SECTION PWC

POWER WINDOW CONTROL SYSTEM

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BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000007519679

DETAILED FLOW

1.OBTAIN INFORMATION ABOUT SYMPTOM

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

>> GO TO 2.

2.REPRODUCE THE MALFUNCTION INFORMATION

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

>> GO TO 3.

3.IDENTIFY THE MALFUNCTIONING SYSTEM WITH "SYMPTOM DIAGNOSIS"

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

>> GO TO 4.

4.IDENTIFY MALFUNCTIONING PARTS WITH "DTC/CIRCUIT DIAGNOSIS"

Perform the diagnosis with "DTC/CIRCUIT DIAGNOSIS" of the applicable system.

>> GO TO 5.

5.REPAIR OR REPLACE THE MALFUNCTIONING PARTS

Repair or replace the specified malfunctioning parts.

>> GO TO 6.

6.FINAL CHECK

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

Is the malfunctioning part repaired or replaced?

YES   >> Trouble diagnosis is completed.
NO   >> GO TO 3.

INSPECTION AND ADJUSTMENT
ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description

INFOID:0000000007519680

When the battery negative terminal is disconnected, the initialization is necessary.
If any of the following operations are performed, the initialization is necessary as well as when the negative terminal of battery is disconnected.
- Power supply to the power window main switch or power window motor is cut off by the removal of battery terminal or if the battery fuse is blown.
- Disconnection and connection of power window main switch harness connector.
- Removal and installation of motor from regulator assembly.
- Operation of regulator assembly as an independent unit.
- Removal and installation of glass.
- Removal and installation of door glass run.

The following specified operations can not be performed under the non-initialized condition.
- Auto-up operation
- Anti-pinch function

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement

INFOID:0000000007519681

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

CHECK ANTI-PINCH FUNCTION
1. Fully open the door window.
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) or for 2 seconds without pinching piece of wood and stops.
- Check that glass does not rise when operating the power window main switch while lowering.
CAUTION:
- **Perform initial setting when auto-up operation or anti-pinch function does not operate normally.**
- **Check that AUTO-UP operates before inspection when system initialization is performed.**
- **Never check with hands or other body parts because they may be pinched. Never get pinched.**
- **It may switch to fail-safe mode if open/close operation is performed continuously without fully closing. Perform initial setting in that situation. Refer to PWC-70, "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:0000000007519682

When the control unit replaced, the initialization in necessary.
If any of the following operations are performed, the initialization is necessary as well as when the control unit is disconnected.
- Power supply to the power window main switch or power window motor is cut off by the removal of battery terminal or if the battery fuse is blown.

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

- Disconnection and connection of power window main switch harness connector.
- Removal and installation of motor from regulator assembly.
- Disconnection and connection of battery negative terminal.
- Removal and installation of glass.
- Removal and installation of door glass run.

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

- Auto-up operation
- Anti-pinch function

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement

INFOID:0000000007519683

INITIALIZATION PROCEDURE

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

CHECK ANTI-PINCH FUNCTION

1. Fully open the door window.
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) or for 2 seconds without pinching piece of wood and stops.
- Check that glass does not rise when operating the power window main switch while lowering.

CAUTION:
- **Perform initial setting when auto-up operation or anti-pinch function does not operate normally.**
- **Check that AUTO-UP operates before inspection when system initialization is performed.**
- **Never check with hands or other body parts because they may be pinched. Never get pinched.**
- **It may switch to fail-safe mode if open/close operation is performed continuously without fully closing. Perform initial setting in that situation. Refer to PWC-70, "Fail-safe"**
- **Finish initial setting. Otherwise, next operation cannot be done.**
1. **Auto-up operation**
2. **Anti-pinch function**

SYSTEM DESCRIPTION

POWER WINDOW SYSTEM

System Diagram

INFOID:0000000007519684


```
                    IGN

            BCM                    FRONT
                                   POWER
                                   WINDOW        MOTOR
                                   SWITCH
                                   (PASSENGER    ENCODER
   REMOTE KEYLESS                  SIDE)
   ENTRY RECEIVER
                                   POWER
                                   WINDOW        MOTOR
                                   MAIN
                                   SWITCH        ENCODER
   FRONT DOOR
   SWITCH                          FRONT DOOR LOCK
                                   ASSEMBLY
                                   (KEY CYLINDER SWITCH)

                                   REAR POWER
                                   WINDOW        MOTOR
                                   SWITCH
                                   (LH/RH)
```

------► : Retained power

◄────► : Power window serial link

JMKIA2683GB
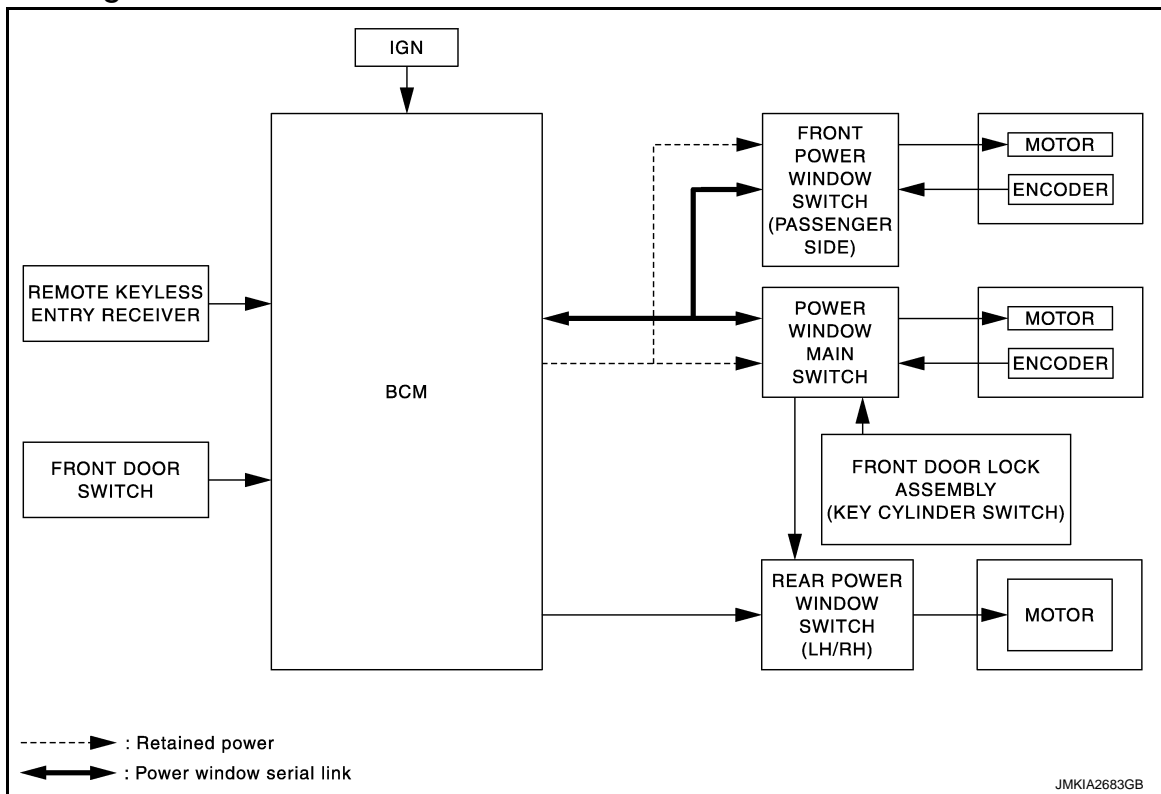
System Description

INFOID:0000000007519685

- Power window system is activated by power window switch when ignition switch turns ON, or during the retained power operation after ignition switch turns OFF.
- Power window main switch opens/closes all door glass.
- Front and rear power window switch opens/closes the corresponding door glass.
- AUTO UP/DOWN operation can be performed when power window main switch or front power window switch (passenger side) turns to AUTO.
- Power window serial link transmits the signals from power window main switch to front power window switch (passenger side).
- Power window lock switch can lock all power windows other than driver seat.
- If door glass receives resistance that is the specified value or more while power window of front seat is in AUTO-UP operation, power window of front seat operates in the reverse direction.
- Hold the door key cylinder to the LOCK or UNLOCK direction for 1 second or more to OPEN or CLOSE front power windows when ignition switch OFF.
- Front power windows open when pressing Intelligent Key unlock button for 3 seconds.

POWER WINDOW AUTO-OPERATION (FRONT DRIVER SIDE & PASSENGER SIDE)

- AUTO UP/DOWN operation can be performed when power window main switch or front power window switch (passenger side) turns to AUTO.
- Encoder continues detecting the movement of power window motor and transmits the encoder pulse signal to power window switch while power window motor is operating.
- Power window switch reads the changes of encoder signal and stops AUTO operation when door glass is at the fully opened/closed position.
- Power window motor is operable if encoder is malfunctioning.

RETAINED POWER OPERATION

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

POWER WINDOW SYSTEM

< SYSTEM DESCRIPTION >

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

POWER WINDOW LOCK FUNCTION
Ground circuit inside power window main switch shuts off when power window lock switch is ON. This inhibits each power window switch operation except the power window main switch.

POWER WINDOW SERIAL LINK (FRONT DRIVER SIDE & PASSENGER SIDE)
- Power window main switch, front power window switch (passenger side), and BCM transmit and receive the power window serial link.
- Power window serial link transmits the power window main switch operation signals and IGN signal to power window main switch module and front power window switch (passenger side) module.

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

Operation Condition
When front door glass AUTO-UP operation is performed (anti-pinch function does not operate just before the door glass closes and is fully closed).
NOTE:
Depending on environment and driving conditions, if a similar impact or load is applied to the door glass, it may lower.

DOOR KEY CYLINDER SWITCH OPERATION
Hold the door key cylinder to the LOCK or UNLOCK direction for 1.5 seconds or more to OPEN or CLOSE front power windows when ignition switch is OFF. In addition, it stops when key position is moved to NEUTRAL when operating.
OPERATION CONDITION
- Ignition switch OFF.
- Hold door key cylinder to LOCK position for 1.5 seconds or more to perform CLOSE operation of the door glass.
- Hold door key cylinder to UNLOCK position for 1.5 seconds or more to perform OPEN operation of the door glass.

KEYLESS POWER WINDOW DOWN OPERATION (FRONT DRIVER SIDE & PASSENGER SIDE)
Front power windows open when the unlock button on Intelligent Key is activated and kept pressed for more than 3 seconds with the ignition switch OFF. The windows keep opening if the unlock button is continuously pressed.
The power window opening stops when the following operations are performed:
- When the unlock button is kept pressed more than 15 seconds.
- When the ignition switch is turned ON while the power window opening is operated.
- When the unlock button is released.
While retained power operation activate, keyless power window down function cannot be operated.
Keyless power window down operation mode can be changed by "PW DOWN SET" mode in "WORK SUPPORT". Refer to .
NOTE:
Use CONSULT to change settings.
MODE 1 (3 sec) / MODE 2 (OFF) / MODE 3 (5 sec)

POWER WINDOW SYSTEM

< SYSTEM DESCRIPTION >

Component Parts Location

JMKIA2632ZZ
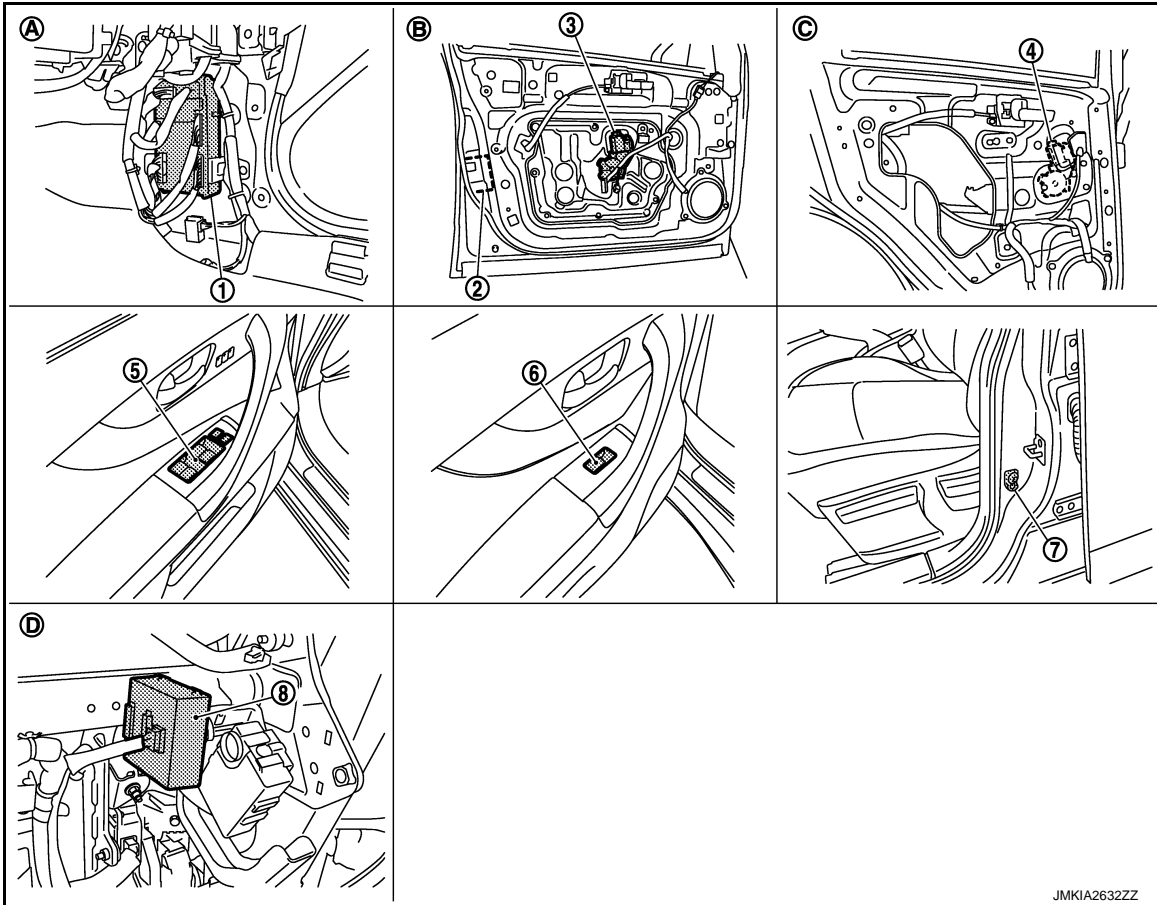
1. BCM
2. Front door lock assembly (driver side) (key cylinder switch)
3. Front power window motor (driver side)

4. Rear power window motor LH
5. Power window main switch
6. Rear power window switch LH

7. Front door switch (driver side)
8. Remote keyless entry receiver

A. View with dash side lower (passenger side) removed
B. View with front door finisher removed
C. View with rear door finisher removed

D. View with instrument lower panel (driver side) removed

Component Description

Component	Function
BCM	• Supplies power supply to power window switch. • Controls retained power.
Power window main switch	• Directly controls all power window motor of all doors. • Controls anti-pinch operation of power window.
Front power window switch (passenger side)	• Controls power window motor of passenger door. • Controls anti-pinch operation of power window.
Rear power window switch	• Controls power window motor of rear right and left doors.
Front power window motor	• Integrates the ENCODER POWER and WINDOW MOTOR. • Starts operating with signals from power window main switch & front power window switch (passenger side). • Transmits power window motor rotation as a pulse signal to power window switch.

POWER WINDOW SYSTEM

< SYSTEM DESCRIPTION >

Component	Function
Rear power window motor	Starts operating with signals from power window main switch & rear power window switch.
Remote keyless entry receiver	Receives lock/unlock signal from the intelligent key, and then transmits to BCM.
Front door lock assembly (key cylinder switch)	Transmits operation condition of key cylinder switch to power window main switch.
Front door switch (driver side/passenger side)	Front door open/close condition and transmits to BCM.

