SECTION PWC

POWER WINDOW CONTROL SYSTEM

CONTENTS

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000009723114

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:0000000009723115

When battery negative terminal is disconnected, initialization is necessary.
If any of the following operations are performed, initialization is necessary as well as when battery negative terminal is disconnected.

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

The operations as per the following cannot be performed while initialization is not complete.

- AUTO-UP operation
- Anti-pinch function
- Door key cylinder switch power window function

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement

INFOID:0000000009723116

INITIALIZATION PROCEDURE

1. Disconnect battery negative terminal or power window control unit connector. Reconnect it after a minute or more.
2. Turn ignition switch ON.
3. Operate power window switch to fully open door glass. (This operation is unnecessary if door glass is already fully open.)
4. Pull and hold power window switch UP (AUTO-UP operation). Even after door glass stops at the fully closed position, pull the switch for 2 seconds or more.
5. Initialization procedure is complete.
6. Inspect anti-pinch function.

CHECK ANTI-PINCH FUNCTION

1. Fully open door glass.
2. Place a piece of wood near the fully closed position.
3. Close door glass completely using AUTO-UP.

- Check that door glass lowers approximately 150 mm (5.9 in) without pinching piece of wood and stops.
- Check that door glass does not rise when operating power window main switch while lowering.

CAUTION:

- **Perform initialization when AUTO-UP operation or anti-pinch function does not operate normally.**
- **Check that AUTO-UP operates before inspection when initialization is performed.**
- **Never check with hands or other body parts because they may be pinched. Never get pinched.**
- **It may switch to the fail-safe mode if open/close operation is performed continuously without fully closing door glass. Perform initialization in the above situation. Refer to PWC-89, "Fail Safe".**
- **Finish initialization. Otherwise, the next operation cannot be done.**

1. **AUTO-UP operation**
2. **Anti-pinch function**
3. **Door key cylinder switch power window function**

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description

INFOID:0000000009723117

When the control unit is replaced, initialization is necessary.
If any of the following operations are performed, initialization is necessary as well as when the control unit is disconnected.

- Power supply to the power window control unit is cut off by the removal of battery terminal or the battery fuse is blown.
- Disconnection and connection of power window control unit harness connector.
- Removal and installation of motor from regulator assembly.
- Disconnection and connection of battery negative terminal.
- Removal and installation of rear power window control unit.
- Removal and installation of door glass.
- Removal and installation of door glass run.

The following specified operations cannot be performed while initialization is not complete.

- AUTO-UP operation
- Anti-pinch function
- Door key cylinder switch power window function

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement

INFOID:0000000009723118

INITIALIZATION PROCEDURE

1. Disconnect battery negative terminal or power window control unit connector. Reconnect it after a minute or more.
2. Turn ignition switch ON.
3. Operate power window switch to fully open door glass. (This operation is unnecessary if door glass is already fully open.)
4. Pull and hold power window switch UP (AUTO-UP operation). Even after door glass stops at the fully closed position, pull the switch for 2 seconds or more.
5. Initialization procedure is complete.
6. Inspect anti-pinch function.

CHECK ANTI-PINCH FUNCTION

1. Fully open door glass.
2. Place a piece of wood near the fully closed position.
3. Close door glass completely using AUTO-UP.

- Check that door glass lowers approximately 150 mm (5.9 in) without pinching piece of wood and stops.
- Check that door glass does not rise when operating power window main switch while lowering.

CAUTION:

- **Perform initialization when AUTO-UP operation or anti-pinch function does not operate normally.**
- **Check that AUTO-UP operates before inspection when initialization is performed.**
- **Never check with hands or other body parts because they may be pinched. Never get pinched.**
- **It may switch to the fail-safe mode if open/close operation is performed continuously without fully closing. Perform initialization in the above situation. Refer to PWC-89, "Fail Safe".**
- **Finish initialization. Otherwise, the next operation cannot be done.**

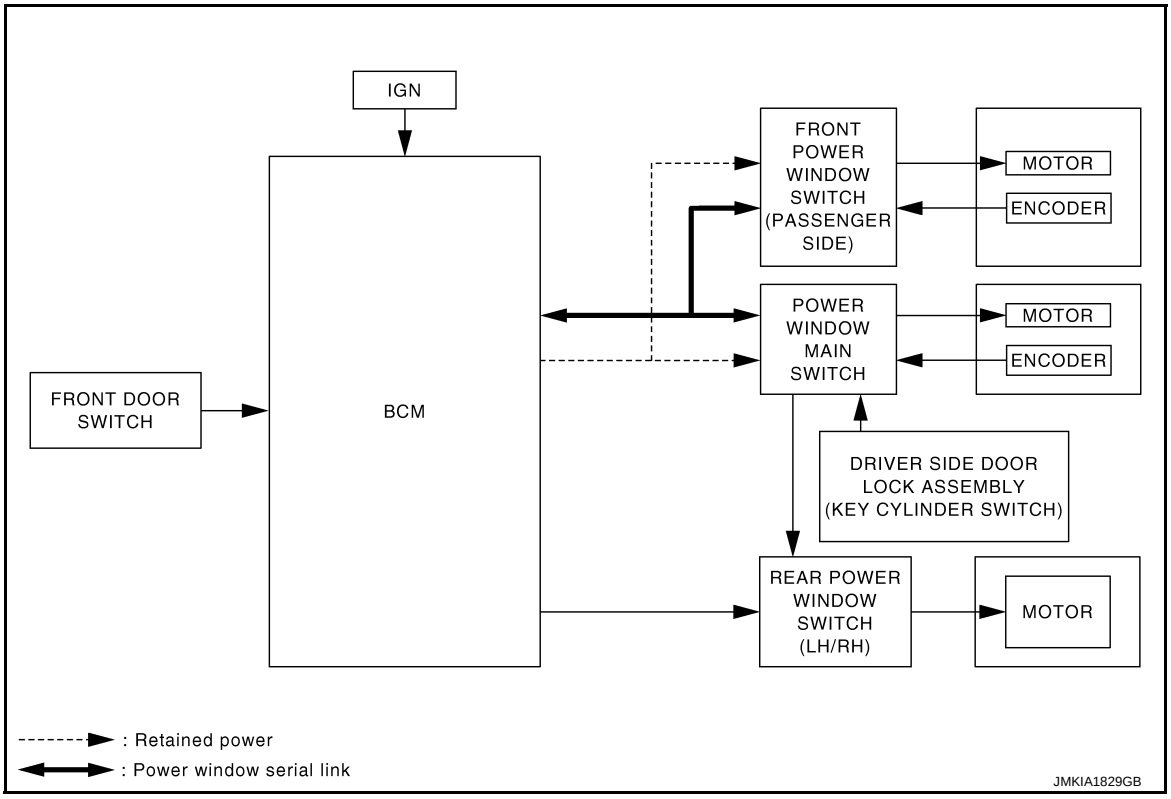
1. **AUTO-UP operation**
2. **Anti-pinch function**
3. **Door key cylinder switch power window function**

SYSTEM DESCRIPTION

POWER WINDOW SYSTEM

System Diagram

INFOID:0000000009723119



System Description

INFOID:0000000009723120

POWER WINDOW SYSTEM

- Power window system is operable during the retained power operation timer after turning ignition switch OFF.
- Power window main switch can open/close door glass.
- Front and rear power window switch can open/close the corresponding door glass.
- AUTO UP/DOWN operation can be performed when front power window switch turns to AUTO.
- Power window lock switch can lock all power windows other than driver seat.
- Power window serial link transmits the signals from power window main switch to front power window switch (passenger side).
- If door glass receives resistance that is the specified value or more while power window of front seat is in AUTO-UP operation, power window of front seat operates in the reverse direction.
- Hold the door key cylinder to the LOCK or UNLOCK direction for 1.5seconds or more to OPEN or CLOSE from power window when ignition switch OFF.
- Front power windows open when pressing Intelligent Key unlock button for 3 seconds.

POWER WINDOW AUTO-OPERATION

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

RETAINED POWER OPERATION

Retained power operation is an additional power supply function that enables power window system to operate for 45 seconds after ignition switch turns OFF.

RETAINED POWER FUNCTION CANCEL CONDITIONS

- Front door CLOSE (door switch OFF) → OPEN (door switch ON).
- When ignition switch turns ON again.
- When timer times out. (45 seconds)

POWER WINDOW LOCK FUNCTION

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

POWER WINDOW SERIAL LINK

- Front power window switches and BCM transmit and receive the power window serial link.
- Power window serial link transmits the power window main switch operation signals and IGN signal to power window main switch module, front power window switch (passenger side) module.

ANTI-PINCH OPERATION

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

OPERATION CONDITION

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

NOTE:

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

DOOR KEY CYLINDER SWITCH POWER WINDOW FUNCTION

Hold the door key cylinder to the LOCK or UNLOCK direction for 1.5 seconds or more to OPEN or CLOSE front power windows when ignition switch is OFF. In addition, it stops when key position is moved to NEUTRAL when operating.

OPERATION CONDITION

- Ignition switch OFF.
- Hold door key cylinder to LOCK position for 1.5 seconds or more to perform CLOSE operation of the door glass.
- Hold door key cylinder to UNLOCK position for 1.5 seconds or more to perform OPEN operation of the door glass.

KEYLESS POWER WINDOW DOWN FUNCTION

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

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

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

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

Keyless power window down operation mode can be changed by “PW DOWN SET” mode in “WORK SUPPORT”. Refer to DLK-57, "INTELLIGENT KEY : CONSULT Function (BCM - INTELLIGENT KEY)".

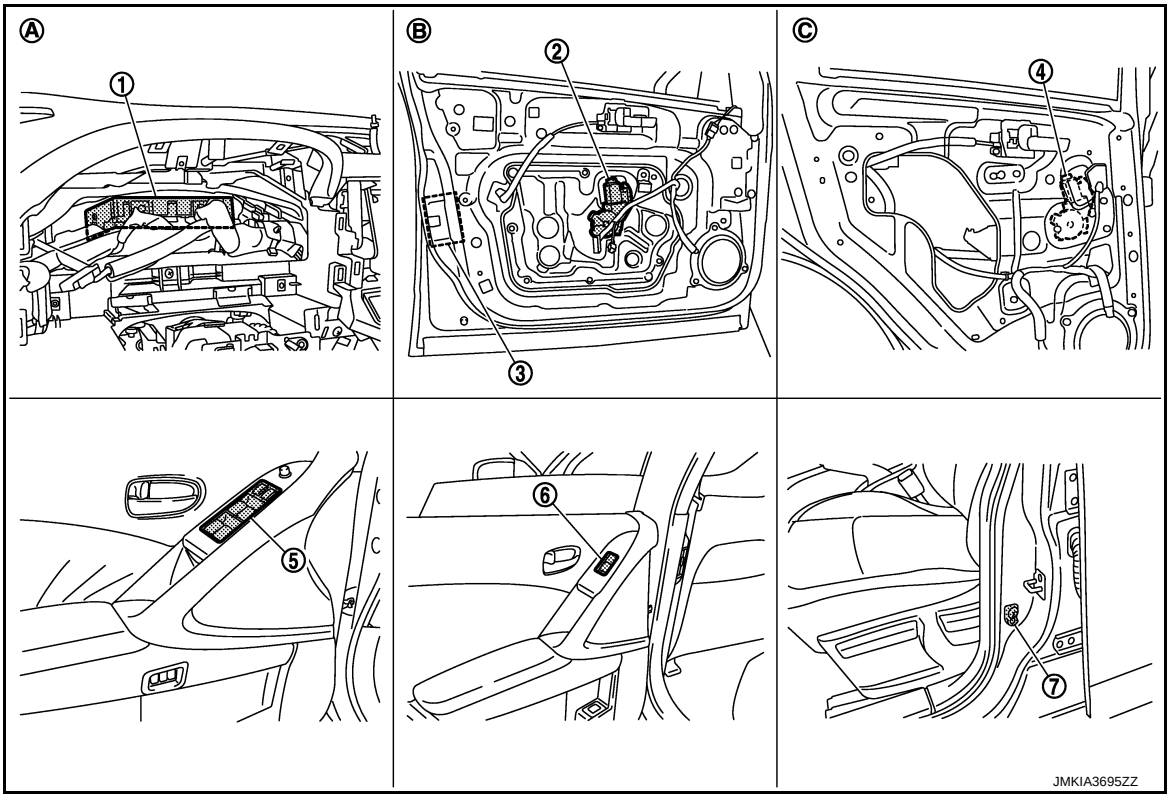
NOTE:

Use CONSULT to change settings.

MODE 1 (3 sec) / MODE 2 (OFF) / MODE 3 (5 sec)

Component Parts Location

INFOID:0000000009723121



1. BCM
   M118, M119, M122, M123
2. Front power window motor (driver side)
   D7
3. Front door lock assembly (driver side)
   Door key cylinder switch D9
4. Rear power window motor LH
   D82
5. Power window main switch
   D5, D6
6. Rear power window switch LH
   D83
7. Front door switch (driver side)
   B34

A. Behind the combination meter
B. View with front door finisher removed.
C. View with rear door finisher removed.

Component Description

INFOID:0000000009723122

Component	Function
BCM	• Supplies power to power window switch • Controls retained power function
Power window main switch	• Directly controls all power window motor of all doors • Controls anti-pinch operation of power window
Front power window switch (passenger side)	• Controls power window motor of front passenger side door • Controls anti-pinch operation of power window
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 • Outputs front power window motor (driver side) rotation as a pulse signal to power window main switch
Front power window motor (passenger side)	• Integrates the encoder and power window motor • Starts operating with signals from power window main switch & front power window switch (passenger side) • Outputs front power window motor (passenger side) rotation as a pulse signal to front power window switch (passenger side)

Component	Function
Rear power window motor (LH & RH)	Starts operating with signals from power window main switch & rear power window switch (LH & RH)
Front door lock assembly (driver side) Door Key cylinder switch	Transmits operation condition of Key cylinder switch to power window
Front door switch	Door open/close condition and transmits to BCM

DIAGNOSIS SYSTEM (BCM)
COMMON ITEM
COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000010064808

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

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

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

×: Applicable item

System	Sub system selection item	Diagnosis mode		
		Work Support	Data Monitor	Active Test
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×*1	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
—	AIR CONDITONER*2			
• Intelligent Key system • Engine start system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
NVIS - NATS	IMMU		×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door opener system	TRUNK		×	×
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	TPMS (AIR PRESSURE MONITOR)	×	×	×

NOTE:
- *1: For models with rain sensor this mode is displayed, but is not used.
- *2: This item is displayed, but is not used.

FREEZE FRAME DATA (FFD)

The BCM records the following vehicle condition at the time a particular DTC is detected, and displays on CONSULT.

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

NOTE:

*: Power supply position shifts to “LOCK” from “OFF”, when ignition switch is in the OFF position, selector lever is in the P position, and any of the following conditions are met.

- Closing door
- Opening door
- Door is locked using door request switch
- Door is locked using Intelligent Key

The power supply position shifts to “ACC” when the push-button ignition switch (push switch) is pushed at “LOCK”.

RETAINED PWR

RETAINED PWR : CONSULT Function (BCM - RETAINED PWR)

INFOID:0000000009723124

Data monitor

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

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

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

BCM

BCM : Diagnosis Procedure

INFOID:0000000009723125

1.CHECK FUSE AND FUSIBLE LINK

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

Signal name	Fuse and fusible link No.
Battery power supply	L
	10

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			Voltage (Approx.)
(+)		(–)	
BCM		Ground	
Connector	Terminal		
M118	1		Battery voltage
M119	11		

Is the measurement value 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		
M119	13		Existed

Does continuity exist?

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

POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH : Diagnosis Procedure

INFOID:0000000009723126

1.CHECK POWER SUPPLY

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

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

Is the inspection result normal?

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

2.CHECK POWER SUPPLY CIRCUIT

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

BCM		Power window main switch		Continuity
Connector	Terminal	Connector	Terminal	
M118	2	D6	19	Existed
	3	D5	10	

4. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M118	2		Not existed
	3		

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-98, "Exploded View".
NO >> Repair or replace harness.

3.CHECK GROUND CIRCUIT

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

Power window main switch		Ground	Continuity
Connector	Terminal		
D6	17		Existed

Is the inspection result normal?

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

FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure

INFOID:0000000009723127

1.CHECK POWER SUPPLY

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

(+)		(–)	Voltage (V) (Approx.)
Front power window switch (passenger side)			
Connector	Terminal		
D45	10	Ground	Battery voltage

Is the inspection result normal?

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

2.CHECK POWER SUPPLY CIRCUIT

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

BCM		Front power window switch (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	
M118	2	D45	10	Existed

4. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M118	2		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-98, "Exploded View".
NO >> Repair or replace harness.

3.CHECK GROUND CIRCUIT

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

Front power window switch (passenger side)		Ground	Continuity
Connector	Terminal		
D45	11		Existed

Is the inspection result normal?

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

REAR POWER WINDOW SWITCH

REAR POWER WINDOW SWITCH : Diagnosis Procedure

INFOID:0000000009723128

1.CHECK POWER SUPPLY

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

(+)			(–)	Voltage (V) (Approx.)
Rear power window switch				
Connector		Terminal		
LH	D83	1	Ground	Battery voltage
RH	D103			

Is the inspection result normal?

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

2. CHECK POWER SUPPLY CIRCUIT

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

BCM		Rear power window switch			Continuity
Connector	Terminal	Connector		Terminal	
M118	3	LH	D83	1	Existed
		RH	D103		

4. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M118	3		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-98, "Exploded View".
NO >> Repair or replace harness.

REAR POWER WINDOW SWITCH

Description

INFOID:0000000009723129

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

Component Function Check

INFOID:0000000009723130

1. CHECK REAR POWER WINDOW SWITCH FUNCTION

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

Is the inspection result normal?

YES >> Rear power window switch is OK.
NO >> Refer to PWC-18, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000009723131

1. CHECK REAR POWER WINDOW SWITCH INPUT SIGNAL

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

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

Is the inspection result normal?

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

2. CHECK REAR POWER WINDOW SWITCH CIRCUIT

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

Power window main switch		Rear power window switch			Continuity
Connector	Terminal	Connector		Terminal	
D5	1	LH	D83	2	Existed
	3			3	
	5	RH	D103	3	
	7			2	

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

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

Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-118, "Removal and Installation".
NO >> Repair or replace harness.

3. CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.
Refer to PWC-19, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace rear power window switch. Refer to PWC-118, "Removal and Installation".

4. CHECK INTERMITTENT INCIDENT

Refer to GI-44, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000009723132

1. CHECK REAR POWER WINDOW SWITCH

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

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

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace rear power window switch. Refer to PWC-118, "Removal and Installation".

POWER WINDOW MOTOR
DRIVER SIDE

DRIVER SIDE : Description

INFOID:0000000009723133

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

DRIVER SIDE : Component Function Check

INFOID:0000000009723134

1. CHECK FRONT POWER WINDOW MOTOR (DRIVER SIDE) OPERATION

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

Is the inspection result normal?

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

DRIVER SIDE : Diagnosis Procedure

INFOID:0000000009723135

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

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

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

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

Power window main switch		Front power window motor (driver side)		Continuity
Connector	Terminal	Connector	Terminal	
D5	8	D7	2	Existed
	11		1	

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

Power window main switch		Ground	Continuity
Connector	Terminal		
D5	8		Not existed
	11		

Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-118, "Removal and Installation".
NO >> Repair or replace harness.

3. CHECK FRONT POWER WINDOW MOTOR (DRIVER SIDE)

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

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace power window motor (driver side). Refer to GW-22, "Removal and Installation".

4. CHECK INTERMITTENT INCIDENT

Refer to GI-44, "Intermittent Incident".

>> INSPECTION END

DRIVER SIDE : Component Inspection

INFOID:0000000009723136

1. CHECK FRONT POWER WINDOW MOTOR (DRIVER SIDE)

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

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

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace front power window motor (driver side). Refer to GW-22, "Removal and Installation".

PASSENGER SIDE

PASSENGER SIDE : Description

INFOID:0000000009723137

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:0000000009723138

1. CHECK FRONT POWER WINDOW MOTOR (PASSENGER SIDE) OPERATION

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

Is the inspection result normal?

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

PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000009723139

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

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

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

Is the inspection result normal?

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

2.CHECK FRONT POWER WINDOW MOTOR (PASSENGER SIDE) CIRCUIT

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

Front power window switch (passenger side)		Front power window motor (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	
D45	9	D46	1	Existed
	8		2	

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

Front power window switch (passenger side)		Ground	Continuity
Connector	Terminal		
D45	9		Not existed
	8		

Is the inspection result normal?

YES >> Replace front power window switch (passenger side).PWC-118, "Removal and Installation".
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-22, "Removal and Installation".

4.CHECK INTERMITTENT INCIDENT

Refer to GI-44, "Intermittent Incident".

>> INSPECTION END

PASSENGER SIDE : Component Inspection

INFOID:0000000009723140

1.CHECK FRONT POWER WINDOW MOTOR (PASSENGER SIDE)

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

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

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace front power window motor (passenger side). Refer to GW-22, "Removal and Installation".

REAR LH

REAR LH : Description

INFOID:0000000009723141

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:0000000009723142

1.CHECK REAR POWER WINDOW MOTOR LH OPERATION

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

Is the inspection result normal?

YES >> Rear power window motor LH is OK.
NO >> Refer to PWC-23, "REAR LH : Diagnosis Procedure"

REAR LH : Diagnosis Procedure

INFOID:0000000009723143

1.CHECK REAR POWER WINDOW MOTOR LH INPUT SIGNAL

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

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

Is the inspection result normal?

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

2.CHECK REAR POWER WINDOW MOTOR LH CIRCUIT

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

Rear power window switch LH		Rear power window motor LH		Continuity
Connector	Terminal	Connector	Terminal	
D83	4	D82	3	Existed
	5		1	

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

Rear power window switch LH		Ground	Continuity
Connector	Terminal		
D83	4		Not existed
	5		

Is the inspection result normal?

YES >> Replace rear power window switch. Refer to PWC-118, "Removal and Installation".
NO >> Repair or replace harness.

3.CHECK REAR POWER WINDOW MOTOR LH

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

Is the inspection result normal?

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

4.CHECK INTERMITTENT INCIDENT

Refer to GI-44, "Intermittent Incident".

>> INSPECTION END

REAR LH : Component Inspection

INFOID:0000000009723144

COMPONENT INSPECTION

1.CHECK REAR POWER WINDOW MOTOR LH

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

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

Is the inspection result normal?

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

REAR RH

REAR RH : Description

INFOID:0000000009723145

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:0000000009723146

1. CHECK REAR POWER WINDOW MOTOR RH OPERATION

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

Is the inspection result normal?

YES >> Rear power window motor RH is OK.
NO >> Refer to PWC-25, "REAR RH : Diagnosis Procedure".

REAR RH : Diagnosis Procedure

INFOID:0000000009723147

1.CHECK REAR POWER WINDOW MOTOR RH INPUT SIGNAL

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

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

Is the inspection result normal?

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

2.CHECK REAR POWER WINDOW MOTOR RH CIRCUIT

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

Rear power window switch RH		Rear power window motor RH		Continuity
Connector	Terminal	Connector	Terminal	
D103	4	D102	3	Existed
	5		1	

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

Rear power window switch RH		Ground	Continuity
Connector	Terminal		
D103	4		Not existed
	5		

Is the inspection result normal?

YES >> Replace rear power window switch RH. Refer to PWC-118, "Removal and Installation".
NO >> Repair or replace harness.

3.CHECK REAR POWER WINDOW MOTOR RH

Check rear power window motor RH.
Refer to PWC-26, "REAR RH : Component Inspection".

Is the inspection result normal?

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

4.CHECK INTERMITTENT INCIDENT

Refer to GI-44, "Intermittent Incident".

>> INSPECTION END

REAR RH : Component Inspection

INFOID:0000000009723148

COMPONENT INSPECTION

1.CHECK REAR POWER WINDOW MOTOR RH

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

Rear power window motor RH			Motor condition
Connector	Terminal		
	(+)	(–)	
D102	3	1	DOWN
	1	3	UP

Is the inspection result normal?

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

ENCODER CIRCUIT
DRIVER SIDE

DRIVER SIDE : Description

INFOID:0000000009723149

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

DRIVER SIDE : Component Function Check

INFOID:0000000009723150

1.CHECK ENCODER OPERATION

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

Is the inspection result normal?

YES >> Encoder is OK.
NO >> Refer to PWC-27, "DRIVER SIDE : Diagnosis Procedure".

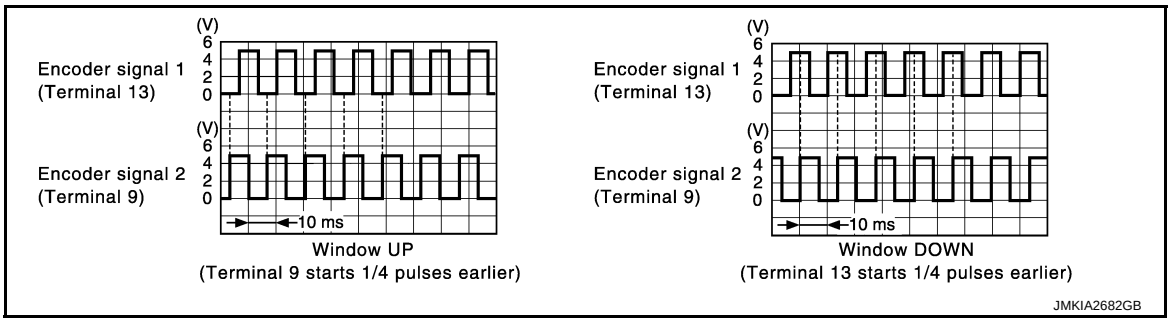
DRIVER SIDE : Diagnosis Procedure

INFOID:0000000009723151

1.CHECK ENCODER SIGNAL

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

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



Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-118, "Removal and Installation".
NO >> GO TO 2.

2.CHECK ENCORDER SIGNAL CIRCUIT

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

Power window main switch		Front power window motor (driver side)		Continuity
Connector	Terminal	Connector	Terminal	
D5	9	D7	3	Existed
	13		5	

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

Power window main switch		Ground	Continuity
Connector	Terminal		
D5	9		Not existed
	13		

Is the inspection result normal?

