SECTION PWC

POWER WINDOW CONTROL SYSTEM

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BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

WorkFlow

INFOID:0000000001515862

DETAILED FLOW

1.OBTAIN INFORMATION ABOUT SYMPTOM

Interview the customer to obtain the malfunction information (conditions and environment when the malfunction occurred) as much 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 and then identify where to start performing the diagnosis based on possible causes and symptoms.

>> GO TO 4.

4.IDENTIFY THE MALFUNCTIONING PARTS WITH “COMPONENT DIAGNOSIS”

Perform the diagnosis with “Component diagnosis” of the applicable system.

>> GO TO 5.

5.REPAIR OR REPLACE THE MALFUNCTIONING PARTS

Repair or replace the specified malfunctioning parts.

>> GO TO 6.

6.FINAL CHECK

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

Are the malfunctions corrected?

YES >> INSPECTION END
NO >> GO TO 3.

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description

INFOID:0000000001515863

If any of the following work has been done Initial setting is necessary.
- Power supply to the power window main switch or power window motor is cut off by the removal of battery terminal or the battery fuse is blown.
- Disconnection and connection of power window main switch harness connector.
- Removal and installation of motor from regulator assembly.
- Operation of regulator assembly as an independent unit.
- Removal and installation of glass.
- Removal and installation of door glass run.

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

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

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement

INFOID:0000000001515864

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

CHECK ANTI-PINCH FUNCTION
1. Fully open the door window.
2. Place a piece of wood near fully closed position.
3. Close door glass completely with AUTO-UP.

- Check that glass lowers for approximately 150 mm or 2 seconds without pinching piece of wood and stops.
- Check that glass does not rise when operating the power window main switch while lowering.

CAUTION:
- **Perform initial setting when auto-up operation or anti-pinch function does not operate normally.**
- **Check that AUTO-UP operates before inspection when system initialization is performed.**
- **Do not check with hands and other body parts because they may be pinched. Do not get pinched.**
- **It may switch to fail-safe mode if open/close operation is performed continuously without full close. Perform initial setting in that situation. Refer to PWC-71, "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:0000000001515865

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

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Re-

quirement

INFOID:0000000001515866

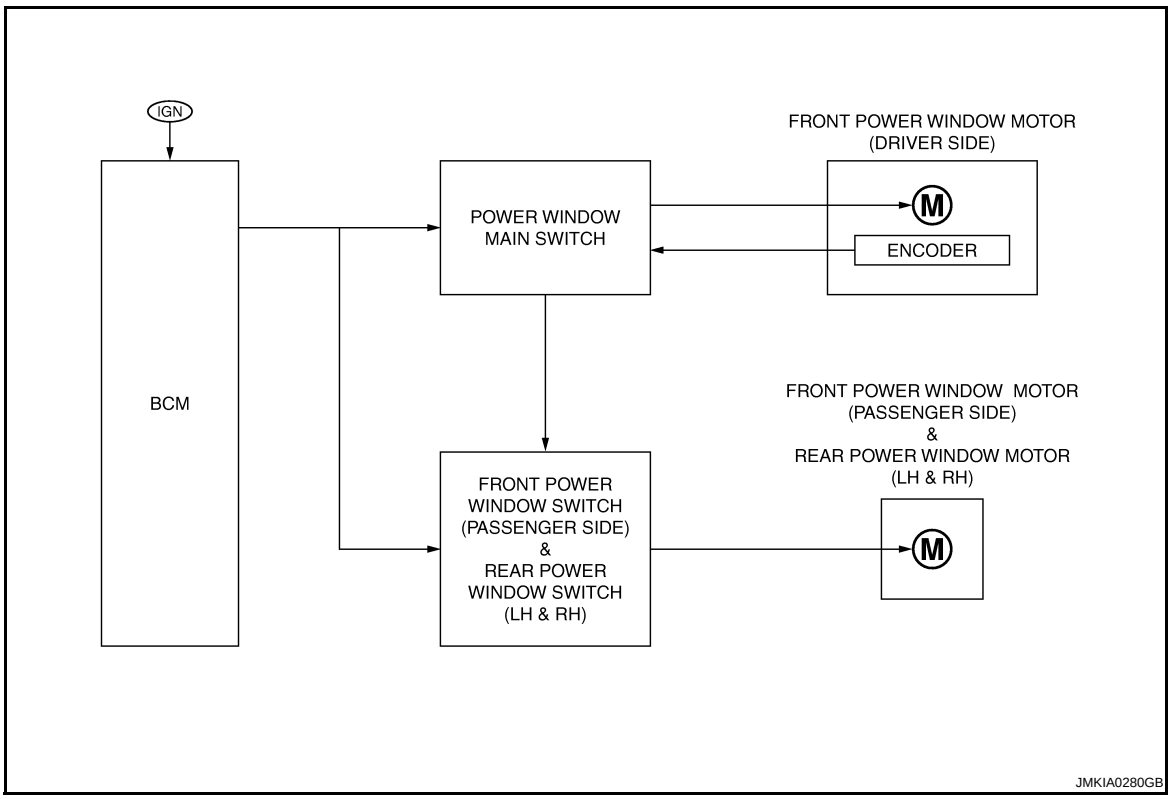
Refer to PWC-4, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" for initialization procedure and check anti-pinch function.

FUNCTION DIAGNOSIS

POWER WINDOW SYSTEM

System Diagram

INFOID:0000000001505594



System Description

INFOID:0000000001505595

POWER WINDOW MAIN SWITCH

INPUT/OUTPUT SIGNAL CHART

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

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

INPUT/OUTPUT SIGNAL CHART

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

POWER WINDOW OPERATION

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

POWER WINDOW AUTO-OPERATION (FRONT DRIVER SIDE)

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

POWER WINDOW LOCK

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

ANTI-PINCH OPERATION (FRONT DRIVER SIDE)

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

OPERATION CONDITION

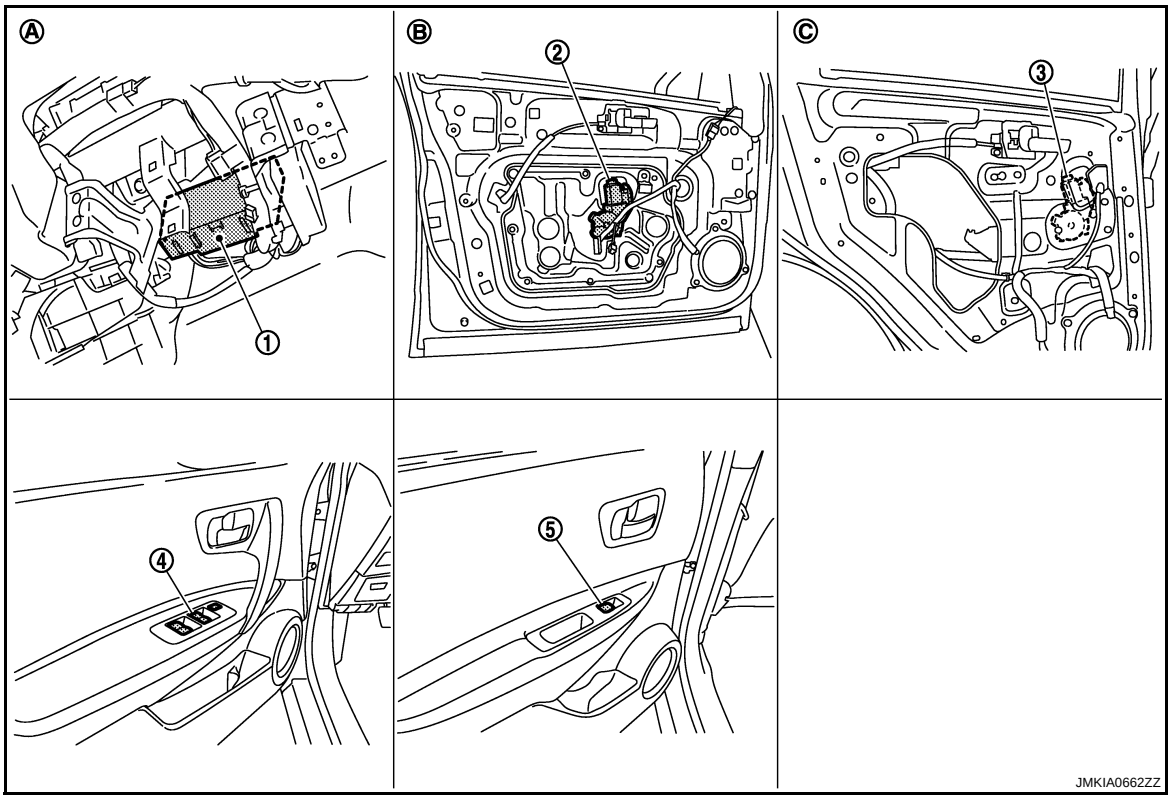
- When front door glass (driver side) AUTO-UP operation is performed (anti-pinch function does not operate just before the door glass closes and is fully closed)

NOTE:

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

Component Parts Location

INFOID:0000000001505596



1. BCM
   M65, M66, M67
2. Front power window motor (driver side)
   LHD:D7
   RHD:D27
3. Rear power window motor LH
   LHD:D82
   RHD:D112
4. Power window main switch
   LHD:D5, D6
   RHD:D25, D26
5. Rear power window switch LH
   LHD:D83
   RHD:D113

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

Component Description

INFOID:0000000001505597

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

COMPONENT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

BCM

BCM : Diagnosis Procedure

INFOID:0000000001505599

1.CHECK FUSE AND FUSIBLE LINK

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

Terminal No.	Signal name	Fuse and fusible link No.
3	Ignition power supply	1 (10A)
41	Battery power supply	10 (10A)
57		J (50A)

Is the fuse fusing?

YES >> Replace the blown fuse or fusible link after repairing the affected circuit if a fuse or fusible link is blown.
NO >> GO TO 2.

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connectors.
3. Check voltage between BCM harness connector and ground.

Terminals			Condition	Voltage (Approx.)
(+)		(–)		
BCM				
Connector	Terminal			
M65	3	Ground	Ignition switch ON	Battery voltage
M66	41		Ignition switch OFF	
M67	57			

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M67	55		Existed

Is the inspection result normal?

YES >> INSPECTION END.
NO >> Repair harness or connector.

POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH : Diagnosis Procedure

INFOID:0000000001505600

1.CHECK POWER SUPPLY CIRCUIT

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

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

():RHD models

Is the inspection result normal?

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

2.CHECK GROUND CIRCUIT

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

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

():RHD models

Is the inspection result normal?

YES >> INSPECTION END.
NO >> Repair or replace harness.

3.CHECK HARNESS CONTINUITY

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

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

4. Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M67	53		Not existed
	58		

():RHD models

Is the inspection result normal?

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

4.CHECK BCM OUTPUT SIGNAL

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

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

Is the inspection result normal?

YES >> GO TO 5.
NO >> Replace BCM. Refer to BCS-68, "Exploded View".

5.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END.

FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure

INFOID:0000000001505601

1.CHECK POWER SUPPLY CIRCUIT

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

Terminal			Condition	Voltage (V) (Approx.)
(+)		(–)		
Front power window switch (passenger side) connector	Terminal			
D45 (D65)	1	Ground	Ignition switch ON	Battery voltage

():RHD models

Is the inspection result normal?

YES >> GO TO 2. (LHD models)
YES >> INSPETCION END. (RHD models)
NO >> GO TO 3.

2.CHECK GROUND 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 ground.

Front power window switch (passenger side) connector	Terminal	Ground	Continuity
D45	7		Existed

Is the inspection result normal?

YES >> INSPECTION END.
NO >> Repair or replace harness.

3.CHECK HARNESS CONTINUITY

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

BCM connector	Terminal	Front power window switch (passenger side) connector	Terminal	Continuity
M67	53	D45 (D65)	1	Existed

4. Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M67	53		Not existed

():RHD models

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END.

REAR POWER WINDOW SWITCH

REAR POWER WINDOW SWITCH : Diagnosis Procedure

INFOID:0000000001505602

1.CHECK POWER SUPPLY CIRCUIT

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

Terminal				Condition	Voltage (V) (Approx.)
(+)			(–)		
Rear power window switch connector		Terminal			
LH	D83 (D113)	1	Ground	Ignition switch ON	Battery voltage
RH	D103 (D93)				

():RHD models

Is the inspection result normal?

YES >> GO TO 2. (LHD models)
YES >> INSPECTION END. (RHD models)
NO >> GO TO 3.

2.CHECK GROUND CIRCUIT

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

Rear power window switch connector		Terminal	Ground	Continuity
LH	D83	7	Ground	Existed
RH	D103			

Is the inspection result normal?

YES >> INSPECTION END.
NO >> Repair or replace harness.

3.CHECK HARNESS CONTINUITY

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

BCM connector	Terminal	Rear power window switch connector		Terminal	Continuity
M67	53	LH	D83 (D113)	1	Existed
		RH	D103 (D93)		

3. Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M67	53	Ground	Not existed

():RHD models

Is the inspection result normal?

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

4.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END.

FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Description

INFOID:0000000001505603

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

Component Function Check

INFOID:0000000001505604

1. CHECK POWER WINDOW MOTOR FUNCTION

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

Is the inspection result normal?