DIAGNOSIS SYSTEM (BCM)
COMMON ITEM

COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000007774192

APPLICATION ITEM
CONSULT performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
Work Support	Changes the setting for each system function.
Self Diagnostic Result	Displays the diagnosis results judged by BCM.
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from BCM.
Data Monitor	The BCM input/output signals are displayed.
Active Test	The signals used to activate each device are forcibly supplied from BCM.
Ecu Identification	The BCM part number is displayed.
Configuration	• Read and save the vehicle specification. • Write the vehicle specification when replacing BCM.

SYSTEM APPLICATION
BCM can perform the following functions for each system.
NOTE:
It can perform the diagnosis modes except the following for all sub system selection items.

×: Applicable item

System	Sub system selection item	Diagnosis mode		
		Work Support	Data Monitor	Active Test
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
—	AIR CONDITONER*			
• Intelligent Key system • Engine start system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
IVIS - NATS	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		×	×

NOTE:

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

FREEZE FRAME DATA (FFD)
The BCM records the following vehicle condition at the time a particular DTC is detected, and displays on CONSULT.

CONSULT screen item	Indication/Unit	Description	
Vehicle Speed	km/h	Vehicle speed of the moment a particular DTC is detected	
Odo/Trip Meter	km	Total mileage (Odometer value) of the moment a particular DTC is detected	
Vehicle Condition	SLEEP>LOCK	Power position status of the moment a particular DTC is detected*	While turning BCM status from low power consumption mode to normal mode (Power supply position is "LOCK"*)
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode (Power supply position is "OFF".)
	LOCK>ACC		While turning power supply position from "LOCK"* to "ACC"
	ACC>ON		While turning power supply position from "ACC" to "IGN"
	RUN>ACC		While turning power supply position from "RUN" to "ACC" (Vehicle is stopping and selector lever is except P position.)
	CRANK>RUN		While turning power supply position from "CRANKING" to "RUN" (From cranking up the engine to run it)
	RUN>URGENT		While turning power supply position from "RUN" to "ACC" (Emergency stop operation)
	ACC>OFF		While turning power supply position from "ACC" to "OFF"
	OFF>LOCK		While turning power supply position from "OFF" to "LOCK"*
	OFF>ACC		While turning power supply position from "OFF" to "ACC"
	ON>CRANK		While turning power supply position from "IGN" to "CRANKING"
	OFF>SLEEP		While turning BCM status from normal mode (Power supply position is "OFF".) to low power consumption mode
	LOCK>SLEEP		While turning BCM status from normal mode (Power supply position is "LOCK"*.) to low power consumption mode
	LOCK		Power supply position is "LOCK"*
	OFF		Power supply position is "OFF" (Ignition switch OFF)
	ACC		Power supply position is "ACC" (Ignition switch ACC)
	ON		Power supply position is "IGN" (Ignition switch ON with engine stopped)
	ENGINE RUN		Power supply position is "RUN" (Ignition switch ON with engine running)
	CRANKING		Power supply position is "CRANKING" (At engine cranking)
IGN Counter	0 - 39	The number of times that ignition switch is turned ON after DTC is detected • The number is 0 when a malfunction is detected now. • The number increases like 1 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON. • The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.	

NOTE:

*: Power supply position shifts to "LOCK" from "OFF", when ignition switch is in the OFF position, selector lever is in the P position, and any of the following conditions are met.
• Closing door
• Opening door
• Door is locked using door request switch
• Door is locked using Intelligent Key
The power supply position shifts to "ACC" when the push-button ignition switch (push switch) is pushed at "LOCK".

RETAIND PWR

RETAIND PWR : CONSULT Function (BCM - RETAINED PWR)

INFOID:0000000007519689

Data monitor

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

Monitor Item	Description
DOOR SW-DR	Indicates [ON/OFF] condition of driver side door switch.
DOOR SW-AS	Indicates [ON/OFF] condition of passenger side door switch.

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT
POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH : Diagnosis Procedure

INFOID:0000000007519690

1.CHECK POWER SUPPLY CIRCUIT 1

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

(+)		(−)	Voltage (V) (Approx.)
Power window main switch			
Connector	Terminal		
D8	10	Ground	Battery voltage
D9	19		

Is the inspection result normal?

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

2.CHECK GROUND CIRCUIT

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

Power window main switch		Ground	Continuity
Connector	Terminal		
D9	17		Existed

Is the inspection result normal?

YES >> GO TO 4.
NO   >> Repair or replace harness.

3.CHECK POWER SUPPLY CIRCUIT 2

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

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

4. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M118	2		Not existed
	3		

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-79, "Exploded View".
NO   >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

Refer to GI-45, "Intermittent Incident"

>> INSPECTION END

FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure

INFOID:0000000007519691

1.CHECK POWER SUPPLY CIRCUIT 1

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

(+)		(−)	Voltage (V) (Approx.)
Front power window switch (passenger side)			
Connector	Terminal		
D38	10	Ground	Battery voltage

Is the inspection result normal?

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

2.CHECK GROUND CIRCUIT

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

Front power window switch (passenger side)		Ground	Continuity
Connector	Terminal		
D38	11		Existed

Is the inspection result normal?

YES   >> GO TO 4.
NO   >> Repair or replace harness.

3.CHECK POWER SUPPLY CIRCUIT 2

1. Disconnect BCM connector.
2. Check continuity between BCM harness connector and front power window switch (passenger side) harness connector.

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

3. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M118	2		Not existed

Is the inspection result normal?

YES   >> Replace BCM. Refer to BCS-79, "Exploded View".
NO   >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident"

>> INSPECTION END

REAR POWER WINDOW SWITCH

REAR POWER WINDOW SWITCH : Diagnosis Procedure

INFOID:0000000007519692

1.CHECK POWER SUPPLY CIRCUIT 1

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

(+)			(−)	Voltage (V) (Approx.)
Rear power window switch				
Connector		Terminal		
LH	D54	1	Ground	Battery voltage
RH	D74			

Is the inspection result normal?

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

2.CHECK GROUND CIRCUIT

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

Rear power window switch			Ground	Continuity
Connector		Terminal		
LH	D54	7		Existed
RH	D74			

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace harness.

3.CHECK POWER SUPPLY CIRCUIT 2

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

BCM		Rear power window switch			Continuity
Connector	Terminal	Connector		Terminal	
M118	3	LH	D54	1	Existed
		RH	D74		

4. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M118	3		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-79, "Exploded View".
NO >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident"

>> INSPECTION END

REAR POWER WINDOW SWITCH

Description

INFOID:0000000007519693

- BCM supplies power.
- When power window switch is operated, corresponding power window motor is activated and rear door glass moves UP/DOWN.

Component Function Check

INFOID:0000000007519694

1. CHECK REAR POWER WINDOW FUNCTION

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

Is the inspection result normal?

YES >> Rear power window switch is OK.
NO >> Refer to PWC-17, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000007519695

1.CHECK REAR POWER WINDOW MOTOR INPUT SIGNAL

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

(+)			(−)	Condition		Voltage (V) (Approx.)
Rear power window switch						
Connector		Terminal				
LH	D54	2	Ground	Power window main switch (rear LH)	UP	Battery voltage
					DOWN	0
		3			UP	0
					DOWN	Battery voltage
RH	D74	2		Power window main switch (rear 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-18, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace rear power window switch. Refer to PWC-90, "Removal and Installation".

3.CHECK HARNESS CONTINUITY

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

Power window main switch		Rear power window switch			Continuity
Connector	Terminal	Connector		Terminal	
D8	1	LH	D54	2	Existed
	3			3	
	5	RH	D74	3	
	7			2	

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

Power window main switch			Continuity
Connector	Terminal		
D8	1	Ground	Not existed
	3		
	5		
	7		

Is the inspection result normal?

YES   >> Replace power window main switch. Refer to PWC-88, "Removal and Installation".
NO   >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident"

>> INSPECTION END

Component Inspection

INFOID:0000000007519696

COMPONENT INSPECTION

1.CHECK REAR POWER WINDOW SWITCH

1.   Turn ignition switch OFF.
2.   Disconnect rear power window switch connector.
3.   Check rear power window switch.

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

Is the inspection result normal?

YES   >> Rear power window switch is OK.
NO   >> Replace rear power window switch. Refer to PWC-90, "Removal and Installation".

POWER WINDOW MOTOR

< DTC/CIRCUIT DIAGNOSIS >

POWER WINDOW MOTOR
DRIVER SIDE

DRIVER SIDE : Description

INFOID:0000000007519697

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

DRIVER SIDE : Component Function Check

INFOID:0000000007519698

1.CHECK POWER WINDOW MOTOR CIRCUIT

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

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

YES >> Front power window motor (driver side) is OK.
NO >> Refer to PWC-19, "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE : Diagnosis Procedure

INFOID:0000000007519699

1.CHECK FRONT POWER WINDOW MOTOR INPUT SIGNAL

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

(+) Front power window motor (driver side)		(−)	Condition		Voltage (V) (Approx.)
Connector	Terminal				
D10	2	Ground	Power window main switch	UP	Battery voltage
				DOWN	0
	1			UP	0
				DOWN	Battery voltage

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

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

2.CHECK POWER WINDOW MOTOR

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

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

YES >> GO TO 4.
NO >> Replace front power window motor (driver side). Refer to GW-21, "Removal and Installation".

3.CHECK POWER WINDOW MOTOR CIRCUIT

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

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

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

Power window main switch		Ground	Continuity
Connector	Terminal		
D8	8		Not existed
	11		

Is the inspection result normal?

YES   >> Replace power window main switch. Refer to PWC-88, "Removal and Installation".
NO   >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

>> INSPECTION END

DRIVER SIDE : Component Inspection

INFOID:0000000007519700

COMPONENT INSPECTION

1.CHECK POWER WINDOW MOTOR

1. Turn ignition switch OFF.
2. Disconnect front power window motor (driver side) connector.
3. Check motor operation by connecting the battery voltage directly to front power window motor (driver side) connector.

Front power window motor (driver side) connector	Terminal		Motor operation
	(+)	(−)	
D10	1	2	DOWN
	2	1	UP

Is the inspection result normal?

YES   >> Front power window motor (driver side) is OK.
NO   >> Replace front power window motor (driver side). Refer to GW-21, "Removal and Installation".

PASSENGER SIDE

PASSENGER SIDE : Description

INFOID:0000000007519701

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

PASSENGER SIDE : Component Function Check

INFOID:0000000007519702

1. CHECK POWER WINDOW MOTOR CIRCUIT

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

Is the inspection result normal?

YES   >> Front power window motor (passenger side) is OK.
NO   >> Refer to PWC-20, "PASSENGER SIDE : Diagnosis Procedure".

PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000007519703

1.CHECK FRONT POWER WINDOW MOTOR INPUT SIGNAL

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

(+) Front power window motor (passenger side)		(–)	Condition		Voltage (V) (Approx.)
Connector	Terminal				
D40	2	Ground	Front power window switch (passenger side)	UP	Battery voltage
				DOWN	0
	1			UP	0
				DOWN	Battery voltage

Is the inspection result normal?

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

2.CHECK POWER WINDOW MOTOR

Check front power window motor (passenger side).
Refer to PWC-21, "PASSENGER SIDE : Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace front power window motor (passenger side). Refer to GW-21, "Removal and Installation".

3.CHECK POWER WINDOW MOTOR CIRCUIT

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

Front power window switch (passenger side)		Front power window motor (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	
D38	8	D40	1	Existed
	9		2	

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

Front power window switch (passenger side)			Continuity
Connector	Terminal		
D38	8	Ground	Not existed
	9		

Is the inspection result normal?

YES >> Replace front power window switch (passenger side). Refer to PWC-89, "Removal and Installation".
NO >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

>> INSPECTION END

PASSENGER SIDE : Component Inspection

INFOID:0000000007519704

COMPONENT INSPECTION

1.CHECK POWER WINDOW MOTOR

1. Turn ignition switch OFF.
2. Disconnect front power window motor (passenger side) connector.

POWER WINDOW MOTOR

< DTC/CIRCUIT DIAGNOSIS >

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

Front power window motor (passenger side) connector	Terminal		Motor condition
	(+)	(−)	
D40	1	2	UP
	2	1	DOWN

Is the inspection result normal?

YES >> Front power window motor (passenger side) is OK.
NO >> Replace front power window motor (passenger side). Refer to GW-21, "Removal and Installation".

REAR LH

REAR LH : Description

INFOID:0000000007519705

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

REAR LH : Component Function Check

INFOID:0000000007519706

1.CHECK REAR POWER WINDOW MOTOR CURCUIT

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

Is the inspection result normal?

YES >> Rear power window motor LH is OK.
NO >> Refer to PWC-22, "REAR LH : Diagnosis Procedure"

REAR LH : Diagnosis Procedure

INFOID:0000000007519707

1.CHECK REAR POWER WINDOW MOTOR 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.

(+)		(−)	Condition		Voltage (V) (Approx.)
Rear power window motor LH					
Connector	Terminal				
D52	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 2.
NO >> GO TO 3.

2.CHECK REAR POWER WINDOW MOTOR

Check rear power window motor LH.
Refer to PWC-23, "REAR LH : Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace rear power window motor LH. Refer to GW-27, "Removal and Installation".

3.CHECK POWER WINDOW MOTOR CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect rear power window switch LH connector.

POWER WINDOW MOTOR

< DTC/CIRCUIT DIAGNOSIS >

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	
D54	5	D52	1	Existed
	4		3	

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

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

Is the inspection result normal?

YES >> Replace rear power window switch LH. Refer to PWC-90, "Removal and Installation".
NO >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

>> INSPECTION END

REAR LH : Component Inspection
INFOID:0000000007519708

COMPONENT INSPECTION

1.CHECK REAR POWER WINDOW MOTOR

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
	(+)	(−)	
D52	3	1	DOWN
	1	3	UP

Is the inspection result normal?

YES >> Rear power window motor LH is OK.
NO >> Replace rear power window motor LH. Refer to GW-27, "Removal and Installation".

REAR RH

REAR RH : Description
INFOID:0000000007519709

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

REAR RH : Component Function Check
INFOID:0000000007519710

1. CHECK REAR POWER WINDOW MOTOR CIRCUIT

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

Is the inspection result normal?

YES >> Rear power window motor RH is OK.
NO >> Refer to PWC-24, "REAR RH : Diagnosis Procedure".

POWER WINDOW MOTOR

< DTC/CIRCUIT DIAGNOSIS >

REAR RH : Diagnosis Procedure

1.CHECK REAR POWER WINDOW MOTOR 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.

(+)		(−)	Condition		Voltage (V) (Approx.)
Rear power window motor RH					
Connector	Terminal				
D72	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 2.
  NO   >> GO TO 3.

2.CHECK REAR POWER WINDOW MOTOR

Check rear power window motor RH.
Refer to PWC-25, "REAR RH : Component Inspection".

Is the inspection result normal?

  YES   >> GO TO 4.
  NO   >> Replace rear power window motor RH. Refer to GW-27, "Removal and Installation".

3.CHECK POWER WINDOW MOTOR 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	
D74	5	D72	1	Existed
	4		3	

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

Rear power window switch RH			Continuity
Connector	Terminal	Ground	
D74	5		Not existed
	4		

Is the inspection result normal?

  YES   >> Replace rear power window switch RH. Refer to PWC-90, "Removal and Installation".
  NO   >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

      >> INSPECTION END

POWER WINDOW MOTOR

< DTC/CIRCUIT DIAGNOSIS >

REAR RH : Component Inspection

INFOID:0000000007519712

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
	(+)	(−)	
D72	3	1	DOWN
	1	3	UP

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

YES   >> Rear power window motor RH is OK.
NO   >> Replace rear power window motor RH. Refer to <u>GW-27, "Removal and Installation"</u>.