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

3.CHECK ENCORDER POWER SUPPLY

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

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

Is the inspection result normal?

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

4.CHECK ENCORDER POWER SUPPLY CIRCUIT

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

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

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

Power window main switch		Ground	Continuity
Connector	Terminal		
D5	15		Not existed

Is the inspection result normal?

YES >> Replace power window main switch. Refer toPWC-118, "Removal and Installation".
NO >> Repair or replace harness.

5.CHECK GROUND CIRCUIT 1

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

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

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace harness.

6.CHECK GROUND CIRCUIT 2

1. Connect power window main switch connector.
2. Check continuity between power window main switch harness connector and ground.

Power window main switch		Ground	Continuity
Connector	Terminal		
D5	2		Existed

Is the inspection result normal?

YES >> Replace front power window motor (driver side). Refer to GW-22, "Removal and Installation".
NO >> Replace power window main switch. Refer to PWC-118, "Removal and Installation".

PASSENGER SIDE

PASSENGER SIDE : Description

INFOID:0000000009723152

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

PASSENGER SIDE : Component Function Check

INFOID:0000000009723153

1.CHECK ENCODER OPERATION

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

Is the inspection result normal?

YES >> Encoder is OK.
NO >> Refer to PWC-29, "PASSENGER SIDE : Diagnosis Procedure".

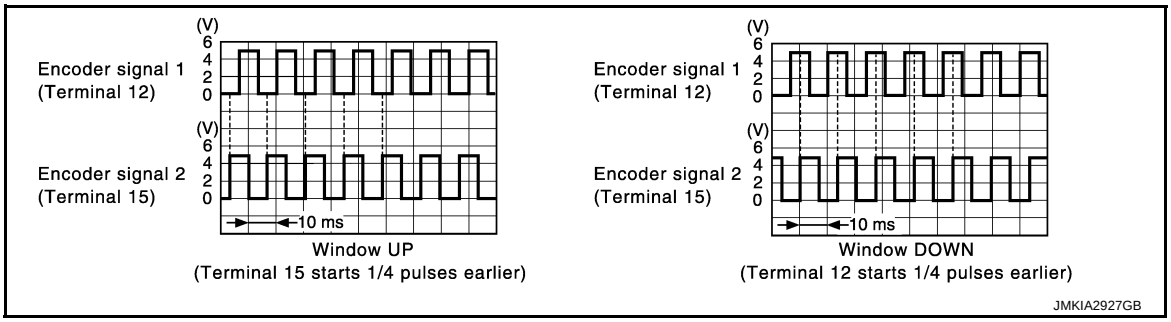
PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000009723154

1.CHECK ENCODER SIGNAL

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

(+)		(–)	Signal (Reference value)
Front power window switch (passenger side)			
Connector	Terminal		
D45	12	Ground	Refer to following signal
	15		



Is the inspection result normal?

YES >> Replace front power window switch (passenger side). Refer to PWC-118, "Removal and Installation".
NO >> GO TO 2.

2.CHECK ENCORDER SIGNAL 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)		Front power window motor (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	
D45	12	D46	5	Existed
	15		3	

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

Front power window switch (passenger side)		Ground	Continuity
Connector	Terminal		
D45	12		Not existed
	15		

Is the inspection result normal?

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

3.CHECK ENCORDER POWER SUPPLY

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

(+)		(–)	Voltage (V) (Approx.)
Front power window motor (passenger side)			
Connector	Terminal		
D46	4	Ground	Battery voltage

Is the inspection result normal?

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

4.CHECK ENCODER POWER SUPPLY CIRCUIT

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

Front power window switch (passenger side)		Front power window motor (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	
D45	4	D46	4	Existed

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

Front power window switch (passenger side)		Ground	Continuity
Connector	Terminal		
D45	4		Not existed

Is the inspection result normal?

YES >> Replace front power window switch (passenger side). Refer to PWC-118, "Removal and Installation".
NO >> Repair or replace harness.

5.CHECK GROUND CIRCUIT 1

1. Turn ignition switch OFF.

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

Front power window switch (passenger side)		Front power window motor (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	
D45	3	D46	6	Existed

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace harness.

6. CHECK GROUND CIRCUIT 2

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

Front power window switch (passenger side)		Ground	Continuity
Connector	Terminal		
D45	3		Existed

Is the inspection result normal?

YES >> Replace front power window motor (passenger side). Refer to GW-22, "Removal and Installation".
NO >> Replace front power window switch (passenger side). Refer to PWC-118, "Removal and Installation".

POWER WINDOW SERIAL LINK
POWER WINDOW MAIN SWITCH
POWER WINDOW MAIN SWITCH : Description

INFOID:0000000009723155

Power window main switch, front power window switch (passenger side) and BCM transmit and receive the signal by power window serial link.
The signal mentioned below is transmitted from BCM to power window main switch, front power window switch (passenger side).
- Keyless power window down signal

The signal mentioned below is transmitted from power window main switch to front power window switch (passenger side).
- Front passenger side door window operation signal
- Power window control by key cylinder switch signal
- Power window lock switch signal
- Retained power operation signal

POWER WINDOW MAIN SWITCH : Component Function Check

INFOID:0000000009723156

1.CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

With CONSULT
Check (“CDL LOCK SW ”, “CDL UNLOCK SW”) in “DATA MONITOR” mode for “POWER DOOR LOCK SYSTEM” with CONSULT. Refer toDLK-55, "DOOR LOCK : CONSULT Function (BCM - DOOR LOCK)".

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

Is the inspection result normal?

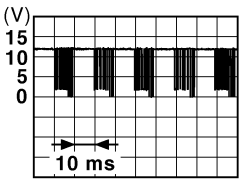
YES >> Power window serial link is OK.
NO >> Refer to PWC-32, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure".

POWER WINDOW MAIN SWITCH : Diagnosis Procedure

INFOID:0000000009723157

1.CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

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

(+)		(–)	Signal (Reference value)
Power window main switch			
Connector	Terminal		
D5	14	Ground	

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Is the inspection result normal?

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

2.CHECK POWER WINDOW SERIAL LINK SIGNAL

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

(+)		(–)	Voltage (V) (Approx.)
Power window main switch			
Connector	Terminal		
D5	14	Ground	Battery voltage

Is the measurement value within the specification?

YES >> Replace power window main switch. Refer to PWC-118, "Removal and Installation".
NO >> GO TO 3.

3.CHECK POWER WINDOW SERIAL LINK CIRCUIT

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

BCM		Power window main switch		Continuity
Connector	Terminal	Connector	Terminal	
M123	132	D5	14	Existed

4. Check continuity between BCM connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M123	132		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-98, "Exploded View".
NO >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-44, "Intermittent Incident".

>> INSPECTION END

FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Description

INFOID:0000000009723158

Power window main switch, front power window switch (passenger side) and BCM transmit and receive the signal by power window serial link.
The signal mentioned below is transmitted from BCM to power window main switch, front power window switch (passenger side).
- Keyless power window down signal

The signal mentioned below is transmitted from power window main switch to front power window switch (passenger side).
- Front passenger side door window operation signal
- Power window control by key cylinder switch signal
- Power window lock switch signal
- Retained power operation signal

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

INFOID:0000000009723159

1.CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

With CONSULT

Check (“CDL LOCK SW ”, “CDL UNLOCK SW”) in “DATA MONITOR” mode for “POWER DOOR LOCK SYSTEM” with CONSULT. Refer toDLK-55, "DOOR LOCK : CONSULT Function (BCM - DOOR LOCK)".

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

Is the inspection result normal?

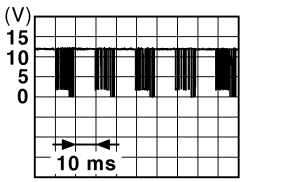
YES >> Power window serial link is OK.
NO >> Refer to PWC-34, "FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure".

FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure

INFOID:0000000009723160

1.CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

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

(+)		(–)	Signal (Reference value)
Front power window switch (passenger side)			
Connector	Terminal		
D45	16	Ground	

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Is the inspection result normal?

YES >> Replace front power window switch (passenger side). Refer to PWC-118, "Removal and Installation".
NO >> GO TO 2.

2.CHECK POWER WINDOW SERIAL LINK SIGNAL

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

(+)		(–)	Voltage (V) (Approx.)
Front power window switch (passenger side)			
Connector	Terminal		
D45	16	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-118, "Removal and Installation".
NO >> GO TO 3.

3.CHECK POWER WINDOW SERIAL LINK CIRCUIT

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

BCM		Front power window switch (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	
M123	132	D45	16	Existed

4. Check continuity between BCM connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M123	132		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-98, "Exploded View".
NO >> Repair or replace harness.

ECU DIAGNOSIS INFORMATION

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:0000000010064950

VALUES ON THE DIAGNOSIS TOOL

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

CONSULT MONITOR ITEM

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

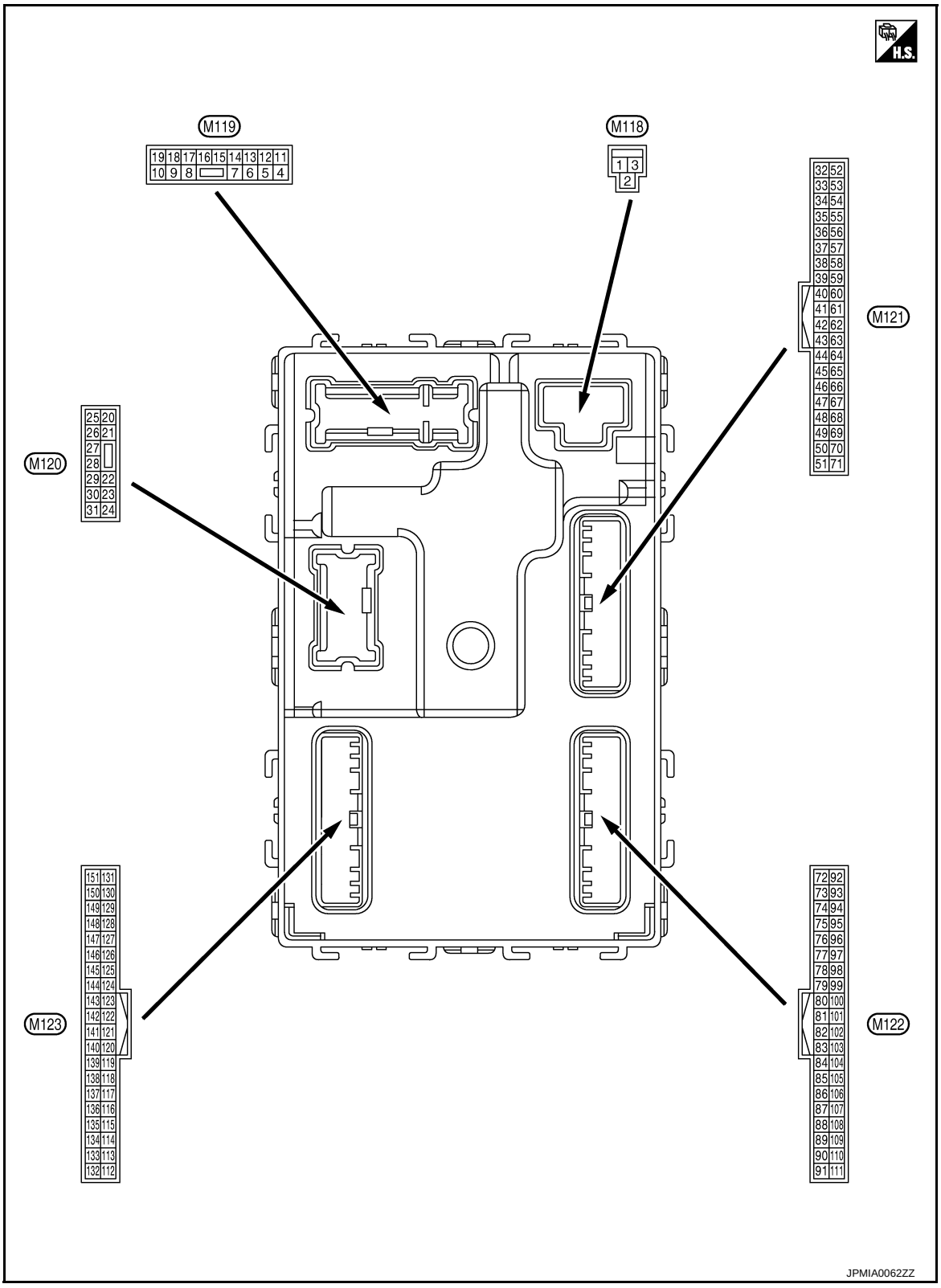
Monitor Item	Condition	Value/Status
FR FOG SW	Front fog lamp switch OFF	Off
	Front fog lamp switch ON	On
RR FOG SW	**NOTE:** The item is indicated, but not monitored.	Off
DOOR SW-DR	Driver door closed	Off
	Driver door opened	On
DOOR SW-AS	Passenger door closed	Off
	Passenger door opened	On
DOOR SW-RR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

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

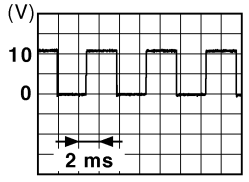
Monitor Item	Condition	Value/Status
SFT PN -IPDM	Selector lever in any position other than P and N	Off
	Selector lever in P or N position	On
SFT P -MET	Selector lever in any position other than P	Off
	Selector lever in P position	On
SFT N -MET	Selector lever in any position other than N	Off
	Selector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

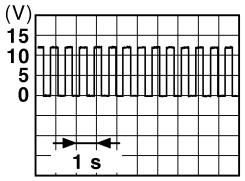
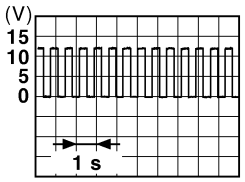
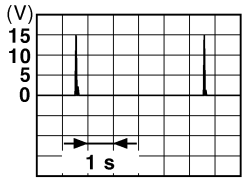
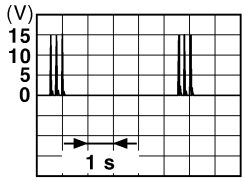
Monitor Item	Condition	Value/Status
CONFIRM ID3	The Intelligent Key ID that the key slot receives is not recognized by the third Intelligent Key ID registered to BCM.	Yet
	The Intelligent Key ID that the key slot receives is recognized by the third Intelligent Key ID registered to BCM.	Done
CONFIRM ID2	The Intelligent Key ID that the key slot receives is not recognized by the second Intelligent Key ID registered to BCM.	Yet
	The Intelligent Key ID that the key slot receives is recognized by the second Intelligent Key ID registered to BCM.	Done
CONFIRM ID1	The Intelligent Key ID that the key slot receives is not recognized by the first Intelligent Key ID registered to BCM.	Yet
	The Intelligent Key ID that the key slot receives is recognized by the first Intelligent Key ID registered to BCM.	Done
TP 4	The ID of fourth Intelligent Key is not registered to BCM	Yet
	The ID of fourth Intelligent Key is registered to BCM	Done
TP 3	The ID of third Intelligent Key is not registered to BCM	Yet
	The ID of third Intelligent Key is registered to BCM	Done
TP 2	The ID of second Intelligent Key is not registered to BCM	Yet
	The ID of second Intelligent Key is registered to BCM	Done
TP 1	The ID of first Intelligent Key is not registered to BCM	Yet
	The ID of first Intelligent Key is registered to BCM	Done
AIR PRESS FL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front LH tire
AIR PRESS FR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front RH tire
AIR PRESS RR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear RH tire
AIR PRESS RL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear LH tire
ID REGST FL1	ID of front LH tire transmitter is registered	Done
	ID of front LH tire transmitter is not registered	Yet
ID REGST FR1	ID of front RH tire transmitter is registered	Done
	ID of front RH tire transmitter is not registered	Yet
ID REGST RR1	ID of rear RH tire transmitter is registered	Done
	ID of rear RH tire transmitter is not registered	Yet
ID REGST RL1	ID of rear LH tire transmitter is registered	Done
	ID of rear LH tire transmitter is not registered	Yet
WARNING LAMP	Tire pressure indicator OFF	Off
	Tire pressure indicator ON	On
BUZZER	Tire pressure warning alarm is not sounding	Off
	Tire pressure warning alarm is sounding	On

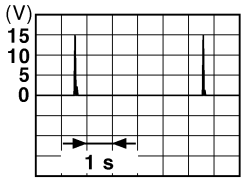
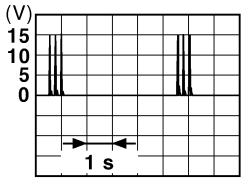
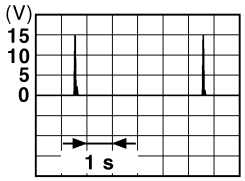
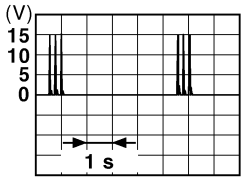
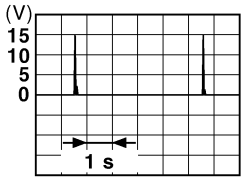
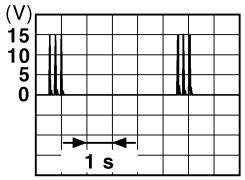
TERMINAL LAYOUT

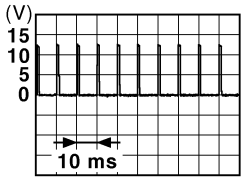
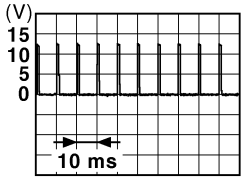
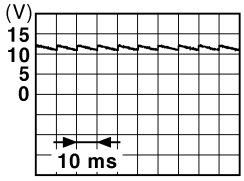
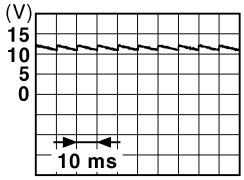


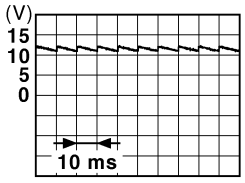
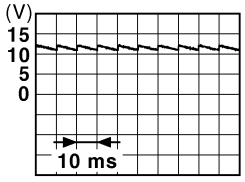
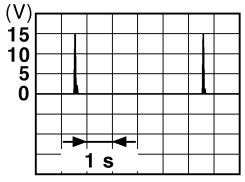
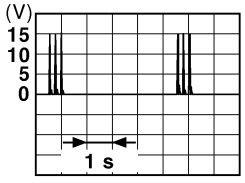
PHYSICAL VALUES

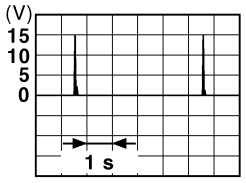
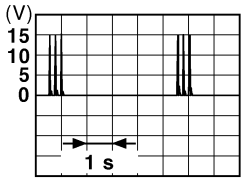
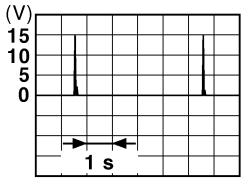
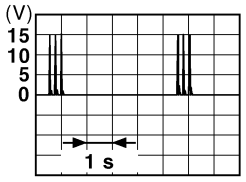
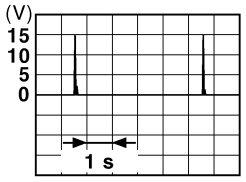
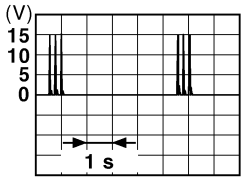
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
1 (W)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
2 (GR)	Ground	P/W power supply (BAT)	Output	Ignition switch OFF		Battery voltage
3 (L)	Ground	P/W power supply (IGN)	Output	Ignition switch ON		Battery voltage
4 (P/W)	Ground	Interior room lamp power supply	Output	Interior room lamp battery saver is activated. (Cuts the interior room lamp power supply)		0 V
				Interior room lamp battery saver is not activated. (Outputs the interior room lamp power supply)		Battery voltage
5 (G)	Ground	Passenger door UNLOCK	Output	Passenger door	UNLOCK (Actuator is activated)	Battery voltage
					Other than UNLOCK (Actuator is not activated)	0 V
7 (W)	Ground	Step lamp control	Output	Step lamp	ON	0 V
					OFF	Battery voltage
8 (V)	Ground	All doors LOCK	Output	All doors	LOCK (Actuator is activated)	Battery voltage
					Other than LOCK (Actuator is not activated)	0 V
9 (G)	Ground	Driver door UNLOCK	Output	Driver door	UNLOCK (Actuator is activated)	Battery voltage
					Other than UNLOCK (Actuator is not activated)	0 V
10 (P)	Ground	Rear RH door and rear LH door UNLOCK	Output	Rear RH door and rear LH door	UNLOCK (Actuator is activated)	Battery voltage
					Other than UNLOCK (Actuator is not activated)	0 V
11 (LG)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
13 (B)	Ground	Ground	—	Ignition switch ON		0 V
14 (O)	Ground	Push-button ignition switch illumination ground	Output	Tail lamp	OFF	0 V
					ON	**NOTE:** When the illumination brightening/dimming level is in the neutral position  JSNIA0010GB
15 (L)	Ground	ACC indicator lamp	Output	Ignition switch	OFF (LOCK and ON indicator lamps are not illuminated.)	Battery voltage
					ACC	0 V

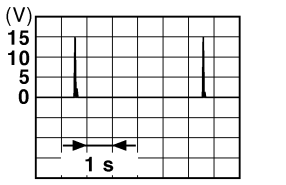
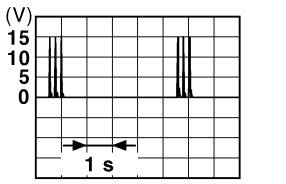
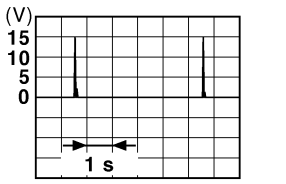
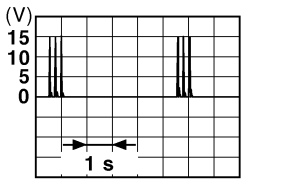
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
17 (G)	Ground	Turn signal RH	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch RH	 PKID0926E 6.5 V
18 (BR)	Ground	Turn signal LH	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch LH	 PKID0926E 6.5 V
19 (Y)	Ground	Interior room lamp control	Output	Interior room lamp	OFF	Battery voltage
					ON	0 V
23 (BR)	Ground	Back door open	Output	Back door	OPEN (Back door opener actuator is activated)	Battery voltage
					Other than OPEN (Back door opener actuator is not activated)	0 V
26 (G)	Ground	Rear wiper	Output	Rear wiper	OFF (Stopped)	0 V
					ON (Operated)	Battery voltage
34 (B)	Ground	Luggage room antenna (-)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB

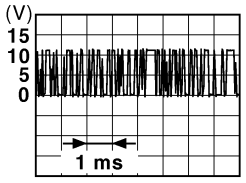
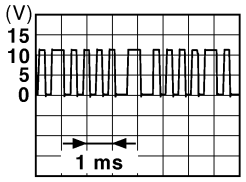
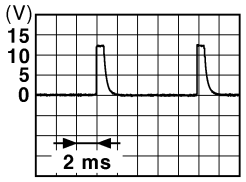
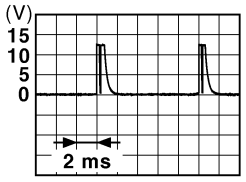
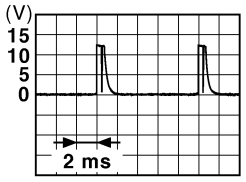
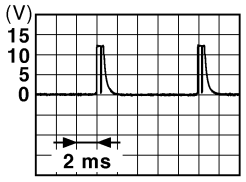
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
35 (W)	Ground	Luggage room antenna (+)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
38 (L)	Ground	Rear bumper antenna (-)	Output	When the back door request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB
39 (BR)	Ground	Rear bumper antenna (+)	Output	When the back door request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB
47 (L)	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	OFF or ACC	Battery voltage
					ON	0 V

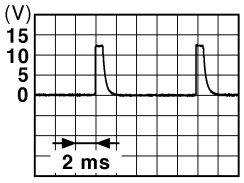
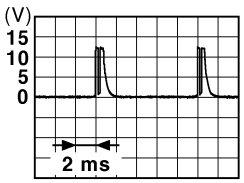
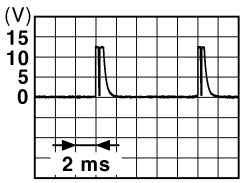
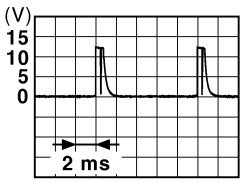
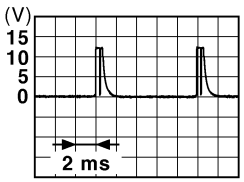
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
52 (R)	Ground	Starter relay control	Output	Ignition switch ON	When selector lever is in P or N position	Battery voltage
					When selector lever is not in P or N position	0.3 V
				Ignition switch OFF		0 V
60 (BR)	Ground	Push-button ignition switch (push switch)	Input	Push-button ignition switch (push switch)	Pressed	0 V
					Not pressed	Battery voltage
61 (R)	Ground	Back door request switch	Input	Back door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	 JPMIA0016GB 1.0 V
64 (GR)	Ground	Intelligent key warning buzzer control	Output	Warning buzzer	Sounding	0 V
					Not sounding	Battery voltage
65 (O)	Ground	Rear wiper stop position	Input	Rear wiper	In stop position	 JPMIA0016GB 1.0 V
					Not in stop position	0 V
66 (Y)	Ground	Back door switch	Input	Back door switch	OFF (When back door closes)	 JPMIA0011GB 11.8 V
					ON (When back door opens)	0 V
67 (LG)	Ground	Back door opener switch	Input	Back door opener switch	Pressed	0 V
					Not pressed	 JPMIA0011GB 11.8 V