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

Diagnosis Procedure

INFOID:0000000001505605

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

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

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

():RHD models

Is the inspection result normal?

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

2. CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

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

Is the inspection result normal?

YES >> GO TO 5.
NO >> Replace front power window switch (passenger side). Refer to PWC-83, "Removal and Installation".

3. CHECK FRONT WINDOW SWITCH (PASSENGER SIDE) CIRCUIT

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

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

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

Power window main switch connector	Terminal	Ground	Continuity
D5 (D25)	8		Not existed
	11		

():RHD models

Is the inspection result normal?

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

4.CHECK POWER WINDOW MAIN SWITCH OUTPUT SIGNAL

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

Terminal			Power window switch condition	Voltage (V) (Approx.)
(+)		(–)		
Power window main switch connector	Terminal			
D5 (D25)	8	Ground	UP	Battery voltage
			DOWN	0
	11		UP	0
			DOWN	Battery voltage

():RHD models

Is the inspection result normal?

YES >> GO TO 5.
NO >> Replace power window main switch. Refer to PWC-83, "Removal and Installation".

5.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END.

Component Inspection

INFOID:0000000001505606

1.CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Check front power window switch (passenger side).

Front power window switch (passenger side)	Terminal		Front power window switch condition	Continuity
D45 (D65)	1	5	UP	Existed
	3	4		
	3	4	NEUTRAL	
	2	5		
	1	4	DOWN	
	2	5		

():RHD models

Is the inspection result normal?

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

REAR POWER WINDOW SWITCH

Description

INFOID:0000000001505607

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

Component Function Check

INFOID:0000000001505608

1. CHECK REAR POWER WINDOW MOTOR FUNCTION

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

Is the inspection result normal?

YES >> Rear power window switch is OK.
NO >> Refer to PWC-16, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000001505609

1. CHECK REAR POWER WINDOW SWITCH INPUT SIGNAL

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

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

():RHD models

Is the inspection result normal?

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

2. CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.
Refer to PWC-17, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Replace rear power window switch. Refer to PWC-83, "Removal and Installation".

3. CHECK REAR POWER WINDOW SWITCH CIRCUIT

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

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

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

Power window main switch		Ground	Continuity
Connector	Terminal		
D5 (D25)	1	Ground	Not existed
	3		
	5		
	7		

():RHD models

Is the inspection result normal?

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

4.CHECK POWER WINDOW MAIN SWITCH OUTPUT SIGNAL

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

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

():RHD models

Is the inspection result normal?

YES >> GO TO 5.
NO >> Replace power window main switch. Refer to PWC-83, "Removal and Installation".

5.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END.

Component Inspection

INFOID:0000000001505610

1.CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.

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

():RHD models

Is the inspection result normal?

YES >> Rear power window switch is OK.
NO >> Replace rear power window switch. Refer to PWC-83, "Removal and Installation".

POWER WINDOW MOTOR
DRIVER SIDE

DRIVER SIDE : Description

INFOID:0000000001505611

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

DRIVER SIDE : Component Function Check

INFOID:0000000001505612

1. CHECK POWER WINDOW MOTOR CIRCUIT

Check power window motor operation with power window main switch.

Is the inspection result normal?

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

DRIVER SIDE : Diagnosis Procedure

INFOID:0000000001505613

1. CHECK POWER WINDOW MOTOR (DRIVER SIDE) INPUT SIGNAL

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

Terminal			Power window main switch Condition	Voltage (V) (Approx.)
(+)		(–)		
Power window motor (driver side) connector	Terminal			
D7 (D27)	2	Ground	UP	Battery voltage
			DOWN	0
	1		UP	0
			DOWN	Battery voltage

():RHD models

Is the inspection result normal?

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

2. CHECK POWER WINDOW MOTOR CIRCUIT

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

Power window main switch connector	Terminal	Front power window motor (driver side) connector	Terminal	Continuity
D5 (D25)	16	D7 (D27)	2	Existed
	12		1	

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

Power window main switch connector	Terminal		Continuity
D5 (D25)	16	Ground	Not existed
	12		

():RHD models

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK POWER WINDOW MAIN SWITCH OUTPUT SIGNAL

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

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

():RHD models

Is the inspection result normal?

YES >> GO TO 5.
NO >> Replace power window main switch. Refer toPWC-83, "Removal and Installation".

4.CHECK POWER WINDOW MOTOR

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

Is the inspection result normal?

YES >> GO TO 5.
NO >> Replace power window motor (driver side). Refer to GW-20, "Removal and Installation".

5.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END.

DRIVER SIDE : Component Inspection

INFOID:0000000001505614

1.CHECK POWER WINDOW MOTOR

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

Front power window motor (driver side) connector	Terminal		Motor condition
	(+)	(–)	
D7 (D27)	1	2	DOWN
	2	1	UP

():RHD models

Is the inspection result normal?

YES >> Power window motor (driver side) is OK.
NO >> Replace front power window motor (driver side). Refer to GW-20, "Removal and Installation".

PASSENGER SIDE

PASSENGER SIDE : Description

INFOID:0000000001505615

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

PASSENGER SIDE : Component Function Check

INFOID:0000000001505616

1. CHECK POWER WINDOW MOTOR CIRCIUT

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

Is the inspection result normal?

YES >> Power window motor (passenger side) is OK.
NO >> Refer to PWC-21, "PASSENGER SIDE : Diagnosis Procedure".

PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000001505617

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

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

Terminal			Front power window switch (passenger side) condition	Voltage (V) (Approx.)
(+)		(–)		
Front power window motor (passenger side) connector	Terminal			
D46 (D66)	2	Ground	UP	Battery voltage
			DOWN	0
	1		UP	0
			DOWN	Battery voltage

():RHD models

Is the inspection result normal?

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

2.CHECK POWER WINDOW MOTOR CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect front power window switch (passenger side) connector and front power window motor (passenger side) connector.
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) connector	Terminal	Front power window motor (passenger side) connector	Terminal	Continuity
D45 (D65)	4	D46 (D66)	1	Existed
	5		2	

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

Front power window switch (passenger side) connector	Terminal	Ground	Continuity
D45 (D65)	4		Not existed
	5		

():RHD models

Is the inspection result normal?

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

3.CHECK FRONT POWER WINDOW MOTOR (PASSENGER SIDE)

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

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace front power window motor (passenger side). Refer to GW-25, "Removal and Installation".

4.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END.

PASSENGER SIDE : Component Inspection

INFOID:0000000001505618

1.CHECK FRONT POWER WINDOW MOTOR (PASSENGER SIDE)

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

Front power window motor (passenger side) connector	Terminal		Motor condition
	(+)	(–)	
D46 (D66)	1	2	DOWN
	2	1	UP

():RHD models

Is the inspection result normal?

YES >> Power window motor (passenger side) is OK.
NO >> Replace front power window motor (passenger side). Refer to GW-25, "Removal and Installation".

REAR LH

REAR LH : Description

INFOID:0000000001505619

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:0000000001505620

1.CHECK POWER WINDOW MOTOR CURCUIT

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

Is the inspection result normal?

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

REAR LH : Diagnosis Procedure

INFOID:0000000001505621

1.CHECK REAR POWER WINDOW MOTOR LH INPUT SIGNAL

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

Terminal			Power window switch condition	Voltage (V) (Approx.)
(+)		(–)		
Rear power window motor LH connector	Terminal			
D82 (D112)	1	Ground	UP	Battery voltage
			DOWN	0
	3		UP	0
			DOWN	Battery voltage

():RHD models

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK HARNESS CONTINUITY

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

Rear power window switch LH connector	Terminal	Rear power window motor LH connector	Terminal	Continuity
D83 (D113)	4	D82 (D112)	3	Existed
	5		1	

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

Rear power window switch LH connector	Terminal	Ground	Continuity
D83 (D113)	4		Not existed
	5		

():RHD models

Is the inspection result normal?

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

3.CHECK REAR POWER WINDOW MOTOR LH

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-25, "Removal and Installation".

4.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END.

REAR LH : Component Inspection

INFOID:0000000001505622

COMPONENT INSPECTION

1.CHECK POWER WINDOW MOTOR

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

Rear power window motor LH connector	Terminal		Motor condition
	(+)	(–)	
D82 (D112)	3	1	DOWN
	1	3	UP

():RHD models

Is the inspection result normal?

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

REAR RH

REAR RH : Description

INFOID:0000000001505623

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:0000000001505624

1. CHECK POWER WINDOW MOTOR CIRCUIT

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

Is the inspection result normal?

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

REAR RH : Diagnosis Procedure

INFOID:0000000001505625

1. CHECK REAR POWER WINDOW MOTOR RH INPUT SIGNAL

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

Terminal			Rear power window switch RH condition	Voltage (V) (Approx.)
(+)		(–)		
Rear power window motor RH connector	Terminal			
D102 (D92)	1	Ground	UP	Battery voltage
			DOWN	0
	3		UP	0
			DOWN	Battery voltage

():RHD models

Is the inspection result normal?

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

2. CHECK HARNESS CONTINUITY

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

Rear power window switch RH connector	Terminal	Rear power window motor RH connector	Terminal	Continuity
D103 (D93)	4	D102 (D92)	3	Existed
	5		1	

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

Rear power window switch RH connector	Terminal	Ground	Continuity
D103 (D93)	4		Not existed
	5		

():RHD models

Is the inspection result normal?

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

3.CHECK REAR POWER WINDOW MOTOR RH

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-25, "Removal and Installation".

4.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END.

REAR RH : Component Inspection

INFOID:0000000001505626

COMPONENT INSPECTION

1.CHECK REAR POWER WINDOW MOTOR RH

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
	(+)	(–)	
D102 (D92)	3	1	DOWN
	1	3	UP

():RHD models

Is the inspection result normal?

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

ENCODER CIRCUIT

Description

INFOID:0000000001529999

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

Component Function Check

INFOID:0000000001530000

1.CHECK ENCODER OPERATION

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

Is the inspection result normal?

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

Diagnosis Procedure

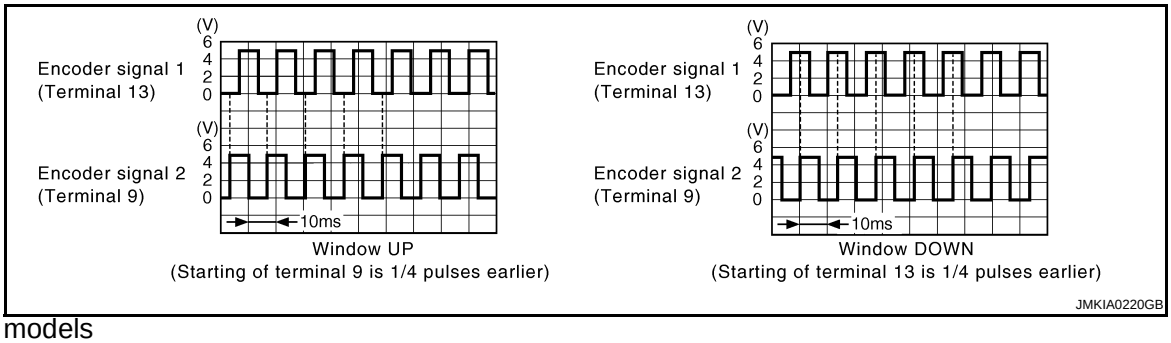
INFOID:0000000001530001

Encoder Circuit Check

1.CHECK ENCODER OPERATION

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

Terminals			Signal (Reference value)
(+)		(–)	
Power window main switch connector	Terminal		
D5 (D25)	9	Ground	Refer to following signal
	13		



():RHD models

Is the inspection result normal?

YES >> GO TO 7.
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 connector	Terminal	Front power window motor (driver side) connector	Terminal	Continuity
D5 (D25)	9	D7 (D27)	3	Existed
	13		5	

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

Power window main switch connector	Terminal	Ground	Continuity
D5 (D25)	9		Not existed
	13		

():RHD models

Is the inspection result normal?

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

3.CHECK ENCORDER POWER SUPPLY CIRCUIT

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.

Terminal			Voltage (V) (Approx.)
(+)		(–)	
Front power window motor (driver side) connector	Terminal		
D7 (D27)	4	Ground	Battery voltage

():RHD models

Is the inspection result normal?

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

4.CHECK GROUND CIRCUIT

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

Front power window motor (driver side) connector	Terminal	Ground	Continuity
D7 (D27)	6		Existed

():RHD models

Is the inspection result normal?

YES >> GO TO 7.
NO >> GO TO 6.

5.CHECK HARNESS CONTINUITY 1

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

Power window main switch connector	Terminal	Front power window motor (driver side) connector	Terminal	Continuity
D5 (D25)	15	D7 (D27)	4	Existed

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

Power window main switch connector	Terminal	Ground	Continuity
D5 (D25)	15		Not existed

():RHD models

Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-83, "Removal and Installation".
NO >> Repair or replace harness.

6.CHECK HARNESS CONTINUITY 2

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

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

():RHD models

Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-83, "Removal and Installation".
NO >> Repair or replace harness.

7.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END.