DOOR SWITCH

Description
INFOID:000000007519713

Detects door open/closed condition.

Component Function Check
INFOID:000000007519714

1.CHECK FUNCTION

Check door switches ("DOOR SW-DR", "DOOR SW-AS") in "Data Monitor" mode with CONSULT.

Monitor item	Door condition	Display
DOOR SW-DR	CLOSE → OPEN	OFF → ON
DOOR SW-AS		

Is the inspection result normal?
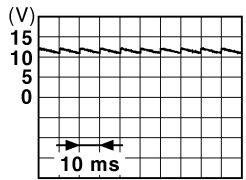
YES >> Door switch is OK.
NO >> Refer to PWC-26, "Diagnosis Procedure".

Diagnosis Procedure
INFOID:000000007519715

1.CHECK FRONT DOOR SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect malfunction front door switch connector.
3. Check signal between malfunction front door switch harness connector and ground with oscilloscope.

(+)			(−)	Voltage (V) (Approx.)
Front door switch				
Connector		Terminal		
Driver side	B16			
Passenger side	B216	2	Ground	

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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 BCM harness connector and malfunction door switch harness connector.

BCM		Front door switch		Continuity
Connector	Terminal	Connector	Terminal	
M123	124	B216	2	Exists
	150	B16		

3. Check continuity between BCM harness connector and ground.

BCM			Continuity
Connector	Terminal	Ground	
M123	124		Not exist
	150		

DOOR SWITCH

< DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-79, "Exploded View".
NO >> Repair or replace harness.

3.CHECK FRONT DOOR SWITCH

Check front door switch.
Refer to PWC-27, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace malfunction front door switch. Refer to DLK-308, "Removal and Installation".

4.CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000007519716

1.CHECK FRONT DOOR SWITCH

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

(+)		(-)	Condition	Continuity
Front door switch				
Connector	Terminal			
Driver side	B16	2	Ground part of door switch	Door switch pressed	Not exist
				Door switch released	Exists
Passenger side	B216	2		Door switch pressed	Not exist
				Door switch released	Exists

Is the inspection result normal?

YES >> Front door switch is OK.
NO >> Replace malfunction front door switch. Refer to DLK-308, "Removal and Installation".

ENCODER
DRIVER SIDE

DRIVER SIDE : Description

INFOID:0000000007519717

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

DRIVER SIDE : Component Function Check

INFOID:0000000007519718

1.CHECK ENCODER

Check that driver side door glass performs AUTO open/close operation normally by power window main switch.

Is the inspection result normal?

YES >> Encoder is OK.
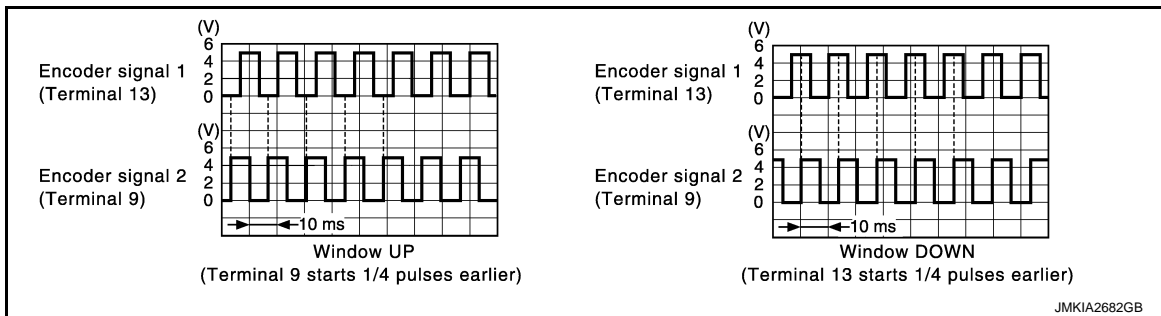NO >> Refer to PWC-28, "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE : Diagnosis Procedure

INFOID:0000000007519719

1.CHECK ENCODER SIGNAL

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

(+)		(−)	Signal (Reference value)
Power window main switch			
Connector	Terminal		
D8	9	Ground	Refer to following signal
	13		

Encoder signal 1 (Terminal 13)
Encoder signal 2 (Terminal 9)
10 ms
Window UP
(Terminal 9 starts 1/4 pulses earlier)

Encoder signal 1 (Terminal 13)
Encoder signal 2 (Terminal 9)
10 ms
Window DOWN
(Terminal 13 starts 1/4 pulses earlier)

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Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-88, "Removal and Installation".
NO >> GO TO 2.

2.CHECK ENCORDER SIGNAL CIRCUIT

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

Power window main switch		Front power window motor (driver side)		Continuity
Connector	Terminal	Connector	Terminal	
D8	9	D10	3	Existed
	13		5	

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

ENCODER

< DTC/CIRCUIT DIAGNOSIS >

Power window main switch		Ground	Continuity
Connector	Terminal		
D8	9		Not existed
	13		

Is the inspection result normal?

YES   >> GO TO 3.
NO   >> Repair or replace harness.

3.CHECK ENCORDER POWER SUPPLY CIRCUIT 1

1. Connect power window main switch connector.
2. Turn ignition switch ON.
3. Check voltage between front power window motor (driver side) harness connector and ground.

(+)		(−)	Voltage (V) (Approx.)
Front power window motor (driver side)			
Connector	Terminal		
D10	4	Ground	Battery voltage

Is the inspection result normal?

YES   >> GO TO 4.
NO   >> GO TO 5.

4.CHECK GROUND CIRCUIT 2

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

Front power window motor (driver side)		Ground	Continuity
Connector	Terminal		
D10	6		Existed

Is the inspection result normal?

YES   >> Replace front power window motor (driver side). Refer to GW-21, "Removal and Installation".
NO   >> GO TO 6.

5.CHECK ENCORDER POWER SUPPLY CIRCUIT 2

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

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

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

Power window main switch		Ground	Continuity
Connector	Terminal		
D8	15		Not existed

Is the inspection result normal?

YES   >> Replace power window main switch. Refer to PWC-88, "Removal and Installation".
NO   >> Repair or replace harness.

6.CHECK GROUND CIRCUIT 2

1. Disconnect power window main switch connector.

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

Power window main switch		Front power window motor (driver side)		Continuity
Connector	Terminal	Connector	Terminal	
D8	2	D10	6	Existed

Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-88, "Removal and Installation".
NO >> Repair or replace harness.

PASSENGER SIDE

PASSENGER SIDE : Description

INFOID:0000000007519720

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

PASSENGER SIDE : Component Function Check

INFOID:0000000007519721

1.CHECK ENCODER

Check that passenger side door glass performs AUTO open/close operation normally by power window main switch or front power window switch (passenger side).

Is the inspection result normal?

YES >> Encoder is OK.
NO >> Refer to PWC-30, "PASSENGER SIDE : Diagnosis Procedure".

PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000007519722

1.CHECK ENCODER SIGNAL

1. Turn ignition switch ON.
2. Check signal between front power window switch (passenger side) harness connector and ground with oscilloscope.

(+)		(−)	Signal (Reference value)
Front power window switch (passenger side)			
Connector	Terminal		
D38	12	Ground	Refer to following signal
	15		

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Is the inspection result normal?

YES >> Replace front power window switch (passenger side). Refer to PWC-89, "Removal and Installation".
NO >> GO TO 2.

2.CHECK ENCORDER SIGNAL CIRCUIT

1. Turn ignition switch OFF.

ENCODER

< DTC/CIRCUIT DIAGNOSIS >

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

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

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

Front power window switch (passenger side)			Continuity
Connector	Terminal	Ground	
D38	12		Not existed
	15		

Is the inspection result normal?

YES   >> GO TO 3.
NO   >> Repair or replace harness.

3.CHECK ENCORDER POWER SUPPLY CIRCUIT 1

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

(+)			Voltage (V) (Approx.)
Front power window motor (passenger side)		(−)	
Connector	Terminal		
D40	4	Ground	Battery voltage

Is the inspection result normal?

YES   >> GO TO 4.
NO   >> GO TO 5.

4.CHECK GROUND CIRCUIT 2

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

Front power window motor (passenger side)			Continuity
Connector	Terminal	Ground	
D40	6		Existed

Is the inspection result normal?

YES   >> Replace front power window motor (passenger side). Refer to GW-21, "Removal and Installation".
NO   >> GO TO 6.

5.CHECK ENCORDER POWER SUPPLY CIRCUIT 2

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

Front power window switch (passenger side)		Front power window motor (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	
D38	4	D40	4	Existed

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

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

Is the inspection result normal?

YES   >> Replace front power window switch (passenger side). Refer to <u>PWC-89, "Removal and Installation"</u>.

NO   >> Repair or replace harness.

6.CHECK GROUND CIRCUIT 2

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

Front power window switch (passenger side)		Front power window motor (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	
D38	3	D40	6	Existed

Is the inspection result normal?

YES   >> Replace front power window switch (passenger side). Refer to <u>PWC-89, "Removal and Installation"</u>.

NO   >> Repair or replace harness.

DOOR KEY CYLINDER SWITCH

< DTC/CIRCUIT DIAGNOSIS >

DOOR KEY CYLINDER SWITCH

Description
INFOID:000000007519723

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

Component Function Check
INFOID:000000007519724

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

Check ("KEY CYL LK-SW", "KEY CYL UN-SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYS-TEM" with CONSULT. Refer to DLK-61, "INTELLIGENT KEY : CONSULT Function (BCM - INTELLIGENT KEY)".

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

Is the inspection result normal?

YES >> Door key cylinder switch is OK.
NO >> Refer to PWC-33, "Diagnosis Procedure".

Diagnosis Procedure
INFOID:000000007519725

1. CHECK DOOR KEY CYLINDER SWITCH SIGNAL

1. Turn ignition switch OFF.
2. Disconnect front door lock assembly (driver side) (key cylinder switch) connect.
3. Turn ignition switch ON.
4. Check voltage between front door lock assembly (driver side) (key cylinder switch) harness connector and ground.

(+)		(−)	Voltage (V) (Approx.)
Front door lock assembly (driver side) (key cylinder switch)			
Connector	Terminal		
D15	5	Ground	5
	6		

Is the inspection result normal?

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

2. CHECK DOOR KEY CYLINDER SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect power window main switch connector.
3. Check continuity between power window main switch harness connector and front door lock assembly (driver side) (key cylinder switch) harness connector.

Power window main switch		Front door lock assembly (driver side) (key cylinder switch)		Continuity
Connector	Terminal	Connector	Terminal	
D8	4	D15	6	Existed
	6		5	

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

DOOR KEY CYLINDER SWITCH

< DTC/CIRCUIT DIAGNOSIS >

Power window main switch		Ground	Continuity
Connector	Terminal		
D8	4		Not existed
	6		

Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-88, "Removal and Installation".
NO >> Repair or replace harness.

3. CHECK DOOR KEY CYLINDER SWITCH GROUND CIRCUIT

Check continuity between front door lock assembly (driver side) (key cylinder switch) harness connector and ground.

Front door lock assembly (driver side) (key cylinder switch)		Ground	Continuity
Connector	Terminal		
D15	4		Existed

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace harness.

4. CHECK DOOR KEY CYLINDER SWITCH

Check front door lock assembly (driver side) (key cylinder switch).
Refer to PWC-34, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Replace front door lock assembly (driver side) (key cylinder switch). Refer to DLK-293, "DOOR LOCK : Removal and Installation".

5. CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000007519726

COMPONENT INSPECTION

1. CHECK DOOR KEY CYLINDER SWITCH

1. Turn ignition switch OFF.
2. Disconnect front door lock assembly (driver side) (key cylinder switch) connector.
3. Check front door lock assembly (driver side) (key cylinder switch).

Front door lock assembly (driver side) (key cylinder switch)			Key position	Continuity
Connector	Terminal			
D15	5	4	Unlock	Existed
			Neutral / Lock	Not existed
	6		Lock	Existed
			Neutral / Unlock	Not existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace front door lock assembly (driver side) (key cylinder switch). Refer to DLK-293, "DOOR LOCK : Removal and Installation".

A

B

POWER WINDOW SERIAL LINK
POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH : Description

INFOID:0000000007519727

C

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

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

- Keyless power window down signal

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

D

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

E

POWER WINDOW MAIN SWITCH : Component Function Check

INFOID:0000000007519728

F

1.CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

G

🖳 **With CONSULT**

Check ("CDL LOCK SW ", "CDL UNLOCK SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYSTEM" with CONSULT. Refer to <u>DLK-61, "INTELLIGENT KEY : CONSULT Function (BCM - INTELLIGENT KEY)"</u>.

H

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

I

J

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

YES   >> Power window serial link is OK.
NO   >> Refer to <u>PWC-35, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure"</u>.

PWC

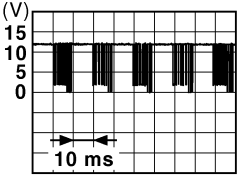### POWER WINDOW MAIN SWITCH : Diagnosis Procedure

INFOID:0000000007519729

L

1.CHECK POWER WINDOW SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect power window main switch connector.
3. Check signal between power window main switch harness connector and ground with oscilloscope when door lock and unlock switch (driver side and passenger side) is turned to "LOCK" or "UNLOCK".
4. Check that signals which are shown in the figure below can be detected during 10 seconds just after door lock and unlock switch (driver side and passenger side) is turned to "LOCK" or "UNLOCK".

M

N

(+)		(−)	Signal (Reference value)
Power window main switch			
Connector	Terminal		
D8	14	Ground	

O

P

JPMIA0013GB

POWER WINDOW SERIAL LINK

< DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

  YES   >> Replace power window main switch. Refer to PWC-88, "Removal and Installation".
  NO   >> GO TO 2.

2.CHECK POWER WINDOW SERIAL LINK CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between BCM harness connector and power window main switch harness connector.

BCM		Power window main switch		Continuity
Connector	Terminal	Connector	Terminal	
M123	132	D8	14	Existed

3. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M123	132		Not existed

Is the inspection result normal?

  YES   >> Replace BCM. Refer to BCS-79, "Exploded View".
  NO   >> Repair or replace harness.

FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Description   *INFOID:0000000007519730*

Power window main switch, front power window switch (passenger side) and BCM transmit and receive the signal by power window serial link.
The signal mentioned below is transmitted from BCM to power window main switch and front power window switch (passenger side).
• Keyless power window down signal
The signal mentioned below is transmitted from power window main switch to front power window switch (passenger side).
• Front passenger side door window operation signal
• Power window control by key cylinder switch signal
• Power window lock switch signal
• Retained power operation signal

FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Component Function Check   *INFOID:0000000007519731*

1.CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

Ⓜ **With CONSULT**
Check ("CDL LOCK SW ", "CDL UNLOCK SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYS-TEM" with CONSULT. Refer to DLK-61, "INTELLIGENT KEY : CONSULT Function (BCM - INTELLIGENT KEY)".

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

Is the inspection result normal?

  YES   >> Power window serial link is OK.
  NO   >> Refer to PWC-37, "FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure".

POWER WINDOW SERIAL LINK

< DTC/CIRCUIT DIAGNOSIS >

FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure

INFOID:0000000007519732

1.CHECK POWER WINDOW SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect front power window switch (passenger side) connector.
3. Check signal between front power window switch (passenger side) harness connector and ground with oscilloscope when door lock and unlock switch (driver side and passenger side) is turned to "LOCK" or "UNLOCK".
4. Check that signals which are shown in the figure below can be detected during 10 seconds just after door lock and unlock switch (driver side and passenger side) is turned to "LOCK" or "UNLOCK".