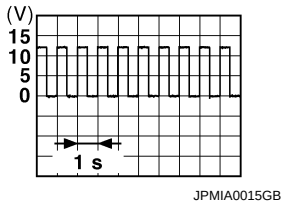
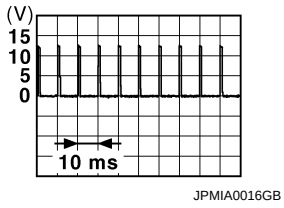
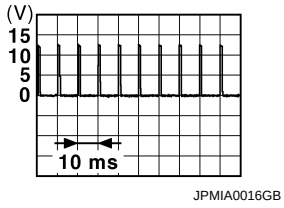
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
68 (W)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (When rear RH door closes)	 JPMIA0011GB 11.8 V
					ON (When rear RH door opens)	0 V
69 (R)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (When rear LH door closes)	 JPMIA0011GB 11.8 V
					ON (When rear LH door opens)	0 V
72 (B)	Ground	Room antenna (-) (Center console)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB

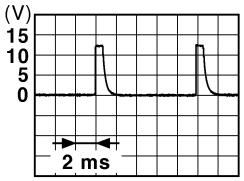
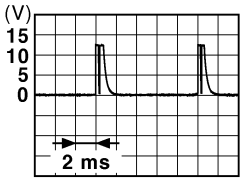
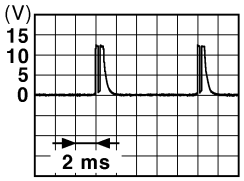
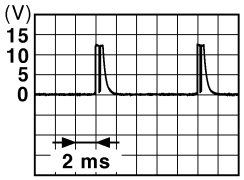
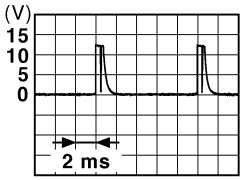
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
73 (W)	Ground	Room antenna (+) (Center console)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
74 (Y)	Ground	Passenger door antenna (-)	Output	When the passenger door request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB
75 (LG)	Ground	Passenger door antenna (+)	Output	When the passenger door request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB

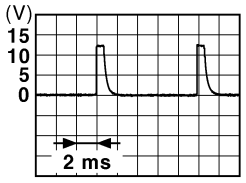
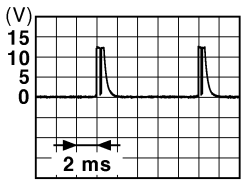
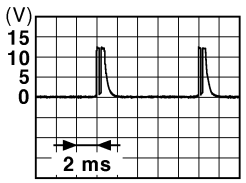
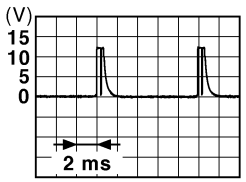
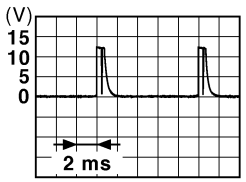
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
76 (V)	Ground	Driver door antenna (-)	Output	When the driver door request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB
77 (P)	Ground	Driver door antenna (+)	Output	When the driver door request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB
80 (SB)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
81 (O)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
82 (BR)	Ground	Ignition relay [fuse block (J/B)] control	Output	Ignition switch	OFF or ACC	0 V
					ON	Battery voltage

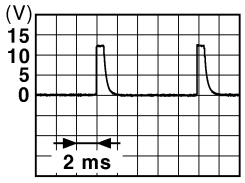
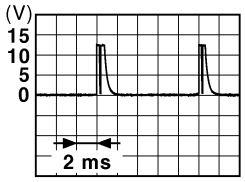
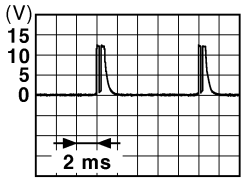
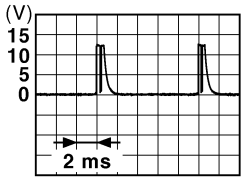
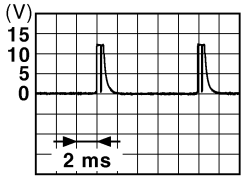
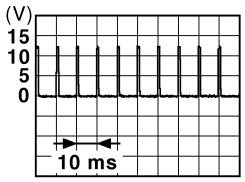
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
83 (P)	Ground	Remote keyless entry receiver communication	Input/ Output	During waiting		 JMKIA0064GB
				When operating either button on Intelligent Key		 JMKIA0065GB
87 (R)	Ground	Combination switch INPUT 5	Input	Combination switch	All switches OFF (Wiper intermittent dial 4)	 JPMIA0041GB 1.4 V
					Front fog lamp switch ON (Wiper intermittent dial 4)	 JPMIA0037GB 1.3 V
					Rear wiper switch ON (Wiper intermittent dial 4)	 JPMIA0039GB 1.3 V
					Any of the conditions below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 6 • Wiper intermittent dial 7	 JPMIA0040GB 1.3 V

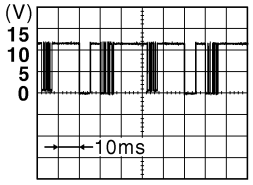
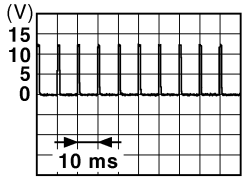
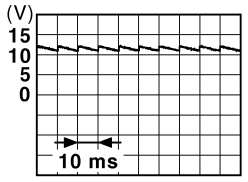
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
88 (GR)	Ground	Combination switch INPUT 3	Input	Combination switch	All switches OFF (Wiper intermittent dial 4)	 JPMIA0041GB 1.4 V
					Lighting switch HI (Wiper intermittent dial 4)	 JPMIA0036GB 1.3 V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

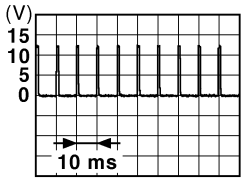
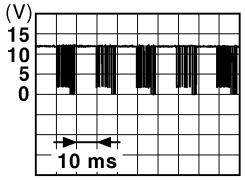
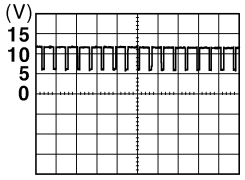
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
92 (R)	Ground	Key slot illumination	Output	Key slot illumination	OFF	0 V
					Blinking	 JPMIA0015GB 6.5 V
					ON	Battery voltage
93 (P)	Ground	ON indicator lamp	Output	Ignition switch	OFF (LOCK and ACC indicator lamps are not illuminated.)	Battery voltage
					ON	0 V
95 (L)	Ground	ACC relay control	Output	Ignition switch	OFF	0 V
					ACC or ON	Battery voltage
96 (Y)	Ground	CVT shift selector (detention switch) power supply	Output	—		Battery voltage
99 (V)	Ground	Selector lever P position switch	Input	Selector lever	P position	0 V
					Any position other than P	Battery voltage
100 (P)	Ground	Passenger door request switch	Input	Passenger door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	 JPMIA0016GB 1.0 V
101 (W)	Ground	Driver door request switch	Input	Driver door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	 JPMIA0016GB 1.0 V
102 (Y)	Ground	Blower fan motor relay control	Output	Ignition switch	OFF or ACC	0 V
					ON	Battery voltage
103 (L)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OFF		Battery voltage

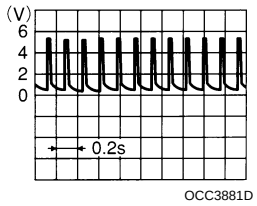
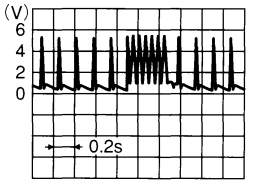
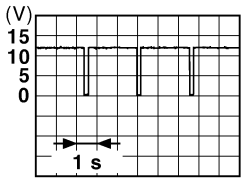
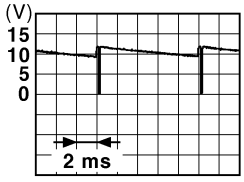
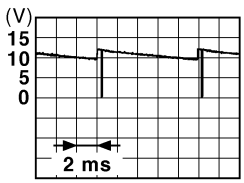
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
107 (O)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermittent dial 4)	All switches OFF	 JPMIA0041GB 1.4 V
					Turn signal switch LH	 JPMIA0037GB 1.3 V
					Turn signal switch RH	 JPMIA0036GB 1.3 V
					Front wiper switch LO	 JPMIA0038GB 1.3 V
					Front washer switch ON	 JPMIA0039GB 1.3 V

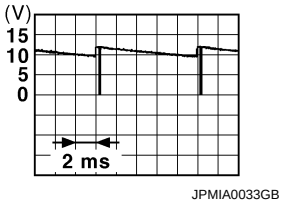
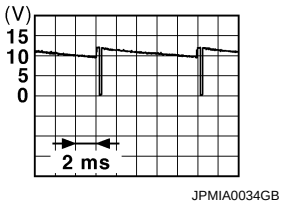
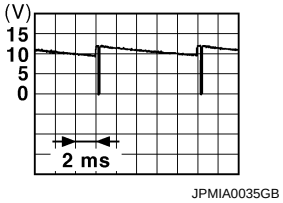
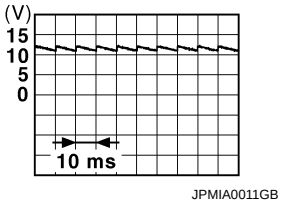
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
108 (P)	Ground	Combination switch INPUT 4	Input	Combination switch	All switches OFF (Wiper intermittent dial 4)	 JPMIA0041GB 1.4 V
					Lighting switch AUTO (Wiper intermittent dial 4)	 JPMIA0038GB 1.3 V
					Lighting switch 1ST (Wiper intermittent dial 4)	 JPMIA0036GB 1.3 V
					Rear wiper switch INT (Wiper intermittent dial 4)	 JPMIA0040GB 1.3 V
					Any of the conditions below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	 JPMIA0039GB 1.3 V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
109 (SB)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermittent dial 4)	All switches OFF	 JPMIA0041GB 1.4 V
					Lighting switch PASS	 JPMIA0037GB 1.3 V
					Lighting switch 2ND	 JPMIA0036GB 1.3 V
					Front wiper switch INT/ AUTO	 JPMIA0038GB 1.3 V
					Front wiper switch HI	 JPMIA0040GB 1.3 V
110 (G)	Ground	Hazard switch	Input	Hazard switch	ON	0 V
					OFF	 JPMIA0012GB 1.1 V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
112 (R)	Ground	Rain sensor serial link	Input/ Output	Ignition switch ON		 JPMIA0156GB 8.7 V
113 (P/B)	Ground	Optical sensor	Input	Ignition switch ON	When bright outside of the vehicle	Close to 5 V
					When dark outside of the vehicle	Close to 0 V
116 (GR)	Ground	Stop lamp switch 1	Input	—		Battery voltage
118 (L)	Ground	Stop lamp switch 2	Input	Stop lamp switch	OFF (Brake pedal is not depressed)	0 V
					ON (Brake pedal is depressed)	Battery voltage
119 (W)	Ground	Front door lock assembly driver side (Unlock sensor)	Input	Driver door	LOCK status (unlock sensor switch OFF)	 JPMIA0012GB 1.1 V
					UNLOCK status (unlock sensor switch ON)	0 V
121 (Y)	Ground	Key slot switch	Input	When Intelligent Key is inserted into key slot		Battery voltage
				When Intelligent Key is not inserted into key slot		0 V
123 (G)	Ground	IGN feedback	Input	Ignition switch	OFF or ACC	0 V
					ON	Battery voltage
124 (R)	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closes)	 JPMIA0011GB 11.8 V
					ON (When passenger door opens)	0 V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
130 (BR)	Ground	Rear window defogger switch	Input	Ignition switch ON	Rear window defogger switch OFF	 JPMIA0012GB 1.1 V
					Rear window defogger switch ON	0 V
132 (G)	Ground	Power window switch communication	Input/ Output	Ignition switch ON		 JPMIA0013GB 10.2 V
				Ignition switch OFF or ACC		Battery voltage
133 (W)	Ground	Push-button ignition switch illumination	Output	Push-button ignition switch illumination	ON (When tail lamps OFF)	9.5 V
					ON (When tail lamps ON)	**NOTE:** The pulse width of this wave is varied by the illumination brightening/dimming level.  JPMIA0159GB
					OFF	0 V
134 (R)	Ground	LOCK indicator lamp	Output	LOCK indicator lamp	OFF (ACC and ON indicator lamps are not illuminated.)	Battery voltage
					ON	0 V
137 (P)	Ground	Receiver and sensor ground	Input	Ignition switch ON		0 V
138 (V)	Ground	Receiver and sensor power supply	Output	Ignition switch	OFF	0 V
					ACC or ON	5.0 V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
139 (O)	Ground	Tire pressure receiver communication	Input/ Output	Ignition switch ON	Standby state	 OCC3881D
					When receiving the signal from the transmitter	 OCC3880D
140 (GR)	Ground	Selector lever P/N position	Input	Selector lever	P or N position	Battery voltage
					Except P and N positions	0 V
141 (O)	Ground	Security indicator	Output	Security indicator	ON	0 V
					Blinking	 JPMIA0014GB 11.3 V
					OFF	Battery voltage
142 (L)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermittent dial 4)	All switches OFF	0 V
					Lighting switch 1ST	 JPMIA0031GB 10.7 V
					Lighting switch HI	
					Lighting switch 2ND	
					Turn signal switch RH	
143 (W)	Ground	Combination switch OUTPUT 1	Output	Combination switch	All switches OFF (Wiper intermittent dial 4)	0 V
					Front wiper switch HI (Wiper intermittent dial 4) Rear wiper switch INT (Wiper intermittent dial 4) Any of the conditions below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3 • Wiper intermittent dial 6 • Wiper intermittent dial 7	 JPMIA0032GB 10.7 V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
144 (P)	Ground	Combination switch OUTPUT 2	Output	Combination switch	All switches OFF (Wiper intermittent dial 4)	0 V
					Front washer switch ON (Wiper intermittent dial 4)	 JPMIA0033GB 10.7 V
					Rear wiper switch ON (Wiper intermittent dial 4)	
					Rear washer switch ON (Wiper intermittent dial 4)	
					Any of the conditions below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	
145 (V)	Ground	Combination switch OUTPUT 3	Output	Combination switch (Wiper intermittent dial 4)	All switches OFF	0 V
					Front wiper switch INT/ AUTO	 JPMIA0034GB 10.7 V
					Front wiper switch LO	
					Lighting switch AUTO	
146 (Y)	Ground	Combination switch OUTPUT 4	Output	Combination switch (Wiper intermittent dial 4)	All switches OFF	0 V
					Front fog lamp switch ON	 JPMIA0035GB 10.7 V
					Lighting switch 2ND	
					Lighting switch PASS	
					Turn signal switch LH	
150 (SB)	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closes)	 JPMIA0011GB 11.8 V
					ON (When driver door opens)	0 V
151 (G)	Ground	Rear window defogger relay control	Output	Rear window defogger	Active	0 V
					Not activated	Battery voltage

Wiring Diagram - BCM -

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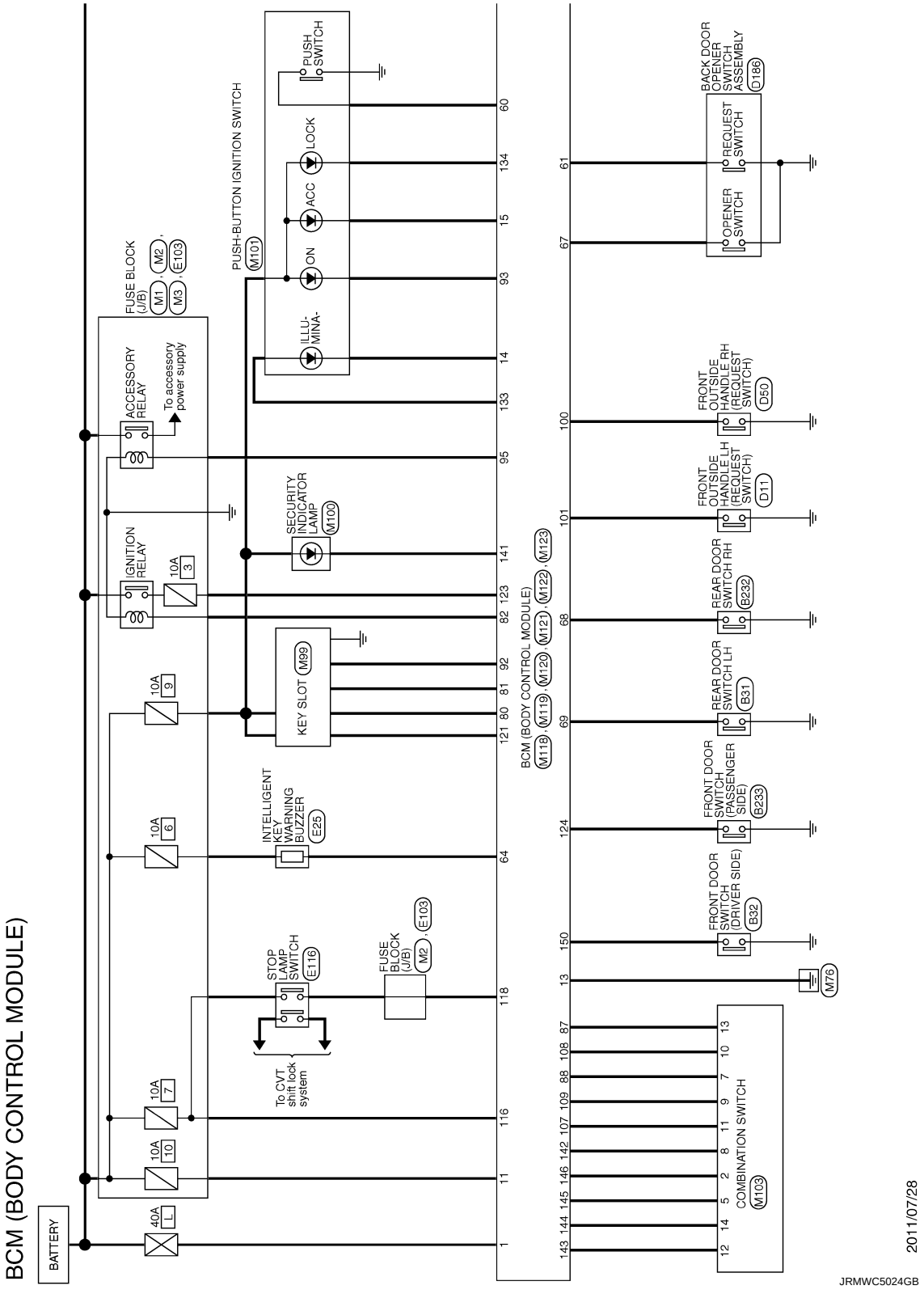
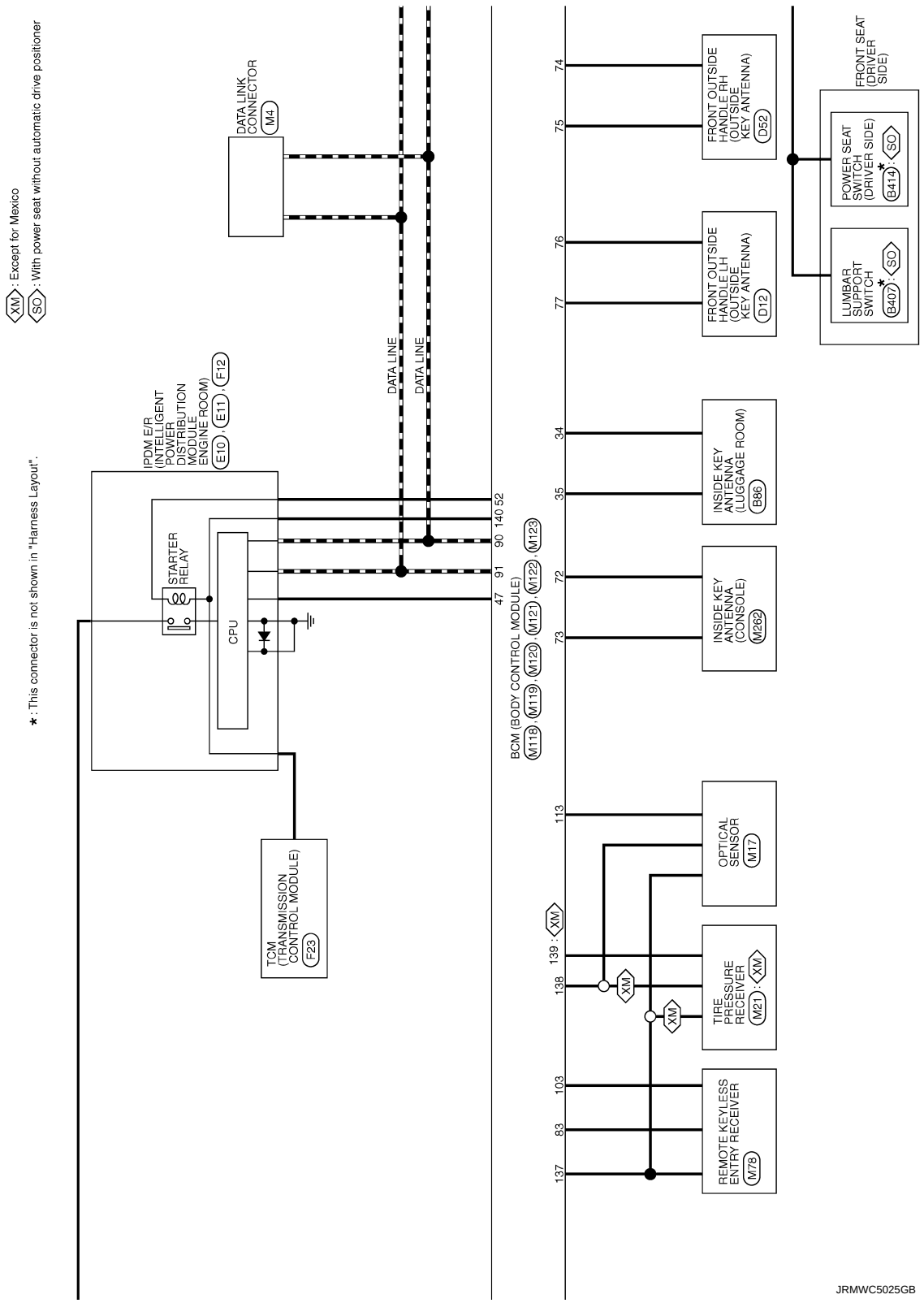
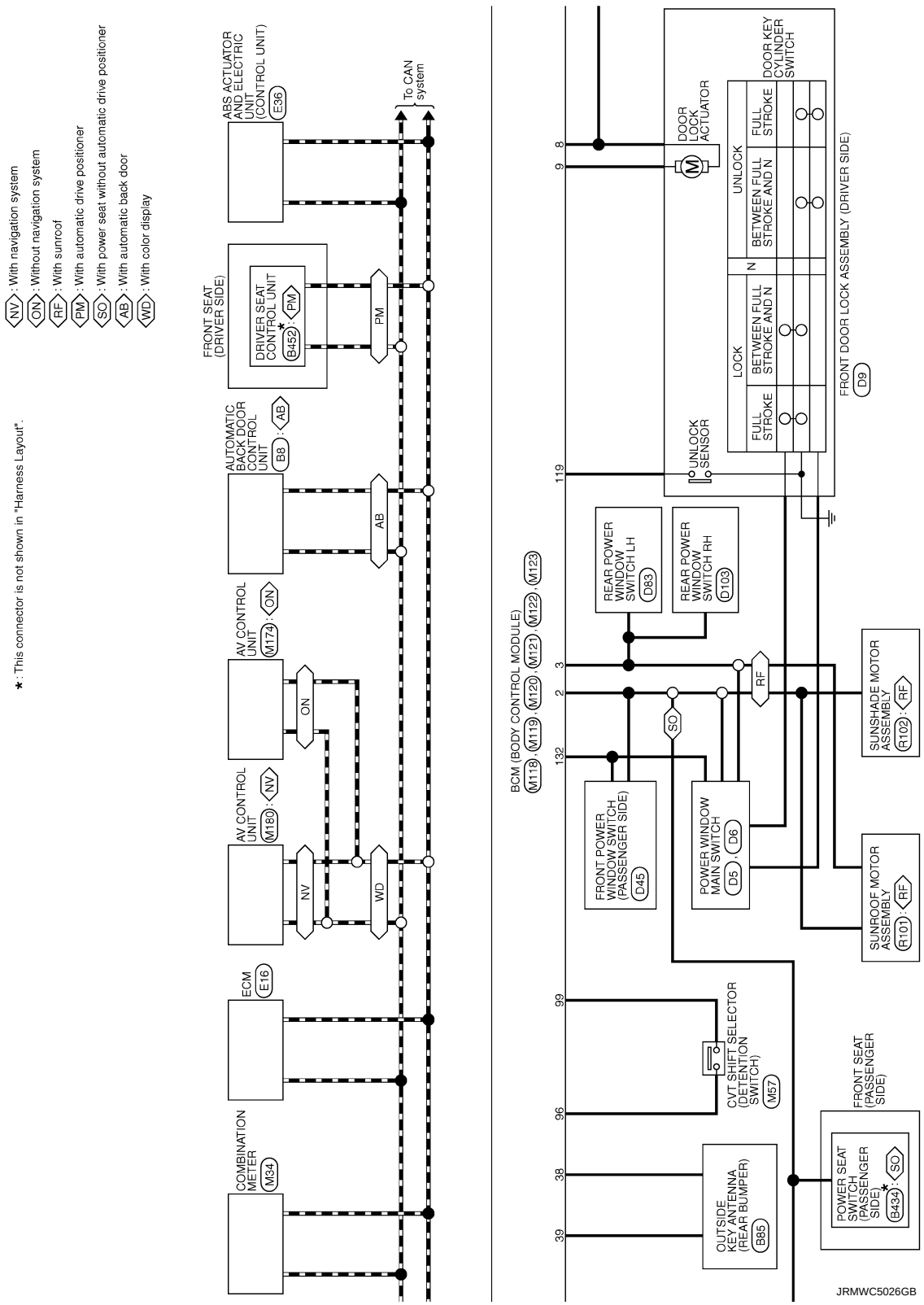
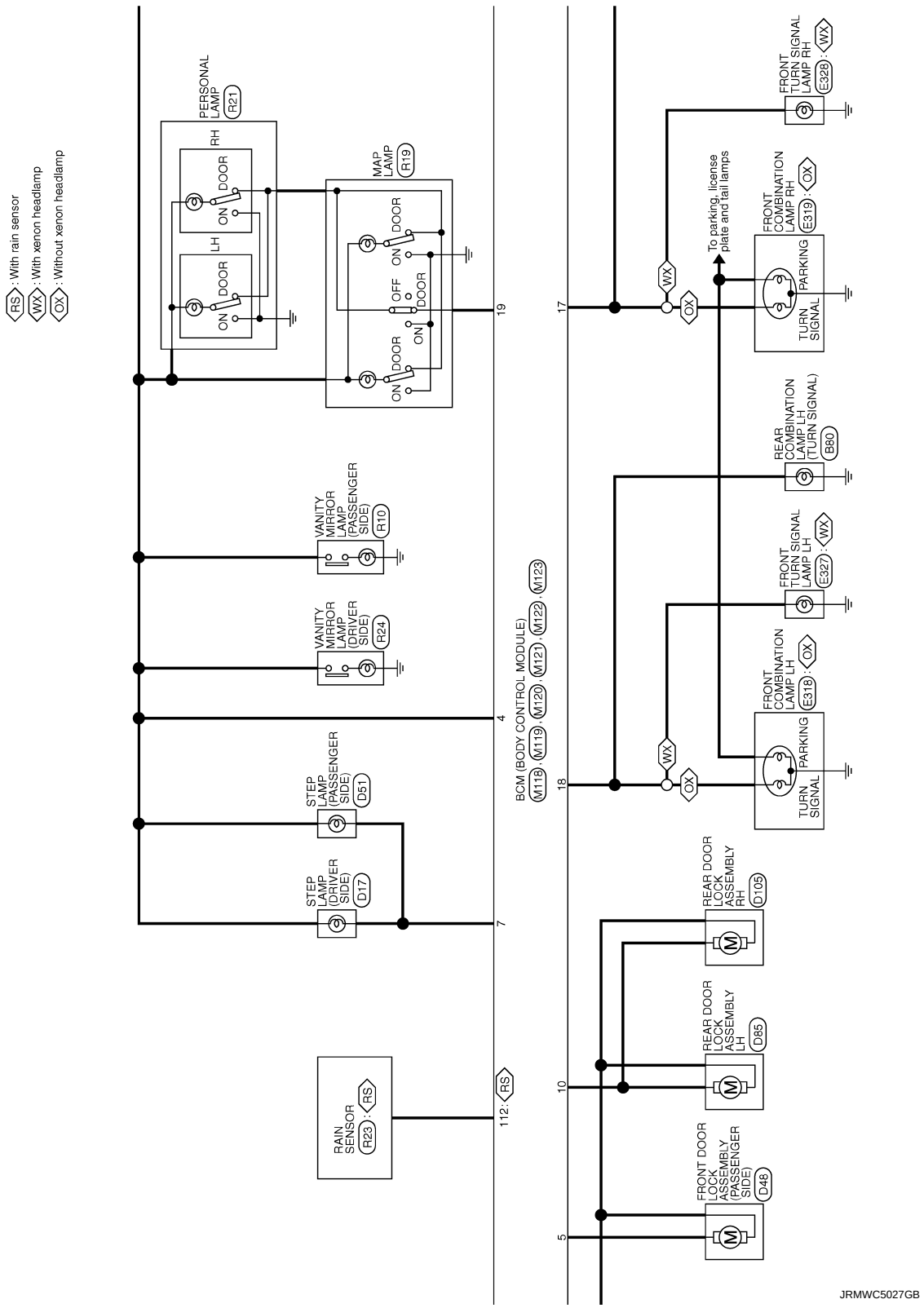
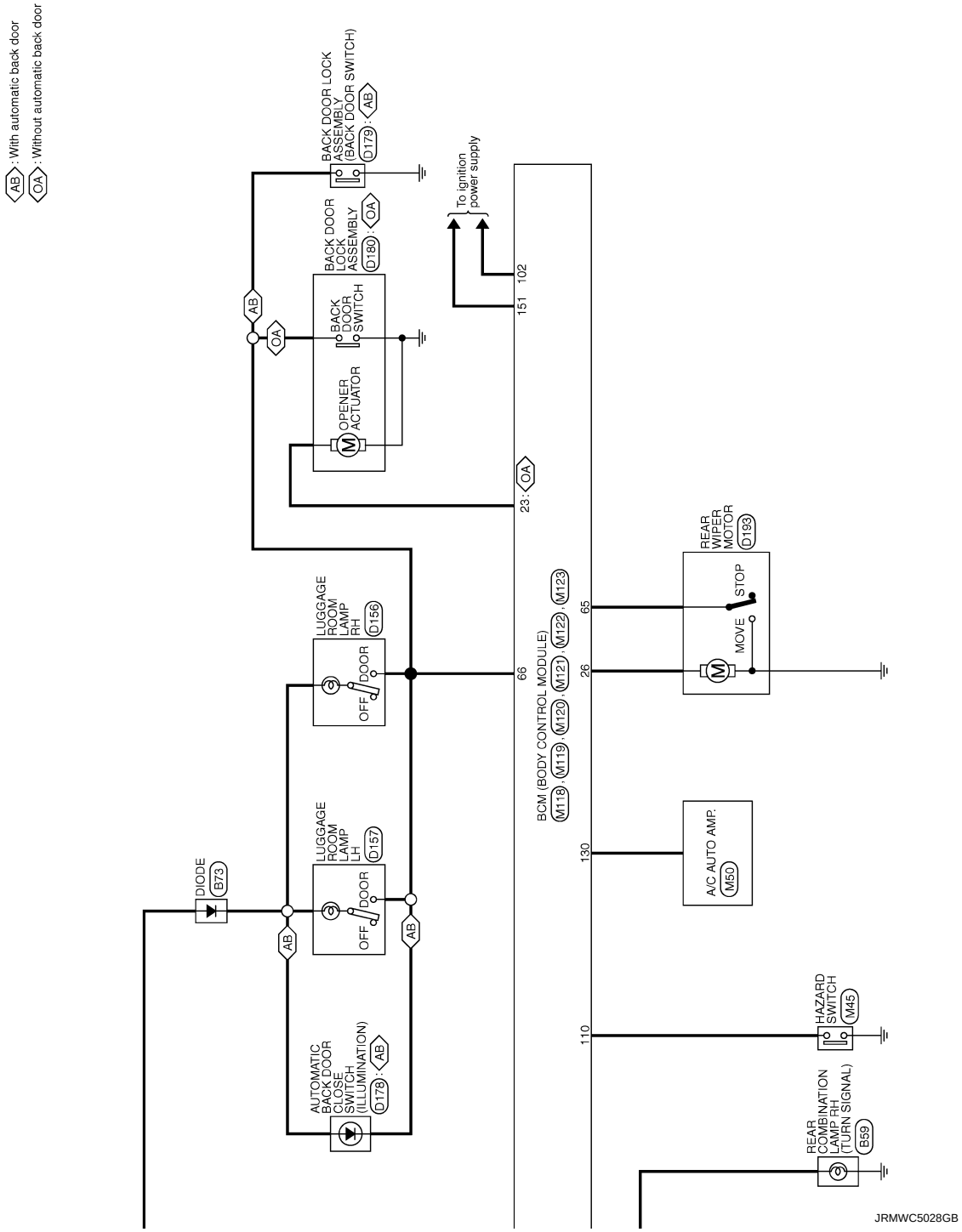
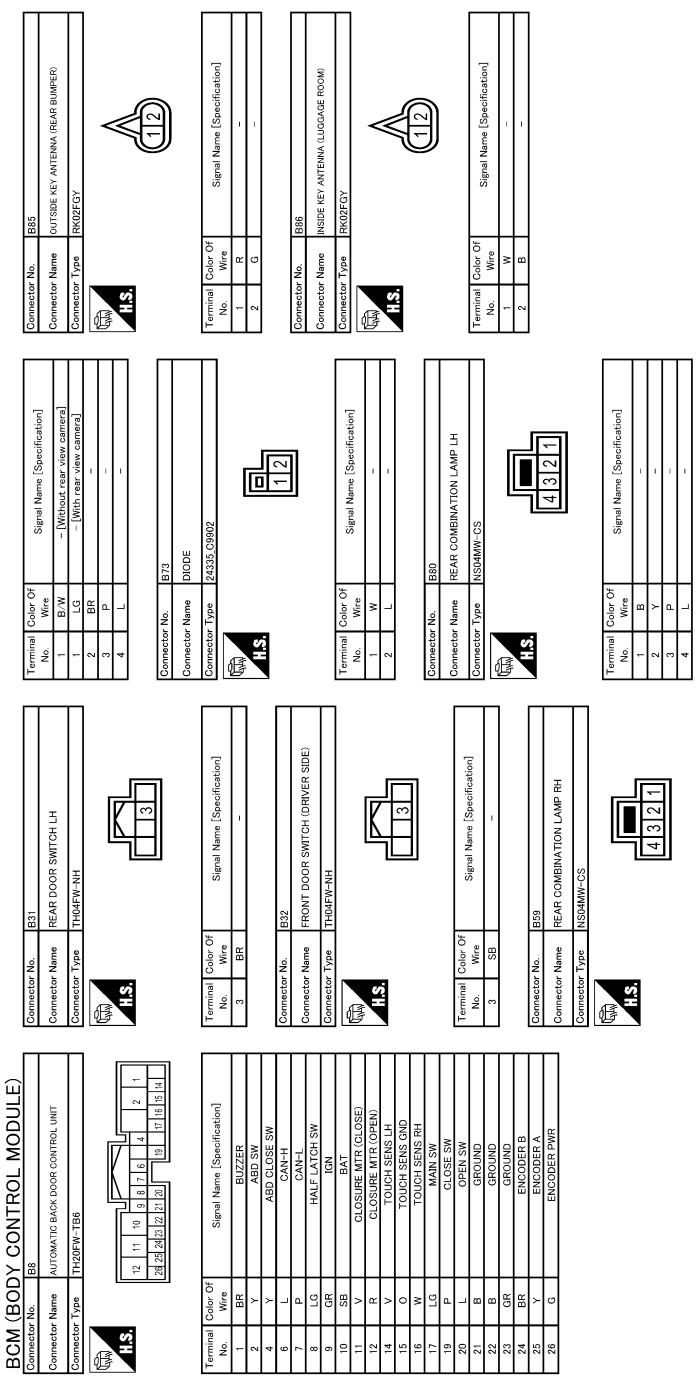