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:0000000001548868

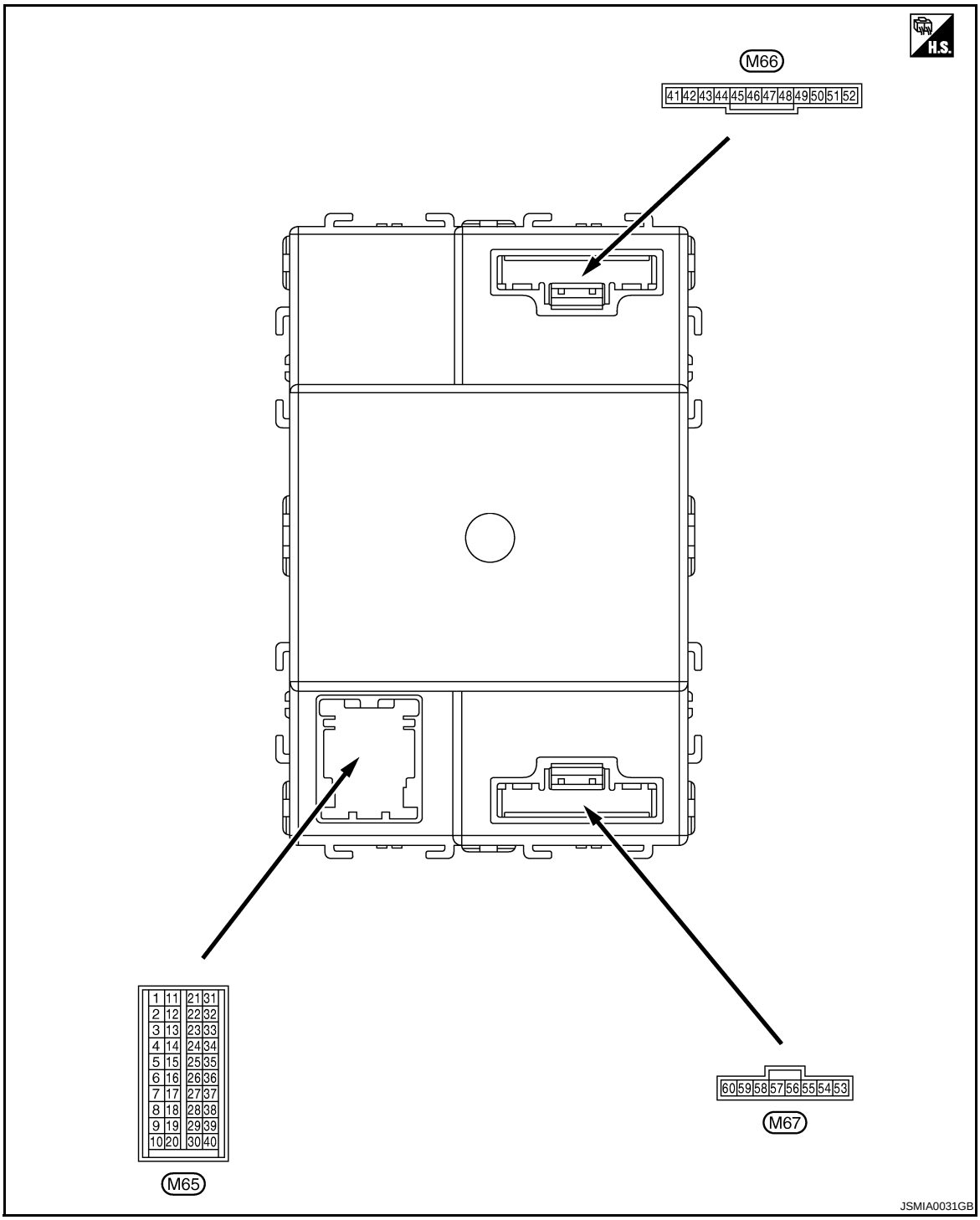
VALUES ON THE DIAGNOSIS TOOL

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

Monitor Item	Condition	Value/Status
UNLOCK WITH DR	**NOTE:** The item is indicated, but not monitored	On
		Off
LOCK WITH SPEED	Vehicle speed sensing auto door lock function does not operate	Off
	Vehicle speed sensing auto door lock function is operating	On
ACC ON SW	Ignition switch OFF	Off
	Ignition switch ACC or ON	On
REAR DEF SW	Rear window defogger switch OFF	Off
	Rear window defogger switch ON	On
TAIL LAMP SW	Lighting switch OFF	Off
	Lighting switch 1ST	On
TURN SIGNAL R	Turn signal switch OFF	Off
	Turn signal switch RH	On
TURN SIGNAL L	Turn signal switch OFF	Off
	Turn signal switch LH	On
HI BEAM SW	Lighting switch OFF	Off
	Lighting switch HI	On
HEAD LAMP SW 1	Lighting switch OFF	Off
	Lighting switch 2ND	On
HEAD LAMP SW 2	Lighting switch OFF	Off
	Lighting switch 2ND	On
PASSING SW	Other than lighting switch PASS	Off
	Lighting switch PASS	On
AUTO LIGHT SW	Lighting switch OFF	Off
	Lighting switch AUTO	On
FR FOG SW	Front fog lamp switch OFF	Off
	Front fog lamp switch ON	On
RR FOG SW	Rear fog lamp switch OFF	Off
	Rear fog lamp switch ON	On
ENGINE RUN	Engine stopped	Off
	Engine running	On
LIT-SEN FAIL	Light & rain sensor is in normal condition	OK
	Light & rain sensor is with error	NOTOK
AUT LIGHT SYS	Outside of the room is dark	On
	Outside of the room is bright	Off
HD LIGHT TIME	—	Displays a setting time of the follow me home function set by the work support
IGN SW CAN	Ignition switch OFF or ACC	Off
	Ignition switch ON	On
FR WIPER HI	Front wiper switch OFF	Off
	Front wiper switch HI	On
FR WIPER LOW	Front wiper switch OFF	Off
	Front wiper switch LO	On
FR WIPER INT	Front wiper switch OFF	Off
	Front wiper switch INT	On

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

TERMINAL LAYOUT

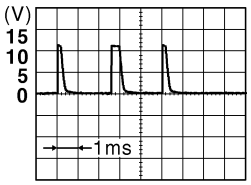
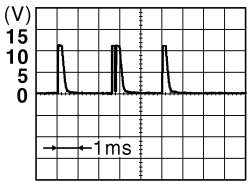
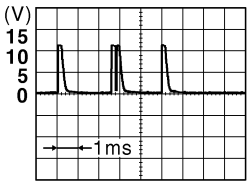
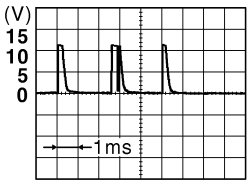
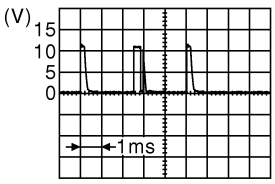


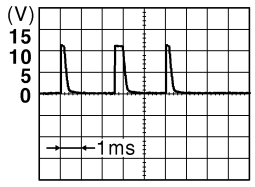
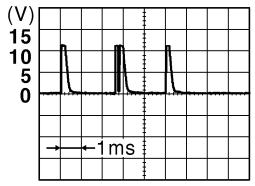
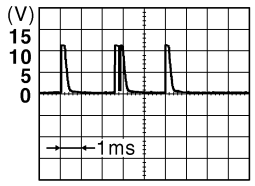
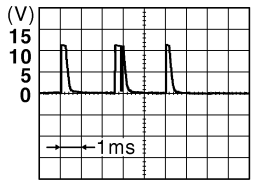
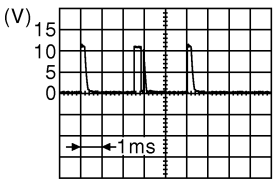
PHYSICAL VALUES

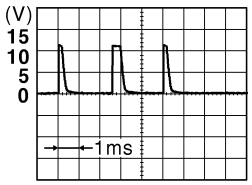
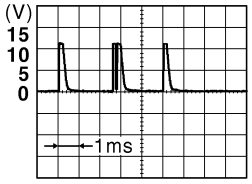
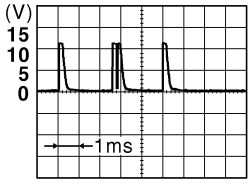
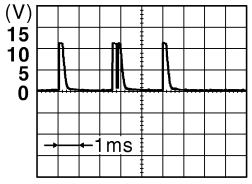
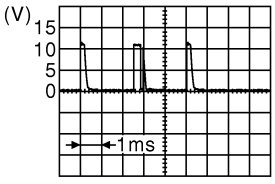
CAUTION:

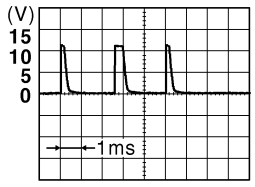
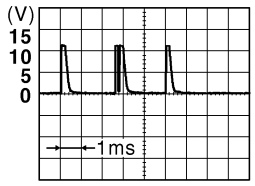
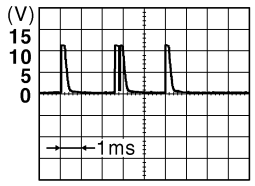
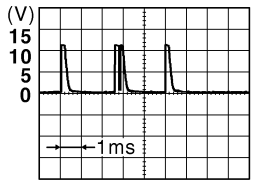
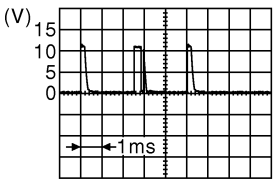
- **Check combination switch system terminal waveform under the loaded condition with lighting switch, turn signal switch and wiper switch OFF is not to be fluctuated by being overloaded.**
- **Turn wiper intermittent dial position to 4 except when checking waveform or voltage of wiper intermittent dial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

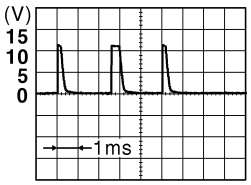
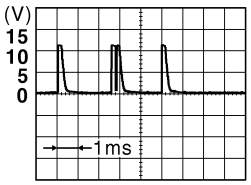
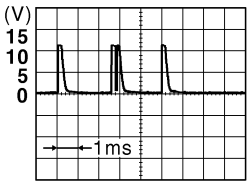
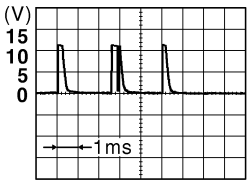
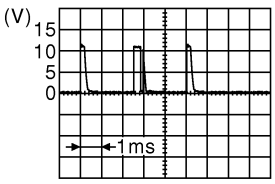
Terminal No. (Wire color)		Description		Condition	Value (Approx.)
		Signal name	Input/ Output		
+	–				
1 (W)	Ground	NATS antenna amp.	Input/ Output	Insert mechanical key into ignition key cylinder	Just after Insert mechanical key into ignition key cylinder. Pointer of tester should move
2 (G)	Ground	NATS antenna amp.	Input/ Output	Insert mechanical key into ignition key cylinder	Just after Insert mechanical key into ignition key cylinder. Pointer of tester should move
3 (W)	Ground	Ignition power supply	Input	Ignition switch OFF or ACC	0 V
				Ignition switch ON or START	Battery voltage
4 (SB)	Ground	ACC power supply	Input	Ignition switch OFF	0 V
				Ignition switch ON or ACC	Battery voltage
5 (LG)*1 (R)*2	Ground	Key switch	Input	Insert mechanical key into ignition key cylinder	Battery voltage
				Remove mechanical key from ignition key cylinder	0 V

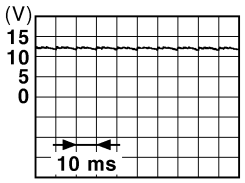
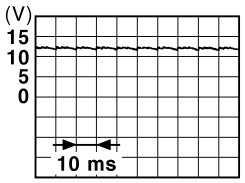
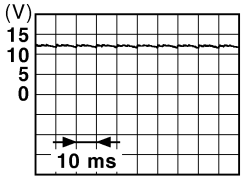
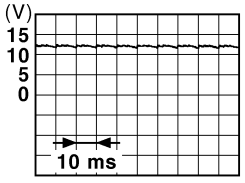
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
6 (L)	Ground	Combination switch INPUT 3	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 JPMIA0165GB 1.4 V
					Lighting switch HI (Wiper intermittent dial 4)	 JPMIA0166GB 1.3 V
					Lighting switch 2ND (Wiper intermittent dial 4)	 JPMIA0167GB 1.3 V
					Rear washer switch ON	 JPMIA0169GB 1.3 V
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	 JPMIA0196GB 1.3 V

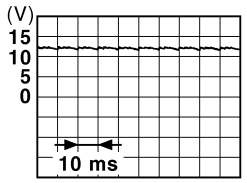
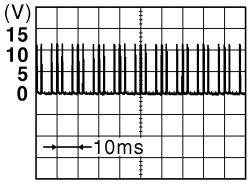
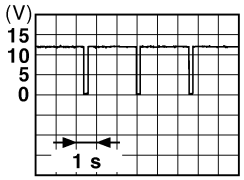
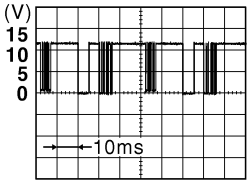
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
7 (GR)	Ground	Combination switch INPUT 4	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 JPMIA0165GB 1.4 V
					Lighting switch 1ST (Wiper intermittent dial 4)	 JPMIA0166GB 1.3 V
					Lighting switch AUTO (Wiper intermittent dial 4)	 JPMIA0168GB 1.3 V
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 6	 JPMIA0169GB 1.3 V
					Rear wiper INT (Wiper intermittent dial 4)	 JPMIA0196GB 1.3 V