(+)		(−)	Signal (Reference value)
Front power window switch (passenger side)			
Connector	Terminal		
D38	16	Ground	

JPMIA0013GB

Is the inspection result normal?

YES >> Replace front power window switch (passenger side). Refer to PWC-89, "Removal and Installation".

NO >> GO TO 2.

2.CHECK POWER WINDOW SERIAL LINK CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between BCM harness connector and front power window switch (passenger side) harness connector.

BCM		Front power window switch (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	
M123	132	D38	16	Existed

3. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M123	132		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-79, "Exploded View".

NO >> Repair or replace harness.

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

ECU DIAGNOSIS INFORMATION

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:0000000007774193

VALUES ON THE DIAGNOSIS TOOL

CONSULT MONITOR ITEM

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

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
RR FOG SW	**NOTE:** The item is indicated, but not monitored.	Off
DOOR SW-DR	Driver door closed	Off
	Driver door opened	On
DOOR SW-AS	Passenger door closed	Off
	Passenger door opened	On
DOOR SW-RR	Rear RH door closed	Off
	Rear RH door opened	On
DOOR SW-RL	Rear LH door closed	Off
	Rear LH door opened	On
DOOR SW-BK	Back door closed	Off
	Back door opened	On
CDL LOCK SW	Other than power door lock switch LOCK	Off
	Power door lock switch LOCK	On
CDL UNLOCK SW	Other than power door lock switch UNLOCK	Off
	Power door lock switch UNLOCK	On
KEY CYL LK-SW	Other than driver door key cylinder LOCK position	Off
	Driver door key cylinder LOCK position	On
KEY CYL UN-SW	Other than driver door key cylinder UNLOCK position	Off
	Driver door key cylinder UNLOCK position	On
KEY CYL SW-TR	**NOTE:** The item is indicated, but not monitored.	Off
HAZARD SW	Hazard switch is OFF	Off
	Hazard switch is ON	On
REAR DEF SW	**NOTE:** The item is indicated, but not monitored.	Off
TR CANCEL SW	**NOTE:** The item is indicated, but not monitored.	Off
TR/BD OPEN SW	Back door opener switch OFF	Off
	While the back door opener switch is turned ON	On
TRNK/HAT MNTR	**NOTE:** The item is indicated, but not monitored.	Off
REVERSE SW	**NOTE:** The item is indicated, but not monitored.	Off
RKE-LOCK	LOCK button of the Intelligent Key is not pressed	Off
	LOCK button of the Intelligent Key is pressed	On
RKE-UNLOCK	UNLOCK button of the Intelligent Key is not pressed	Off
	UNLOCK button of the Intelligent Key is pressed	On
RKE-TR/BD	**NOTE:** The item is indicated, but not monitored.	Off
RKE-PANIC	PANIC button of the Intelligent Key is not pressed	Off
	PANIC button of the Intelligent Key is pressed	On
RKE-P/W OPEN	UNLOCK button of the Intelligent Key is not pressed	Off
	UNLOCK button of the Intelligent Key is pressed and held	On
RKE-MODE CHG	LOCK/UNLOCK button of the Intelligent Key is not pressed and held simultaneous-ly	Off
	LOCK/UNLOCK button of the Intelligent Key is pressed and held simultaneously	On

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

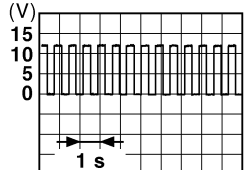| Monitor Item	Condition	Value/Status
OPTICAL SENSOR	Bright outside of the vehicle	Close to 5 V
	Dark outside of the vehicle	Close to 0 V
REQ SW -DR	Driver door request switch is not pressed	Off
	Driver door request switch is pressed	On
REQ SW -AS	Passenger door request switch is not pressed	Off
	Passenger door request switch is pressed	On
REQ SW -RR	**NOTE:** The item is indicated, but not monitored.	Off
REQ SW -RL	**NOTE:** The item is indicated, but not monitored.	Off
REQ SW -BD/TR	Back door request switch is not pressed	Off
	Back door request switch is pressed	On
PUSH SW	Push-button ignition switch (push switch) is not pressed	Off
	Push-button ignition switch (push switch) is pressed	On
IGN RLY2 -F/B	**NOTE:** The item is indicated, but not monitored.	Off
ACC RLY -F/B	**NOTE:** The item is indicated, but not monitored.	Off
CLUCH SW	**NOTE:** The item is indicated, but not monitored.	Off
BRAKE SW 1	The brake pedal is depressed when No. 7 fuse is blown	Off
	The brake pedal is not depressed when No. 7 fuse is blown, or No. 7 fuse is normal	On
BRAKE SW 2	The brake pedal is not depressed	Off
	The brake pedal is depressed	On
DETE/CANCL SW	Selector lever in P position	Off
	Selector lever in any position other than P	On
SFT PN/N SW	Selector lever in any position other than P and N	Off
	Selector lever in P or N position	On
S/L -LOCK	**NOTE:** The item is indicated but not monitored.	Off
S/L -UNLOCK	**NOTE:** The item is indicated but not monitored.	Off
S/L RELAY-F/B	**NOTE:** The item is indicated but not monitored.	Off
UNLK SEN -DR	Driver door is unlocked	Off
	Driver door is locked	On
PUSH SW -IPDM	Push-button ignition switch (push-switch) is not pressed	Off
	Push-button ignition switch (push-switch) is pressed	On
IGN RLY1 -F/B	Ignition switch in OFF or ACC position	Off
	Ignition switch in ON position	On
DETE SW -IPDM	Selector lever in any position other than P	Off
	Selector lever in P position	On
SFT PN -IPDM	Selector lever in any position other than P and N	Off
	Selector lever in P or N position	On
SFT P -MET	Selector lever in any position other than P	Off
	Selector lever in P position	On

Monitor Item	Condition	Value/Status
SFT N -MET	Selector lever in any position other than N	Off
	Selector lever in N position	On
ENGINE STATE	Engine stopped	Stop
	While the engine stalls	Stall
	At engine cranking	Crank
	Engine running	Run
S/L LOCK-IPDM	**NOTE:** The item is indicated but not monitored.	Off
S/L UNLK-IPDM	**NOTE:** The item is indicated but not monitored.	Off
S/L RELAY-REQ	**NOTE:** The item is indicated but not monitored.	Off
VEH SPEED 1	While driving	Equivalent to speed-ometer reading
VEH SPEED 2	While driving	Equivalent to speed-ometer reading
DOOR STAT-DR	Driver door is locked	LOCK
	Wait with selective UNLOCK operation (5 seconds)	READY
	Driver door is unlocked	UNLOCK
DOOR STAT-AS	Passenger door is locked	LOCK
	Wait with selective UNLOCK operation (5 seconds)	READY
	Passenger door is unlocked	UNLOCK
ID OK FLAG	Driver side door is open after ignition switch is turned OFF (Selector lever is in the P position)	Reset
	Ignition switch ON	Set
PRMT ENG STRT	The engine start is prohibited	Reset
	The engine start is permitted	Set
PRMT RKE STRT	**NOTE:** The item is indicated, but not monitored.	Reset
KEY SW -SLOT	The Intelligent Key is not inserted into key slot	Off
	The Intelligent Key is inserted into key slot	On
RKE OPE COUN1	During the operation of the Intelligent Key	Operation frequency of the Intelligent Key
RKE OPE COUN2	**NOTE:** The item is indicated, but not monitored.	—
CONFRM ID ALL	The key ID that the key slot receives is not recognized by any key ID registered to BCM.	Yet
	The key ID that the key slot receives accords with any key ID registered to BCM.	Done
CONFIRM ID4	The key ID that the key slot receives is not recognized by the fourth key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by the fourth key ID registered to BCM.	Done
CONFIRM ID3	The key ID that the key slot receives is not recognized by the third key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by the third key ID registered to BCM.	Done

BCM (BODY CONTROL MODULE)

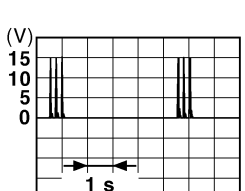< ECU DIAGNOSIS INFORMATION >

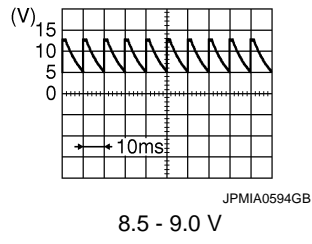| Monitor Item	Condition	Value/Status
CONFIRM ID2	The key ID that the key slot receives is not recognized by the second key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by the second key ID registered to BCM.	Done
CONFIRM ID1	The key ID that the key slot receives is not recognized by the first key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by the first key ID registered to BCM.	Done
TP 4	The ID of fourth Intelligent Key is not registered to BCM	Yet
	The ID of fourth Intelligent Key is registered to BCM	Done
TP 3	The ID of third Intelligent Key is not registered to BCM	Yet
	The ID of third Intelligent Key is registered to BCM	Done
TP 2	The ID of second Intelligent Key is not registered to BCM	Yet
	The ID of second Intelligent Key is registered to BCM	Done
TP 1	The ID of first Intelligent Key is not registered to BCM	Yet
	The ID of first Intelligent Key is registered to BCM	Done

TERMINAL LAYOUT

JPMIA0062ZZ

PHYSICAL VALUES

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	−	Signal name	Input/ Output			
1 (W)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
2 (Y)	Ground	P/W power supply (BAT)	Output	Ignition switch OFF		12 V
3 (BG)	Ground	P/W power supply (IGN)	Output	Ignition switch ON		12 V
4 (P)	Ground	Interior room lamp power supply	Output	Interior room lamp battery saver is activated. (Cuts the interior room lamp power supply)		0 V
				Interior room lamp battery saver is not activated. (Outputs the interior room lamp power supply)		12 V
5 (V)	Ground	Passenger door UN-LOCK	Output	Passenger door	UNLOCK (Actuator is activated)	12 V
					Other than UNLOCK (Actuator is not activated)	0 V
7 (Y)	Ground	Step lamp control	Output	Step lamp	ON	0 V
					OFF	12 V
8 (V)	Ground	All doors, fuel lid LOCK	Output	All doors, fuel lid	LOCK (Actuator is activated)	12 V
					Other than LOCK (Actuator is not activated)	0 V
9 (G)	Ground	Driver door, fuel lid UNLOCK	Output	Driver door, fuel lid	UNLOCK (Actuator is activated)	12 V
					Other than UNLOCK (Actuator is not activated)	0 V
10 (BR)	Ground	Rear RH door and rear LH door UN-LOCK	Output	Rear RH door and rear LH door	UNLOCK (Actuator is activated)	12 V
					Other than UNLOCK (Actuator is not activated)	0 V
11 (R)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
13 (B)	Ground	Ground	—	Ignition switch ON		0 V
15 (Y)	Ground	ACC indicator lamp	Output	Ignition switch	OFF (LOCK indicator is not illuminated)	Battery voltage
					ACC or ON	0 V
17 (W)	Ground	Turn signal RH (Front)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch RH	6.5 V

PKID0926E

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >
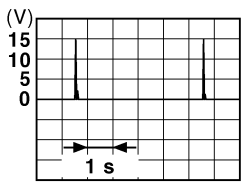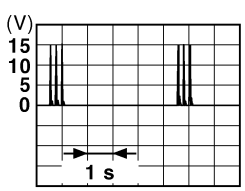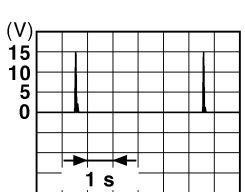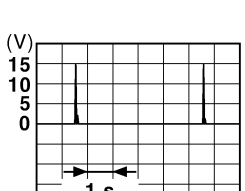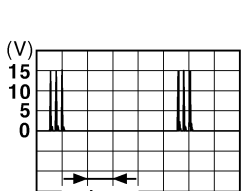
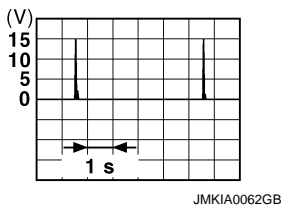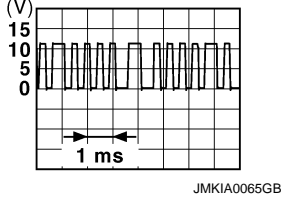| Terminal No. (Wire color) +	Terminal No. (Wire color) −	Description Signal name	Description Input/ Output	Condition		Value (Approx.)
18 (BG)	Ground	Turn signal LH (Front)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch LH	6.5 V
19 (SB)	Ground	Interior room lamp control	Output	Other than under condition		5.0 V
				• Interior room lamp timer is activated. (Door is unlocked. etc...) • Welcome light function is activated.		0 V
20 (V)	Ground	Turn signal RH (Rear)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch RH	6.5 V
25 (G)	Ground	Turn signal LH (Rear)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch LH	6.5 V
26 (P)	Ground	Rear wiper	Output	Rear wiper	OFF (Stopped)	0 V
					ON (Operated)	12 V
34 (SB)	Ground	Luggage room antenna (−)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	
					When Intelligent Key is not in the passenger compartment	

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	−	Signal name	Input/ Output		
35 (V)	Ground	Luggage room antenna (+)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment — JMKIA0062GB
					When Intelligent Key is not in the passenger compartment — JMKIA0063GB
38 (B)	Ground	Back door antenna (−)	Output	When the back door opener request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area — JMKIA0062GB
					When Intelligent Key is not in the antenna detection area — JMKIA0063GB
39 (W)	Ground	Back door antenna (+)	Output	When the back door opener request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area — JMKIA0062GB
					When Intelligent Key is not in the antenna detection area — JMKIA0063GB
47 (Y)	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	OFF or ACC: 12 V
					ON: 0 V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	−	Signal name	Input/ Output			
52 (LG)	Ground	Starter relay control	Output	Ignition switch ON	When selector lever is in P or N position	12 V
					When selector lever is not in P or N position	0 V
60 (SB)	Ground	Push-button ignition switch (Push switch)	Input	Push-button ignition switch (Push switch)	Pressed	0 V
					Not pressed	12 V
61 (W)	Ground	Back door opener request switch	Input	Back door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	JPMIA0016GB 1.0 V
64 (L)	Ground	Intelligent Key warning buzzer (Engine room)	Output	Intelligent Key warning buzzer (Engine room)	Sounding	0 V
					Not sounding	12 V
65 (BG)	Ground	Rear wiper stop position	Input	Rear wiper	In stop position	JPMIA0016GB 1.0 V
					Not in stop position	0 V
66 (LG)	Ground	Back door switch	Input	Back door switch	OFF (Door close)	12 V
					ON (Door open)	0 V
67 (P)	Ground	Back door opener switch	Input	Back door opener switch	Pressed	0 V
					Not pressed	JPMIA0594GB 8.5 - 9.0 V
68 (BR)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (Door close)	JPMIA0594GB 8.5 - 9.0 V
					ON (Door open)	0 V
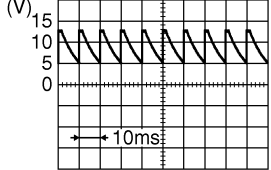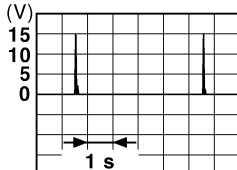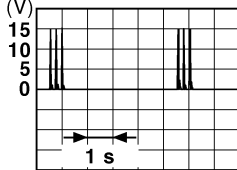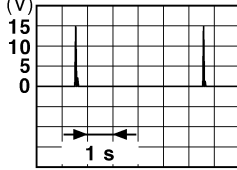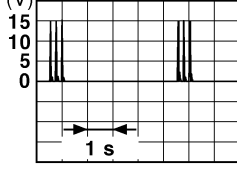
BCM (BODY CONTROL MODULE)