XM : Except for Mexico
SO : With power seat without automatic drive positioner
*: This connector is not shown in "Harness Layout".
DATA LINK CONNECTOR M4
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) E10, E11, F12
STARTER RELAY
CPU
TCM (TRANSMISSION CONTROL MODULE) F23
DATA LINE
DATA LINE
BCM (BODY CONTROL MODULE) M118, M119, M120, M121, M122, M123
47 91 90 140 52
137 83 103 138 139 : XM 113 73 72 35 34 77 76 75 74
REMOTE KEYLESS ENTRY RECEIVER M78
TIRE PRESSURE RECEIVER M21 : XM
OPTICAL SENSOR M17
INSIDE KEY ANTENNA (CONSOLE) M262
INSIDE KEY ANTENNA (LUGGAGE ROOM) B86
FRONT OUTSIDE HANDLE LH (OUTSIDE KEY ANTENNA) D12
FRONT OUTSIDE HANDLE RH (OUTSIDE KEY ANTENNA) D52
FRONT SEAT (DRIVER SIDE)
LUMBAR SUPPORT SWITCH B407 : SO *
POWER SEAT SWITCH (DRIVER SIDE) B414 : SO *
JRMWC5025GB


NV : With navigation system
ON : Without navigation system
RF : With sunroof
PM : With automatic drive positioner
SO : With power seat without automatic drive positioner
AB : With automatic back door
WD : With color display
*: This connector is not shown in "Harness Layout".
ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) E36
To CAN system
FRONT SEAT (DRIVER SIDE)
DRIVER SEAT CONTROL UNIT B452
PM
AUTOMATIC BACK DOOR CONTROL UNIT B8
AB
AV CONTROL UNIT M174
ON
AV CONTROL UNIT M180
NV
WD
ECM E16
COMBINATION METER M34
BCM (BODY CONTROL MODULE) M118, M119, M120, M121, M122, M123
DOOR LOCK ACTUATOR
UNLOCK SENSOR
DOOR KEY CYLINDER SWITCH
LOCK
UNLOCK
FULL STROKE
BETWEEN FULL STROKE AND N
FRONT DOOR LOCK ASSEMBLY (DRIVER SIDE) D9
REAR POWER WINDOW SWITCH LH D83
REAR POWER WINDOW SWITCH RH D103
FRONT POWER WINDOW SWITCH (PASSENGER SIDE) D45
POWER WINDOW MAIN SWITCH D5, D6
SUNSHADE MOTOR ASSEMBLY R102
SUNROOF MOTOR ASSEMBLY R101
CVT SHIFT SELECTOR (DETENTION SWITCH) M57
OUTSIDE KEY ANTENNA (REAR BUMPER) B85
POWER SEAT SWITCH (PASSENGER SIDE)* B434
FRONT SEAT (PASSENGER SIDE)
JRMWC5026GB


RS : With rain sensor
WX : With xenon headlamp
OX : Without xenon headlamp
PERSONAL LAMP R21
RH
LH
DOOR
ON
MAP LAMP R19
OFF
VANITY MIRROR LAMP (PASSENGER SIDE) R10
VANITY MIRROR LAMP (DRIVER SIDE) R24
STEP LAMP (PASSENGER SIDE) D51
STEP LAMP (DRIVER SIDE) D17
RAIN SENSOR R23
112: RS
BCM (BODY CONTROL MODULE)
M118, M119, M120, M121, M122, M123
19
4
7
17
18
10
5
To parking, license plate and tail lamps
FRONT TURN SIGNAL LAMP RH E328
FRONT COMBINATION LAMP RH E319
FRONT COMBINATION LAMP LH E318
REAR COMBINATION LAMP LH (TURN SIGNAL) B80
FRONT TURN SIGNAL LAMP LH E327
TURN SIGNAL
PARKING
REAR DOOR LOCK ASSEMBLY RH D105
REAR DOOR LOCK ASSEMBLY LH D85
FRONT DOOR LOCK ASSEMBLY (PASSENGER SIDE) D48
JRMWC5027GB


AB : With automatic back door
OA : Without automatic back door
BACK DOOR LOCK ASSEMBLY (BACK DOOR SWITCH) D179
BACK DOOR LOCK ASSEMBLY D180
BACK DOOR SWITCH
OPENER ACTUATOR
To ignition power supply
151 102
23 : OA
LUGGAGE ROOM LAMP RH D156
LUGGAGE ROOM LAMP LH D157
DOOR
OFF
DIODE B73
AUTOMATIC BACK DOOR CLOSE SWITCH (ILLUMINATION) D178
BCM (BODY CONTROL MODULE) M118, M119, M120, M121, M122, M123
66
65
26
130
110
REAR WIPER MOTOR D193
STOP
MOVE
A/C AUTO AMP. M50
HAZARD SWITCH M45
REAR COMBINATION LAMP RH (TURN SIGNAL) B59
JRMWC5028GB



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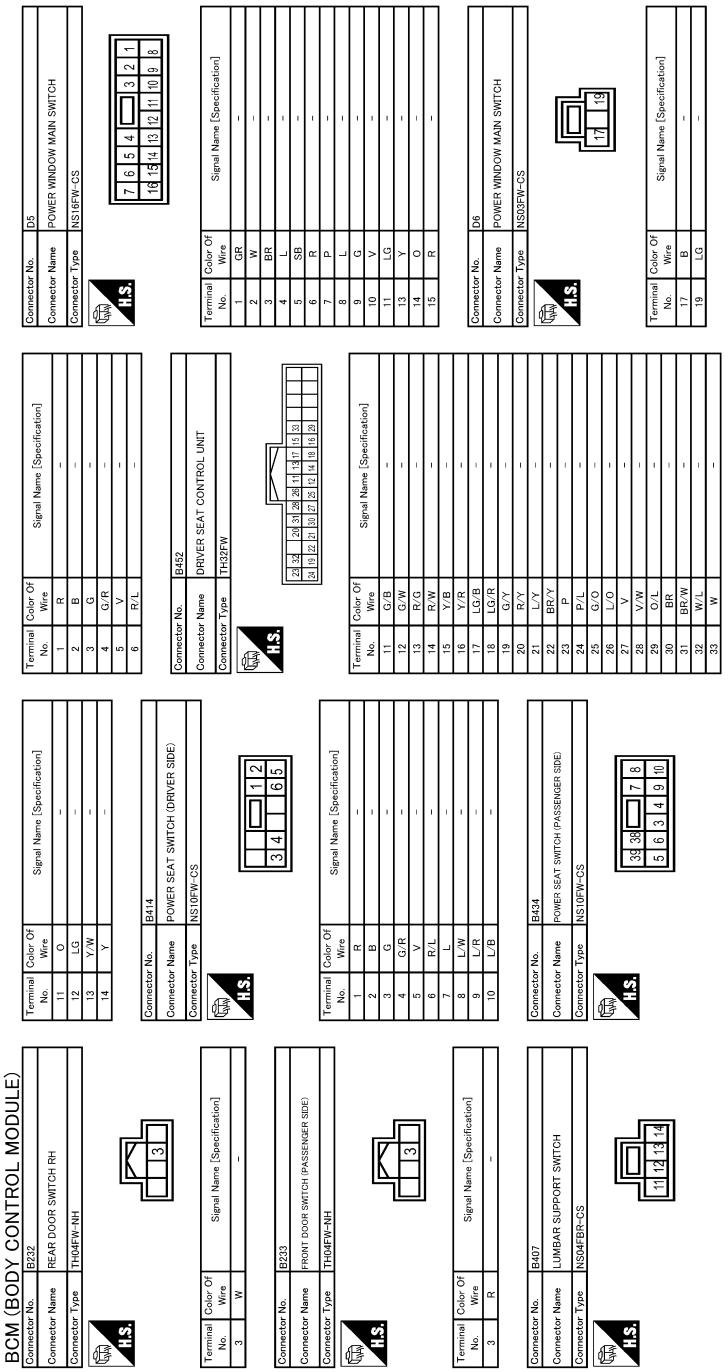
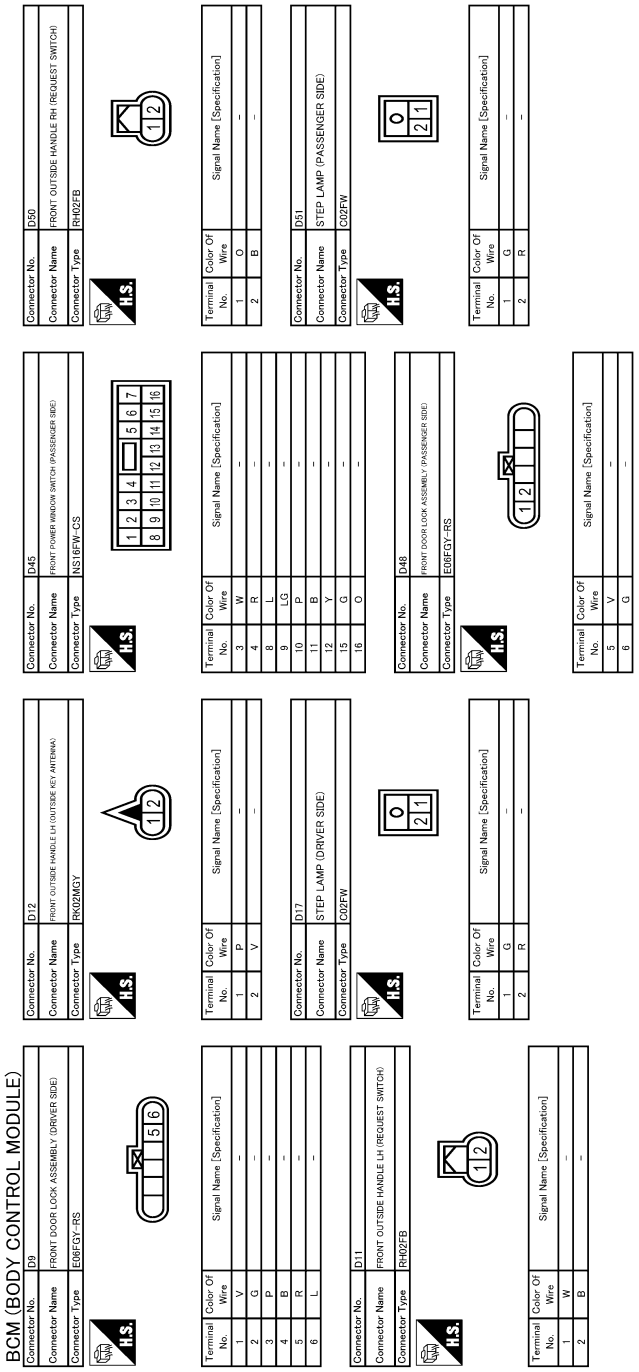

BCM (BODY CONTROL MODULE)
Connector No. B232
Connector Name REAR DOOR SWITCH RH
Connector Type TH04FW-NH
H.S.
Terminal No. | Color Of Wire | Signal Name [Specification]
3 | W | –
Connector No. B233
Connector Name FRONT DOOR SWITCH (PASSENGER SIDE)
Connector Type TH04FW-NH
H.S.
Terminal No. | Color Of Wire | Signal Name [Specification]
3 | R | –
Connector No. B407
Connector Name LUMBAR SUPPORT SWITCH
Connector Type NS04FBR-CS
H.S.
Terminal No. | Color Of Wire | Signal Name [Specification]
11 | O | –
12 | LG | –
13 | Y/W | –
14 | Y | –
Connector No. B414
Connector Name POWER SEAT SWITCH (DRIVER SIDE)
Connector Type NS10FW-CS
H.S.
Terminal No. | Color Of Wire | Signal Name [Specification]
1 | R | –
2 | B | –
3 | G | –
4 | G/R | –
5 | V | –
6 | R/L | –
7 | L/W | –
8 | L/R | –
9 | L/R | –
10 | L/B | –
Connector No. B434
Connector Name POWER SEAT SWITCH (PASSENGER SIDE)
Connector Type NS10FW-CS
H.S.
Terminal No. | Color Of Wire | Signal Name [Specification]
1 | G | –
2 | B | –
3 | G | –
4 | G/R | –
5 | V | –
6 | R/L | –
7 | L | –
8 | L/W | –
9 | L/R | –
10 | L/B | –
Connector No. B452
Connector Name DRIVER SEAT CONTROL UNIT
Connector Type TH32FW
H.S.
Terminal No. | Color Of Wire | Signal Name [Specification]
1 | R | –
2 | B | –
3 | G | –
4 | G/R | –
5 | V | –
6 | R/L | –
Connector No. D5
Connector Name POWER WINDOW MAIN SWITCH
Connector Type NS16FW-CS
H.S.
Terminal No. | Color Of Wire | Signal Name [Specification]
1 | GR | –
2 | W | –
3 | BR | –
4 | L | –
5 | SB | –
6 | R | –
7 | P | –
8 | L | –
9 | G | –
10 | V | –
11 | LG | –
13 | Y | –
14 | O | –
15 | R | –
Connector No. D6
Connector Name POWER WINDOW MAIN SWITCH
Connector Type NS03FW-CS
H.S.
Terminal No. | Color Of Wire | Signal Name [Specification]
17 | B | –
19 | LG | –
JRMWE5831GB



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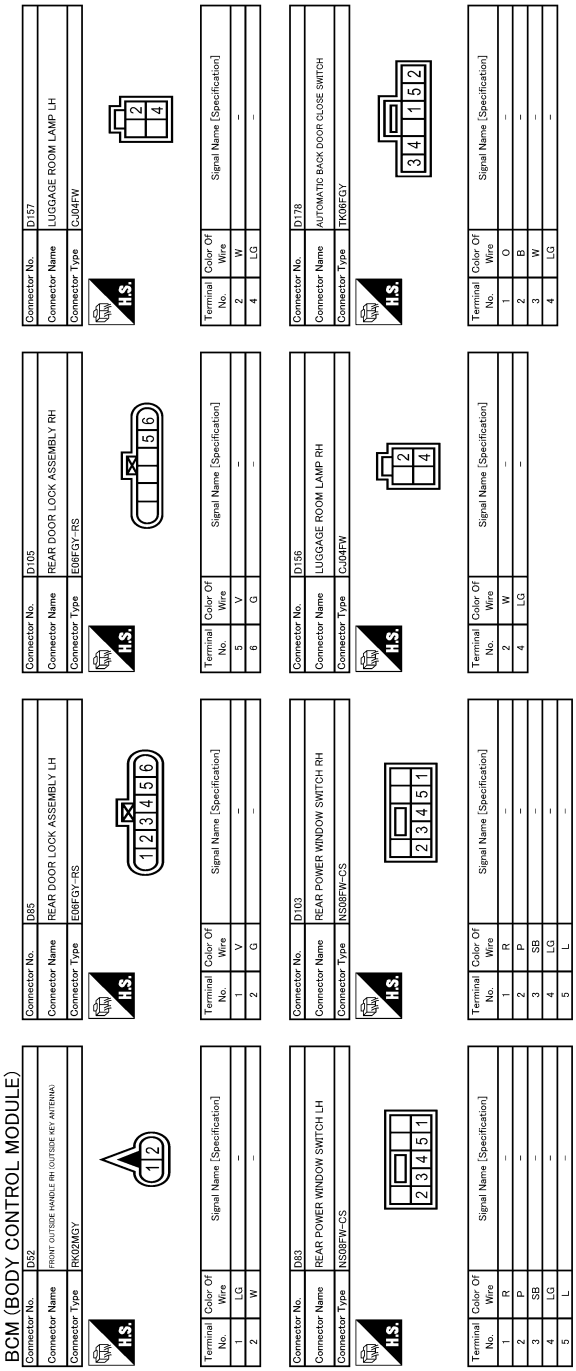