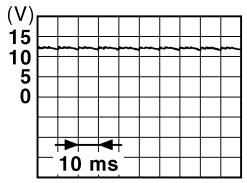
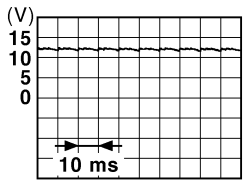
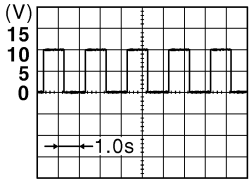
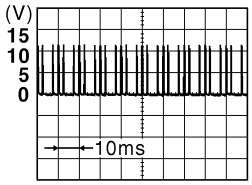
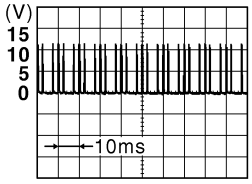
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
8 (V)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermittent dial 4)	All switch OFF	 JPMIA0165GB 1.4 V
					Turn signal switch RH	 JPMIA0166GB 1.3 V
					Turn signal switch LH	 JPMIA0167GB 1.3 V
					Front wiper switch LO	 JPMIA0168GB 1.3 V
					Front washer switch ON	 JPMIA0196GB 1.3 V

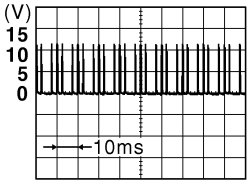
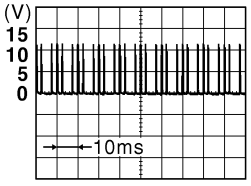
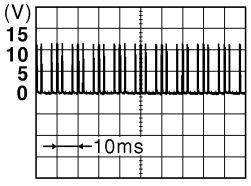
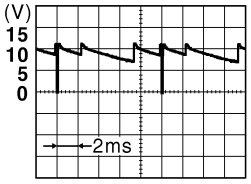
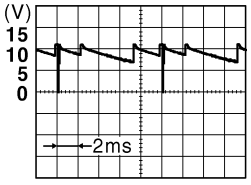
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
9 (G)*3 (B)*4	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermittent dial 4)	All switch OFF	 JPMIA0165GB 1.4 V
					Lighting switch 2ND	 JPMIA0166GB 1.3 V
					Lighting switch PASS	 JPMIA0167GB 1.3 V
					Front wiper switch INT	 JPMIA0168GB 1.3 V
					Front wiper switch HI	 JPMIA0196GB 1.3 V

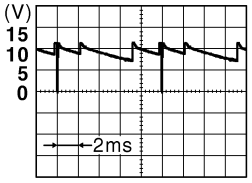
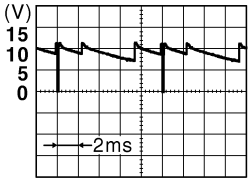
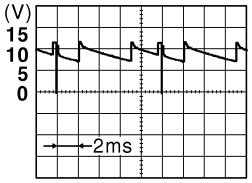
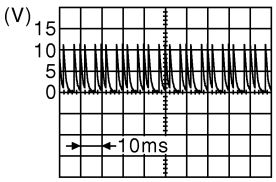
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
10 (BR)	Ground	Combination switch INPUT 5	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 JPMIA0165GB 1.3 V
					Front fog lamp switch ON (Wiper intermittent dial 4)	 JPMIA0167GB 1.3 V
					Rear fog lamp switch ON (Wiper intermittent dial 4)	 JPMIA0168GB 1.3 V
					Rear wiper switch ON (Wiper intermittent dial 4)	 JPMIA0169GB 1.3 V
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 6 • Wiper intermittent dial 7	 JPMIA0196GB 1.3 V
11 (B)	Ground	Audio link	Input/ Output	—	—	—

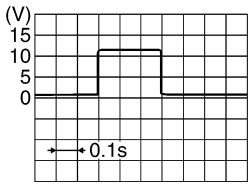
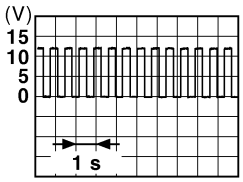
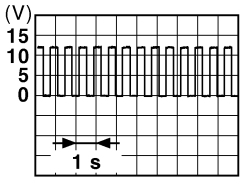
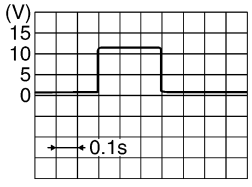
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
12 (LG)	Ground	Rear door switch RH	Input	Rear door switch RH	OFF (When rear door RH closed)	 PKID0924E 11.2 V
					ON (When rear door RH opened)	0 V
13 (V)	Ground	Back door switch	Input	Back door switch	OFF (When back door closed)	 PKID0924E 11.2 V
					ON (When back door opened)	0 V
14 (P)*3 (BR)*4	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closed)	 PKID0924E 11.2 V
					ON (When passenger door opened)	0 V
15 (BR)*3 (P)*4	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closed)	 PKID0924E 11.2 V
					ON (When driver door opened)	0 V

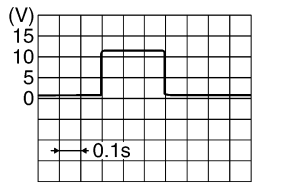
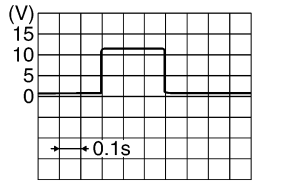
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
16 (GR)	Ground	Rear door switch LH	Input	Rear door switch LH	OFF (When rear door LH closed)	 PKID0924E 11.2 V
					ON (When rear door LH opened)	0 V
17 (L)	Ground	Door lock status indicator	Output	Door lock status indicator	ON	12 V
					OFF	0 V
20 (SB)	Ground	Rear window defogger switch	Input	Rear window defogger switch	Not pressed	 JPMIA0154GB 1.1 V
					While pressing	0 V
21 (P)	—	CAN-L	Input/ Output	—		—
22 (L)	—	CAN-H	Input/ Output	—		—
23 (V)	Ground	Security indicator	Output	Security indicator	ON	0 V
					Blinking	 JPMIA0014GB 10.3 V
					OFF	12 V
24 (GR)	Ground	Light & rain sensor serial link	Input/ Output	Ignition switch OFF or ACC		12 V
				Ignition switch ON		 JPMIA0156GB 8.7 V
25 (G)	Ground	Alarm link	Output	—		—

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
26 (GR)*5 (LG)*6	Ground	Blower fan motor switch	Input	Blower fan motor switch	OFF	 PKID0924E 11.2 V
					ON (other than OFF)	0 V
27 (P)*5 (Y)*6	Ground	A/C switch	Input	Ignition switch ON	Compressor ON is not requested from auto amp. (A/C indicator OFF, blower fan motor switch OFF or etc.)	 PKID0924E 11.2 V
					Compressor ON is requested from auto amp. (A/C indicator ON and blower fan motor switch ON).	0 V
28 (LG)*7 (R)*8	Ground	Shock detect sensor	Input	Ignition switch OFF or ACC		0 V
				Ignition switch ON		 JPMIA0155GB 6.0 V
29 (LG)*3 (O)*4	Ground	Back door opener switch	Input	Back door opener switch	Not pressed	 JPMIA0154GB 1.2 V
					Pressed	0 V
32 (BR)	Ground	Door lock/unlock switch (Unlock)	Input	Door lock/unlock switch	Not pressed	 JPMIA0154GB 1.2 V
					Pressed to the unlock side	0 V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
33 (W)*9 (Y)*10	Ground	Hazard switch	Input	Hazard switch	OFF	 JPMIA0154GB 1.3 V
					ON	0 V
34 (SB)*3 (P)*4	Ground	Door lock/unlock switch (Lock)	Input	Door lock/un-lock switch	Not pressed	 JPMIA0154GB 1.2 V
					Pressed to the lock side	0 V
35 (G)	Ground	Headlamp washer switch	Input	Headlamp washer switch	Not pressed	 JPMIA0154GB 1.2 V
					Pressed to the lock side	0 V
36 (G)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermit-tent dial 4)	All switch OFF	0 V
					Turn signal switch RH	 JPMIA0164GB 9.1 V
					Lighting switch 2ND	
					Lighting switch HI	
					Lighting switch 1ST	
37 (R)	Ground	Combination switch OUTPUT 2	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	0 V
					Front washer switch ON (Wiper intermittent dial 4)	 JPMIA0161GB 9.1 V
					Rear washer switch ON (Wiper intermittent dial 4)	
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	
					Rear wiper switch ON (Wiper intermittent dial 4)	

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
38 (W)	Ground	Combination switch OUTPUT 3	Output	Combination switch (Wiper intermittent dial 4)	All switch OFF	0 V
					Front wiper switch LO Front wiper switch MIST Front wiper switch INT Lighting switch AUTO Rear fog lamp switch ON	 JPMIA0162GB 9.3 V
39 (Y)	Ground	Combination switch OUTPUT 4	Output	Combination switch (Wiper intermittent dial 4)	All switch OFF	0 V
					Turn signal switch LH Lighting switch PASS Lighting switch 2ND Front fog lamp switch ON	 JPMIA0163GB 9.3 V
40 (P)	Ground	Combination switch OUTPUT 1	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	0 V
					Front wiper switch HI (Wiper intermittent dial 4)	 JPMIA0160GB 9.1 V
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3 • Wiper intermittent dial 6 • Wiper intermittent dial 7	
					Rear wiper switch INT (Wiper intermittent dial 4)	
41 (LG)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
42 (V)	Ground	Interior room lamp power supply	Output	Interior room lamp battery saver activation		0 V
				Interior room lamp battery saver no activation		12 V
43 (SB)	Ground	Rear wiper motor	Output	Rear wiper switch OFF		0 V
				Rear wiper switch ON		12 V
44 (B)	Ground	Rear wiper auto stop	Input	Ignition switch ON	Rear wiper stop position	 JPMIA0197GB
					Any position other than rear wiper stop position	0 V

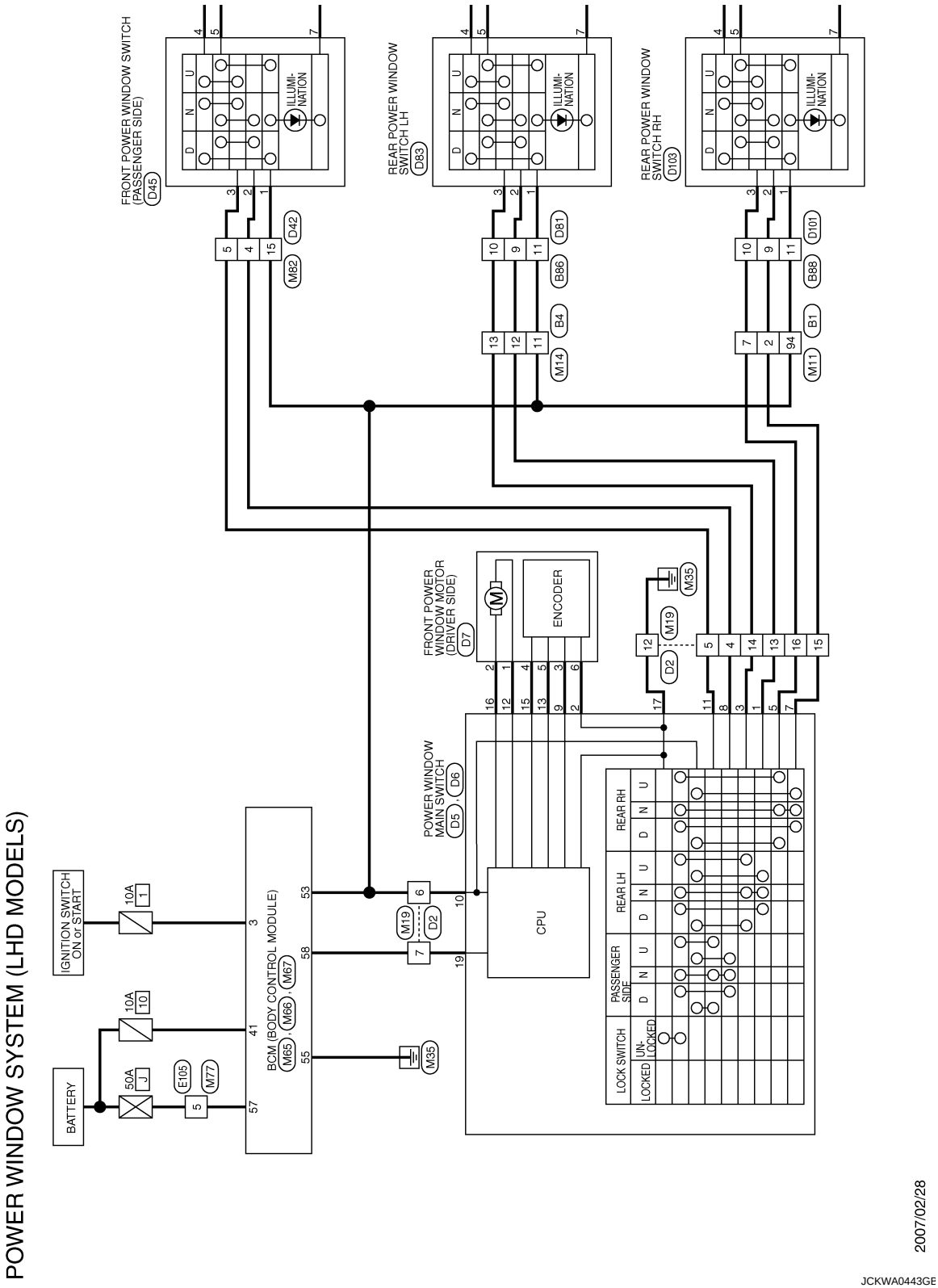
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
45 (V)	Ground	Back door lock actuator	Output	Back door opener switch	Pressed	 SKIA9232E
					Not pressed	0 V
47 (BR)	Ground	Turn signal LH	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch LH	 PKID0926E 6.5 V
48 (GR)	Ground	Turn signal RH	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch RH	 PKID0926E 6.5 V
49 (Y)	Ground	Rear fog lamp	Output	Rear fog lamp	OFF	0 V
					ON	12 V
50 (G)	Ground	Unlock sensor	Input	Driver's door	Unlock	5 V
					lock	0 V
51 (R)	Ground	Stop lamp switch	Input	Depress the brake pedal		Battery voltage
				Release the brake pedal		0 V
52 (R)	Ground	Room lamp timer control	Output	Interior room lamp	OFF	12 V
					ON	0 V
53 (L)	Ground	Power window power supply (IGN)	Output	Ignition switch	OFF or ACC	0 V
					ON	12 V
54 (O)	Ground	Door unlock (All other than driver's door)	Output	Door lock/unlock switch	Pressed to the unlock side	 SKIA9232E
					Not pressed	0 V
55 (B)	Ground	Ground	—	Ignition switch ON		0 V