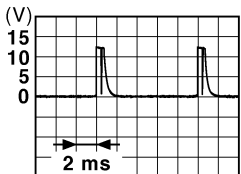< ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	−	Signal name	Input/Output		
69 (R)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (Door close)
					(V) 15 10 5 0 →← 10ms JPMIA0594GB 8.5 - 9.0 V
				ON (Door open)	0 V
74 (SB)	Ground	Passenger door antenna (−)	Output	When the passenger door request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area
					(V) 15 10 5 0 →← 1 s JMKIA0062GB
					When Intelligent Key is not in the antenna detection area
					(V) 15 10 5 0 →← 1 s JMKIA0063GB
75 (BR)	Ground	Passenger door antenna (+)	Output	When the passenger door request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area
					(V) 15 10 5 0 →← 1 s JMKIA0062GB
					When Intelligent Key is not in the antenna detection area
					(V) 15 10 5 0 →← 1 s JMKIA0063GB

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	−	Signal name	Input/Output		
76 (V)	Ground	Driver door antenna (−)	Output	When the driver door request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area JMKIA0062GB
					When Intelligent Key is not in the antenna detection area JMKIA0063GB
77 (LG)	Ground	Driver door antenna (+)	Output	When the driver door request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area JMKIA0062GB
					When Intelligent Key is not in the antenna detection area JMKIA0063GB
78 (Y)	Ground	Room antenna (−) (Instrument panel)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment JMKIA0062GB
					When Intelligent Key is not in the passenger compartment JMKIA0063GB

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >
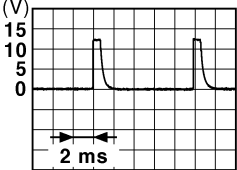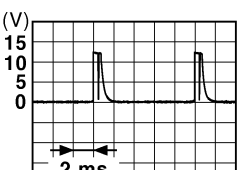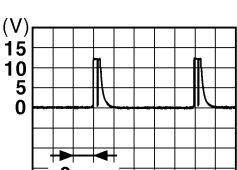
Terminal No. (Wire color) +	Terminal No. (Wire color) −	Description Signal name	Description Input/Output	Condition	Condition	Value (Approx.)
79 (BR)	Ground	Room antenna (+) (Instrument panel)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	JMKIA0063GB
80 (GR)	Ground	NATS antenna amp.	Input/Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
81 (W)	Ground	NATS antenna amp.	Input/Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
82 (P)	Ground	Ignition relay [Fuse block (J/B)] control	Output	Ignition switch	OFF or ACC	0 V
					ON	12 V
83 (GR)	Ground	Remote keyless entry receiver communication	Input/Output	During waiting		JMKIA0064GB
				When operating either button on the Intelligent Key		JMKIA0065GB

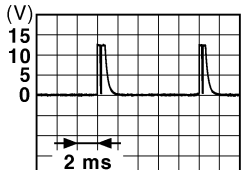# BCM (BODY CONTROL MODULE)

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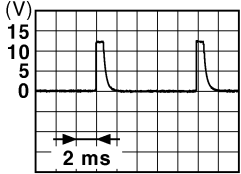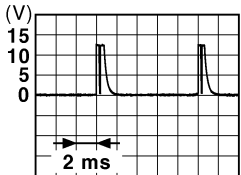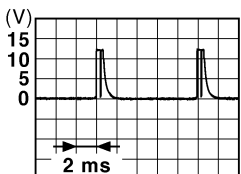
Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	−	Signal name	Input/ Output		
87 (BR)	Ground	Combination switch INPUT 5	Input	Combination switch	All switches OFF (Wiper volume dial 4) JPMIA0041GB 1.4 V
					Front fog lamp switch ON (Wiper volume dial 4) JPMIA0037GB 1.3 V
					Rear wiper switch ON (Wiper volume dial 4) JPMIA0039GB 1.3 V
					Any of the conditions below with all switches OFF • Wiper volume dial 1 • Wiper volume dial 2 • Wiper volume dial 6 • Wiper volume dial 7 JPMIA0040GB 1.3 V
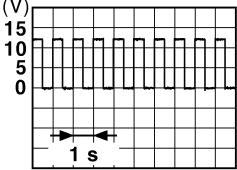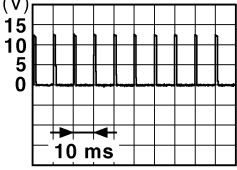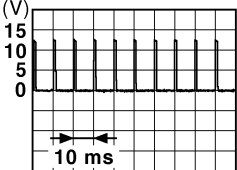
BCM (BODY CONTROL MODULE)

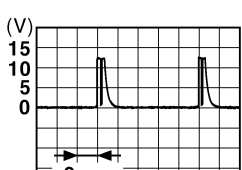< ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	−	Signal name	Input/ Output		
88 (V)	Ground	Combination switch INPUT 3	Input	Combination switch	All switches OFF (Wiper volume dial 4) JPMIA0041GB — 1.4 V
					Lighting switch HI (Wiper volume dial 4) JPMIA0036GB — 1.3 V
					Lighting switch 2ND (Wiper volume dial 4) JPMIA0037GB — 1.3 V
					Rear washer switch ON (Wiper volume dial 4) JPMIA0039GB — 1.3 V
					Any of the conditions below with all switches OFF • Wiper volume dial 1 • Wiper volume dial 2 • Wiper volume dial 3 JPMIA0040GB — 1.3 V
90 (P)	Ground	CAN-L	Input/ Output	—	—
91 (L)	Ground	CAN-H	Input/ Output	—	—

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >
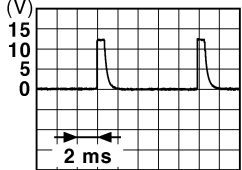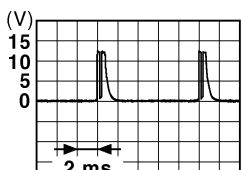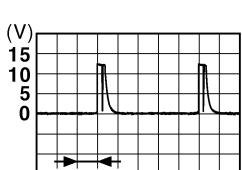
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	−	Signal name	Input/Output			
92 (LG)	Ground	Key slot illumination	Output	Key slot illumination	OFF	12 V
					Blinking	JPMIA0015GB 6.5 V
					ON	0 V
93 (V)	Ground	ON indicator lamp	Output	Ignition switch	OFF (LOCK indicator is not illuminated)	Battery voltage
					ON or ACC	0 V
95 (BG)	Ground	ACC relay control	Output	Ignition switch	OFF	0 V
					ACC or ON	12 V
96 (GR)	Ground	A/T shift selector (Detention switch) power supply	Output	—		12 V
99 (R)	Ground	Selector lever P position switch	Input	Selector lever	P position	0 V
					Any position other than P	12 V
100 (G)	Ground	Passenger door request switch	Input	Passenger door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	JPMIA0016GB 1.0 V
101 (SB)	Ground	Driver door request switch	Input	Driver door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	JPMIA0016GB 1.0 V
102 (BG)	Ground	Blower fan motor relay control	Output	Ignition switch	OFF or ACC	0 V
					ON	12 V
103 (BR)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OFF		12 V
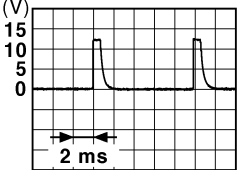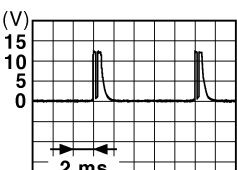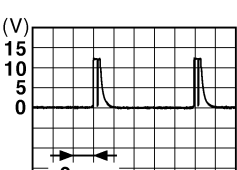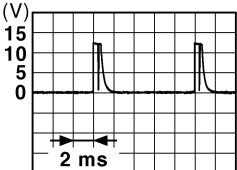
Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	−	Signal name	Input/ Output		
107 (LG)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper volume dial 4)	All switches OFF JPMIA0041GB 1.4 V
					Turn signal switch LH JPMIA0037GB 1.3 V
					Turn signal switch RH JPMIA0036GB 1.3 V
					Front wiper switch LO JPMIA0038GB 1.3 V
					Front washer switch ON JPMIA0039GB 1.3 V
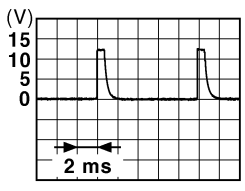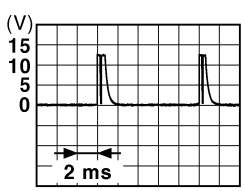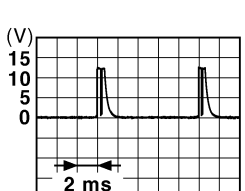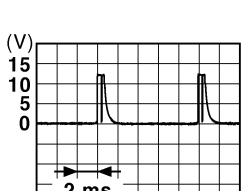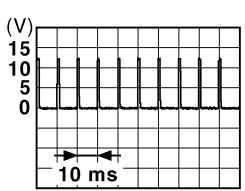
Terminal No. (Wire color)		Description				Condition	Value (Approx.)
+	−	Signal name	Input/ Output				
108 (R)	Ground	Combination switch INPUT 4	Input	Combination switch		All switches OFF (Wiper volume dial 4)	(V) 15 10 5 0 ← 2 ms → JPMIA0041GB 1.4 V
						Lighting switch AUTO (Wiper volume dial 4)	(V) 15 10 5 0 ← 2 ms → JPMIA0038GB 1.3 V
						Lighting switch 1ST (Wiper volume dial 4)	(V) 15 10 5 0 ← 2 ms → JPMIA0036GB 1.3 V
						Rear wiper switch INT (Wiper volume dial 4)	(V) 15 10 5 0 ← 2 ms → JPMIA0040GB 1.3 V
						Any of the conditions below with all switches OFF • Wiper volume dial 1 • Wiper volume dial 5 • Wiper volume dial 6	(V) 15 10 5 0 ← 2 ms → JPMIA0039GB 1.3 V
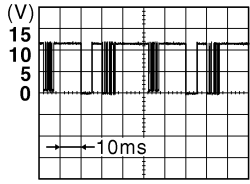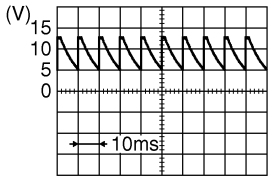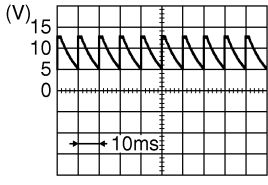
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	−	Signal name	Input/ Output			
109 (Y)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper volume dial 4)	All switches OFF	 JPMIA0041GB 1.4 V
					Lighting switch PASS	 JPMIA0037GB 1.3 V
					Lighting switch 2ND	 JPMIA0036GB 1.3 V
					Front wiper switch INT/ AUTO	 JPMIA0038GB 1.3 V
					Front wiper switch HI	 JPMIA0040GB 1.3 V
110 (G)	Ground	Hazard switch	Input	Hazard switch	ON	0 V
					OFF	 JPMIA0012GB 1.1 V
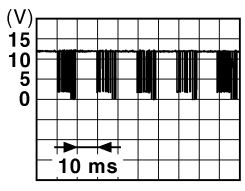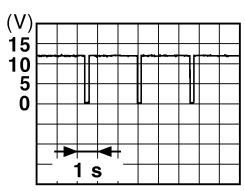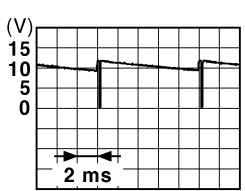
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	−	Signal name	Input/ Output			
112 (GR)	Ground	Rain sensor serial link	Input/ Output	Ignition switch ON		JPMIA0156GB 8.7 V
113 (P)	Ground	Optical sensor	Input	Ignition switch ON	When bright outside of the vehicle	Close to 5 V
					When dark outside of the vehicle	Close to 0 V
116 (BR)	Ground	Stop lamp switch 1	Input	—		Battery voltage
118 (P)	Ground	Stop lamp switch 2 (Without ICC)	Input	Stop lamp switch	OFF (Brake pedal is not depressed)	0 V
					ON (Brake pedal is depressed)	Battery voltage
		Stop lamp switch 2 (With ICC)		Stop lamp switch OFF (Brake pedal is not depressed) and ICC brake hold relay OFF		0 V
				Stop lamp switch ON (Brake pedal is depressed) or ICC brake hold relay ON		Battery voltage
119 (SB)	Ground	Front door lock assembly driver side (Unlock sensor)	Input	Driver door	LOCK status (Unlock sensor switch OFF)	JPMIA0594GB 8.5 - 9.0 V
					UNLOCK status (Unlock switch sensor ON)	0 V
121 (BR)	Ground	Key slot switch	Input	When the Intelligent Key is inserted into key slot		12 V
				When the Intelligent Key is not inserted into key slot		0 V
123 (W)	Ground	IGN feedback	Input	Ignition switch	OFF or ACC	0 V
					ON	Battery voltage
124 (LG)	Ground	Passenger door switch	Input	Passenger door switch	OFF (Door close)	JPMIA0594GB 8.5 - 9.0 V
					ON (Door open)	0 V
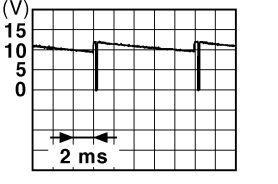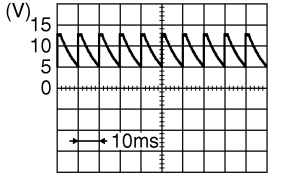
BCM (BODY CONTROL MODULE)

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Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	−	Signal name	Input/ Output			
132 (BG)	Ground	Power window switch communication	Input/ Output	Ignition switch ON		JPMIA0013GB 10.2 V
				Ignition switch OFF or ACC		12 V
134 (GR)	Ground	LOCK indicator lamp	Output	LOCK indicator lamp	OFF	Battery voltage
					ON	0 V
137 (B)	Ground	Receiver and sensor ground	Input	Ignition switch ON		0 V
138 (Y)	Ground	Sensor power supply	Output	Ignition switch	OFF	0 V
					ACC or ON	5.0 V
140 (R)	Ground	Selector lever P/N position	Input	Selector lever	P or N position	12 V
					Except P and N positions	0 V
141 (G)	Ground	Security indicator lamp	Output	Security indicator lamp	ON	0 V
					Blinking	JPMIA0014GB 11.3 V
					OFF	12 V
142 (BG)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper volume dial 4)	All switches OFF	0 V
					Lighting switch 1ST	JPMIA0031GB 10.7 V
					Lighting switch HI	
					Lighting switch 2ND	
					Turn signal switch RH	
143 (P)	Ground	Combination switch OUTPUT 1	Output	Combination switch	All switches OFF (Wiper volume dial 4)	0 V
					Front wiper switch HI (Wiper volume dial 4)	JPMIA0032GB 10.7 V
					Rear wiper switch INT (Wiper volume dial 4)	
					Any of the conditions below with all switches OFF • Wiper volume dial 1 • Wiper volume dial 2 • Wiper volume dial 3 • Wiper volume dial 6 • Wiper volume dial 7	

| Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	−	Signal name	Input/ Output			
144 (G)	Ground	Combination switch OUTPUT 2	Output	Combination switch	All switches OFF (Wiper volume dial 4)	0 V
					Front washer switch ON (Wiper volume dial 4)	JPMIA0033GB 10.7 V
					Rear wiper switch ON (Wiper volume dial 4)	
					Rear washer switch ON (Wiper volume dial 4)	
					Any of the conditions below with all switches OFF • Wiper volume dial 1 • Wiper volume dial 5 • Wiper volume dial 6	
145 (L)	Ground	Combination switch OUTPUT 3	Output	Combination switch (Wiper volume dial 4)	All switches OFF	0 V
					Front wiper switch INT/ AUTO	JPMIA0034GB 10.7 V
					Front wiper switch LO	
					Lighting switch AUTO	
146 (SB)	Ground	Combination switch OUTPUT 4	Output	Combination switch (Wiper volume dial 4)	All switches OFF	0 V
					Front fog lamp switch ON	JPMIA0035GB 10.7 V
					Lighting switch 2ND	
					Lighting switch PASS	
					Turn signal switch LH	
150 (GR)	Ground	Driver door switch	Input	Driver door switch	OFF (Door close)	JPMIA0594GB 8.5 - 9.0 V
					ON (Door open)	0 V
151 (G)	Ground	Rear window defogger relay control	Output	Rear window defogger	Active	0 V
					Not activated	Battery voltage