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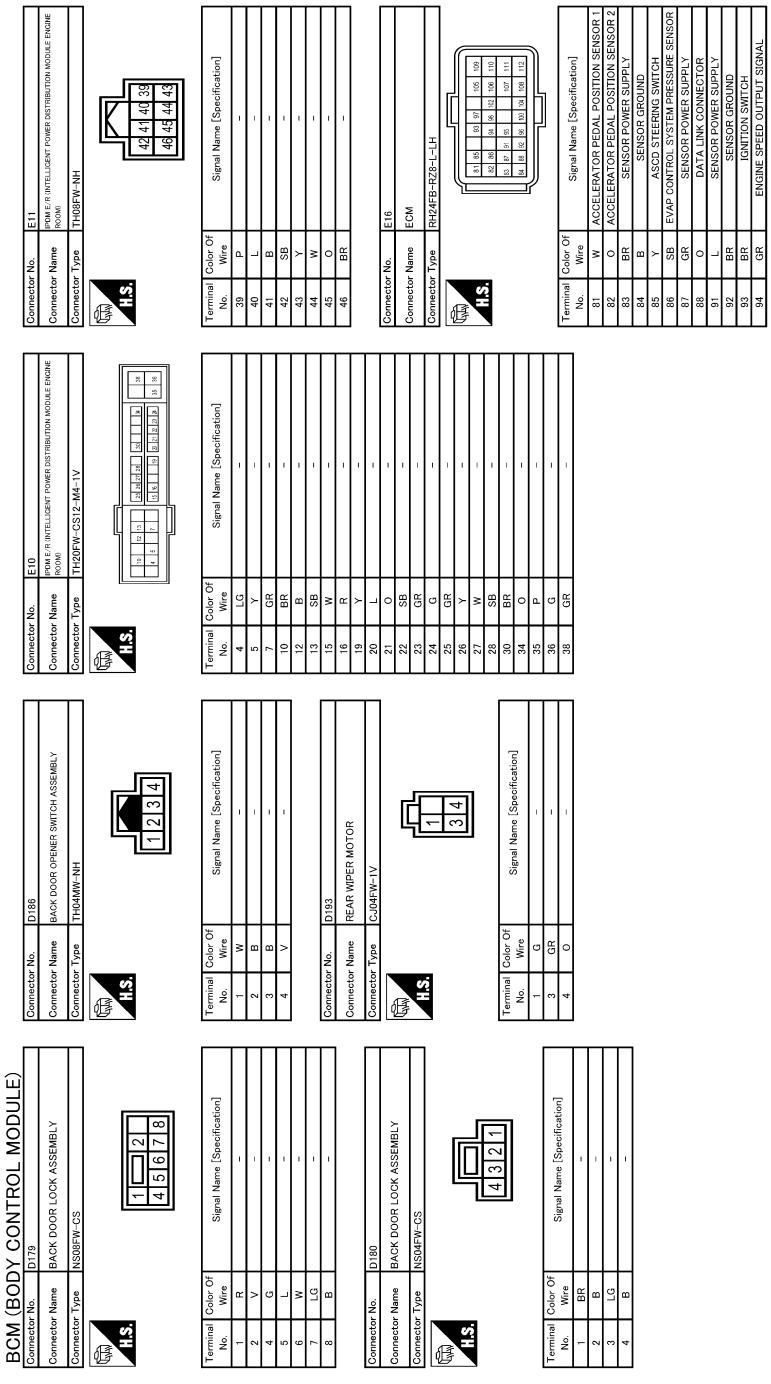

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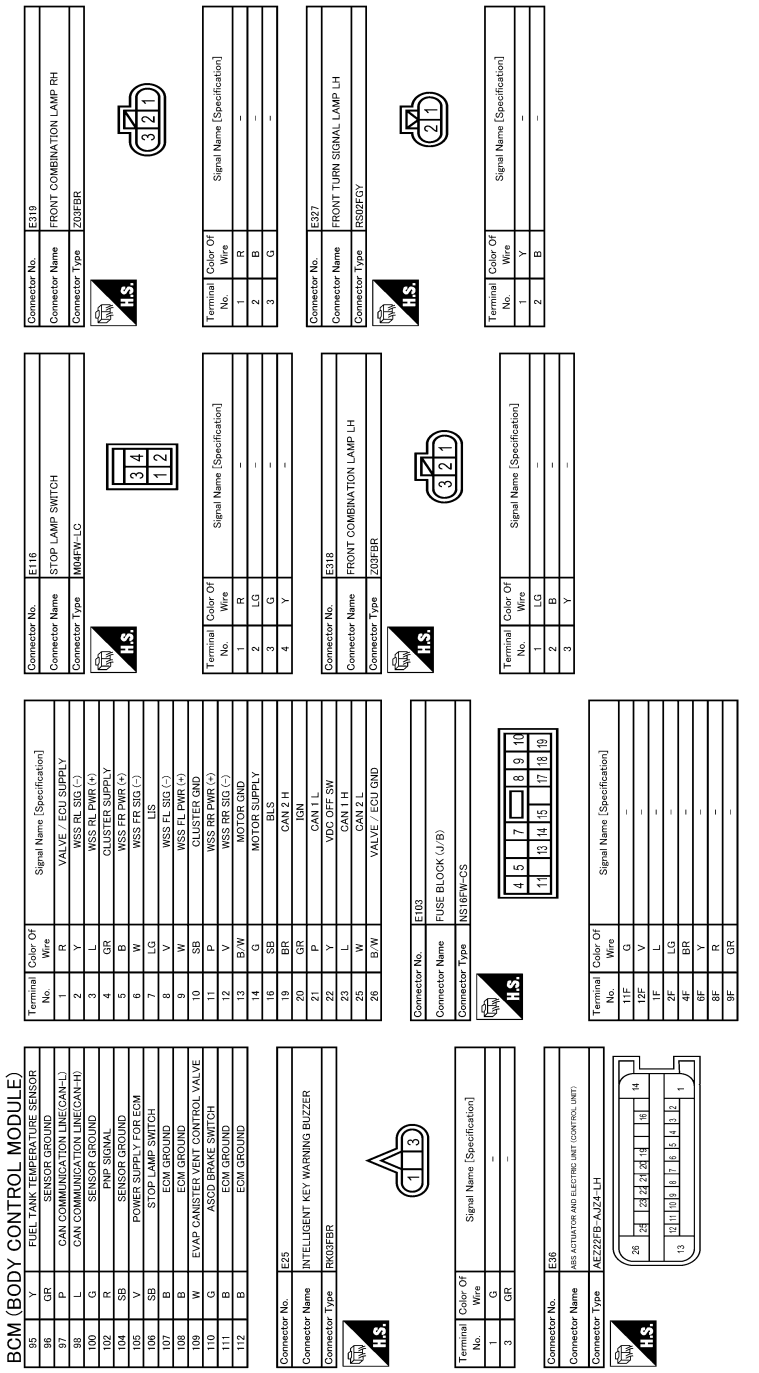

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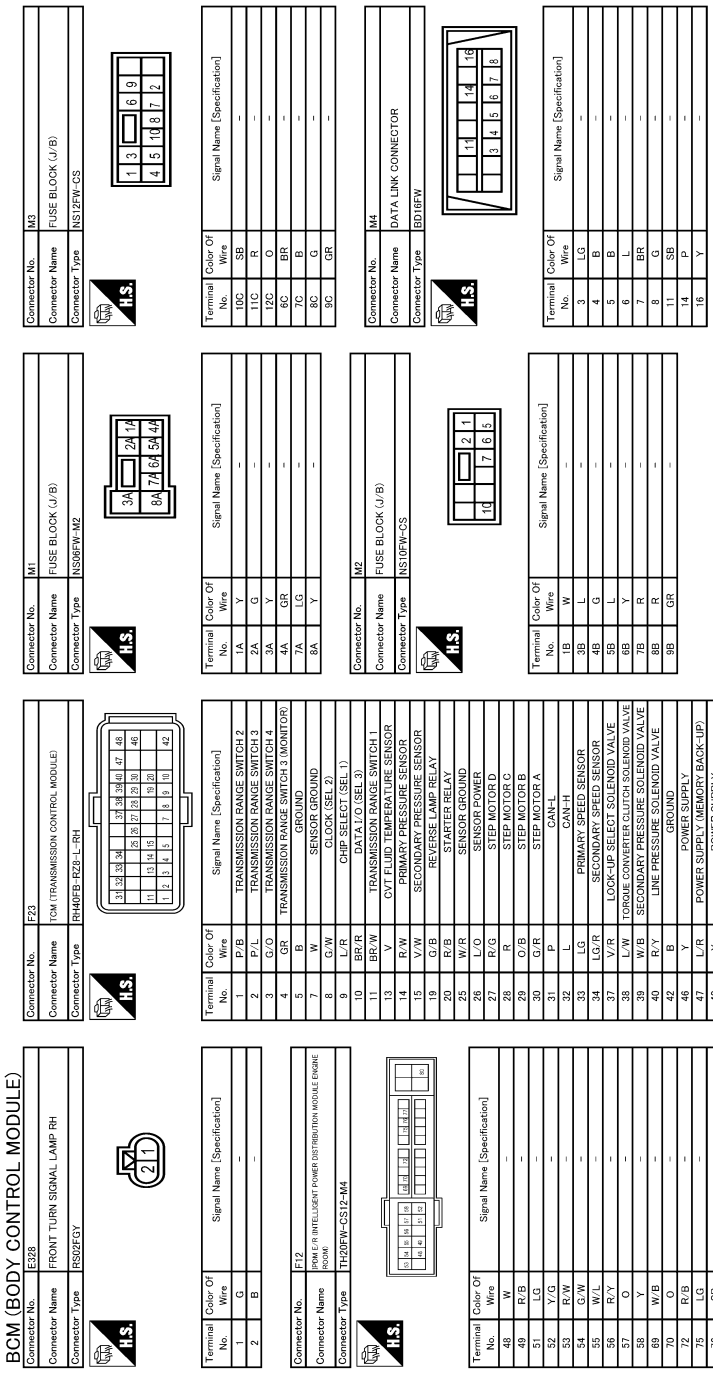

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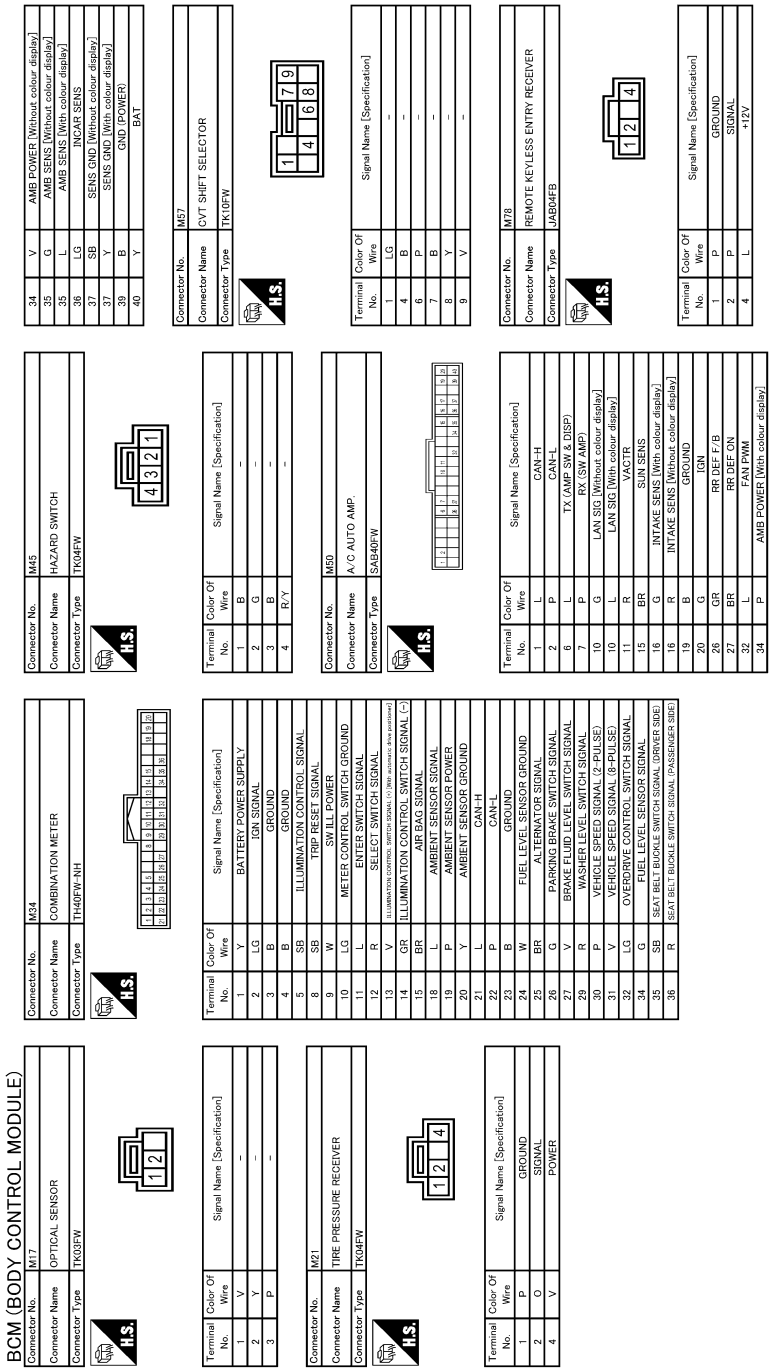

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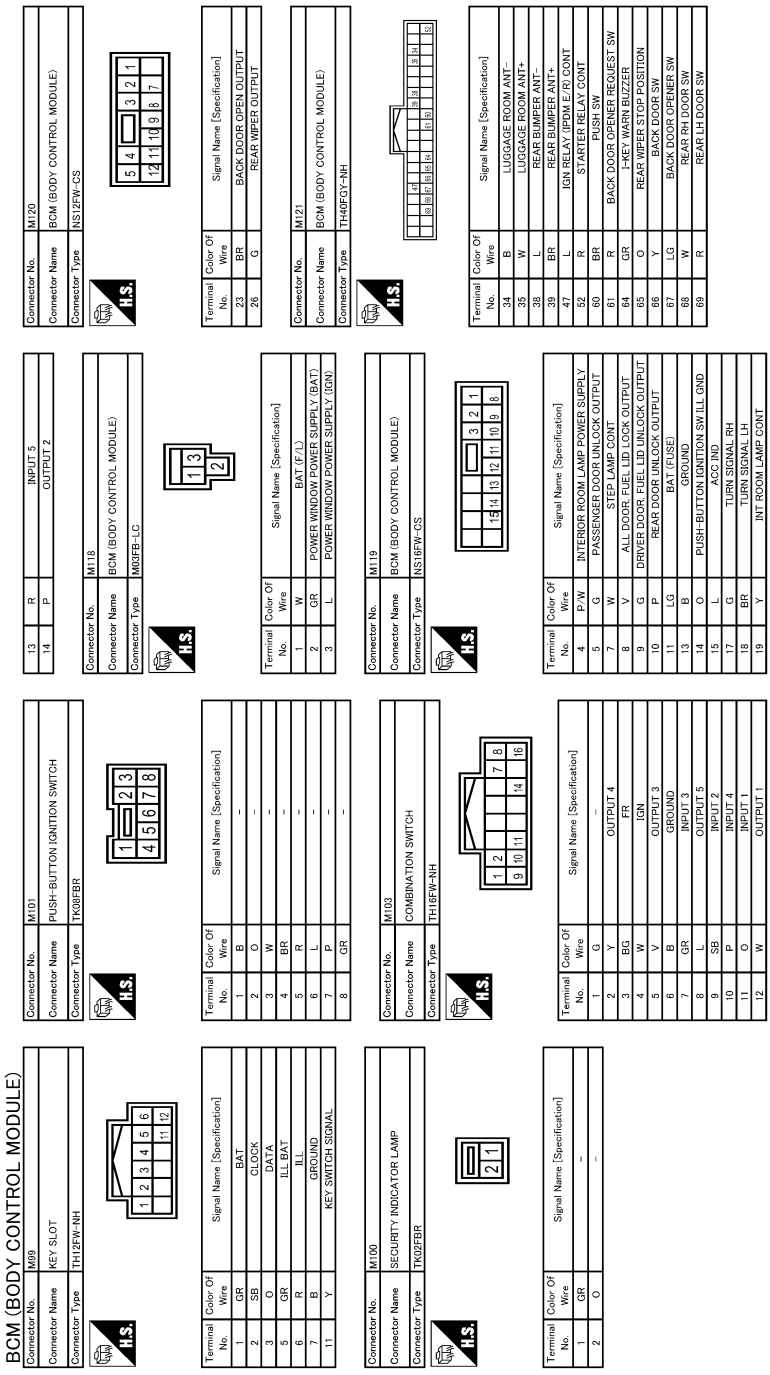

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BCM (BODY CONTROL MODULE)

Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH

Terminal No.	Color Of Wire	Signal Name [Specification]
72	B	ROOM ANT–
73	W	ROOM ANT+
74	Y	PASSENGER DOOR ANT–
75	LG	PASSENGER DOOR ANT+
76	V	DRIVER DOOR ANT–
77	P	DRIVER DOOR ANT+
80	SB	NATS ANT AMP.
81	O	NATS ANT AMP.
82	BR	IGN RELAY (F/B) CONT
83	P	KEYLESS ENTRY RECEIVER COMM
87	R	COMBI SW INPUT 5
88	GR	COMBI SW INPUT 3
90	P	CAN-L
91	L	CAN-H
92	R	KEY SLOT ILL CONT
93	P	ON IND
95	L	ACC RELAY CONT
96	Y	CVT SHIFT SELECTOR POWER SUPPLY
99	V	SHIFT P
100	P	PASSENGER DOOR REQUEST SW
101	W	DRIVER DOOR REQUEST SW
102	Y	BLOWER RELAY CONT
103	L	KEYLESS ENTRY RECEIVER POWER SUPPLY
107	O	COMBI SW INPUT 1
108	P	COMBI SW INPUT 4
109	SB	COMBI SW INPUT 2
110	G	HAZARD SW

Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH

Terminal No.	Color Of Wire	Signal Name [Specification]
112	R	RAIN SENSOR SERIAL LINK
113	P/B	OPTICAL SENSOR
116	GR	STOP LAMP SW 1
118	L	STOP LAMP SW 2
119	W	DR DOOR UNLOCK SENSOR
121	Y	KEY SLOT SW
123	G	IGN F/B
124	R	PASSENGER DOOR SW
130	BR	REAR DEFOGGER SW
132	G	POWER WINDOW SW COMM
133	W	PUSH-BUTTON IGNITION SW ILL POWER
134	R	LOCK IND
137	P	RECEIVER SENSOR GND
138	V	RECEIVER SENSOR POWER SUPPLY
139	O	TIRE PRESS RECEIVER COMM
140	GR	SHIFT N/P
141	O	SECURITY IND LAMP CONT
142	L	COMBI SW OUTPUT 5
143	W	COMBI SW OUTPUT 1
144	P	COMBI SW OUTPUT 2
145	V	COMBI SW OUTPUT 3
146	Y	COMBI SW OUTPUT 4
150	SB	DRIVER DOOR SW
151	G	REAR WINDOW DEFOGGER RELAY CONT

Connector No.	M174
Connector Name	AV CONTROL UNIT
Connector Type	TH32FW-NH

Terminal No.	Color Of Wire	Signal Name [Specification]
76	LG	AV COMM (L)
77	SB	AV COMM (H)
78	LG	AV COMM (L)
79	SB	AV COMM (H)
80	P	CAN-L
81	L	CAN-H
82	V	SW GND
86	SHIELD	SHIELD
87	R	TEL VOICE SIGNAL (+)
88	L	TEL VOICE SIGNAL (–)
92	V	VEHICLE SPEED SIGNAL (8-PULSE)
93	G	PARKING BRAKE [Without BOSE system]
94	SB	REVERSE
95	G	IGNITION
96	W	DISK EJECT SIGNAL
102	W	AUX SOUND SIGNAL GND
103	B	AUX SOUND SIGNAL LH (+)
104	R	AUX SOUND SIGNAL RH (+)

Connector No.	M180
Connector Name	AV CONTROL UNIT
Connector Type	TH32FW-NH

Terminal No.	Color Of Wire	Signal Name [Specification]
65	LG	PARKING BRAKE
67	L	–
68	LG	–
71	SHIELD	SHIELD
72	B	MICROPHONE VCC
73	R	COMM (CONT– DISP)
74	P	CAN-L
75	LG	AV COMM (L)
76	LG	AV COMM (L)
79	R	ILLUMINATION SIGNAL
80	G	IGNITION
81	SB	REVERSE
82	V	VEHICLE SPEED SIGNAL (8-PULSE)
83	B	–
87	W	MICROPHONE SIGNAL
88	B	–
89	W	–
90	L	CAN-H
91	SB	AV COMM (H)
92	SB	AV COMM (H)

Connector No.	M262
Connector Name	INSIDE KEY ANTENNA (CONSOLE)
Connector Type	RK02FGY

Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	–
2	B	–

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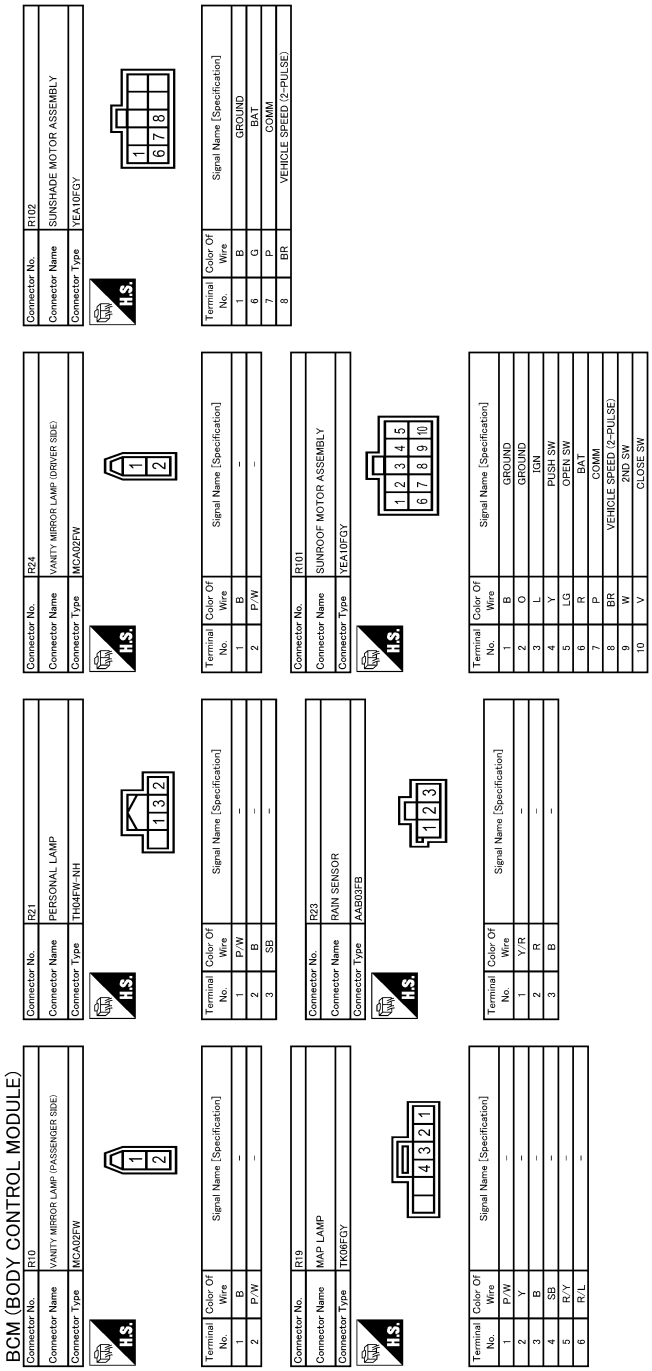

JRMWE5840GB

Fail-safe

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FAIL-SAFE CONTROL BY DTC

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

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

HIGH FLASHER OPERATION

BCM detects the turn signal lamp circuit status by the current value.
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 RAIN SENSOR MALFUNCTION

- BCM judges the rain sensor serial link error by the rain sensor serial link condition and detects the rain sensor malfunction by rain sensor malfunction signal.
- When BCM detects the rain sensor serial link error or the rain sensor malfunction while front wiper AUTO operation, BCM operates a fail-safe control.

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

REAR WIPER MOTOR PROTECTION

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

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

DTC Inspection Priority Chart

INFOID:0000000010064953

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

Priority	DTC
1	B2562: LOW VOLTAGE
2	• U1000: CAN COMM • U1010: CONTROL UNIT(CAN)
3	• B2190: NATS ANTENNA AMP • B2191: DIFFERENCE OF KEY • B2192: ID DISCORD BCM-ECM • B2193: CHAIN OF BCM-ECM • B2195: ANTI SCANNING
4	• B2553: IGNITION RELAY • B2555: STOP LAMP • B2556: PUSH-BTN IGN SW • B2557: VEHICLE SPEED • B2560: STARTER CONT RELAY • B2601: SHIFT POSITION • B2602: SHIFT POSITION • B2603: SHIFT POSI STATUS • B2604: PNP SW • B2605: PNP SW • B2608: STARTER RELAY • B260A: IGNITION RELAY • B260F: ENG STATE SIG LOST • B2614: ACC RELAY CIRC • B2615: BLOWER RELAY CIRC • B2616: IGN RELAY CIRC • B2617: STARTER RELAY CIRC • B2618: BCM • B261A: PUSH-BTN IGN SW • B261E: VEHICLE TYPE • B26EA: KEY REGISTRATION • C1729: VHCL SPEED SIG ERR • U0415: VEHICLE SPEED SIG
5	• C1704: LOW PRESSURE FL • C1705: LOW PRESSURE FR • C1706: LOW PRESSURE RR • C1707: LOW PRESSURE RL • C1708: [NO DATA] FL • C1709: [NO DATA] FR • C1710: [NO DATA] RR • C1711: [NO DATA] RL • C1716: [PRESSDATA ERR] FL • C1717: [PRESSDATA ERR] FR • C1718: [PRESSDATA ERR] RR • C1719: [PRESSDATA ERR] RL • C1734: CONTROL UNIT
6	• B2622: INSIDE ANTENNA • B2623: INSIDE ANTENNA

DTC Index

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NOTE:
The details of time display are as follows.
- CRNT: A malfunction is detected now.
- PAST: A malfunction was detected in the past.

IGN counter is displayed on Freeze Frame Data. For details of Freeze Frame Data, refer to PWC-11, "COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)".