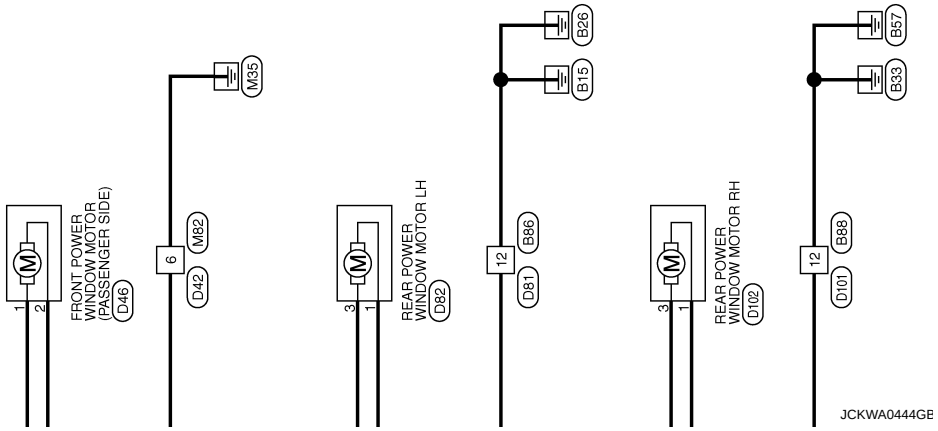
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
56 (V)	Ground	Door lock (All) and fuel lid lock	Output	Door lock/unlock switch	Not pressed	0 V
					Pressed to the lock side	 SKIA9232E
57 (Y)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
58 (P)	Ground	Power window power supply (BAT)	Output	Ignition switch OFF		12 V
59 (R)	Ground	Super lock	Output	When lock button of key fob or Intelligent Key is not pressed		0 V
				When lock button of key fob or Intelligent Key is pressed		12 V
60 (G)	Ground	Driver's door unlock and fuel lid unlock	Output	Door lock/unlock switch	Pressed to the unlock side	 SKIA9232E
					Not pressed	0 V

*1: With Intelligent Key
*2: Without Intelligent Key
*3: RHD models
*4: LHD models
*5: With gasoline engine
*6: With diesel engine
*7: RHD models with side air bag
*8: LHD models with side air bag
*9: With xenon headlamp and daytime light system
*10: Except with xenon headlamp and daytime light system

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

INFOID:0000000001505631




FRONT POWER WINDOW MOTOR (PASSENGER SIDE)
D46
1
2
6
D42
M82
M35
REAR POWER WINDOW MOTOR LH
D82
3
1
12
D81
B86
B15
B26
REAR POWER WINDOW MOTOR RH
D102
3
1
12
D101
B88
B33
B57
JCKWA0444GE

POWER WINDOW SYSTEM (LHD MODELS)

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

Terminal No.	Color of Wire	Signal Name [Specification]
2	W	–
7	Y	–
94	L	–

Connector No.	B4
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
I1	L	–
I2	LG	–
I3	Y	–

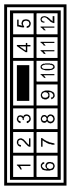
Connector No.	D2
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
4	BR	–
5	SB	–
6	L	–
7	P	–
I2	B	–
I3	R	–
I4	O	–
I5	LG	–
I6	Y	–

Connector No.	D5
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS16FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
1	R	–
2	W	–
3	O	–
5	Y	–
7	LG	–
8	BR	–
9	V	–
10	L	–
I1	SB	–
I2	GR	–
I3	P	–

Connector No.	B86
Connector Name	WIRE TO WIRE
Connector Type	NS12MW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
9	LG	–
10	Y	–
11	L	–
12	B	–

I5	G	–
I6	L	–

Connector No.	B88
Connector Name	WIRE TO WIRE
Connector Type	NS12MW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
9	W	–
10	Y	–
11	L	–
12	B	–

Connector No.	D6
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS03FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
17	B	–
19	P	–

JCKWA0445GE

POWER WINDOW SYSTEM (LHD MODELS)

Connector No.	D7
Connector Name	FRONT POWER WINDOW MOTOR (DRIVER SIDE)
Connector Type	NS06FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
1	GR	–
2	L	–
3	V	–
4	G	–
5	P	–
6	W	–

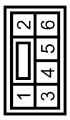
Connector No.	D42
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
4	W	–
5	SB	–
6	B	–
15	L	–

Connector No.	D45
Connector Name	FRONT POWER WINDOW SWITCH (PASSENGER SIDE)
Connector Type	NS08FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
1	L	–
2	W	–
3	SB	–
4	Y	–
5	R	–
7	B	–

Connector No.	D46
Connector Name	FRONT POWER WINDOW MOTOR (PASSENGER SIDE)
Connector Type	NS06FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
1	Y	–
2	R	–

Connector No.	D81
Connector Name	WIRE TO WIRE
Connector Type	NS12FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
9	LG	–
10	Y	–
11	L	–
12	B	–

Connector No.	D82
Connector Name	REAR POWER WINDOW MOTOR LH
Connector Type	RS06FG-DGY

Terminal No.	Color of Wire	Signal Name [Specification]
1	R	–
3	G	–

Connector No.	D83
Connector Name	REAR POWER WINDOW SWITCH LH
Connector Type	NS08FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
1	L	–
2	LG	–
3	Y	–
4	G	–
5	R	–
7	B	–

Connector No.	D101
Connector Name	WIRE TO WIRE
Connector Type	NS12FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
9	LG	–
10	Y	–
11	L	–
12	B	–

JCKWA0446GB

POWER WINDOW SYSTEM (LHD MODELS)

Connector No.	D102
Connector Name	REAR POWER WINDOW MOTOR RH
Connector Type	RS06FG-DGY

Terminal No.	Color of Wire	Signal Name [Specification]
1	R	–
3	G	–

Connector No.	D103
Connector Name	REAR POWER WINDOW SWITCH RH
Connector Type	NS08FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
1	L	–
2	LG	–
3	Y	–
4	G	–
5	R	–
7	B	–

Connector No.	M14
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
11	L	–
12	LG	–[LHD models]
13	Y	–[LHD models]

Connector No.	M19
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
4	W	–
5	SB	–
6	L	–
7	P	–
12	B	–
13	LG	–
14	Y	–
15	LG	–
16	Y	–

Connector No.	E105
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

Terminal No.	Color of Wire	Signal Name [Specification]
5	Y	–

Connector No.	M65
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	AAB40FB

Terminal No.	Color of Wire	Signal Name [Specification]
3	W	IGN SW

Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

Terminal No.	Color of Wire	Signal Name [Specification]
2	LG	–
7	Y	–
94	L	–

Connector No.	M66
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FEA12FBR

Terminal No.	Color of Wire	Signal Name [Specification]
41	LG	BAT(FUSE)

JCKWA0447GE

POWER WINDOW SYSTEM (LHD MODELS)

Connector No.	M67
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FHA08FB

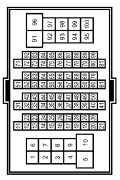
H.S.

60 59 58 57 56 55 54 53

Terminal No.	Color of Wire	Signal Name [Specification]
53	L	P/W POWER SUPPLY(IGN)
55	B	GND
57	Y	BAT(F/L)
58	P	P/W POWER SUPPLY(BAT)

Connector No.	M77
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
5	Y	–

Connector No.	M82
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS

H.S.

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

Terminal No.	Color of Wire	Signal Name [Specification]
4	W	–
5	SB	–
6	B	–
I5	L	–

JCKWA0448GE

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

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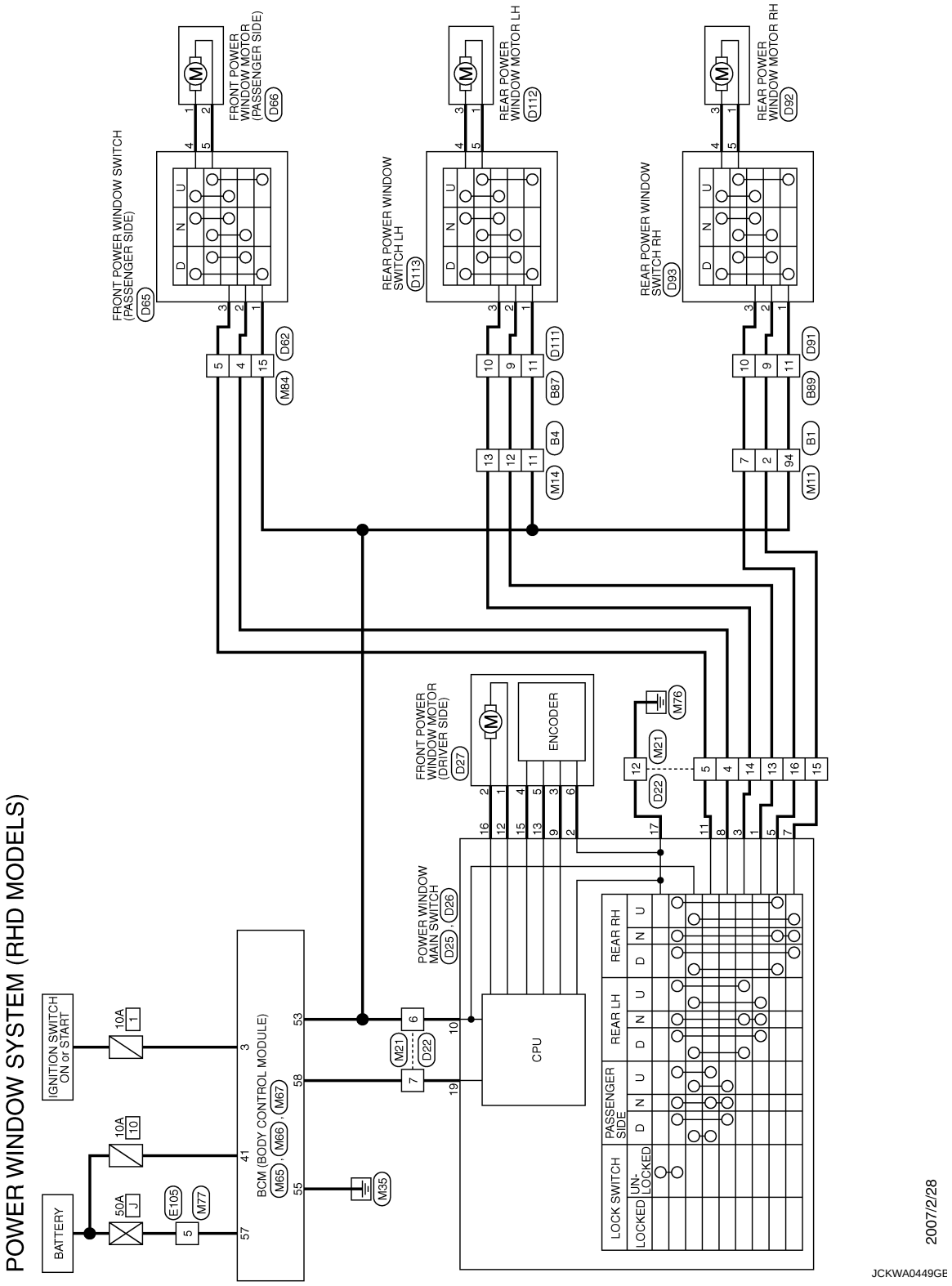