Wiring Diagram - BCM -

INFOID:0000000007774194

For connector terminal arrangements, harness layouts, and alphabets in a ◇ (option abbreviation; if not described in wiring diagram), refer to GI-13, "Connector Information".
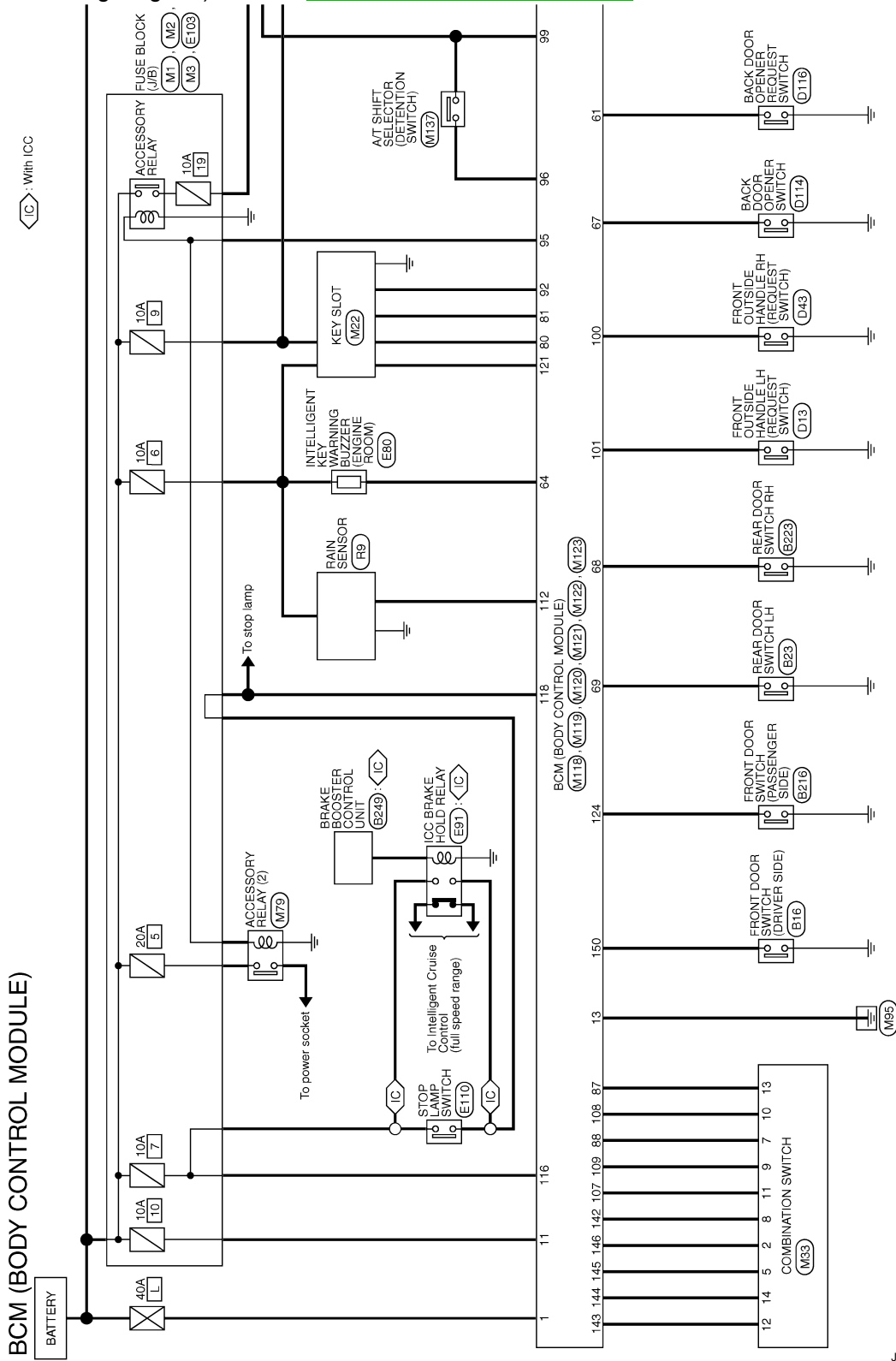
JRMWC4836GB

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JRMWC4837GB

PWC-61
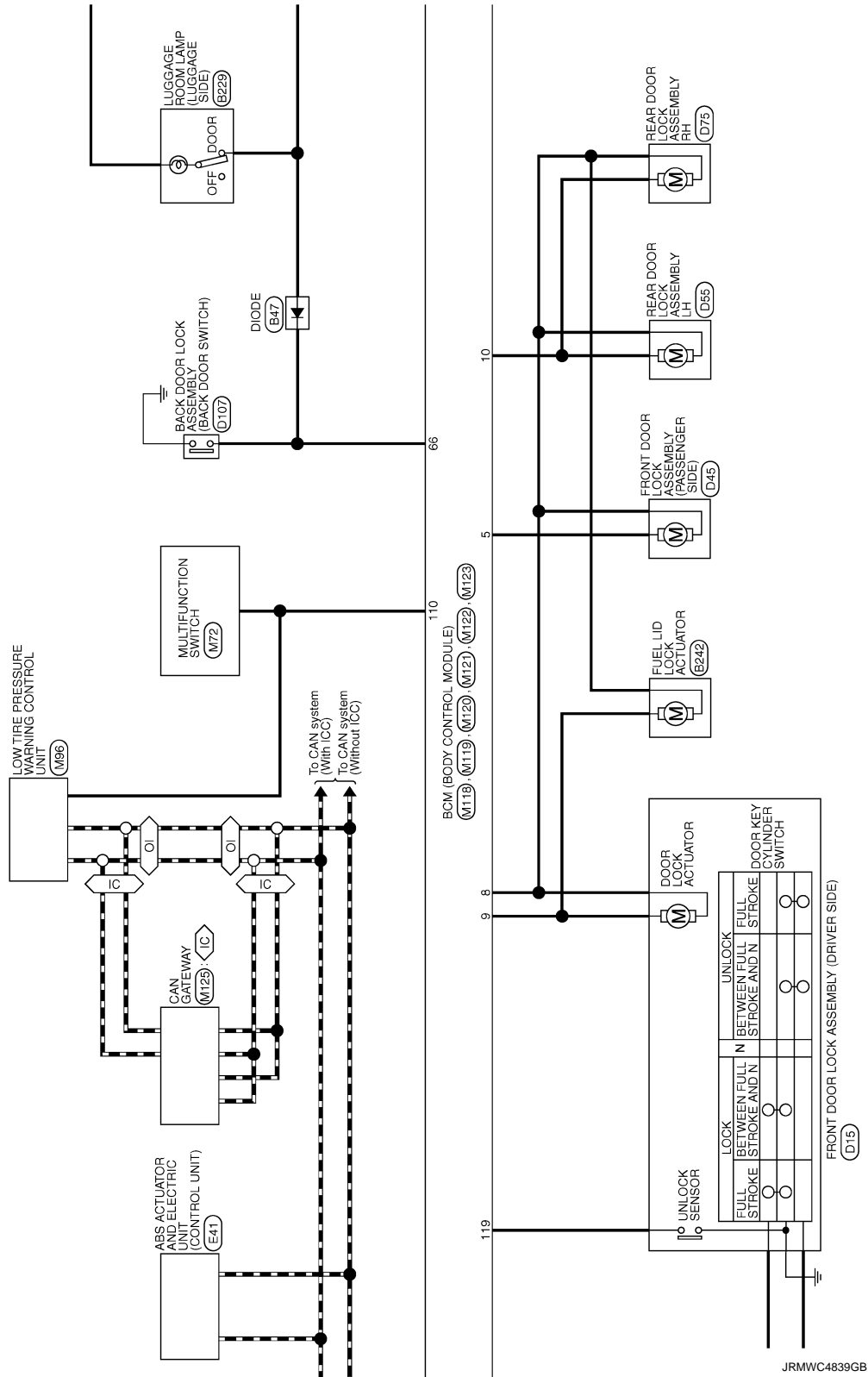
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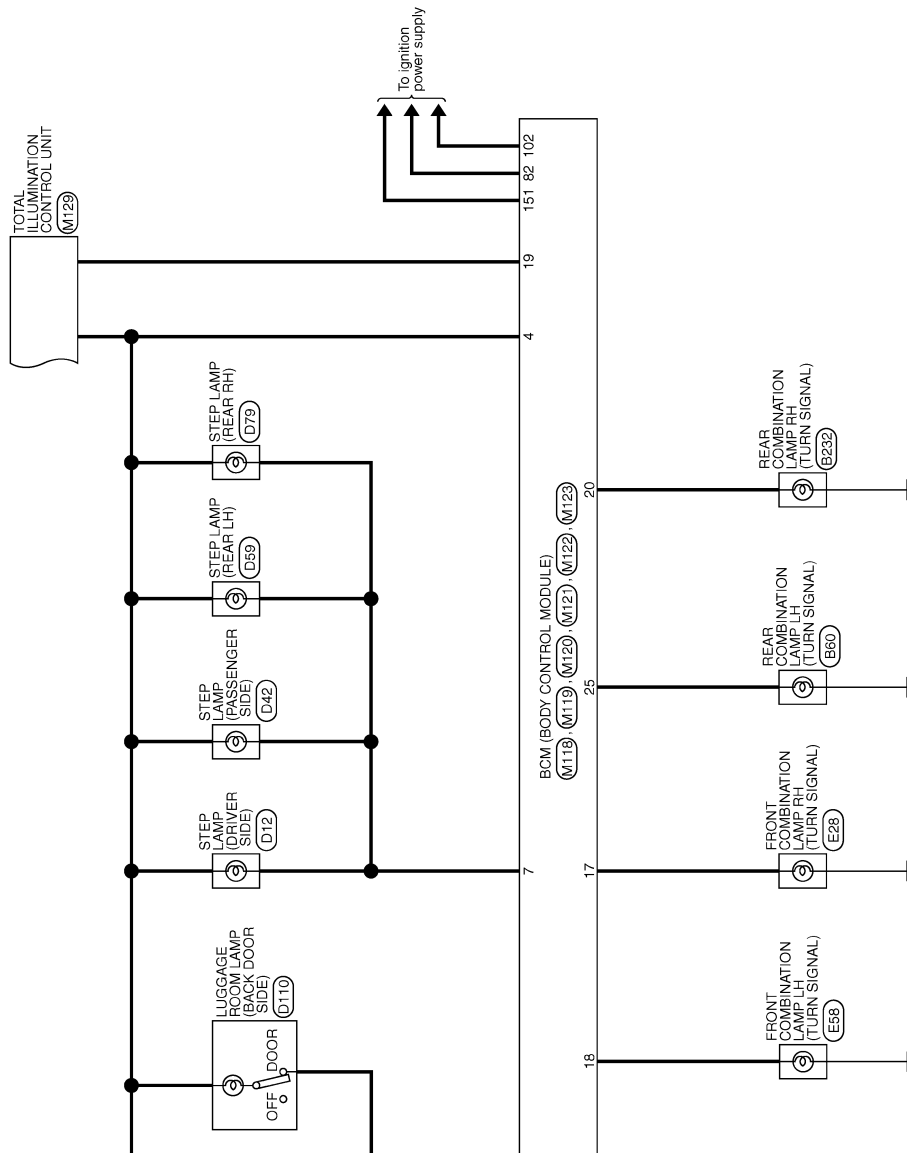
JRMWC4840GB

Fail-safe

INFOID:0000000007774195

FAIL-SAFE CONTROL BY DTC
BCM performs fail-safe control when any DTC are detected.

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

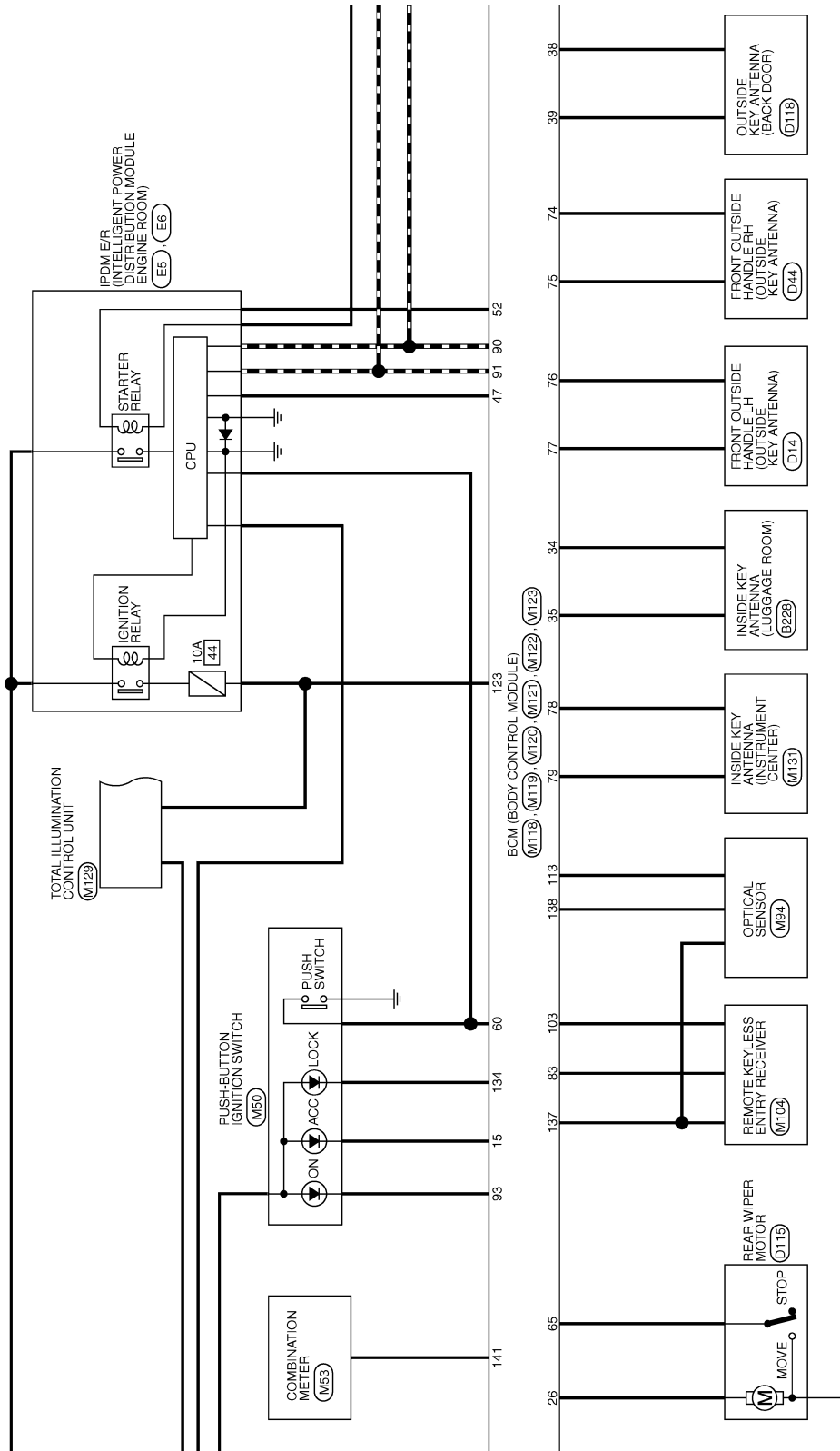| Display contents of CONSULT	Fail-safe	Cancellation
B2190: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC
B2191: DIFFERENCE OF KEY	Inhibit engine cranking	Erase DTC
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2195: ANTI SCANNING	Inhibit engine cranking	Ignition switch ON → OFF
B2560: STARTER CONT RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status becomes consistent • Starter control relay signal • Starter relay status signal
B2608: STARTER RELAY	Inhibit engine cranking	500 ms after the following signal communication status becomes consistent • Starter relay control signal • Starter relay status signal (CAN)
B260A: IGNITION RELAY	Inhibit engine cranking	500 ms after the following conditions are fulfilled • IGN relay (IPDM E/R) control signal: OFF (Battery voltage) • Ignition ON signal (CAN to IPDM E/R): OFF (Request signal) • Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal)
B260F: ENG STATE SIG LOST	Maintains the power supply position attained at the time of DTC detection	When any of the following conditions are fulfilled • Power position changes to ACC • Receives engine status signal (CAN)
B2617: STARTER RELAY CIRC	Inhibit engine cranking	1 second after the starter relay control inside BCM becomes normal
B2618: BCM	Inhibit engine cranking	1 second after the ignition relay (IPDM E/R) control inside BCM becomes normal
B261E: VEHICLE TYPE	Inhibit engine cranking	BCM initialization

FAIL-SAFE CONTROL BY RAIN SENSOR MALFUNCTION
• BCM judges the rain sensor serial link error by the rain sensor serial link condition and detects the rain sensor malfunction by rain sensor malfunction signal.
• When BCM detects the rain sensor serial link error or the rain sensor malfunction while front wiper AUTO operation, BCM operates a fail-safe control.

NOTE:
If rain sensor malfunction is detected when ignition switch is turned OFF ⇒ ON and front wiper switch is INT position, BCM operates a fail-safe control.

REAR WIPER MOTOR PROTECTION
BCM detects the rear wiper stopping position according to the rear wiper stop position signal.
When the rear wiper stop position signal does not change for more than 5 seconds while driving the rear wiper, BCM stops power supply to protect the rear wiper motor.

Condition of cancellation
1. More than 1 minute is passed after the rear wiper stops.
2. Turn rear wiper switch OFF.
3. Operate the rear wiper switch or rear washer switch.

DTC Inspection Priority Chart

INFOID:0000000007774196

If some DTCs are displayed at the same time, perform inspections one by one based on the following priority chart.

Priority	DTC
1	B2562: LOW VOLTAGE
2	• U1000: CAN COMM • U1010: CONTROL UNIT(CAN)

Priority	DTC
3	• B2190: NATS ANTENNA AMP • B2191: DIFFERENCE OF KEY • B2192: ID DISCORD BCM-ECM • B2193: CHAIN OF BCM-ECM • B2195: ANTI SCANNING
4	• B2553: IGNITION RELAY • B2555: STOP LAMP • B2556: PUSH-BTN IGN SW • B2557: VEHICLE SPEED • B2560: STARTER CONT RELAY • B2601: SHIFT POSITION • B2602: SHIFT POSITION • B2603: SHIFT POSI STATUS • B2604: PNP/CLUTCH SW • B2605: PNP/CLUTCH SW • B2608: STARTER RELAY • B260A: IGNITION RELAY • B260F: ENG STATE SIG LOST • B2614: BCM • B2615: BCM • B2616: BCM • B2617: BCM • B2618: BCM • B261A: PUSH-BTN IGN SW • B261E: VEHICLE TYPE • B26EA: KEY REGISTRATION • U0415: VEHICLE SPEED SIG
5	• B2621: INSIDE ANTENNA • B2623: INSIDE ANTENNA
6	B26E7: TPMS CAN COMM

DTC Index

INFOID:0000000007774197

NOTE:
The details of time display are as follows.
• CRNT: A malfunction is detected now.
• PAST: A malfunction was detected in the past.
IGN counter is displayed on Freeze Frame Data. For details of Freeze Frame Data, refer to .

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning lamp ON	Reference
No DTC is detected. Further testing may be required.	—	—	—	—
U1000: CAN COMM	—	—	—	BCS-36
U1010: CONTROL UNIT(CAN)	—	—	—	BCS-37
U0415: VEHICLE SPEED SIG	—	—	—	BCS-38
B2190: NATS ANTENNA AMP	×	—	—	SEC-47
B2191: DIFFERENCE OF KEY	×	—	—	SEC-50
B2192: ID DISCORD BCM-ECM	×	—	—	SEC-51
B2193: CHAIN OF BCM-ECM	×	—	—	SEC-53
B2195: ANTI SCANNING	×	—	—	SEC-54
B2553: IGNITION RELAY	—	×	—	PCS-49
B2555: STOP LAMP	—	×	—	SEC-55

BCM (BODY CONTROL MODULE)

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CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning lamp ON	Reference
B2556: PUSH-BTN IGN SW	—	×	×	SEC-57
B2557: VEHICLE SPEED	×	×	×	SEC-59
B2560: STARTER CONT RELAY	×	×	×	SEC-60
B2562: LOW VOLTAGE	—	×	—	BCS-39
B2601: SHIFT POSITION	×	×	×	SEC-61
B2602: SHIFT POSITION	×	×	×	SEC-64
B2603: SHIFT POSI STATUS	×	×	×	SEC-66
B2604: PNP/CLUTCH SW	×	×	×	SEC-69
B2605: PNP/CLUTCH SW	×	×	×	SEC-71
B2608: STARTER RELAY	×	×	×	SEC-73
B260A: IGNITION RELAY	×	×	×	PCS-51
B260F: ENG STATE SIG LOST	×	×	×	SEC-75
B2614: BCM	—	×	×	PCS-53
B2615: BCM	—	×	×	PCS-55
B2616: BCM	—	×	×	PCS-57
B2617: BCM	×	×	×	SEC-77
B2618: BCM	×	×	×	PCS-59
B261A: PUSH-BTN IGN SW	—	×	×	SEC-79
B261E: VEHICLE TYPE	×	×	× (Turn ON for 15 seconds)	SEC-82
B2621: INSIDE ANTENNA	—	×	—	DLK-100
B2623: INSIDE ANTENNA	—	×	—	DLK-102
B26E7: TPMS CAN COMM	—	—	—	BCS-40
B26EA: KEY REGISTRATION	—	×	× (Turn ON for 15 seconds)	SEC-76

POWER WINDOW MAIN SWITCH

Reference Value
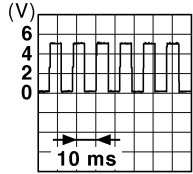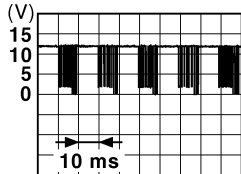
TERMINAL LAYOUT

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

JMKIA5358ZZ

PHYSICAL VALUES

Terminal No. (wire color) +	Terminal No. (wire color) -	Description Signal name	Input/Output	Condition	Voltage [V] (Approx.)
1 (W)	Ground	Rear power window motor LH UP signal	Output	When rear LH switch in power window main switch is in UP operation.	Battery voltage
2 (LG)	Ground	Encoder ground	—	—	0
3 (GR)	Ground	Rear power window motor LH DOWN signal	Output	When rear LH switch in power window main switch is in DOWN operation.	Battery voltage
4 (V)	Ground	Door key cylinder switch LOCK signal	Input	Key position (Neutral → Locked)	5 → 0
5 (SB)	Ground	Rear power window motor RH DOWN signal	Output	When rear RH switch in power window main switch is in DOWN operation.	Battery voltage
6 (Y)	Ground	Door key cylinder switch UNLOCK signal	Input	Key position (Neutral → Unlocked)	5 → 0
7 (BR)	Ground	Rear power window motor RH UP signal	Output	When rear RH switch in power window main switch is in UP operation.	Battery voltage
8 (L)	Ground	Front driver side power window motor UP signal	Output	When front LH switch in power window main switch is in UP operation.	Battery voltage
9 (W)	Ground	Encoder pulse signal 2	Input	When power window motor operates.	(V) 6 4 2 0 ⟷ 10 ms JMKIA0070GB
10 (O)	Ground	Rap signal	Input	IGN SW ON	Battery voltage
				Within 45 second after ignition switch is turned to OFF	Battery voltage
				When driver side or passenger side door is opened during retained power operation	0

POWER WINDOW MAIN SWITCH

< ECU DIAGNOSIS INFORMATION >

| Terminal No. (wire color) +	Terminal No. (wire color) -	Description Signal name	Description Input/Output	Condition	Voltage [V] (Approx.)
11 (G)	Ground	Front driver side power window motor DOWN signal	Output	When front LH switch in power window main switch is in DOWN operation.	Battery voltage
13 (P)	Ground	Encoder pulse signal 1	Input	When power window motor operates.	JMKIA0070GB
14 (V)	Ground	Power window serial link	Input/Output	IGN SW ON or power window timer operating.	JPMIA0013GB
15 (W)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates.	12
17 (B)	Ground	Ground	—	—	0
19 (Y)	Ground	Battery power supply	Input	—	Battery voltage

Wiring Diagram - POWER WINDOW CONTROL SYSTEM -

INFOID:0000000007519739

For connector terminal arrangements, harness layouts, and alphabets in a ⬦ (option abbreviation; if not described in wiring diagram), refer to GI-13, "Connector Information".

JCKWA3800GB

Fail-safe

INFOID:0000000007519741
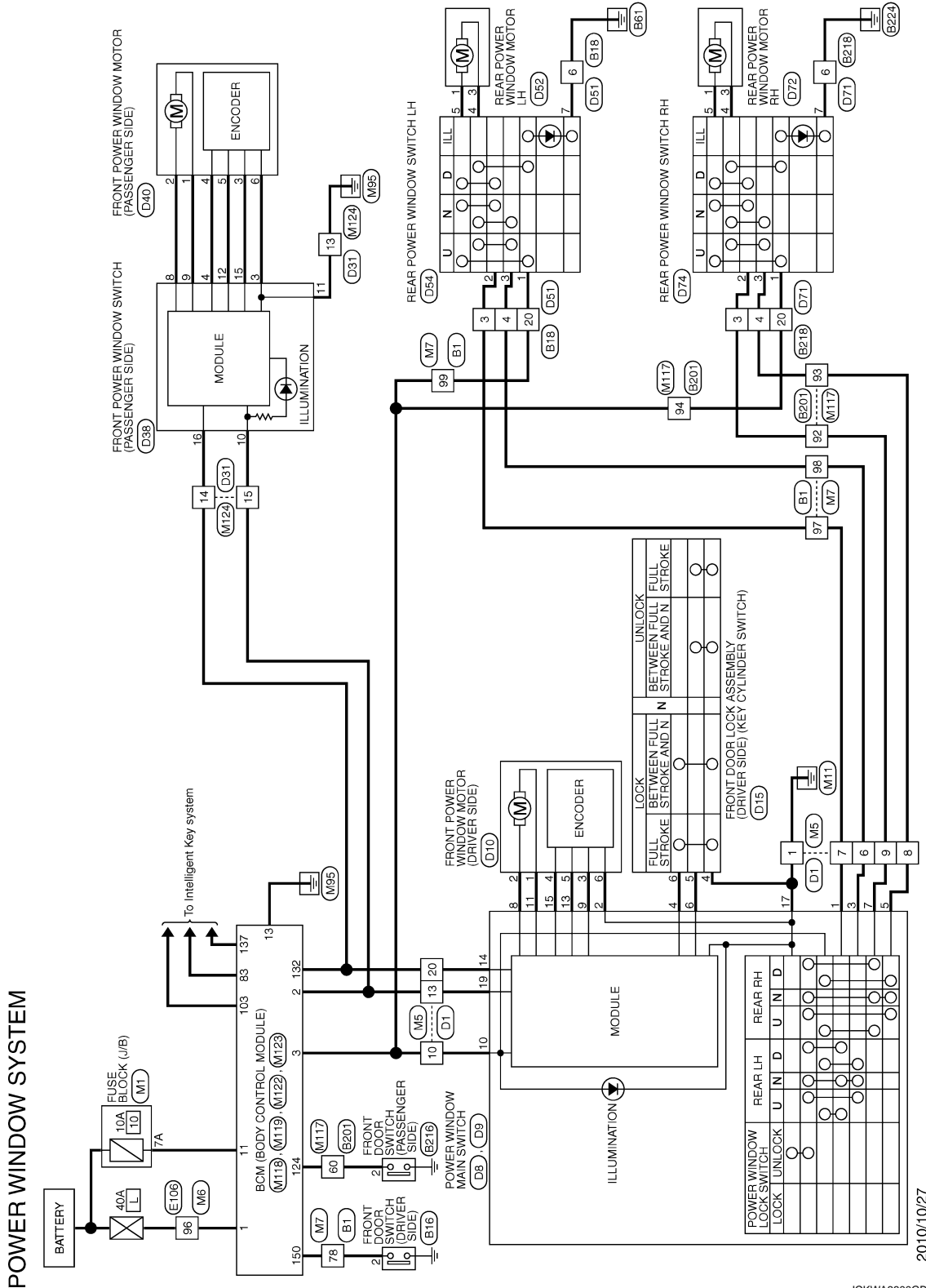
FAIL-SAFE CONTROL

POWER WINDOW MAIN SWITCH

< ECU DIAGNOSIS INFORMATION >

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

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

If fail-safe control, the system changes to a non-initialized condition and the following function do not operate.
• Auto-up operation
• Anti-pinch function
• Retained power function

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

FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Reference Value

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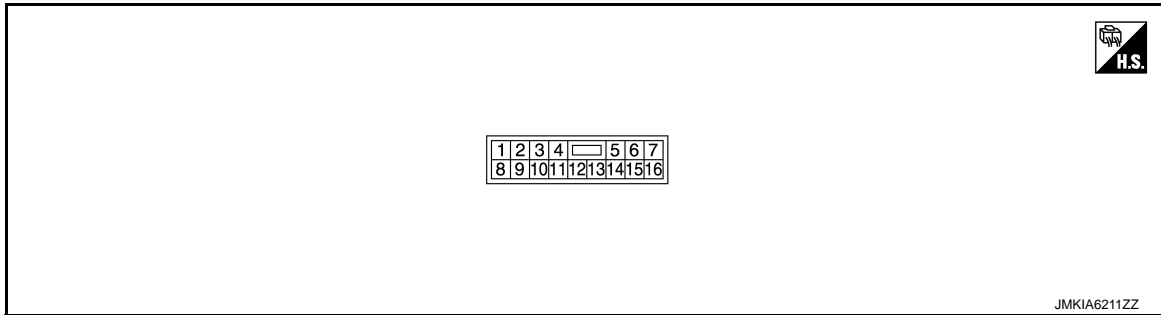
```
1 2 3 4 ⬜ 5 6 7
8 9 10 11 12 13 14 15 16
```

JMKIA6211ZZ

PHYSICAL VALUES

Terminal No. (wire color)		Description		Condition	Voltage [V] (Approx.)
+	-	Signal name	Input/Output		
3 (LG)	Ground	Encoder ground	—	—	0
4 (W)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates	Battery voltage
8 (L)	Ground	Power window motor UP signal	Output	When power window motor is in UP operation.	Battery voltage
9 (G)	Ground	Power window motor DOWN signal	Output	When power window motor is in DOWN operation.	Battery voltage
10 (Y)	Ground	Battery power supply	Input	—	Battery voltage
11 (B)	Ground	Ground	—	—	0
12 (P)	Ground	Encoder pulse signal 1	Input	When power window motor operates.	(V) 6 4 2 0 ←→ 10 ms JMKIA0070GB
15 (R)	Ground	Encoder pulse signal 2	Input	When power window motor operates.	(V) 6 4 2 0 ←→ 10 ms JMKIA0070GB
16 (V)	Ground	Power window serial link	Input/Output	IGN SW ON or power window timer operating.	(V) 15 10 5 0 ←→ 10 ms JPMIA0013GB

Wiring Diagram - POWER WINDOW CONTROL SYSTEM -

INFOID:0000000007816034

For connector terminal arrangements, harness layouts, and alphabets in a ⬡ (option abbreviation; if not described in wiring diagram), refer to GI-13, "Connector Information".