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference
No DTC is detected. further testing may be required.	—	—	—	—	—
U1000: CAN COMM	—	—	—	—	BCS-42
U1010: CONTROL UNIT(CAN)	—	—	—	—	BCS-43
U0415: VEHICLE SPEED SIG	—	—	—	—	BCS-44
B2190: NATS ANTENNA AMP	×	—	—	—	SEC-42
B2191: DIFFERENCE OF KEY	×	—	—	—	SEC-45
B2192: ID DISCORD BCM-ECM	×	—	—	—	SEC-46
B2193: CHAIN OF BCM-ECM	×	—	—	—	SEC-48
B2195: ANTI SCANNING	×	—	—	—	SEC-49
B2553: IGNITION RELAY	—	×	—	—	PCS-50
B2555: STOP LAMP	—	×	—	—	SEC-50
B2556: PUSH-BTN IGN SW	—	×	×	—	SEC-52
B2557: VEHICLE SPEED	×	×	×	—	SEC-54
B2560: STARTER CONT RELAY	×	×	×	—	SEC-55
B2562: LOW VOLTAGE	—	×	—	—	BCS-45
B2601: SHIFT POSITION	×	×	×	—	SEC-56
B2602: SHIFT POSITION	×	×	×	—	SEC-59
B2603: SHIFT POSI STATUS	×	×	×	—	SEC-61
B2604: PNP SW	×	×	×	—	SEC-64
B2605: PNP SW	×	×	×	—	SEC-66
B2608: STARTER RELAY	×	×	×	—	SEC-68
B260A: IGNITION RELAY	×	×	×	—	PCS-52
B260F: ENG STATE SIG LOST	×	×	×	—	SEC-70
B2614: ACC RELAY CIRC	—	×	×	—	PCS-54
B2615: BLOWER RELAY CIRC	—	×	×	—	PCS-57
B2616: IGN RELAY CIRC	—	×	×	—	PCS-60
B2617: STARTER RELAY CIRC	×	×	×	—	SEC-72
B2618: BCM	×	×	×	—	PCS-63
B261A: PUSH-BTN IGN SW	—	×	×	—	SEC-75
B261E: VEHICLE TYPE	×	×	× (Turn ON for 15 seconds)	—	SEC-78
B2622: INSIDE ANTENNA	—	×	—	—	DLK-91
B2623: INSIDE ANTENNA	—	×	—	—	DLK-93
B26EA: KEY REGISTRATION	—	×	× (Turn ON for 15 seconds)	—	SEC-71
C1704: LOW PRESSURE FL	—	—	—	×	WT-23
C1705: LOW PRESSURE FR	—	—	—	×	
C1706: LOW PRESSURE RR	—	—	—	×	
C1707: LOW PRESSURE RL	—	—	—	×	

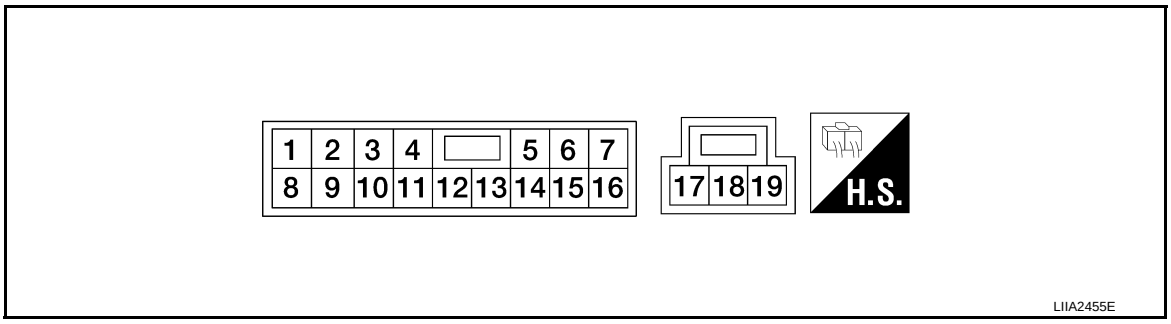
CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference
C1708: [NO DATA] FL	—	—	—	×	WT-25
C1709: [NO DATA] FR	—	—	—	×	
C1710: [NO DATA] RR	—	—	—	×	
C1711: [NO DATA] RL	—	—	—	×	
C1716: [PRESSDATA ERR] FL	—	—	—	×	WT-28
C1717: [PRESSDATA ERR] FR	—	—	—	×	
C1718: [PRESSDATA ERR] RR	—	—	—	×	
C1719: [PRESSDATA ERR] RL	—	—	—	×	
C1729: VHCL SPEED SIG ERR	—	—	—	×	WT-29
C1734: CONTROL UNIT	—	—	—	×	WT-30

POWER WINDOW MAIN SWITCH

Reference Value

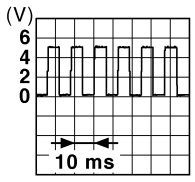
INFOID:0000000009723166

TERMINAL LAYOUT

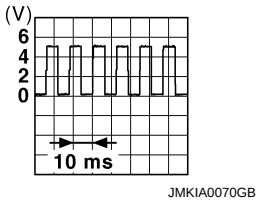
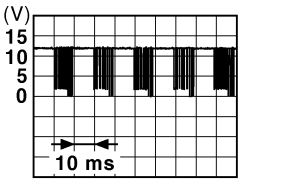


PHYSICAL VALUES

POWER WINDOW MAIN SWITCH

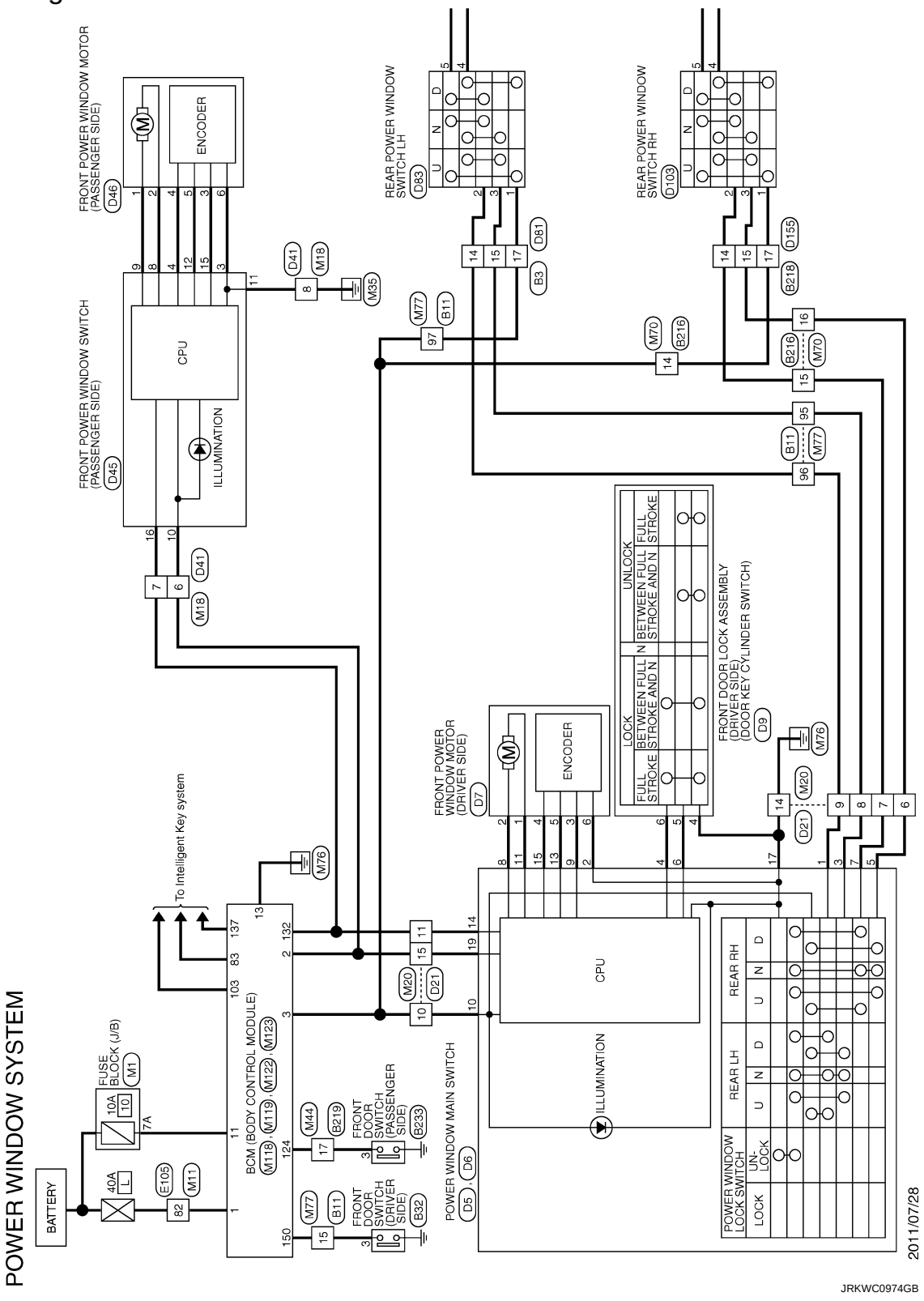
Terminal No. (Wire color)		Description		Condition	Voltage (V) (Approx.)
+	-	Signal name	Input/ Output		
1 (GR)	Ground	Rear power window motor LH UP signal	Output	When rear LH switch in power window main switch is UP at operated	Battery voltage
2 (W)	Ground	Encoder ground	—	—	0
3 (BR)	Ground	Rear power window motor LH DOWN signal	Output	When rear LH switch in power window main switch is DOWN at operated	Battery voltage
4 (L)	Ground	Door key cylinder switch LH LOCK signal	Input	Key position (Neutral → Locked)	5 → 0
5 (SB)	Ground	Rear power window motor RH DOWN signal	Output	When rear RH switch in power window main switch is DOWN at operated	Battery voltage
6 (R)	Ground	Door key cylinder switch LH UNLOCK signal	Input	Key position (Neutral → Unlocked)	5 → 0
7 (P)	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 (L)	Ground	Front power window motor (driver side) UP signal	Output	When front LH switch in power window main switch is UP at operated	Battery voltage
9 (G)	Ground	Encoder pulse signal 2	Input	When front power window motor (driver side) operates	

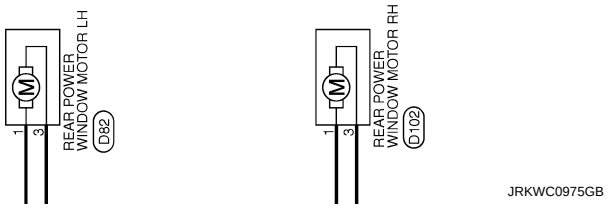
JMKIA0070GB

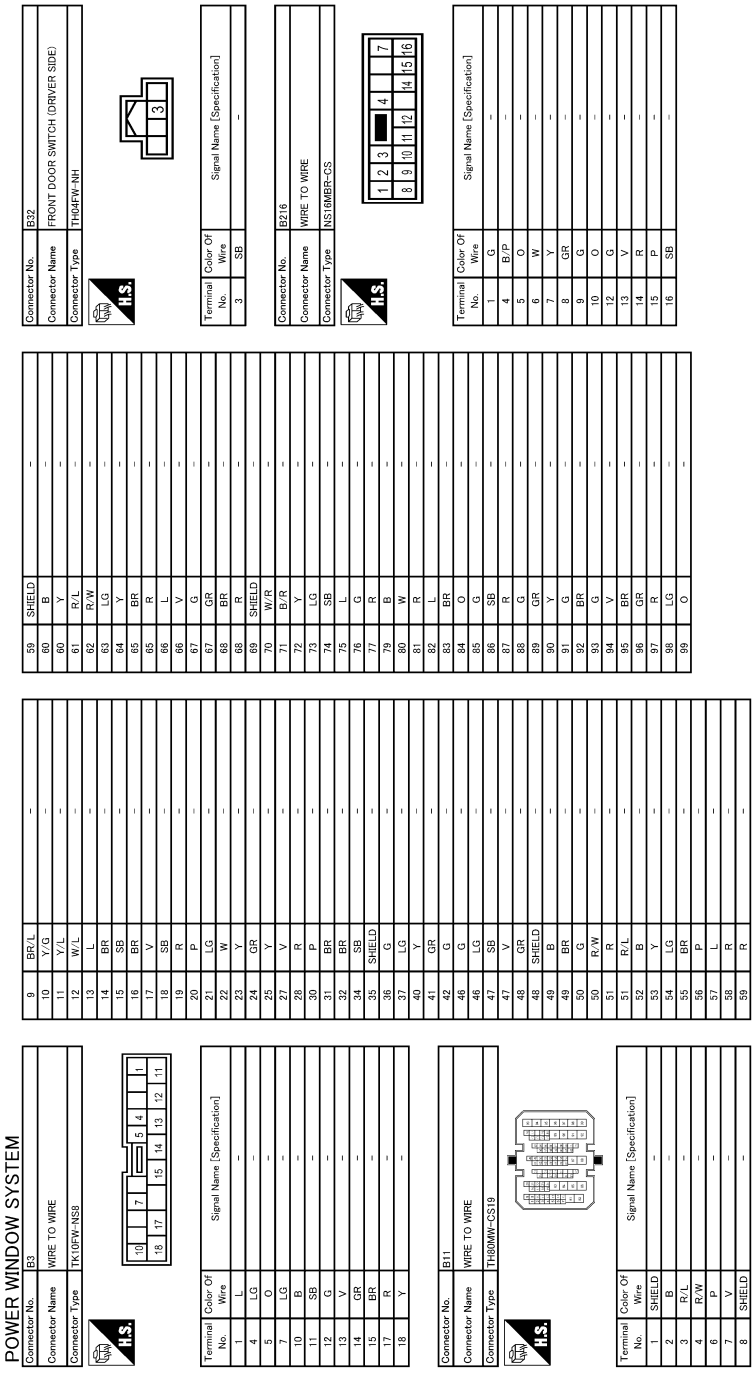
Terminal No. (Wire color)		Description		Condition	Voltage (V) (Approx.)
+	-	Signal name	Input/ Output		
10 (V)	Ground	Retained power signal	Input	Ignition switch ON	Battery voltage
				Within 45 seconds after ignition switch is turned to OFF	Battery voltage
				When driver side or passenger side door is opened during retained power operation	0
11 (LG)	Ground	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 (Y)	Ground	Encoder pulse signal 1	Input	When front power window motor (driver side) operates.	 JMKIA0070GB
14 (O)	Ground	Power window serial link	Input/ Output	Ignition switch ON or power window timer operating	 JPMIA0013GB
15 (R)	Ground	Encoder power supply	Output	Ignition switch ON	Battery voltage
17 (B)	Ground	Ground	—	—	0
19 (LG)	Ground	Battery power supply	Input	Ignition switch OFF	Battery voltage

Wiring Diagram - POWER WINDOW SYSTEM -

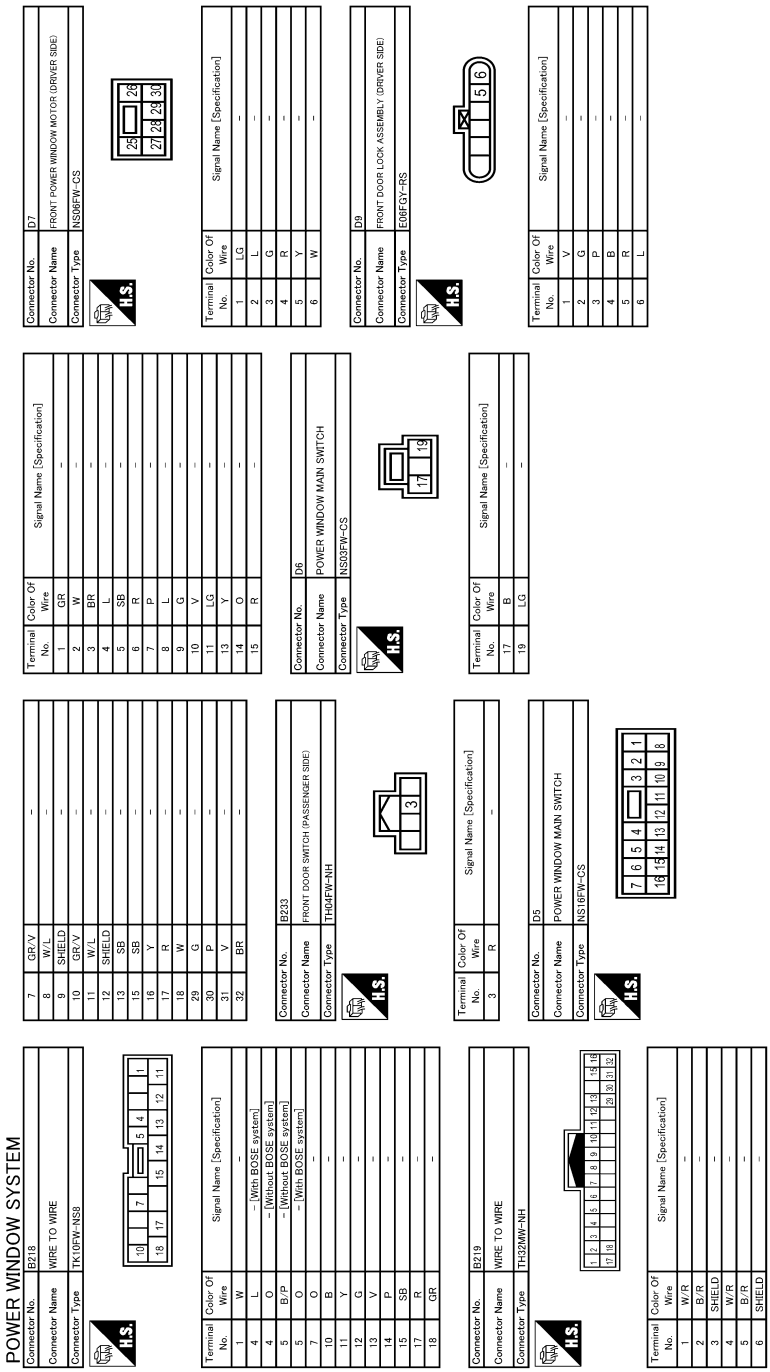
INFOID:0000000009723167



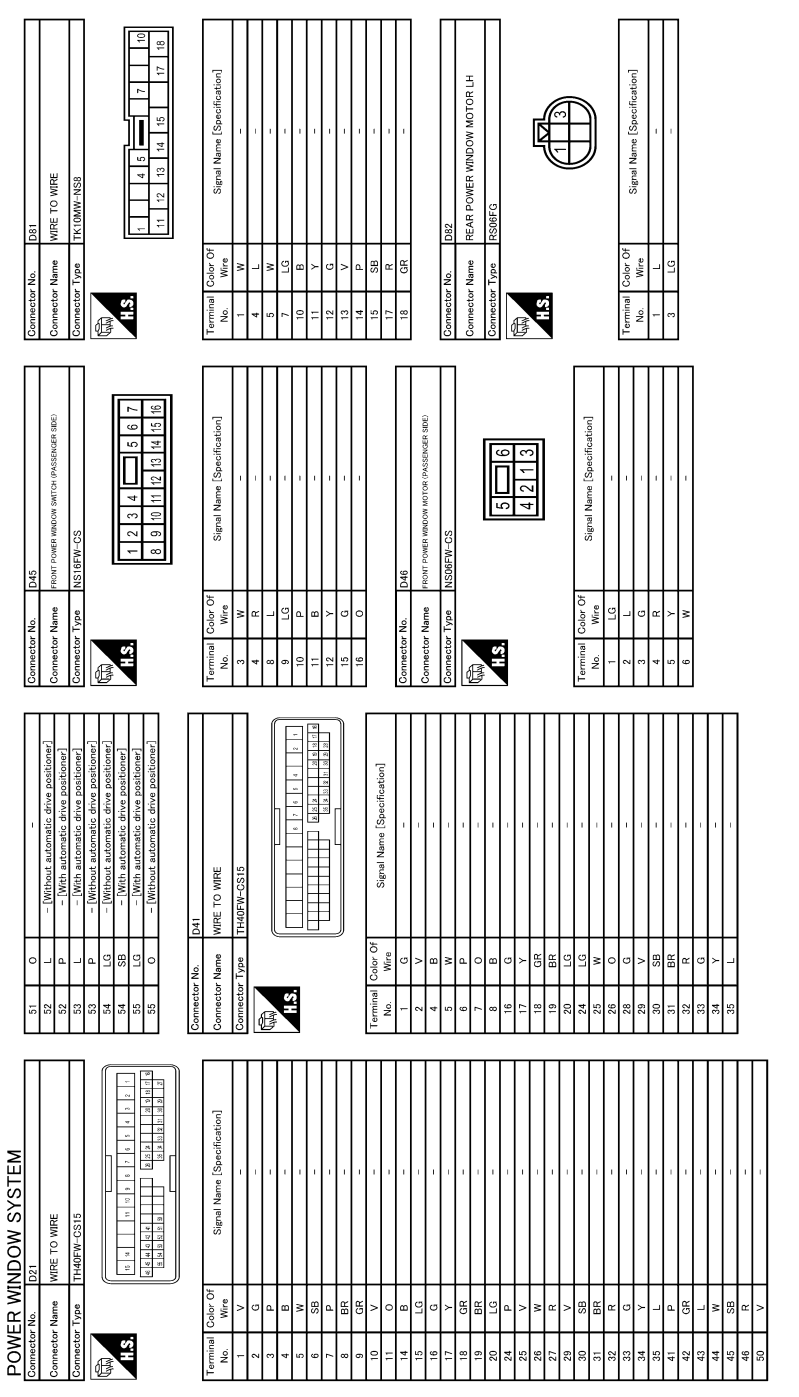

REAR POWER WINDOW MOTOR LH
D82
1
3
REAR POWER WINDOW MOTOR RH
D102
1
3
JRKWC0975GB



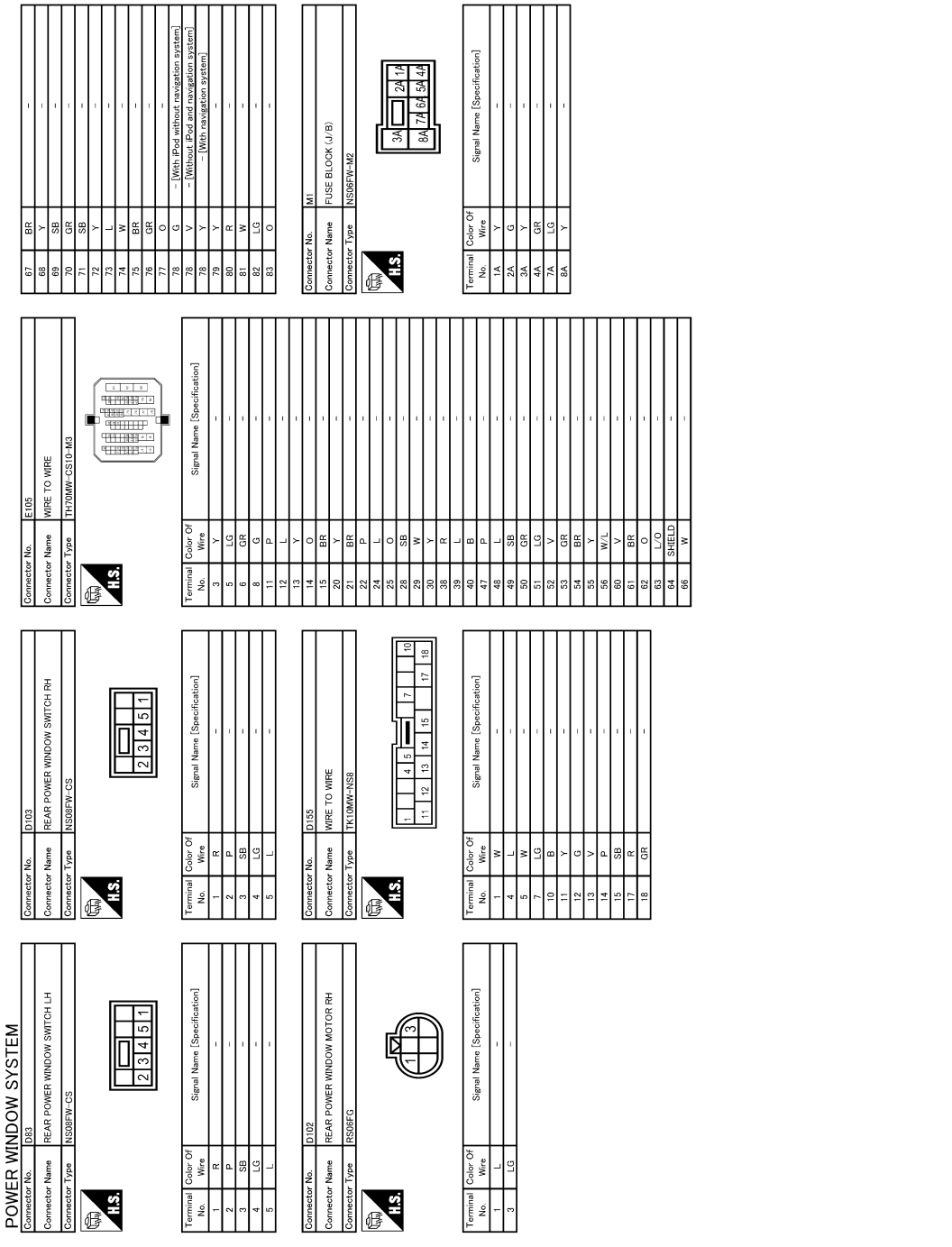
JRKWC8133GB



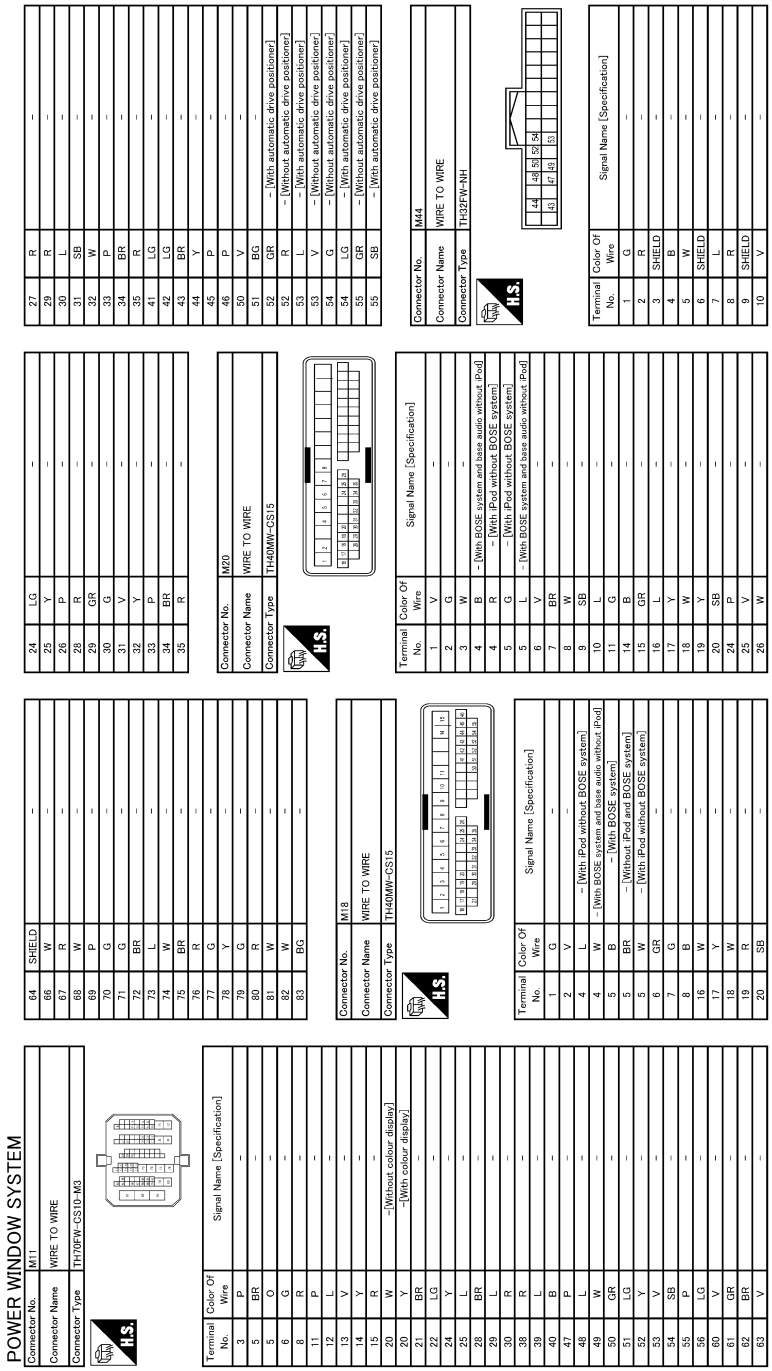
JRKWC8134GB



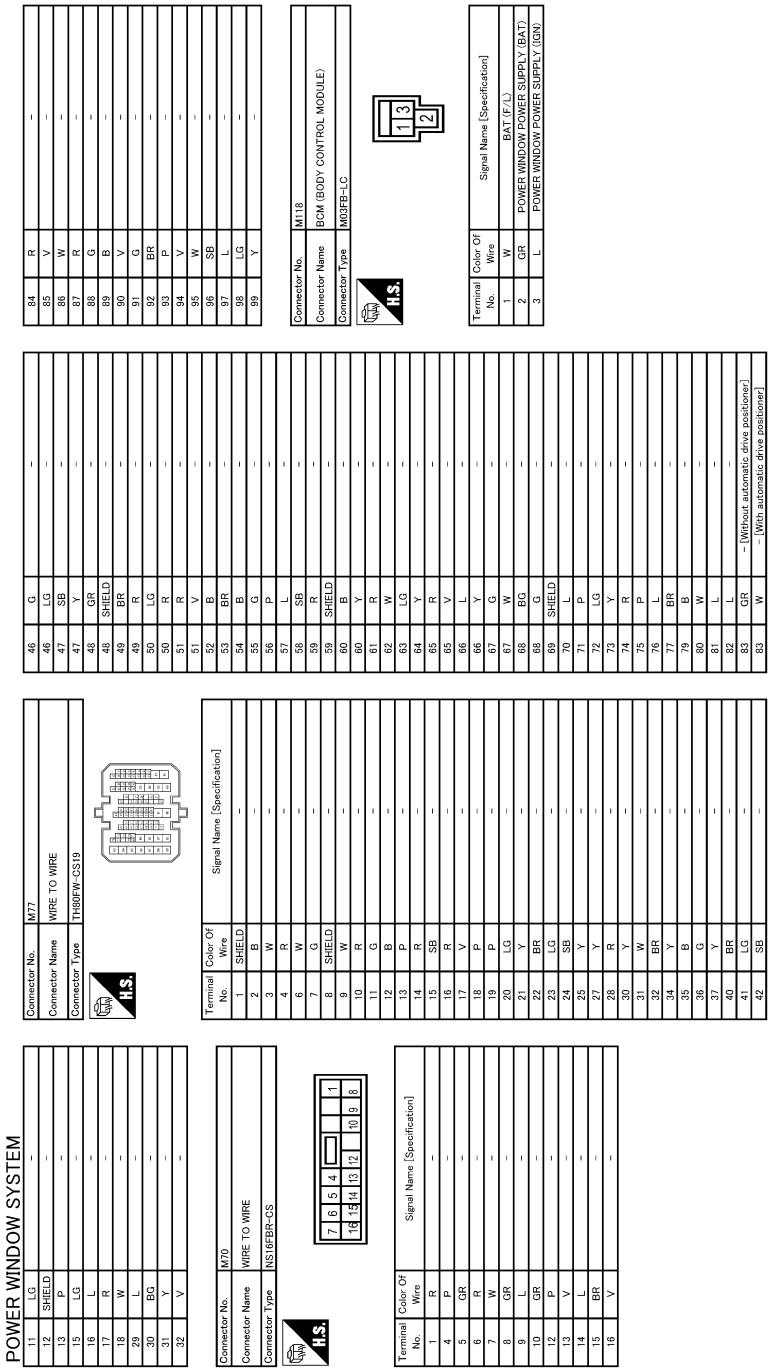
JRKWC8135GB



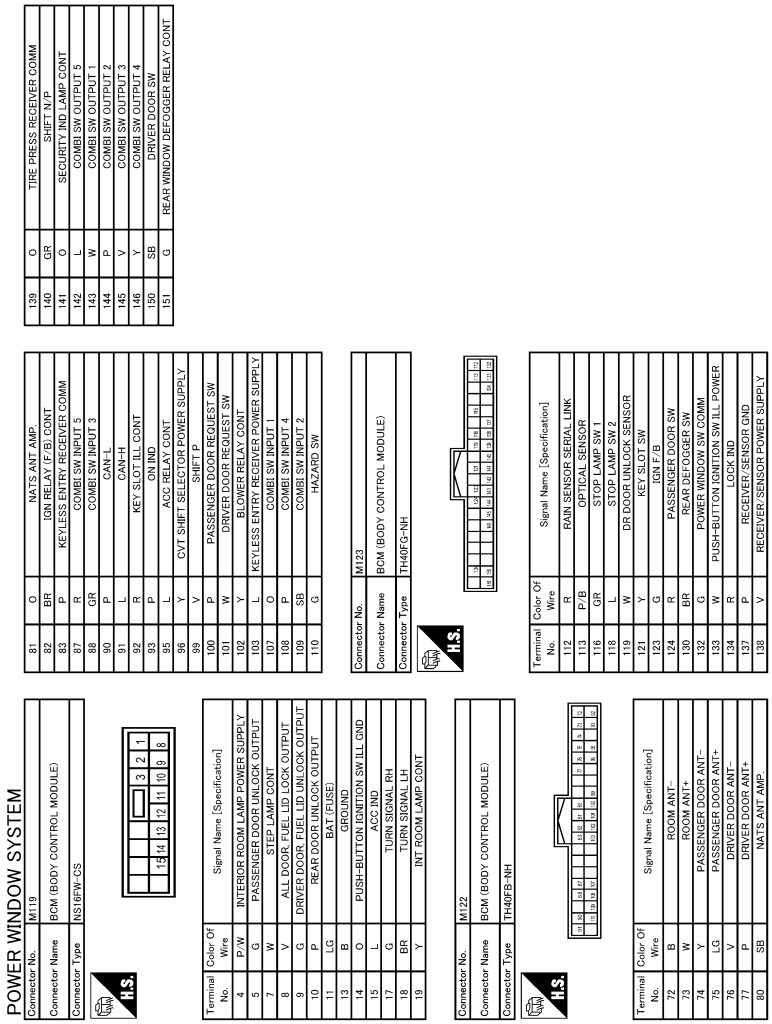
JRKWC8136GB



JRKWC8137GB



JRKWC8138GB



JRKWC8139GB

Fail Safe

INFOID:0000000009723168

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
- Retained power function

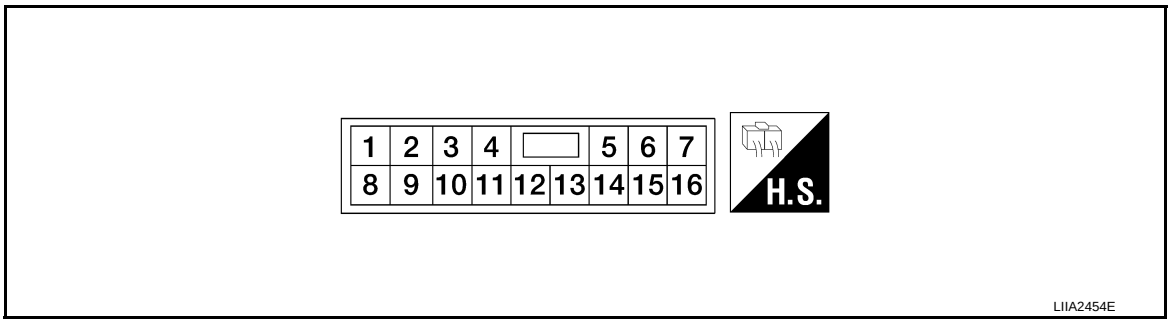
Perform initial operation to recover when switched to fail-safe mode. However, it switches back to fail-safe control when malfunction is found in power window switch or front power window motor.

FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Reference Value

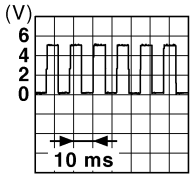
INFOID:0000000009723169

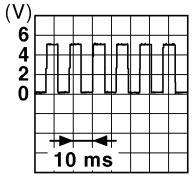
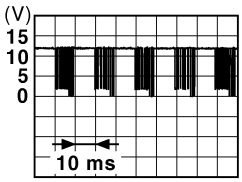
TERMINAL LAYOUT



PHYSICAL VALUES

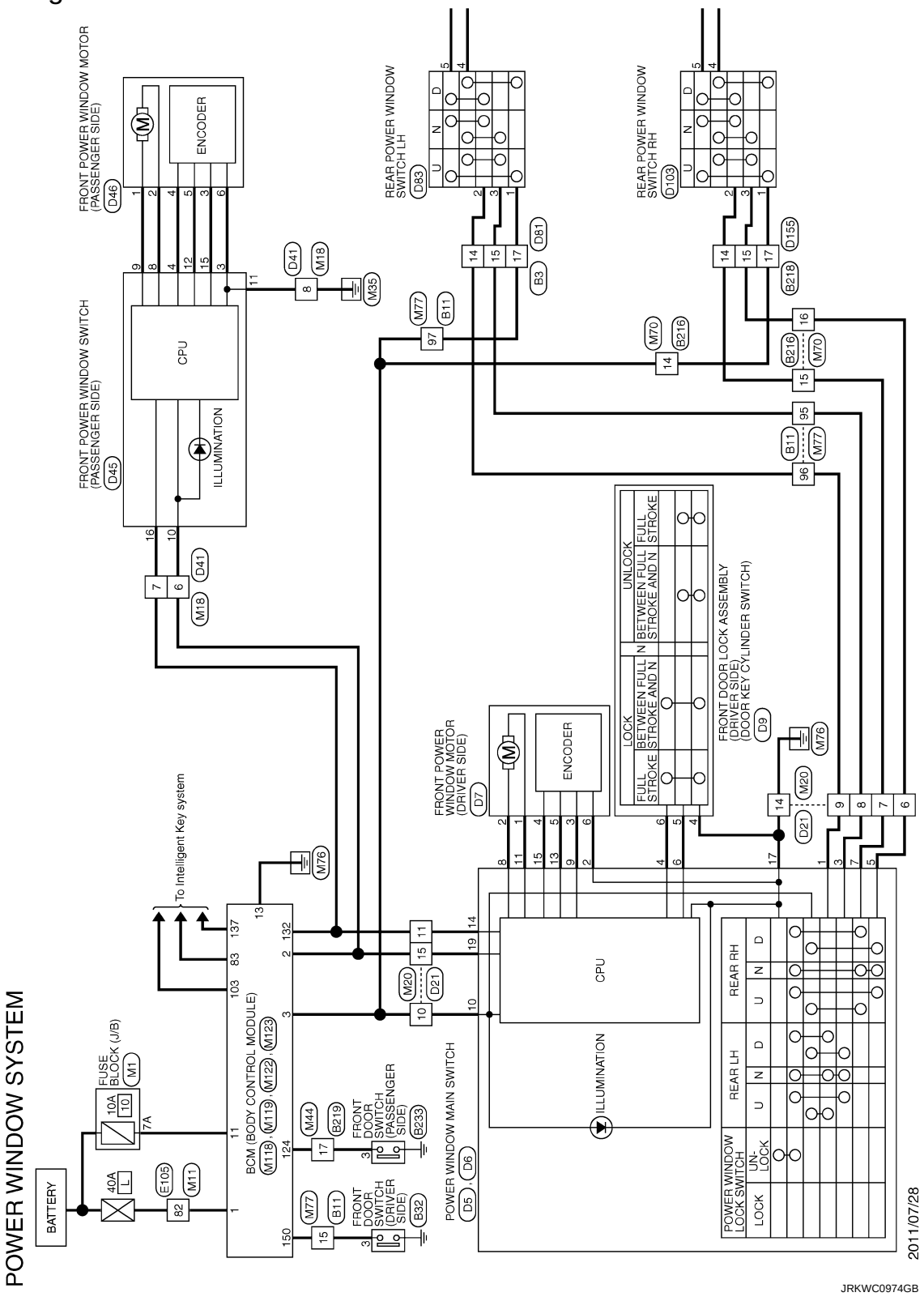
FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

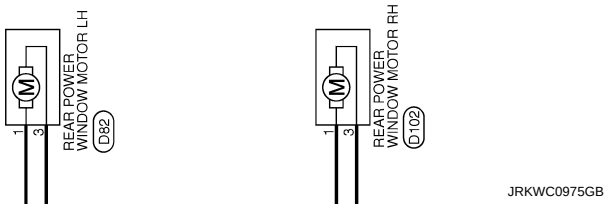
Terminal No.		Description		Condition	Voltage [V] (Approx.)
+	-	Signal name	Input/ Output		
3 (W)	Ground	Encoder ground	—	—	0
4 (R)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates	Battery voltage
8 (L)	Ground	Power window motor DOWN signal	Output	When power window motor is DOWN at operated.	Battery voltage
9 (LG)	Ground	Power window motor UP signal	Output	When power window motor is UP at operated.	Battery voltage
10 (P)	Ground	Battery power supply	Input	—	Battery voltage
11 (B)	Ground	Ground	—	—	0
12 (Y)	Ground	Encoder pulse signal 1	Input	When power window motor operates.	 JMKIA0070GB

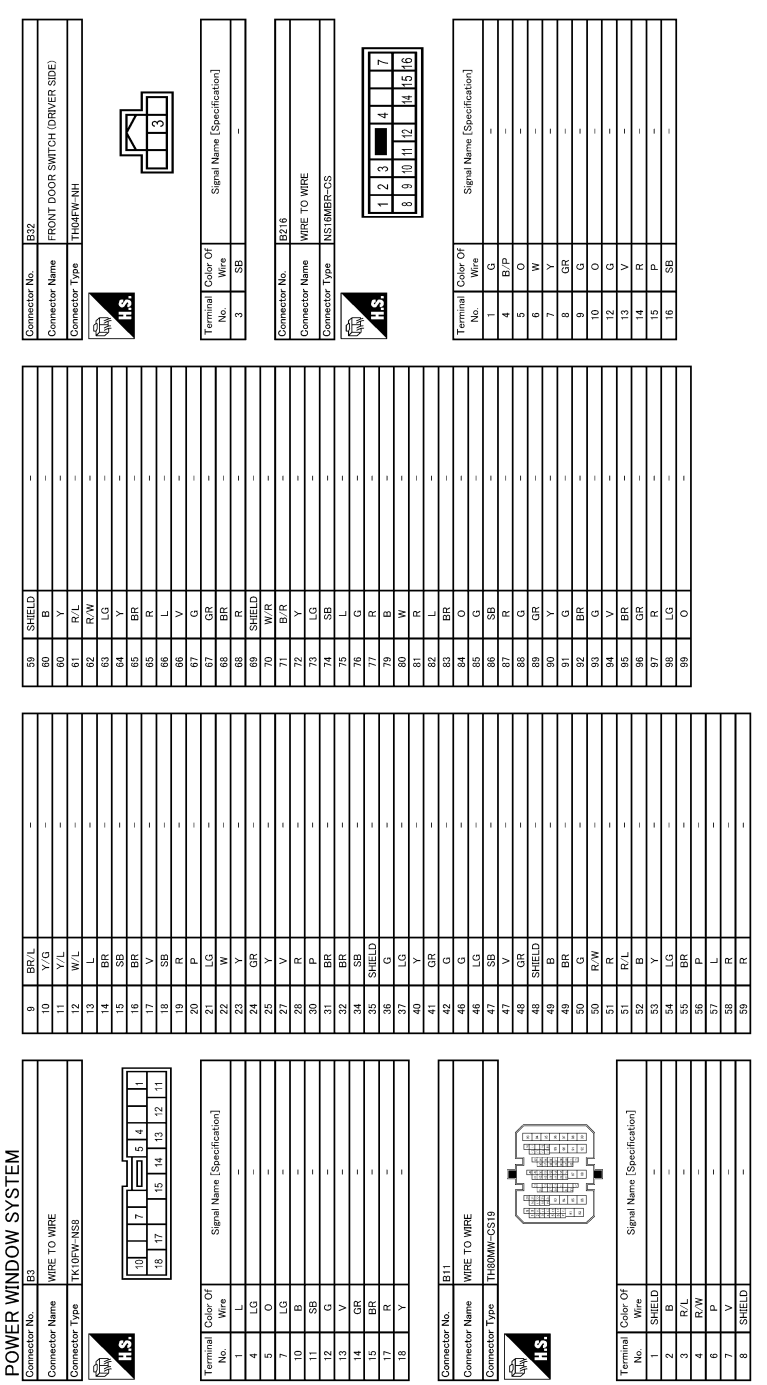
Terminal No.		Description		Condition	Voltage [V] (Approx.)
+	-	Signal name	Input/ Output		
15 (G)	Ground	Encoder pulse signal 2	Input	When power window motor operates.	 JMKIA0070GB
16 (O)	Ground	Power window serial link	Input/ Output	Ignition switch ON or power window timer operating.	 JPMIA0013GB

Wiring Diagram - POWER WINDOW SYSTEM -

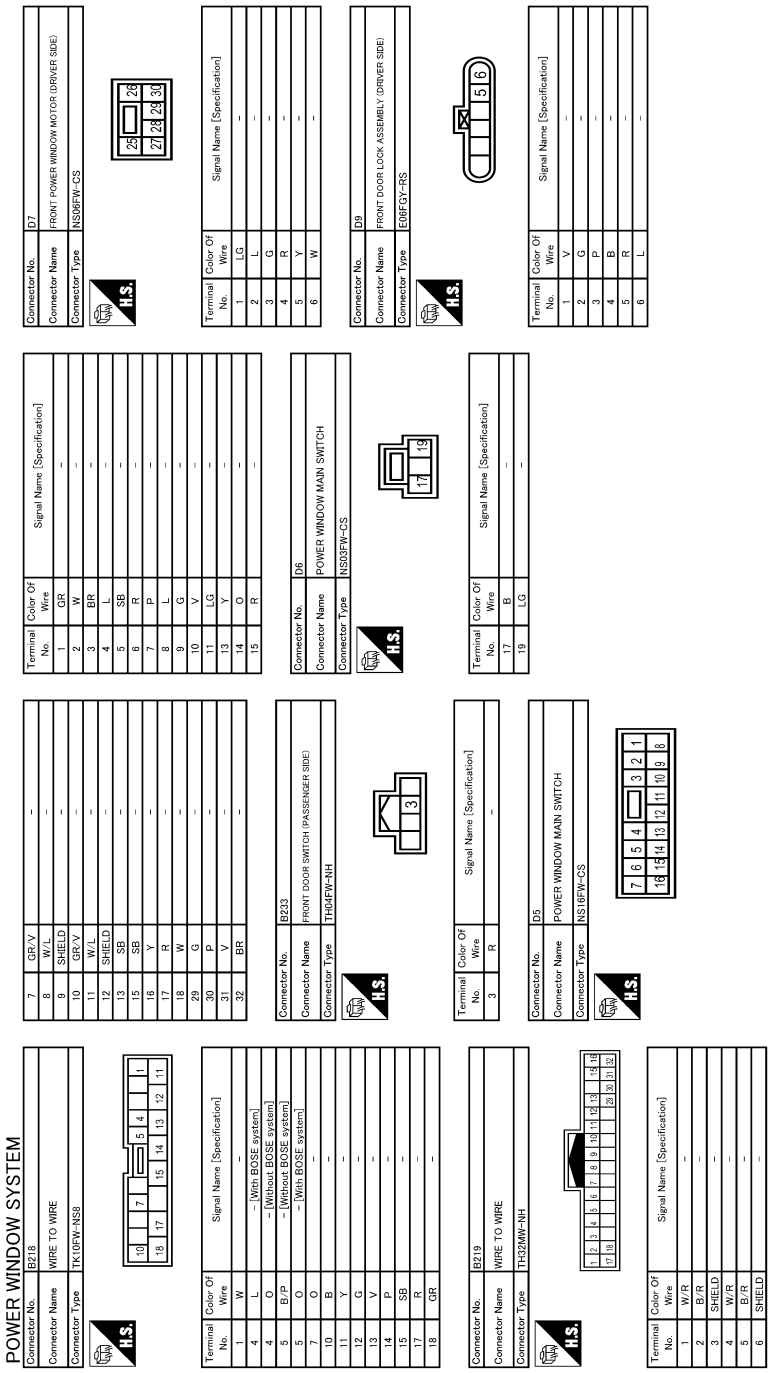
INFOID:0000000009723170




REAR POWER WINDOW MOTOR LH
D82
1
3
REAR POWER WINDOW MOTOR RH
D102
1
3
JRKWC0975GB



JRKWC8133GB



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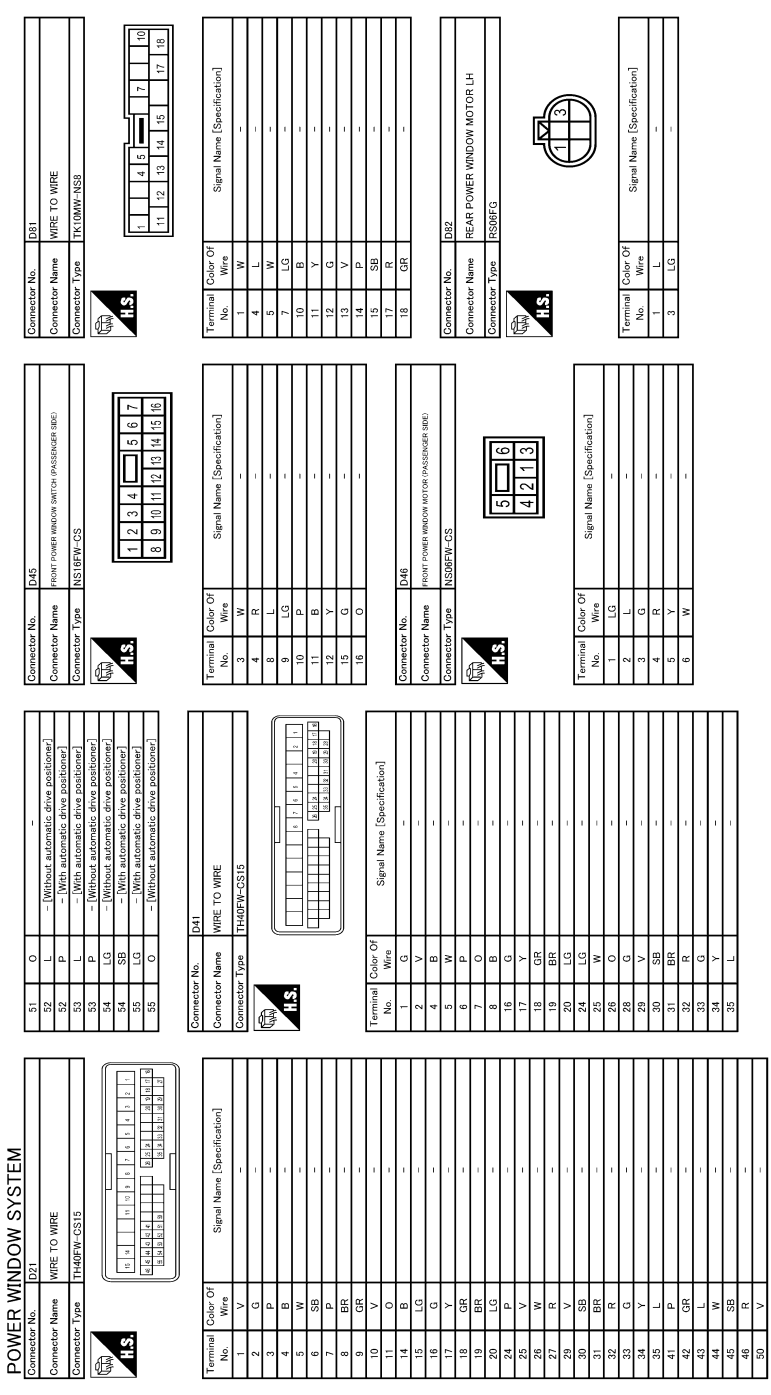
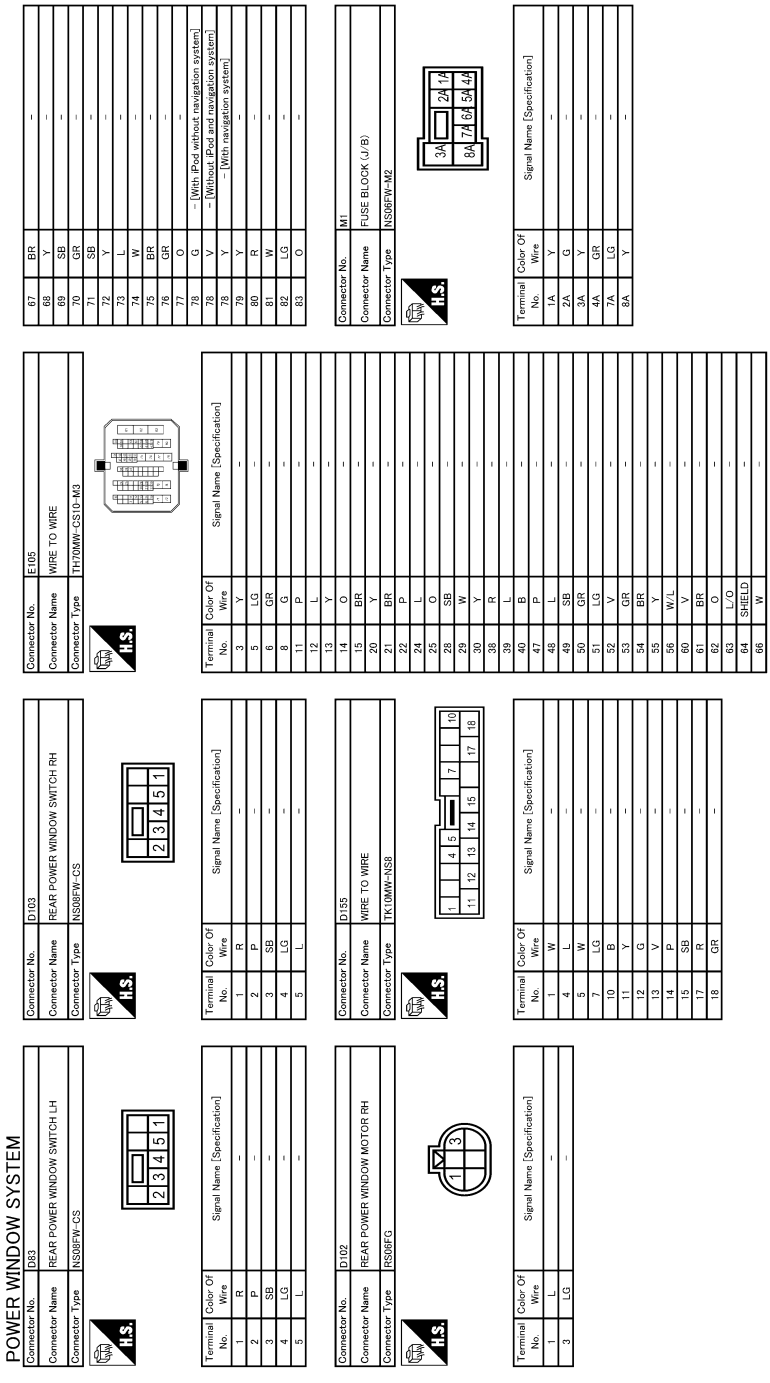


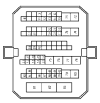
JRKWC8135GB



JRKWC8136GB

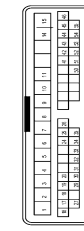
POWER WINDOW SYSTEM

Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Type	TH70FW-CS10-M3



Terminal No.	Color Of Wire	Signal Name [Specification]
3	P	–
5	BR	–
6	O	–
8	G	–
11	R	–
12	P	–
13	L	–
14	V	–
15	Y	–
20	R	–
20	W	– [Without colour display]
20	Y	– [With colour display]
21	BR	–
22	LG	–
24	Y	–
25	L	–
28	BR	–
29	L	–
30	R	–
38	R	–
39	L	–
40	B	–
47	P	–
48	L	–
49	W	–
50	GR	–
51	LG	–
52	Y	–
53	V	–
54	SB	–
55	P	–
56	LG	–
60	V	–
61	GR	–
62	BR	–
63	V	–
64	SHIELD	–
66	W	–
67	R	–
68	W	–
69	P	–
70	G	–
71	G	–
72	BR	–
73	L	–
74	W	–
75	BR	–
76	R	–
77	G	–
78	Y	–
79	G	–
80	R	–
81	W	–
82	W	–
83	BG	–

Connector No.	M18
Connector Name	WIRE TO WIRE
Connector Type	TH40MW-CS15

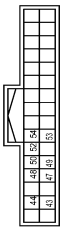


Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	–
2	V	–
4	L	– [With iPod without BOSE system]
4	W	– [With BOSE system and base audio without iPod]
5	B	– [With BOSE system]
5	BR	– [Without iPod and BOSE system]
5	W	– [With iPod without BOSE system]
6	GR	–
7	G	–
8	B	–
16	W	–
17	Y	–
18	W	–
19	R	–
20	SB	–
24	LG	–
25	Y	–
26	P	–
28	R	–
29	GR	–
30	G	–
31	V	–
32	Y	–
33	P	–
34	BR	–
35	R	–

Connector No.	M20
Connector Name	WIRE TO WIRE
Connector Type	TH40MW-CS15

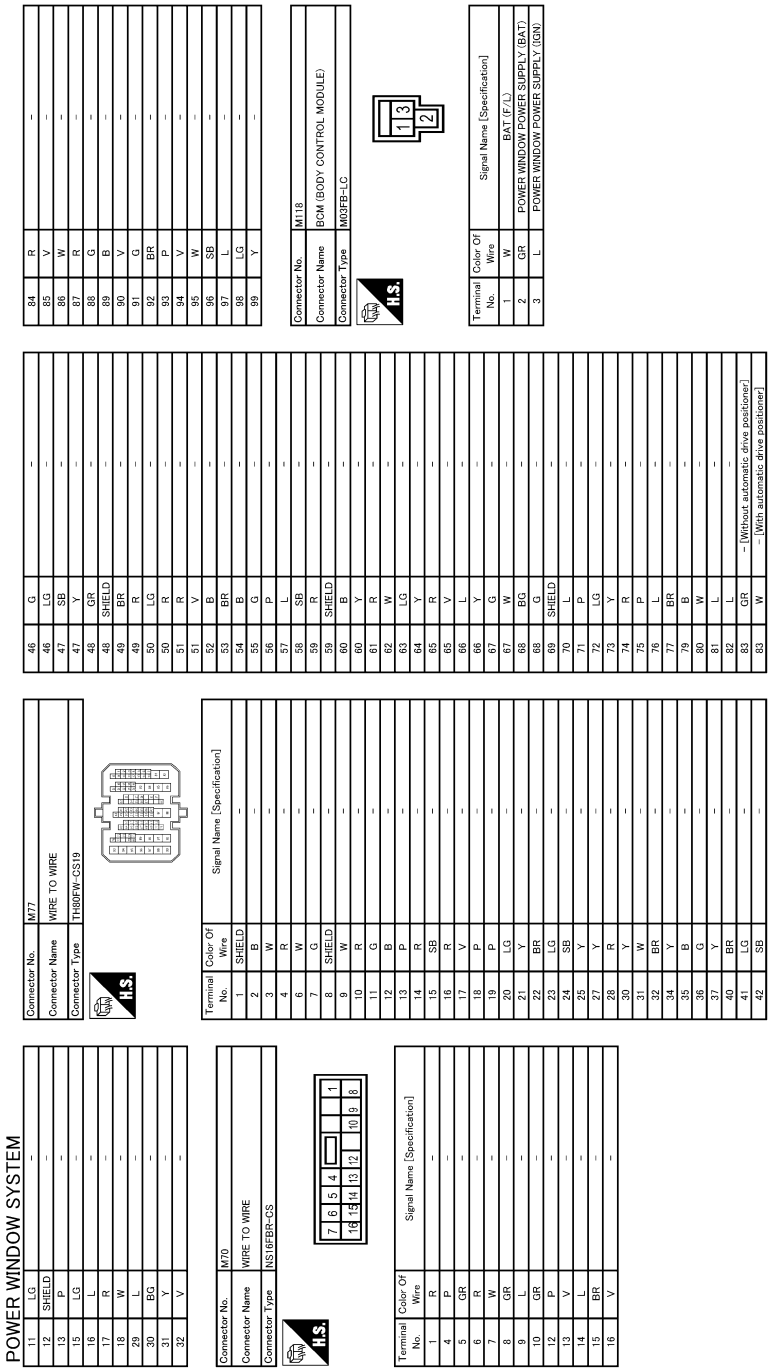
Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	–
2	G	–
3	W	–
4	B	– [With BOSE system and base audio without iPod]
4	R	– [With iPod without BOSE system]
5	G	– [With iPod without BOSE system]
5	L	– [With BOSE system and base audio without iPod]
6	V	–
7	BR	–
8	W	–
9	SB	–
10	L	–
11	G	–
14	B	–
15	GR	–
16	L	–
17	Y	–
18	W	–
19	Y	–
20	SB	–
24	P	–
25	V	–
26	W	–
27	R	–
29	R	–
30	L	–
31	SB	–
32	W	–
33	P	–
34	BR	–
35	R	–
41	LG	–
42	LG	–
43	BR	–
44	Y	–
45	P	–
46	P	–
50	V	–
51	BG	–
52	GR	– [With automatic drive positioner]
52	R	– [Without automatic drive positioner]
53	L	– [With automatic drive positioner]
53	V	– [Without automatic drive positioner]
54	G	– [Without automatic drive positioner]
54	LG	– [With automatic drive positioner]
55	GR	– [Without automatic drive positioner]
55	SB	– [With automatic drive positioner]

Connector No.	M44
Connector Name	WIRE TO WIRE
Connector Type	TH32FW-NH

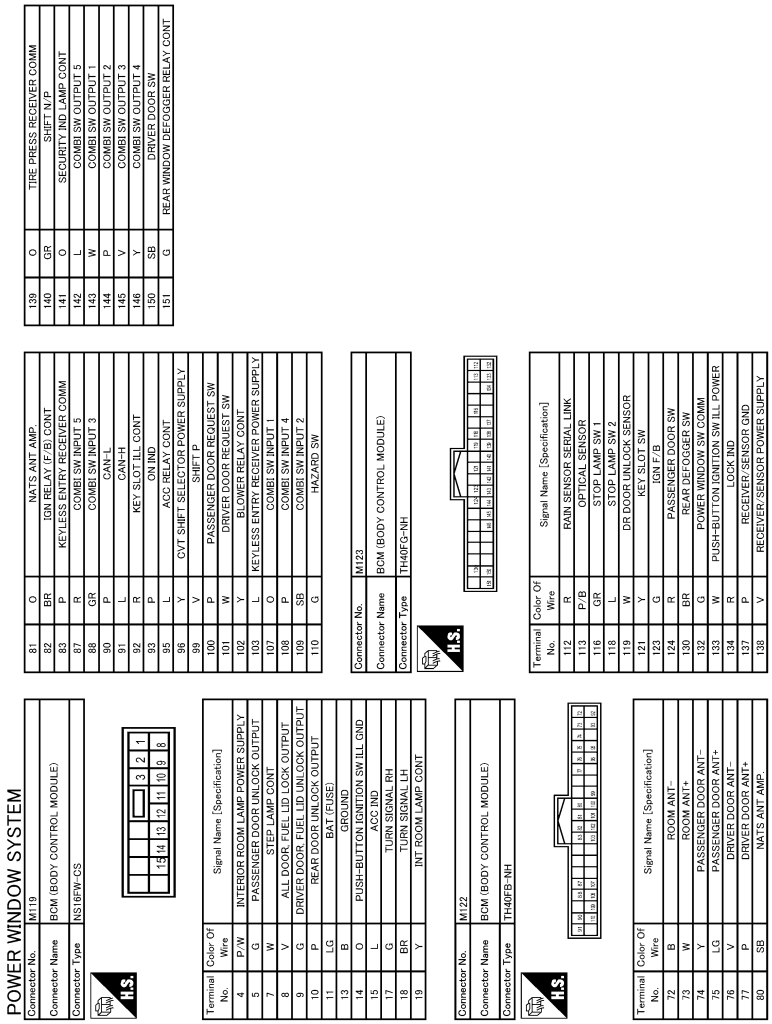


Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	–
2	R	–
3	SHIELD	–
4	B	–
5	W	–
6	SHIELD	–
7	L	–
8	R	–
9	SHIELD	–
10	V	–

JRKWC8137GB



JRKWC8138GB



JRKWC8139GB

Fail Safe

INFOID:0000000009723171

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
- Retained power function

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

SYMPTOM DIAGNOSIS

POWER WINDOWS DO NOT OPERATE WITH ANY POWER WINDOW SWITCHES

Diagnosis Procedure

INFOID:0000000009723172

1. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT

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

Is the inspection result normal?

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

3. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".
NO >> GO TO 1.

DRIVER SIDE POWER WINDOW DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000009723173

1.CHECK FRONT POWER WINDOW MOTOR (DRIVER SIDE)

Check power window motor.
Refer to PWC-20, "DRIVER SIDE : Component Function Check".

Is the inspection result normal?

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

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".
NO >> GO TO 1.

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

WHEN POWER WINDOW MAIN SWITCH IS OPERATED : Diagnosis Procedure

INFOID:0000000009723174

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

Check front power window switch (passenger side) serial link circuit.
Refer to PWC-33, "FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Component Function Check".

Is the inspection result normal?

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

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".
NO >> GO TO 1.

WHEN FRONT POWER WINDOW SWITCH (PASSENGER SIDE) IS OPERATED

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

INFOID:0000000009723175

1.REPLACE FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Replace front power window switch (passenger side).
Refer to PWC-118, "Removal and Installation"

>> INSPECTION END

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

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

INFOID:0000000009723176

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-14, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure".

Is the inspection result normal?

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

2.CHECK PASSENGER SIDE POWER WINDOW MOTOR CIRCUIT

Check passenger side power window motor circuit.
Refer to PWC-21, "PASSENGER SIDE : Component Function Check".

Is the inspection result normal?

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

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".
NO >> GO TO 1.

REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

WHEN POWER WINDOW MAIN SWITCH IS OPERATED

WHEN POWER WINDOW MAIN SWITCH IS OPERATED : Diagnosis Procedure

INFOID:0000000009723177

1.CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.
Refer to PWC-18, "Component Function Check".

Is the inspection result normal?

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

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".
NO >> GO TO 1.

WHEN REAR POWER WINDOW SWITCH LH IS OPERATED

WHEN REAR POWER WINDOW SWITCH LH IS OPERATED : Diagnosis Procedure

INFOID:0000000009723178

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

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

Is the inspection result normal?

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

2.REPLACE REAR POWER WINDOW SWITCH LH

Replace rear power window switch LH.
Refer to PWC-118, "Removal and Installation".

>> INSPECTION END

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

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

INFOID:0000000009723179

1.CHECK REAR POWER WINDOW MOTOR LH

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

Is the inspection result normal?

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

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".
NO >> GO TO 1.

REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE

WHEN POWER WINDOW MAIN SWITCH IS OPERATED

WHEN POWER WINDOW MAIN SWITCH IS OPERATED : Diagnosis Procedure

INFOID:0000000009723180

1. CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.
Refer to PWC-18, "Component Function Check".

Is the inspection result normal?

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

2. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".
NO >> GO TO 1.

WHEN REAR POWER WINDOW SWITCH RH IS OPERATED

WHEN REAR POWER WINDOW SWITCH RH IS OPERATED : Diagnosis Procedure

INFOID:0000000009723181

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

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

Is the inspection result normal?

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

2. REPLACE REAR POWER WINDOW SWITCH RH

Replace rear power window switch RH.
Refer to PWC-118, "Removal and Installation".

>> INSPECTION END

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

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

INFOID:0000000009723182

1. 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 2.
NO >> Repair or replace the malfunctioning parts.

2. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".
NO >> GO TO 1.

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATES NORMALLY

DRIVER SIDE

DRIVER SIDE : Diagnosis Procedure

INFOID:0000000009723183

1.PERFORM INITIALIZATION PROCEDURE

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

Is the inspection result normal?

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

2.CHECK ENCODER (DRIVER SIDE) CIRCUIT

Check encoder (driver side) circuit.
Refer to PWC-27, "DRIVER SIDE : Component Function Check".

Is the inspection result normal?

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

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".
NO >> GO TO 1.

PASSENGER SIDE

PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000009723184

1.PERFORM INITIALIZAITON PROCEDURE

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

Is the inspection result normal?

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

2.CHECK ENCODER (PASSENGER SIDE) CIRCUIT

Check encoder (passenger side) circuit.
Refer to PWC-29, "PASSENGER SIDE : Component Function Check".

Is the inspection result normal?

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

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".
NO >> GO TO 1.

ANTI-PINCH FUNCTION DOES NOT OPERATE NORMALLY

DRIVER SIDE

DRIVER SIDE : Diagnosis Procedure

INFOID:0000000009723185

1. CHECK POWER WINDOW AUTO OPERATION

Check power window auto operation.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Refer to PWC-108, "DRIVER SIDE : Diagnosis Procedure".

2. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".
NO >> GO TO 1.

PASSENGER SIDE

PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000009723186

1. CHECK POWER WINDOW AUTO OPERATION

Check power window auto operation.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Refer to PWC-108, "PASSENGER SIDE : Diagnosis Procedure".

2. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".
NO >> GO TO 1.

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

Diagnosis Procedure

INFOID:0000000009723187

1.CHECK DOOR SWITCH

Check door switch.
Refer to DLK-97, "WITH AUTOMATIC BACK DOOR : Component Function Check".

Is the inspection result normal?

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

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".
NO >> GO TO 1.

DOOR KEY CYLINDER SWITCH DOES NOT OPERATE POWER WINDOWS

Diagnosis Procedure

INFOID:0000000009723188

1.PERFORM INITIALIZATION PROCEDURE

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

Is the inspection result normal?

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

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

Check driver side door lock assembly (door key cylinder switch).
Refer to DLK-110, "Component Function Check".

Is the inspection result normal?

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

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".
NO >> GO TO 1.

KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000009723189

1. CHECK INTELLIGENT KEY FUNCTION

Check Intelligent Key function.
Refer to DLK-127, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace BCM. Refer to BCS-98, "Exploded View".

2. CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".
NO >> GO TO 1.

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

Diagnosis Procedure

INFOID:0000000009723190

1.REPLACE POWER WINDOW MAIN SWITCH

Replace power window main switch.

>> Refer toPWC-118, "Removal and Installation".

POWER WINDOW SWITCH ILLUMINATION DOES NOT ILLUMINATE

Diagnosis Procedure

INFOID:0000000009723191

1.REPLACE POWER WINDOW MAIN SWITCH

Replace power window main switch.

>> Refer toPWC-118, "Removal and Installation".

PRECAUTION

PRECAUTIONS

FOR USA AND CANADA

FOR USA AND CANADA : Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

INFOID:0000000009723192

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

WARNING:

Always observe the following items for preventing accidental activation.

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

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

WARNING:

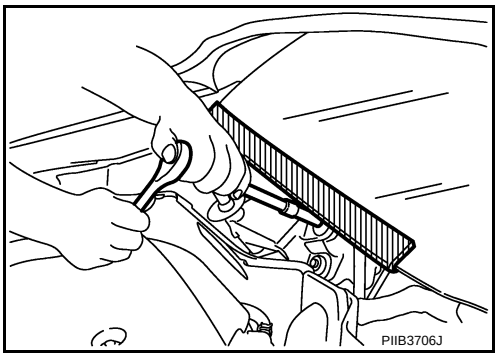
Always observe the following items for preventing accidental activation.

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

FOR USA AND CANADA : Precaution for Procedure without Cowl Top Cover

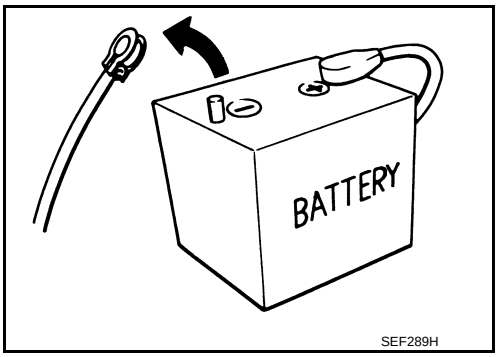
INFOID:0000000009723193

When performing the procedure after removing cowl top cover, cover the lower end of windshield with urethane, etc to prevent damage to windshield.



FOR USA AND CANADA : Precautions for Removing of Battery Terminal

INFOID:0000000010064806



- When removing the 12V battery terminal, turn OFF the ignition switch and wait at least 30 seconds.
  NOTE:
  ECU may be active for several tens of seconds after the ignition switch is turned OFF. If the battery terminal is removed before ECU stops, then a DTC detection error or ECU data corruption may occur.
- For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.
  NOTE:
  If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.
- After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.
  NOTE:
  The removal of 12V battery may cause a DTC detection error.

FOR MEXICO

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

INFOID:0000000009723194

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 AIR BAG” and “SEAT BELT” of this Service Manual.

WARNING:

Always observe the following items for preventing accidental activation.

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

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

WARNING:

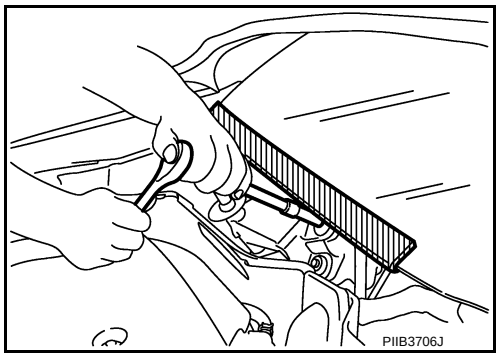
Always observe the following items for preventing accidental activation.

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

FOR MEXICO : Precaution for Procedure without Cowl Top Cover

INFOID:0000000009723195

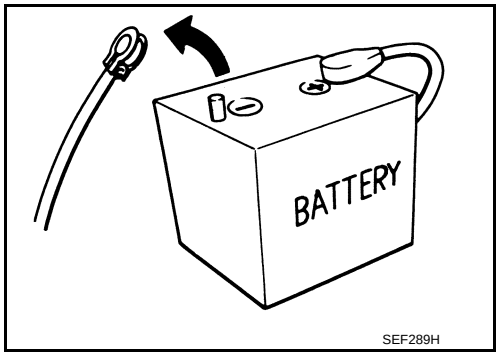
When performing the procedure after removing cowl top cover, cover the lower end of windshield with urethane, etc to prevent damage to windshield.



FOR MEXICO : Precautions for Removing of Battery Terminal

INFOID:0000000010064807

- When removing the 12V battery terminal, turn OFF the ignition switch and wait at least 30 seconds.
  NOTE:
  ECU may be active for several tens of seconds after the ignition switch is turned OFF. If the battery terminal is removed before ECU stops, then a DTC detection error or ECU data corruption may occur.
- For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.
  NOTE:
  If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.



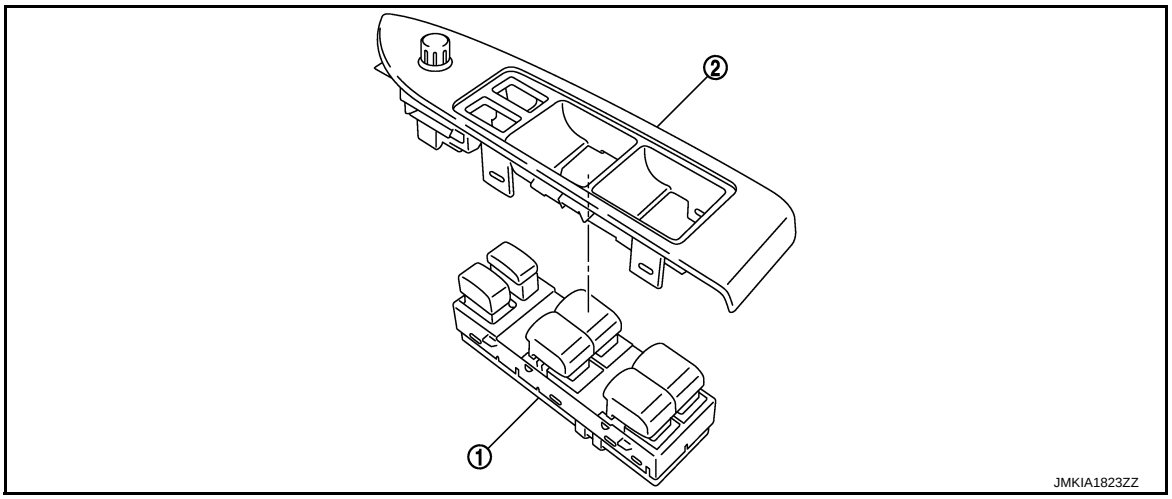
- After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.
  NOTE:
  The removal of 12V battery may cause a DTC detection error.

REMOVAL AND INSTALLATION

POWER WINDOW MAIN SWITCH

Exploded View

INFOID:0000000009723196



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

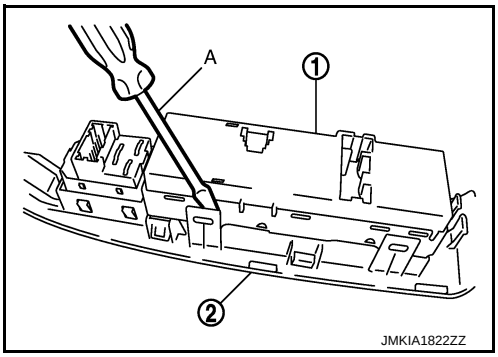
NOTE:
The same procedure is also performed for front power window switch (passenger side) and rear power switch (LH & RH).
Refer to removal and installation procedure. Refer to PWC-118, "Removal and Installation".

Removal and Installation

INFOID:0000000009723197

REMOVAL

1. Remove the power window main switch finisher (2). Refer to INT-13, "FRONT DOOR FINISHER : Exploded View" and INT-13, "FRONT DOOR FINISHER : Removal and Installation".
2. Power window main switch (1) is removed from power window main switch finisher (2) using remover tool (A).



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-6, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".