POWER WINDOW SYSTEM (RHD MODELS)

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

Terminal No.	Color of Wire	Signal Name [Specification]
2	W	–
7	Y	–
94	L	–

Connector No.	B4
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
11	L	–
12	LG	–
13	Y	–

Connector No.	B37
Connector Name	WIRE TO WIRE
Connector Type	NS12MW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
9	LG	–
10	Y	–
11	L	–

Connector No.	B89
Connector Name	WIRE TO WIRE
Connector Type	NS12MW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
9	W	–
10	Y	–
11	L	–

Connector No.	D22
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
4	BR	–
5	SB	–
6	L	–
7	P	–
12	B	–
13	R	–
14	O	–
15	LG	–
16	Y	–

Connector No.	D25
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS16FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
1	R	–
2	W	–
3	O	–
5	Y	–
7	LG	–
8	BR	–
9	V	–
10	L	–
11	SB	–
12	GR	–
13	P	–

15	G	–
16	SB	–

Connector No.	D26
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS03FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
17	B	–
19	P	–

JCKWA0450GB

POWER WINDOW SYSTEM (RHD MODELS)

Connector No.	D27
Connector Name	FRONT POWER WINDOW MOTOR (DRIVER SIDE)
Connector Type	NS06FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
1	GR	–
2	SB	–
3	V	–
4	G	–
5	P	–
6	W	–

Connector No.	D62
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
4	W	–
5	SB	–
15	L	–

Connector No.	D65
Connector Name	FRONT POWER WINDOW SWITCH (PASSENGER SIDE)
Connector Type	NS08FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
1	L	–
2	W	–
3	SB	–
4	Y	–
5	R	–

Connector No.	D66
Connector Name	FRONT POWER WINDOW MOTOR (PASSENGER SIDE)
Connector Type	NS06FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
1	Y	–
2	R	–

Connector No.	D91
Connector Name	WIRE TO WIRE
Connector Type	NS12FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
9	LG	–
10	Y	–
11	L	–

Connector No.	D92
Connector Name	REAR POWER WINDOW MOTOR RH
Connector Type	RS06FG-DGY

Terminal No.	Color of Wire	Signal Name [Specification]
1	R	–
3	G	–

Connector No.	D93
Connector Name	REAR POWER WINDOW SWITCH RH
Connector Type	NS08FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
1	L	–
2	LG	–
3	Y	–
4	G	–
5	R	–

Connector No.	D111
Connector Name	WIRE TO WIRE
Connector Type	NS12FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
9	W	–
10	Y	–
11	L	–

JCKWA0451GE

POWER WINDOW SYSTEM (RHD MODELS)

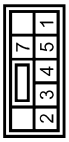
Connector No.	D112
Connector Name	REAR POWER WINDOW MOTOR LH
Connector Type	RS06FG-DGY

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	R	–
3	G	–

Connector No.	D113
Connector Name	REAR POWER WINDOW SWITCH LH
Connector Type	NS08FW-CS

H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
1	L	–
2	W	–
3	Y	–
4	G	–
5	R	–

Connector No.	M14
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
11	L	–
12	P	–[RHD models]
13	R	–[RHD models]

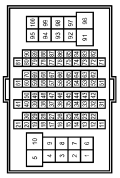
Connector No.	M21
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
4	W	–
5	SB	–
6	L	–
7	P	–
12	B	–
13	P	–
14	R	–
15	LG	–
16	Y	–

Connector No.	E105
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

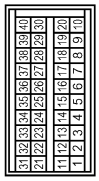
H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
5	Y	–

Connector No.	M65
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	AAB40FB

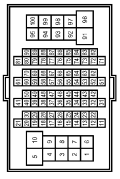
H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
3	W	IGN SW

Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

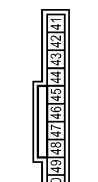
H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
2	LG	–
7	Y	–
94	L	–

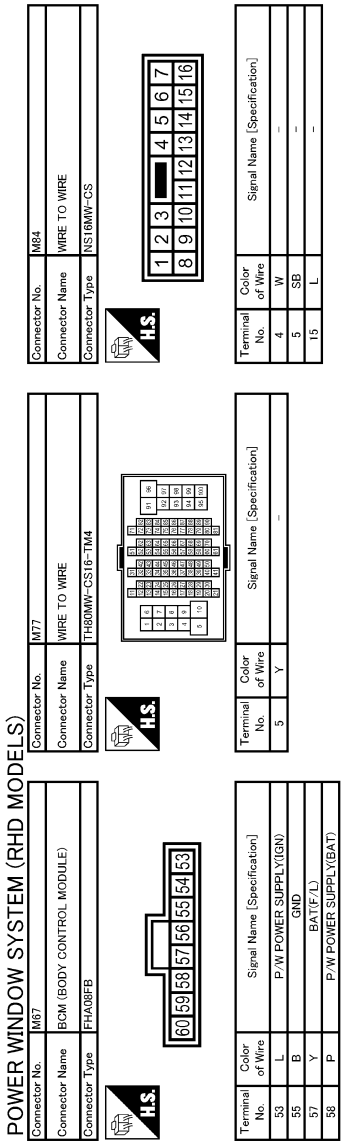
Connector No.	M66
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FEA12FBR

H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
41	LG	BAT(FUSE)

JCKWA0452GB



JCKWA0453GE

Fail Safe

INFOID:0000000001548870

FAIL-SAFE CONTROL BY DTC

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

DTC	Fail-safe	Cancellation
B2190: NATS ANTENNA AMP	• Inhibits engine cranking • Inhibits steering lock unlocking (Intelligent Key unit) • Fuel cut (ECM)	Erase DTC
B2191: DIFFERENCE OF KEY	• Inhibits engine cranking • Inhibits steering lock unlocking (Intelligent Key unit) • Fuel cut (ECM)	Erase DTC
B2192: ID DISCORD BCM-ECM	Fuel cut (ECM)	Erase DTC
B2193: CHAIN OF BCM-ECM	Fuel cut (ECM)	Erase DTC
B2194: DISCORD BCM-I-KEY	• Inhibits engine cranking • Inhibits steering lock unlocking (Intelligent Key unit) • Fuel cut (ECM)	Erase DTC
B2195: ANTI SCANNING	• Inhibits engine cranking • Inhibits steering lock unlocking (Intelligent Key unit) • Fuel cut (ECM)	Erase DTC
B2196: DONGLE NG	• Inhibits engine cranking • Inhibits steering lock unlocking (Intelligent Key unit) • Fuel cut (ECM)	Erase DTC

REAR WIPER MOTOR PROTECTION

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

Condition of cancellation
1. Turn ignition switch OFF.
2. Pass more than 1 minute after the rear wiper stop.
3. Turn ignition switch ON.
4. Operate the rear wiper switch.

HIGH FLASHER OPERATION

BCM detects the turn signal lamp circuit status from the terminal voltage.
BCM increases the turn signal lamp blinking speed if the bulb or harness open is detected with the turn signal lamp operating.
NOTE:
The blinking speed is normal while activating the hazard warning lamp.

FAIL-SAFE CONTROL BY LIGHT & RAIN SENSOR MALFUNCTION

BCM detects the light & rain sensor serial link error and the light & rain sensor malfunction.
BCM controls the following fail-safe when light & rain sensor has a malfunction.

Fail-safe Control
- Auto light control: Headlamp is turned ON.
- Front wiper control: The condition just before the activation of fail-safe is maintained until the front wiper switch is turned OFF.

DTC Inspection Priority Chart

INFOID:0000000001548871

Priority	DTC
1	• U1000: CAN COMM CIRCUIT • U1010: CONTROL UNIT (CAN)
2	• B2190: NATS ANTENNA AMP • B2191: DIFFERNCE OF KEY • B2192: ID DISCORD BCM-ECM • B2193: CHAIN OF BCM-ECM • B2194: DISCORD BCM-I-KEY • B2195: ANTI SCANNING • B2196: DONGLE NG

DTC Index

INFOID:0000000001548872

NOTE:

Details of time display

- CRNT: Displays when there is a malfunction now or after returning to the normal condition until turning ignition switch OFF → ON again.
- PAST: Displays when there is a malfunction that is detected in the past and stored.
- 1 - 39: Displayed if any previous malfunction is present when current condition is normal. It increases like 1 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON. The counter remains at 39 even if the number of cycles exceeds it. It is counted from 1 again when turning ignition switch OFF → ON after returning to the normal condition if the malfunction is detected again.

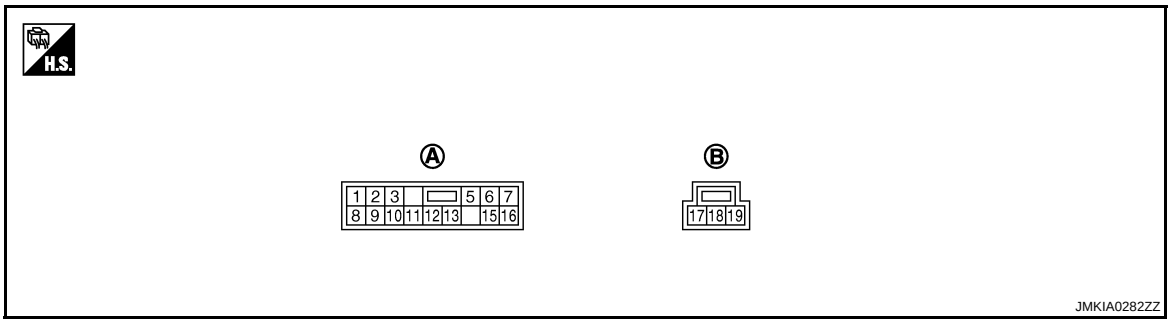
DTC	TIME		Fail-safe	Reference
U1000: CAN COMM CIRCUIT	0	1 - 39	—	BCS-33
U1010: CONTROL UNIT (CAN)	0	1 - 39	—	BCS-34
B2190: NATS ANTENNA AMP	CRNT	PAST	×	• With Intelligent Key system: SEC-41 • Without Intelligent Key system: SEC-254
B2191: DIFFERENCE OF KEY	CRNT	PAST	×	• With Intelligent Key system: SEC-43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