JCKWA3800GB

2010/10/27

FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

< ECU DIAGNOSIS INFORMATION >

Fail-safe

INFOID:0000000007519745

FAIL-SAFE CONTROL

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

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

If fail-safe control, the system changes to a non-initialized condition and the following function do not operate.
• Auto-up operation
• Anti-pinch function
• Retained power function

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

SYMPTOM DIAGNOSIS

NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH

Diagnosis Procedure

INFOID:0000000007519746

1.CHECK BCM POWER SUPPLY AND GROUND CIRCUIT

Check BCM power supply and ground circuit.
Refer to BCS-41, "Diagnosis Procedure".
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-45, "Intermittent Incident".
NO >> GO TO 1.

DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:000000007519747

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

Check power window switch power supply and ground circuit.
Refer to PWC-14, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace the malfunctioning parts.

2.CHECK DRIVER SIDE POWER WINDOW MOTOR

Check driver side power window motor.
Refer to PWC-19, "DRIVER SIDE : Component Function Check".

Is the measurement value within the specification?

YES >> GO TO 3.
NO >> Repair or replace the malfunctioning parts.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-45, "Intermittent Incident".
NO >> GO TO 1.

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

WHEN POWER WINDOW MAIN SWITCH IS OPERATED : Diagnosis Procedure

INFOID:0000000007519748

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

Check front power window switch (passenger side) serial link circuit.
Refer to PWC-36, "FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Component Function Check".
Is the inspection result normal?

   YES   >> GO TO 2.
   NO   >> Repair or replace the malfunctioning parts.

2.CONFIRM THE OPERATION

Confirm the operation again.
Is the result normal?

   YES   >> Check intermittent incident. Refer to GI-45, "Intermittent Incident".
   NO   >> GO TO 1.

WHEN FRONT POWER WINDOW SWITCH (PASSENGER SIDE) IS OPERATED

WHEN FRONT POWER WINDOW SWITCH (PASSENGER SIDE) IS OPERATED : Diagnosis Procedure

INFOID:0000000007519749

1.REPLACE FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Replace front power window switch (passenger side).
Refer to PWC-89, "Removal and Installation"

   >> INSPECTION END

WHEN BOTH POWER WINDOW MAIN SWITCH AND FRONT POWER WINDOW SWITCH ARE OPERATED

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

INFOID:0000000007519750

1.CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE) POWER SUPPLY AND GROUND CIRCUIT

Check front power window switch (passenger side) power supply and ground circuit.
Refer to PWC-15, "FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure".
Is the inspection result normal?

   YES   >> GO TO 2.
   NO   >> Repair or replace the malfunctioning parts.

2.CHECK PASSENGER SIDE POWER WINDOW MOTOR CIRCUIT

Check passenger side power window motor circuit.
Refer to PWC-20, "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-45, "Intermittent Incident".
   NO   >> GO TO 1.

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

WHEN POWER WINDOW MAIN SWITCH IS OPERATED : Diagnosis Procedure

INFOID:0000000007519751

1.CHECK REAR POWER WINDOW SWITCH

Check rear power window switch .
Refer to <u>PWC-17, "Component Function Check"</u>.

Is the inspection result normal?

YES   >> GO TO 2.
NO   >> Repair or replace the malfunctioning parts.

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES   >> Check intermittent incident. Refer to <u>GI-45, "Intermittent Incident"</u>.
NO   >> GO TO 1.

WHEN REAR POWER WINDOW SWITCH LH IS OPERATED

WHEN REAR POWER WINDOW SWITCH LH IS OPERATED : Diagnosis Procedure

INFOID:0000000007519752

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

Check rear power window switch power supply and ground circuit.
Refer to <u>PWC-16, "REAR POWER WINDOW SWITCH : Diagnosis Procedure"</u>.

Is the inspection result normal?

YES   >> GO TO 2.
NO   >> Repair or replace the malfunctioning parts.

2.REPLACE REAR POWER WINDOW SWITCH LH

Replace rear power window switch LH.
Refer to <u>PWC-90, "Removal and Installation"</u>.

>> INSPECTION END

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

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

INFOID:0000000007519753

1.CHECK REAR POWER WINDOW MOTOR LH

Check rear power window motor LH.
Refer to <u>PWC-22, "REAR LH : Component Function Check"</u>.

Is the inspection result normal?

YES   >> GO TO 2.
NO   >> Repair or replace the malfunctioning parts.

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES   >> Check intermittent incident. Refer to <u>GI-45, "Intermittent Incident"</u>.
NO   >> GO TO 1.

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

WHEN POWER WINDOW MAIN SWITCH IS OPERATED : Diagnosis Procedure

INFOID:0000000007519754

1.CHECK REAR POWER WINDOW SWITCH

Check rear power window switch .
Refer to PWC-17, "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-45, "Intermittent Incident".
 NO >> GO TO 1.

WHEN REAR POWER WINDOW SWITCH RH IS OPERATED

WHEN REAR POWER WINDOW SWITCH RH IS OPERATED : Diagnosis Procedure

INFOID:0000000007519755

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

Check rear power window switch power supply and ground circuit.
Refer to PWC-16, "REAR POWER WINDOW SWITCH : Diagnosis Procedure".
Is the inspection result normal?
 YES >> GO TO 2.
 NO >> Repair or replace the malfunctioning parts.

2.REPLACE REAR POWER WINDOW SWITCH RH

Replace rear power window switch RH.
Refer to PWC-90, "Removal and Installation".

 >> INSPECTION END

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

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

INFOID:0000000007519756

1.CHECK REAR POWER WINDOW MOTOR RH

Check rear power window motor RH.
Refer to PWC-23, "REAR RH : 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-45, "Intermittent Incident".
 NO >> GO TO 1.

ANTI-PINCH FUNCTION DOES NOT OPERATE
DRIVER SIDE

DRIVER SIDE : Diagnosis Procedure

INFOID:0000000007519757

1.PERFORM INITIALIZATION PROCEDURE

Initialization procedure is executed and operation is confirmed.
Refer to PWC-5, "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 (DRIVER SIDE) CIRCUIT

Check encoder (driver side) circuit.
Refer to PWC-28, "DRIVER 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-45, "Intermittent Incident".
 NO   >> GO TO 1.

PASSENGER SIDE

PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000007519758

1.PERFORM INITIALIZATION PROCEDURE

Initialization procedure is executed and operation is confirmed.
Refer to PWC-5, "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 (PASSENGER SIDE) CIRCUIT

Check encoder (passenger side) circuit.
Refer to PWC-30, "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-45, "Intermittent Incident".
 NO   >> GO TO 1.

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NORMALLY
DRIVER SIDE

DRIVER SIDE : Diagnosis Procedure

INFOID:0000000007519759

1.PERFORM INITIALIZATION PROCEDURE

Initialization procedure is executed and operation is confirmed.
Refer to PWC-5, "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 (DRIVER SIDE) CIRCUIT

Check encoder (driver side) circuit.
Refer to PWC-28, "DRIVER 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-45, "Intermittent Incident".
 NO >> GO TO 1.

PASSENGER SIDE

PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000007519760

1.PERFORM INITIALIZAITON PROCEDURE

Initialization procedure is executed and operation is confirmed.
Refer to PWC-5, "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 (PASSENGER SIDE) CIRCUIT

Check encoder (passenger side) circuit.
Refer to PWC-30, "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-45, "Intermittent Incident".
 NO >> GO TO 1.

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPER-ATE PROPERLY

Diagnosis Procedure

INFOID:0000000007519761

1.CHECK DOOR SWITCH

Check door switch.
Refer to PWC-26, "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-45, "Intermittent Incident".
NO   >> GO TO 1.

POWER WINDOW DOWN FUNCTION DOES NOT OPERATE WITH KEY CYLINDER OPERATION

Diagnosis Procedure

INFOID:0000000007519762

1.PERFORM INITIALIZATION PROCEDURE

Initialization procedure is executed and operation is confirmed.
Refer to PWC-5, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" .

Is the inspection result normal?

YES   >> INSPECTION END
NO   >> GO TO 2.

2.CHECK DRIVER SIDE DOOR LOCK ASSEMBLY (KEY CYLINDER SWITCH)

Check driver side door lock assembly (key cylinder switch).
Refer to PWC-33, "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-45, "Intermittent Incident".
NO   >> GO TO 1.

POWER WINDOW DOWN FUNCTION DOES NOT WORK WHEN OPERATING WITH INTELLIGENT KEY

Description

INFOID:0000000007519763

NOTE:
Before performing the diagnosis in the following procedure, check " Work Flow". Refer to <u>DLK-9, "Work Flow"</u>.

Diagnosis Procedure

INFOID:0000000007519764

1.CHECK REMOTE KEYLESS ENTRY FUNCTION

Check remote keyless entry function.

<u>Does door lock/unlock with Intelligent key button?</u>

YES >> GO TO 2.
NO >> Go to <u>DLK-136, "Description"</u>.

2.CHECK POWER WINDOW OPERATION

Check power window operation.

<u>Does power window up/down with power window main switch?</u>

YES >> GO TO 3.
NO >> Go to <u>PWC-14, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure"</u>.

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

Check "PW DOWN SET" setting in "WORK SUPPORT".
Refer to <u>DLK-61, "INTELLIGENT KEY : CONSULT Function (BCM - INTELLIGENT KEY)"</u>.

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

YES >> GO TO 4.
NO >> Set "PW DOWN SET" setting in "WORK SUPPORT".

4.CONFIRM THE OPERATION

Confirm the operation again.

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

YES >> Check intermittent incident. Refer to <u>GI-45, "Intermittent Incident"</u>.
NO >> GO TO 1.

< SYMPTOM DIAGNOSIS >

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

Diagnosis Procedure

INFOID:000000007519765

1.REPLACE POWER WINDOW MAIN SWITCH

Replace power window main switch. Refer to PWC-88, "Removal and Installation".

>> INSPECTION END

POWER WINDOW SWITCH DOES NOT ILLUMINATE

DRIVER SIDE

DRIVER SIDE : Diagnosis Procedure
INFOID:0000000007519766

1.REPLACE POWER WINDOW MAIN SWITCH

Replace power window main switch.
Refer to PWC-88, "Removal and Installation".

>> INSPECTION END

PASSENGER SIDE

PASSENGER SIDE : Diagnosis Procedure
INFOID:0000000007519767

1.REPLACE FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Replace front power window switch (passenger side).
Refer to PWC-89, "Removal and Installation".

>> INSPECTION END

REAR LH

REAR LH : Diagnosis Procedure
INFOID:0000000007519768

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

Check rear power window switch power supply and ground circuit.
Refer to PWC-16, "REAR POWER WINDOW SWITCH : Diagnosis Procedure".
Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace harness.

2.REPLACE REAR POWER WINDOW SWITCH LH

Replace rear power window switch LH.
Refer to PWC-90, "Removal and Installation".

>> INSPECTION END

REAR RH

REAR RH : Diagnosis Procedure
INFOID:0000000007519769

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

Check rear power window switch power supply and ground circuit.
Refer to PWC-16, "REAR POWER WINDOW SWITCH : Diagnosis Procedure".
Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace harness.

2.REPLACE REAR POWER WINDOW SWITCH RH

Replace rear power window switch RH.
Refer to PWC-90, "Removal and Installation".

>> INSPECTRION END

PRECAUTION

PRECAUTIONS

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

INFOID:0000000007519770

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the "SRS AIR BAG" and "SEAT BELT" of this Service Manual.

WARNING:
Always observe the following items for preventing accidental activation.
- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see "SRS AIR BAG".**
- **Never use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.**

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

WARNING:
Always observe the following items for preventing accidental activation.
- **When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**
- **When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.**

REMOVAL AND INSTALLATION
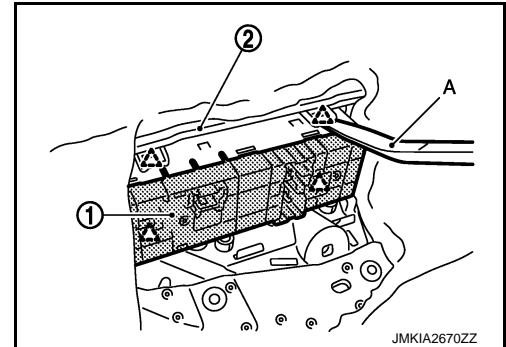## POWER WINDOW MAIN SWITCH

Removal and Installation

INFOID:0000000007519771

REMOVAL
1. Remove the front door finisher.
   Refer to INT-11, "Exploded View" and INT-11, "Removal and Installation".
2. Power window main switch (1) is removed from power window main switch finisher (2) using remover tool (A).

CAUTION:
Never fold pawl of front door finisher.

JMKIA2670ZZ

INSTALLATION
Install in the reverse order of removal.
NOTE:
If power window main switch is replaced or is removed, it is necessary to perform the initialization procedure.

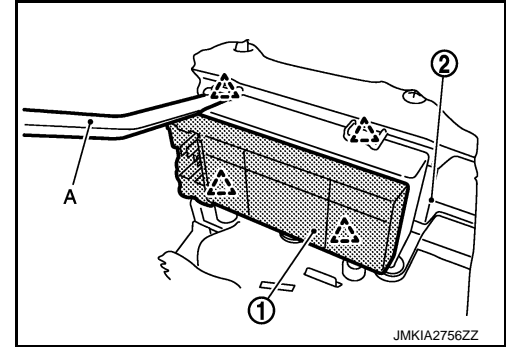# FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Removal and Installation

INFOID:000000007519772

REMOVAL

1. Remove the front door finisher.
   Refer to INT-11, "Exploded View" and INT-11, "Removal and Installation".
2. Front power window switch (passenger side) (1) is removed from front power window switch finisher (2) using remover tool (A).

CAUTION:
Never fold pawl of front door finisher.

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INSTALLATION

Install in the reverse order of removal.

NOTE:
If front power window switch (passenger side) is replaced or is removed, it is necessary to perform the initialization procedure.

REAR POWER WINDOW SWITCH

Removal and Installation
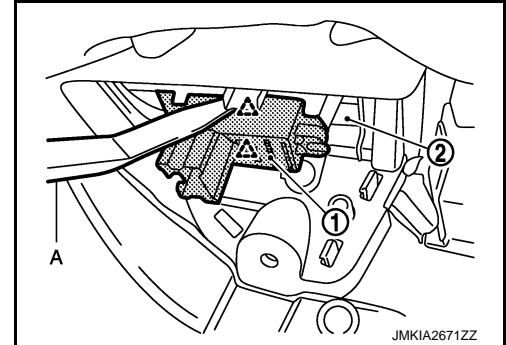
REMOVAL

1. Remove the rear door finisher.
   Refer to INT-14, "Exploded View" and INT-14, "Removal and Installation".
2. Rear power window switch (1) is removed from rear power win-
   dow switch finisher (2) using remover tool (A).

CAUTION:
Never fold pawl of rear door finisher.

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INSTALLATION

Install in the reverse order of removal.