POWER WINDOW MAIN SWITCH

Reference Value

INFOID:0000000001515861

TERMINAL LAYOUT

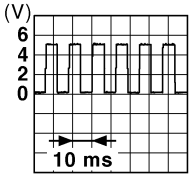


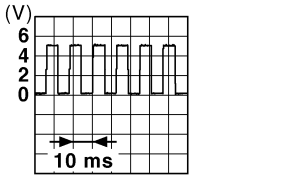
A. LHD:D5
RHD:D25

B. LHD:D6
RHD:D26

PHYSICAL VALUES

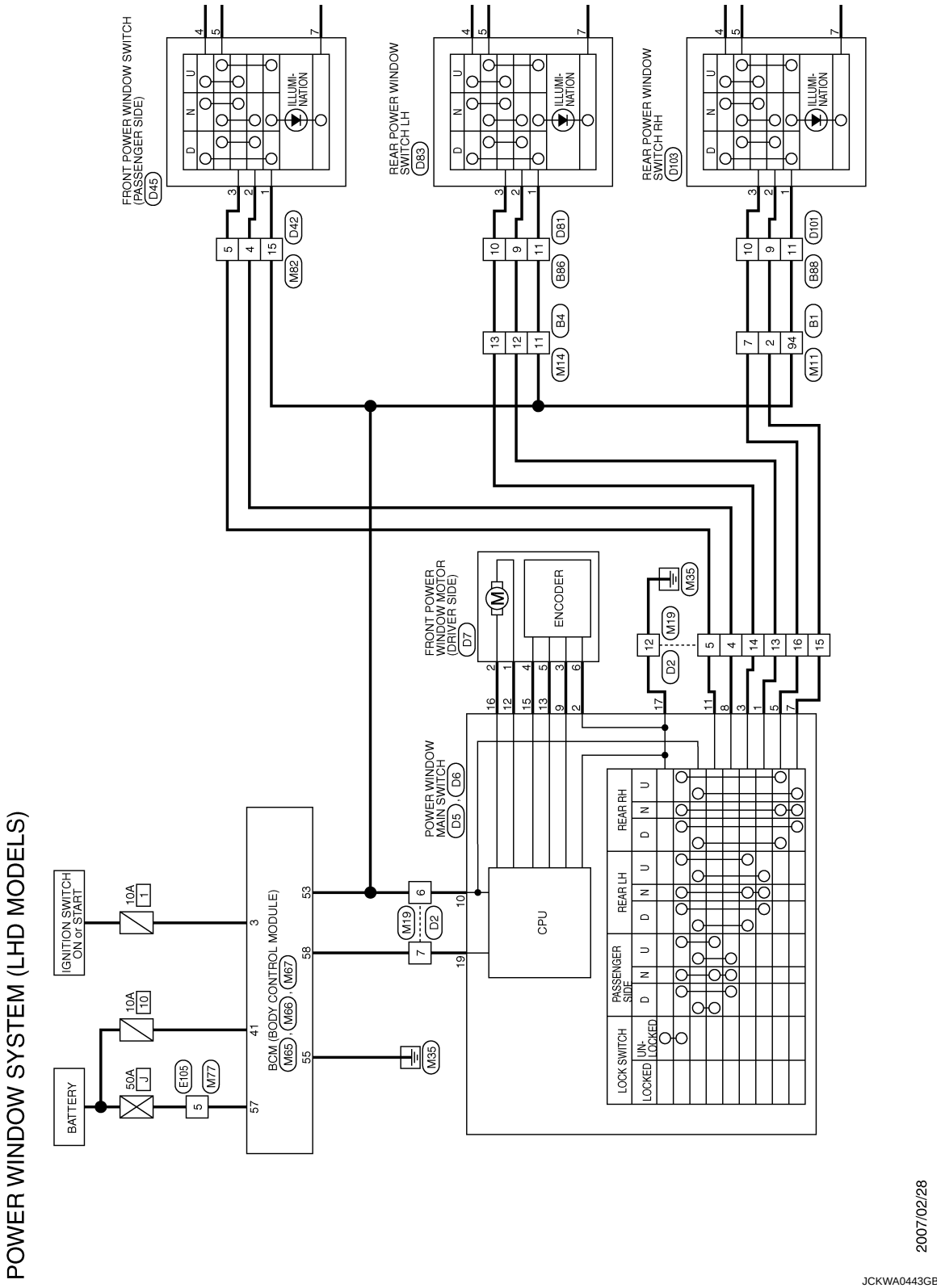
POWER WINDOW MAIN SWITCH

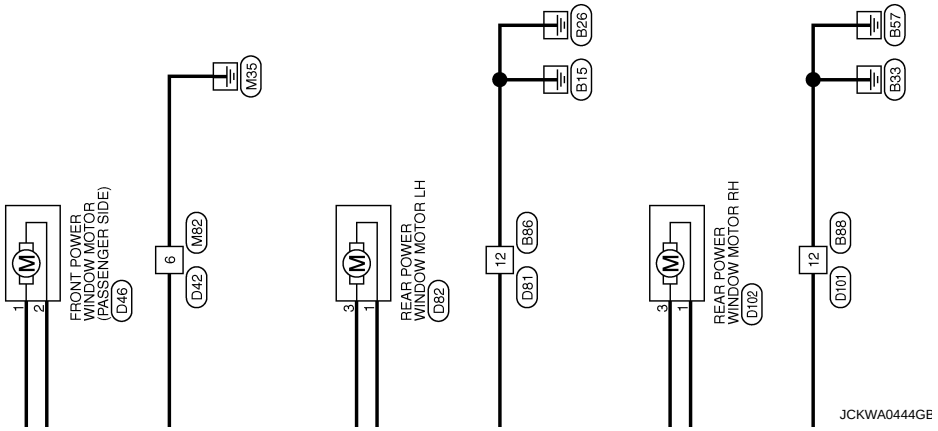
Terminal No. (Wire color)		Description		Condition	Voltage [V] (Approx.)
+	-	Signal name	Input/ Output		
1 (R)	Ground	Rear power window motor LH UP signal	Output	When rear LH switch in power window main switch is UP at operated.	Battery voltage
2 (W)	Ground	Encoder ground	—	—	0
3 (O)	Ground	Rear power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

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

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

INFOID:0000000001551242




FRONT POWER WINDOW MOTOR (PASSENGER SIDE)
D46
1
2
6
D42
M82
M35
REAR POWER WINDOW MOTOR LH
D82
3
1
12
D81
B86
B15
B26
REAR POWER WINDOW MOTOR RH
D102
3
1
12
D101
B88
B33
B57
JCKWA0444GE

POWER WINDOW SYSTEM (LHD MODELS)

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

Terminal No.	Color of Wire	Signal Name [Specification]
2	W	–
7	Y	–
94	L	–

Connector No.	B4
Connector Name	WIRE TO WIRE
Connector Type	NS18MW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
11	L	–
12	LG	–
13	Y	–

Connector No.	B86
Connector Name	WIRE TO WIRE
Connector Type	NS12MW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
9	LG	–
10	Y	–
11	L	–
12	B	–

Connector No.	B88
Connector Name	WIRE TO WIRE
Connector Type	NS12MW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
9	W	–
10	Y	–
11	L	–
12	B	–

Connector No.	D2
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
4	BR	–
5	SB	–
6	L	–
7	P	–
12	B	–
13	R	–
14	O	–
15	LG	–
16	Y	–

Connector No.	D5
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS16FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
1	R	–
2	W	–
3	O	–
5	Y	–
7	LG	–
8	BR	–
9	V	–
10	L	–
11	SB	–
12	GR	–
13	P	–

15	G	–
16	L	–

Connector No.	D6
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS03FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
17	B	–
19	P	–

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POWER WINDOW SYSTEM (LHD MODELS)

Connector No.	D7
Connector Name	FRONT POWER WINDOW MOTOR (DRIVER SIDE)
Connector Type	NS06FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
1	GR	–
2	L	–
3	V	–
4	G	–
5	P	–
6	W	–

Connector No.	D42
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
4	W	–
5	SB	–
6	B	–
15	L	–

Connector No.	D45
Connector Name	FRONT POWER WINDOW SWITCH (PASSENGER SIDE)
Connector Type	NS08FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
1	L	–
2	W	–
3	SB	–
4	Y	–
5	R	–
7	B	–

Connector No.	D46
Connector Name	FRONT POWER WINDOW MOTOR (PASSENGER SIDE)
Connector Type	NS06FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
1	Y	–
2	R	–

Connector No.	D81
Connector Name	WIRE TO WIRE
Connector Type	NS12FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
9	LG	–
10	Y	–
11	L	–
12	B	–

Connector No.	D82
Connector Name	REAR POWER WINDOW MOTOR LH
Connector Type	RS06FG-DGY

Terminal No.	Color of Wire	Signal Name [Specification]
1	R	–
3	G	–

Connector No.	D83
Connector Name	REAR POWER WINDOW SWITCH LH
Connector Type	NS08FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
1	L	–
2	LG	–
3	Y	–
4	G	–
5	R	–
7	B	–

Connector No.	D101
Connector Name	WIRE TO WIRE
Connector Type	NS12FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
9	LG	–
10	Y	–
11	L	–
12	B	–

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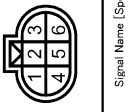
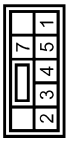
POWER WINDOW SYSTEM (LHD MODELS)

Connector No.	D102
Connector Name	REAR POWER WINDOW MOTOR RH
Connector Type	RS06FG-DGY



Terminal No.	Color of Wire	Signal Name [Specification]
1	R	–
3	G	–

Connector No.	D103
Connector Name	REAR POWER WINDOW SWITCH RH
Connector Type	NS08FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
1	L	–
2	LG	–
3	Y	–
4	G	–
5	R	–
7	B	–

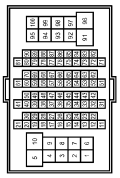
Connector No.	M14
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
11	L	–
12	LG	–[LHD models]
13	Y	–[LHD models]

Connector No.	M19
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS

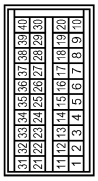
Terminal No.	Color of Wire	Signal Name [Specification]
4	W	–
5	SB	–
6	L	–
7	P	–
12	B	–
13	LG	–
14	Y	–
15	LG	–
16	Y	–

Connector No.	E105
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



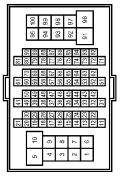
Terminal No.	Color of Wire	Signal Name [Specification]
5	Y	–

Connector No.	M65
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	AAB40FB



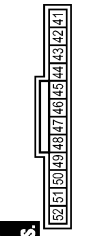
Terminal No.	Color of Wire	Signal Name [Specification]
3	W	IGN SW

Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
2	LG	–
7	Y	–
94	L	–

Connector No.	M66
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FEA12FBR



Terminal No.	Color of Wire	Signal Name [Specification]
41	LG	BAT(FUSE)

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POWER WINDOW SYSTEM (LHD MODELS)

Connector No.	M67
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FHA08FB

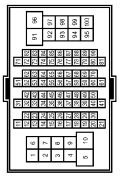
H.S.

60 59 58 57 56 55 54 53

Terminal No.	Color of Wire	Signal Name [Specification]
53	L	P/W POWER SUPPLY(IGN)
55	B	GND
57	Y	BAT(F/L)
58	P	P/W POWER SUPPLY(BAT)

Connector No.	M77
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
5	Y	–

Connector No.	M82
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS

H.S.

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

Terminal No.	Color of Wire	Signal Name [Specification]
4	W	–
5	SB	–
6	B	–
15	L	–

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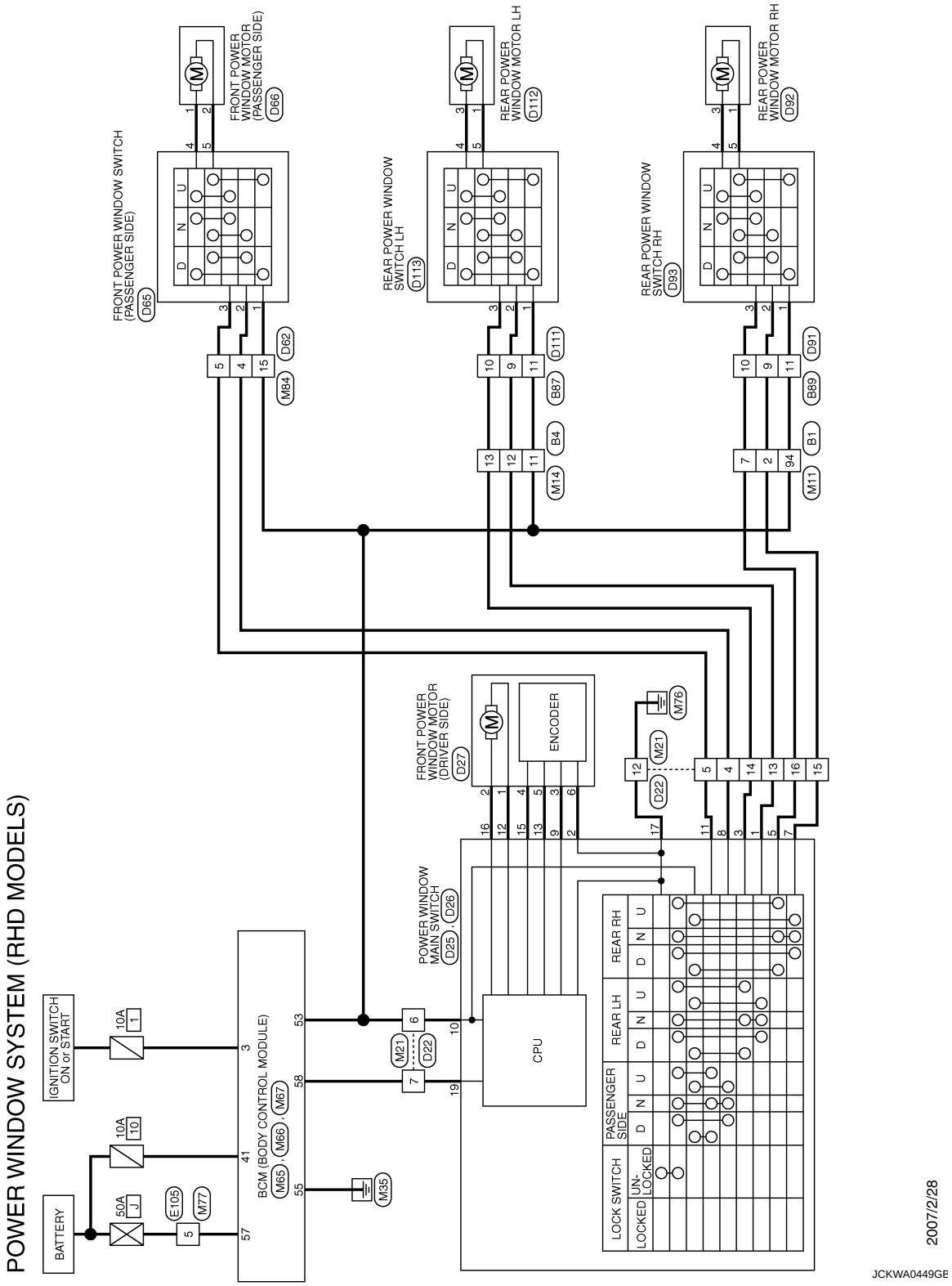
Wiring Diagram - POWER WINDOW CONTROL SYSTEM (RHD MODELS) -

INFOID:0000000001551243



POWER WINDOW SYSTEM (RHD MODELS)

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

Terminal No.	Color of Wire	Signal Name [Specification]
2	W	–
7	Y	–
94	L	–

Connector No.	B4
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
I1	L	–
I2	LG	–
I3	Y	–

Connector No.	B87
Connector Name	WIRE TO WIRE
Connector Type	NS12MW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
9	LG	–
10	Y	–
11	L	–

Connector No.	B89
Connector Name	WIRE TO WIRE
Connector Type	NS12MW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
9	W	–
10	Y	–
11	L	–

Connector No.	D22
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
4	BR	–
5	SB	–
6	L	–
7	P	–
I2	B	–
I3	R	–
I4	O	–
I5	LG	–
I6	Y	–

Connector No.	D25
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS16FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
1	R	–
2	W	–
3	O	–
5	Y	–
7	LG	–
8	BR	–
9	V	–
10	L	–
I1	SB	–
I2	GR	–
I3	P	–

I5	G	–
I6	SB	–

Connector No.	D26
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS03FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
17	B	–
19	P	–

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POWER WINDOW SYSTEM (RHD MODELS)

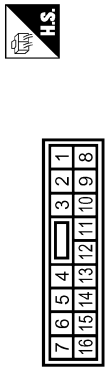
Connector No.	D27
Connector Name	FRONT POWER WINDOW MOTOR (DRIVER SIDE)
Connector Type	NS06FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
1	GR	–
2	SB	–
3	V	–
4	G	–
5	P	–
6	W	–

Connector No.	D62
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
4	W	–
5	SB	–
15	L	–

Connector No.	D65
Connector Name	FRONT POWER WINDOW SWITCH (PASSENGER SIDE)
Connector Type	NS08FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
1	L	–
2	W	–
3	SB	–
4	Y	–
5	R	–

Connector No.	D66
Connector Name	FRONT POWER WINDOW MOTOR (PASSENGER SIDE)
Connector Type	NS06FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
1	Y	–
2	R	–

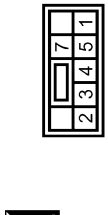
Connector No.	D91
Connector Name	WIRE TO WIRE
Connector Type	NS12FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
9	LG	–
10	Y	–
11	L	–

Connector No.	D92
Connector Name	REAR POWER WINDOW MOTOR RH
Connector Type	RS06FG-DGY

Terminal No.	Color of Wire	Signal Name [Specification]
1	R	–
3	G	–

Connector No.	D93
Connector Name	REAR POWER WINDOW SWITCH RH
Connector Type	NS08FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
1	L	–
2	LG	–
3	Y	–
4	G	–
5	R	–

Connector No.	D111
Connector Name	WIRE TO WIRE
Connector Type	NS12FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
9	W	–
10	Y	–
11	L	–

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POWER WINDOW SYSTEM (RHD MODELS)

Connector No.	D112
Connector Name	REAR POWER WINDOW MOTOR LH
Connector Type	RS06FG-DGY

Terminal No.	Color of Wire	Signal Name [Specification]
1	R	–
3	G	–

Connector No.	D113
Connector Name	REAR POWER WINDOW SWITCH LH
Connector Type	RS08FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
1	L	–
2	W	–
3	Y	–
4	G	–
5	R	–

Connector No.	E105
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

Terminal No.	Color of Wire	Signal Name [Specification]
5	Y	–

Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

Terminal No.	Color of Wire	Signal Name [Specification]
2	LG	–
7	Y	–
94	L	–

Connector No.	M14
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
11	L	–
12	P	–[RHD models]
13	R	–[RHD models]

Connector No.	M21
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
4	W	–
5	SB	–
6	L	–
7	P	–
12	B	–
13	P	–
14	R	–
15	LG	–
16	Y	–

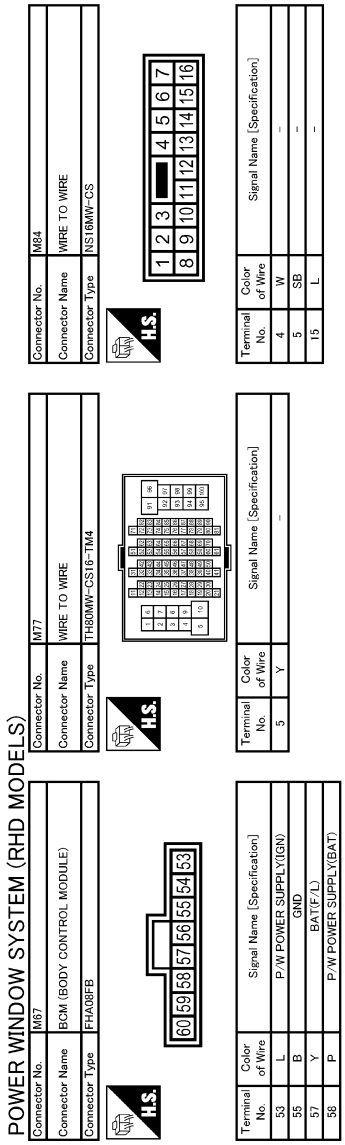
Connector No.	M65
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	AAB40FB

Terminal No.	Color of Wire	Signal Name [Specification]
3	W	IGN SW

Connector No.	M66
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FEA12FBR

Terminal No.	Color of Wire	Signal Name [Specification]
41	LG	BAT(FUSE)

JCKWA0452GE



JCKWA0453GE

Fail Safe

INFOID:0000000001505639

FAIL-SAFE CONTROL

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

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

It changes to condition before initialization and the following functions do not operate when switched to fail-safe control.
- Auto-up operation
- Anti-pinch function

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

SYMPTOM DIAGNOSIS

NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH

Diagnosis Procedure

INFOID:0000000001505640

1. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT

Check BCM power supply and ground circuit.
Refer to PWC-9, "BCM : Diagnosis Procedure".

Is the inspection result normal?

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

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

Check power window main switch power supply and ground circuit.
Refer to PWC-9, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure".

Is the inspection result normal?

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

3. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> GO TO 1.

DRIVER SIDE POWER WINDOW DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000001505641

1.CHECK FRONT POWER WINDOW MOTOR (DRIVER SIDE)

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

Is the inspection result normal?

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

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> GO TO 1.

FRONT PASSENGER SIDE POWER WINDOW DOES NOT OPERATE

WITH BOTH POWER WINDOW MAIN SWITCH AND FRONT PASSENGER SIDE POWER WINDOW SWITCH

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

INFOID:0000000001505642

1. CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Check front power window switch (passenger side).
Refer to PWC-14, "Component Function Check".

Is the inspection result normal?

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

2. CHECK FRONT POWER WINDOW MOTOR (PASSENGER SIDE)

Check front power window motor (passenger side).
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-39, "Intermittent Incident".
NO >> GO TO 1.

WITH FRONT POWER WINDOW SWITCH ONLY

WITH FRONT POWER WINDOW SWITCH ONLY : Diagnosis Procedure

INFOID:0000000001505643

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-11, "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 FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Check front power window switch (passenger side).
Refer to PWC-14, "Component Function Check".

Is the inspection result normal?

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

3. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> GO TO 1.

REAR LH SIDE POWER WINDOW DOES NOT OPERATE

WITH BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW SWITCH LH

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

INFOID:0000000001505644

1.CHECK REAR POWER WINDOW SWITCH

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

Is the inspection result normal?

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

2.CHECK REAR POWER WINDOW MOTOR LH

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

Is the inspection result normal?

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

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> GO TO 1.

WITH REAR POWER WINDOW SWITCH LH ONLY

WITH REAR POWER WINDOW SWITCH LH ONLY : Diagnosis Procedure

INFOID:0000000001505645

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

Check rear power window switch power supply and ground circuit.
Refer to PWC-12, "REAR POWER WINDOW SWITCH : Diagnosis Procedure".

Is the inspection result normal?

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

2.CHECK REAR POWER WINDOW SWITCH

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

Is the inspection result normal?

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

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> GO TO 1.

REAR RH SIDE POWER WINDOW DOES NOT OPERATE

WITH BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW SWITCH RH

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

INFOID:0000000001505646

1.CHECK REAR POWER WINDOW SWITCH

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

Is the inspection result normal?

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

2.CHECK REAR POWER WINDOW MOTOR RH

Check rear power window motor RH.
Refer to PWC-24, "REAR RH : Component Function Check".

Is the inspection result normal?

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

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> GO TO 1.

WITH REAR POWER WINDOW SWITCH RH ONLY

WITH REAR POWER WINDOW SWITCH RH ONLY : Diagnosis Procedure

INFOID:0000000001505647

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

Check rear power winodw switch power supply and ground circuit.
Refer to PWC-12, "REAR POWER WINDOW SWITCH : Diagnosis Procedure".

Is the inspection result normal?

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

2.CHECK REAR POWER WINDOW SWITCH

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

Is the inspection result normal?

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

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> GO TO 1.

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

Diagnosis Procedure

INFOID:0000000001505648

1.PERFORM INITIALIZATION PROCEDURE

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

Is the inspection result normal?

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

2.CHECK ENCODER CIRCUIT

Check encoder circuit.
Refer to PWC-26, "Component Function Check".

Is the inspection result normal?

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

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> GO TO 1.

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

Diagnosis Procedure

INFOID:0000000001505649

1.PERFORM INITIALIZATION PROCEDURE

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

Is the inspection result normal?

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

2.CHECK ENCODER

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

Is the inspection result normal?

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

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> GO TO 1.

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

Diagnosis Procedure

INFOID:0000000001505650

1.REPLACE POWER WINDOW MAIN SWITCH

Replace power window main switch.

>> Refer toPWC-83, "Removal and Installation".

POWER WINDOW SWITCH ILLUMINATION DOES NOT ILLUMINATE PASSENGER SIDE

PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000001518891

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-11, "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.REPLACE FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Replace front power window switch (passenger side).

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

REAR LH

REAR LH : Diagnosis Procedure

INFOID:0000000001518892

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

Check rear power window switch power supply and ground circuit.
Refer to PWC-12, "REAR POWER WINDOW SWITCH : Diagnosis Procedure".

Is the inspection result normal?

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

2.REPLACE REAR POWER WINDOW SWITCH LH

Replace rear power window switch LH.

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

REAR RH

REAR RH : Diagnosis Procedure

INFOID:0000000001518893

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

Check rear power window switch power supply and ground circuit.
Refer to PWC-12, "REAR POWER WINDOW SWITCH : Diagnosis Procedure".

Is the inspection result normal?

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

2.RPLACE REAR POWER WINDOW SWITCH RH

Replace rear power window switch RH.

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

PRECAUTION

PRECAUTIONS

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

INFOID:0000000001557126

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER”, used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the “SRS AIRBAG” and “SEAT BELT” of this Service Manual.

WARNING:

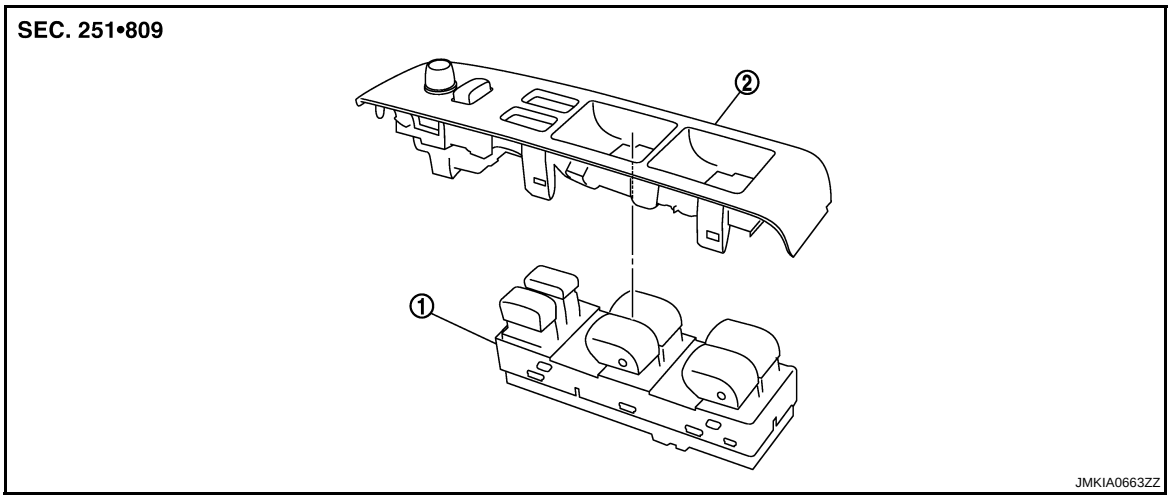
- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper maintenance, including incorrect removal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

ON-VEHICLE REPAIR

POWER WINDOW MAIN SWITCH

Exploded View

INFOID:0000000001505653



1. Power window main switch
2. Power window main switch finisher

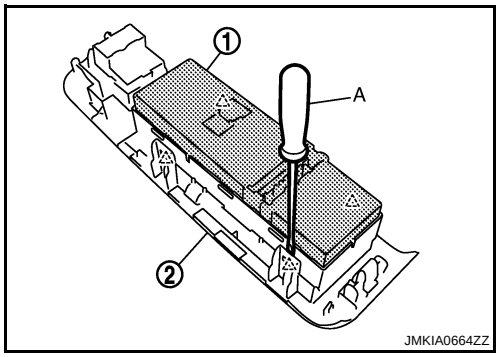
NOTE:
The same procedure is also performed for front power window switch (passenger side) and rear power switch (LH & RH).
Refer to removal and installation procedure. Refer to PWC-83, "Removal and Installation".

Removal and Installation

INFOID:0000000001505654

REMOVAL

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



: Pawl

CAUTION:
Do not fold the pawl of power window main switch finisher.
NOTE:
The same procedure is also performed for front power window switch (passenger side) and rear power window switch (LH & RH).

INSTALLATION

Install in the reverse order of removal.
NOTE:
Power window main switch is exchanged or is detached it is necessary to do the initialization procedure.
Refer to PWC-4, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement".