SECTION PWC

POWER WINDOW CONTROL SYSTEM

CONTENTS

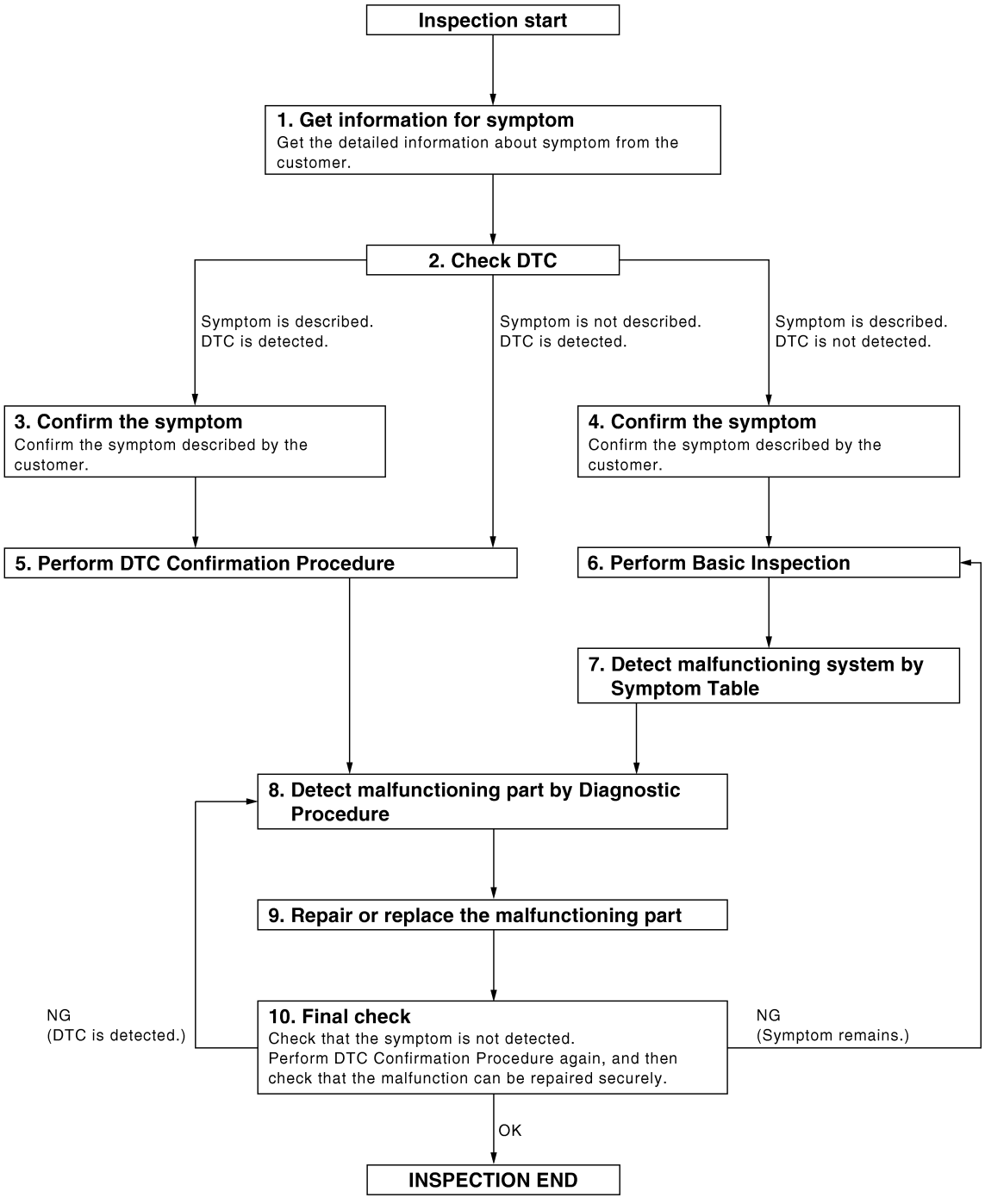
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000005461358

OVERALL SEQUENCE



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DETAILED FLOW

1. GET INFORMATION FOR SYMPTOM

Get the detailed information from the customer about the symptom (the condition and the environment when the incident/malfunction occurred).

>> GO TO 2

2. CHECK DTC

1. Check DTC.
2. Perform the following procedure if DTC is displayed.
- Record DTC and freeze frame data (Print them out with CONSULT-III.)
- Erase DTC.
- Study the relationship between the cause detected by DTC and the symptom described by the customer.
3. Check related service bulletins for information.

Is any symptom described and any DTC detected?

Symptom is described, DTC is displayed>>GO TO 3
Symptom is described, DTC is not displayed>>GO TO 4
Symptom is not described, DTC is displayed>>GO TO 5

3. CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.
Connect CONSULT-III to the vehicle in “DATA MONITOR” mode and check real time diagnosis results.
Verify relation between the symptom and the condition when the symptom is detected.

>> GO TO 5

4. CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.
Connect CONSULT-III to the vehicle in “DATA MONITOR” mode and check real time diagnosis results.
Verify relation between the symptom and the condition when the symptom is detected.

>> GO TO 6

5. PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC Confirmation Procedure for the displayed DTC, and then check that DTC is detected again.
At this time, always connect CONSULT-III to the vehicle, and check diagnostic results in real time.
If two or more DTCs are detected, refer to BCS-79, "DTC Inspection Priority Chart" and determine trouble diagnosis order.

NOTE:
- Freeze frame data is useful if the DTC is not detected.
- Perform Component Function Check if DTC Confirmation Procedure is not included in Service Manual. This simplified check procedure is an effective alternative though DTC cannot be detected during this check.
  If the result of Component Function Check is NG, it is the same as the detection of DTC by DTC Confirmation Procedure.

Is DTC detected?

YES >> GO TO 8
NO >> Refer to GI-39, "Intermittent Incident".

6. PERFORM BASIC INSPECTION

Perform PWC-6, "Work Flow".

Inspection End>>GO TO 7

7. DETECT MALFUNCTIONING SYSTEM BY SYMPTOM TABLE

Detect malfunctioning system based on the confirmed symptom in step 4, and determine the trouble diagnosis order based on possible causes and symptom.

>> GO TO 8

8. DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

NOTE:

The Diagnostic Procedure described based on open circuit inspection. A short circuit inspection is also required for the circuit check in the Diagnostic Procedure.

Is malfunctioning part detected?

YES >> GO TO 9
NO >> Check voltage of related BCM terminals using CONSULT-III.

9. REPAIR OR REPLACE THE MALFUNCTIONING PART

1. Repair or replace the malfunctioning part.
2. Reconnect parts or connectors disconnected during Diagnostic Procedure again after repair and replacement.
3. Check DTC. If DTC is displayed, erase it.

>> GO TO 10

10. FINAL CHECK

When DTC was detected in step 2, perform DTC Confirmation Procedure or Component Function Check again, and then check that the malfunction has been repaired securely.

When symptom was described from the customer, refer to confirmed symptom in step 3 or 4, and check that the symptom is not detected.

Does the symptom reappear?

YES (DTC is detected)>>GO TO 8
YES (Symptom remains)>>GO TO 6
NO >> Inspection End.

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description

INFOID:0000000005461359

Initial setting is necessary when battery terminal is removed.

CAUTION:

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

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

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement

INFOID:0000000005461360

INITIALIZATION PROCEDURE

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

CHECK ANTI-PINCH FUNCTION

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

- Check that glass lowers for approximately 150 mm (5.91 in) or 2 seconds without pinching piece of wood and stops.
- Check that glass does not rise when operating the power window main switch while lowering.

CAUTION:

- **Do not check with hands and other parts of the body because they may be pinched. Do not get pinched.**
- **Check that AUTO-UP operates before inspection when system initialization is performed.**
- **It may switch to fail-safe mode if open/close operation is performed continuously. Perform initial setting in that situation. Refer to PWC-62, "Fail Safe".**
- **Perform initial setting when auto-up operation or anti-pinch function does not operate normally.**
- **Finish initial setting. Otherwise, next operation cannot be done.**

1. **Auto-up operation**
2. **Anti-pinch function**
3. **Retained power operation when ignition switch is OFF.**

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description

INFOID:0000000005461361

Initial setting is necessary when replacing power window main switch.

CAUTION:

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

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

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement

INFOID:0000000005461362

INITIALIZATION PROCEDURE

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

CHECK ANTI-PINCH FUNCTION

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

- Check that glass lowers for approximately 150 mm (5.91 in) or 2 seconds without pinching piece of wood and stops.
- Check that glass does not rise when operating the power window main switch while lowering.

CAUTION:

- **Do not check with hands and other parts of the body because they may be pinched. Do not get pinched.**
- **Check that AUTO-UP operates before inspection when system initialization is performed.**
- **It may switch to fail-safe mode if open/close operation is performed continuously. Perform initial setting in that situation. Refer to PWC-62, "Fail Safe".**
- **Perform initial setting when auto-up operation or anti-pinch function does not operate normally.**
- **Finish initial setting. Otherwise, next operation cannot be done.**

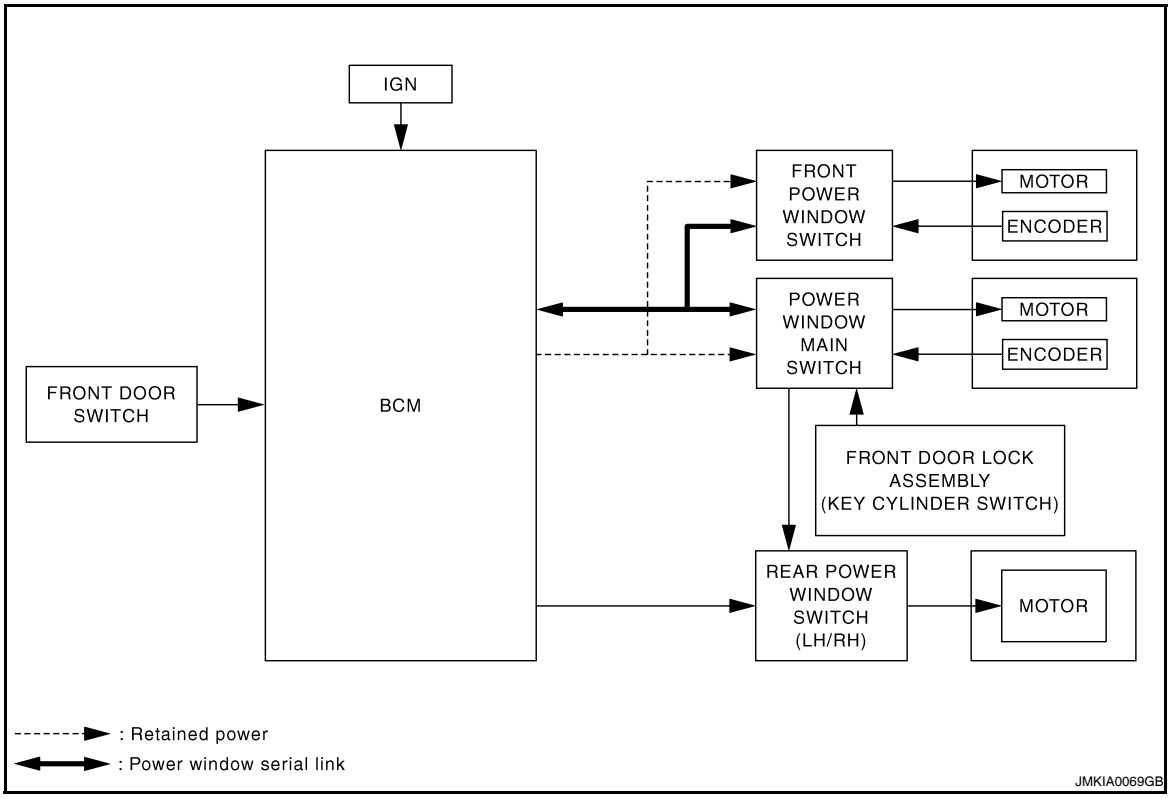
1. **Auto-up operation**
2. **Anti-pinch function**
3. **Retained power operation when ignition switch is OFF.**

FUNCTION DIAGNOSIS

POWER WINDOW SYSTEM

System Diagram

INFOID:0000000005461363



System Description

INFOID:0000000005461364

POWER WINDOW MAIN SWITCH

INPUT/OUTPUT SIGNAL CHART

Item	Input signal to power window main switch	Power window main switch function	Actuator
Key cylinder switch	LOCK/UNLOCK signal (more than 1 second over)	Power window control	Front power window motor
Encoder	Encoder pulse signal		
Power window main switch	Front power window motor (driver side) UP/DOWN signal		
Front power window switch (passenger side)	Front power window motor (passenger side) UP/DOWN signal		
BCM	RAP signal		
Rear power window switch	Rear power window motor UP/DOWN signal		Rear power window motor

FRONT POWER WINDOW SWITCH

INPUT/OUTPUT SIGNAL CHART

Item	Input signal to front power window switch	Front power window switch function	Actuator
Front power window switch (passenger side)	Front power window motor (passenger side) UP/DOWN signal	Power window control	Front power window motor (passenger side)
Encoder	Encoder pulse signal		
BCM	RAP signal		

POWER WINDOW OPERATION

- Power window system is operable during the retained power operation timer after turning ignition switch ON and OFF.
- Power window main switch (driver side) can open/close all windows.
- Front & rear power window switch can open/close the corresponding windows.

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

- AUTO UP/DOWN operation can be performed when power window main switch & front power window switch (passenger side) 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 during the 45 seconds even when ignition switch is turned OFF.

Retained power function cancel conditions

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

POWER WINDOW LOCK

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

ANTI-PINCH OPERATION (FRONT DRIVER SIDE & PASSENGER SIDE)

- Pinch foreign material in the door glass during AUTO-UP operation, and it is the anti-pinch function that lowers the door glass 150 mm (5.91 in) or 2 seconds when detected.
- Encoder continues detecting the movement of power window motor and transmits to power window switch as the encoder pulse signal while power window motor is operating.
- Resistance is applied to the power window motor rotation that changes the frequency of encoder pulse signal if foreign material is trapped in the door glass.
- Power window switch controls to lower the window glass for 150 mm or 2 seconds after it detects encoder pulse signal frequency change.

OPERATION CONDITION

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

NOTE:

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

KEY CYLINDER SWITCH OPERATION

Hold the door key cylinder to the LOCK or UNLOCK direction for 1 second 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 second or more to perform CLOSE operation of the door glass.

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

KEYLESS POWER WINDOW DOWN OPERATION (FRONT DRIVER SIDE & PASSENGER SIDE)

All power windows open when the unlock button on Intelligent Key is activated and kept pressed for more than 3 seconds[NOTE] 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 is active, 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 BCS-25, "INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY)".

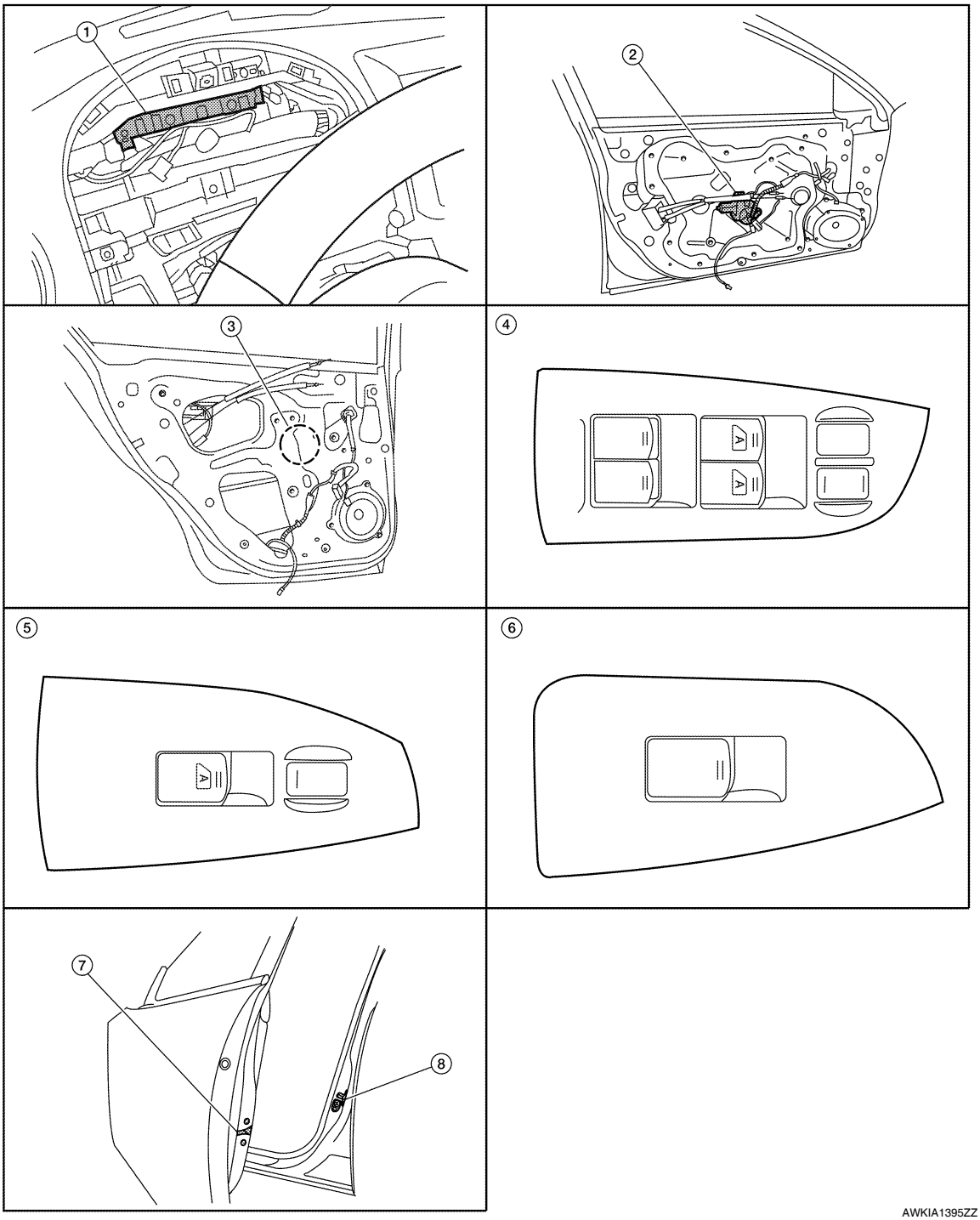
NOTE:

Use CONSULT-III to change settings.

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

Component Parts Location

INFOID:0000000005461365



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1. BCM M16, M17, M18 (view with combination meter removed)
2. Front power window motor LH D9
   Front power window motor RH D104
3. Rear power window motor LH D204
   Rear power window motor RH D304
4. Main power window and door lock/unlock switch D7, D8
5. Power window and door lock/unlock switch RH D105
6. Rear power window switch LH D203
   Rear power window switch RH D303
7. Front door lock assembly LH (key cylinder switch) D10
8. Front door switch LH B8
   Front door switch RH B108

Component Description

INFOID:0000000005461366

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

DIAGNOSIS SYSTEM (BCM)
COMMON ITEM
COMMON ITEM : Diagnosis Description

INFOID:0000000005532031

BCM CONSULT-III FUNCTION
CONSULT-III 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 MNTR	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	• Enables to read and save the vehicle specification. • Enables to 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.

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	HEADLAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
Intelligent Key system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
BCM	BCM	×		
Immobilizer	IMMU		×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Trunk open	TRUNK		×	×
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	AIR PRESSURE MONITOR	×	×	×

COMMON ITEM : CONSULT-III Function

INFOID:0000000005532032

ECU IDENTIFICATION
Displays the BCM part No.

SELF-DIAG RESULT
Refer to BCS-81, "DTC Index".

RETAINED PWR

RETAINED PWR : CONSULT-III Function (BCM - RETAINED PWR)

INFOID:0000000005532033

Data monitor

Monitor Item [Unit]	Description
DOOR SW-DR [ON/OFF]	Indicates condition of front door switch LH.
DOOR SW-AS [ON/OFF]	Indicates condition of front door switch RH.

COMPONENT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

BCM

BCM : Diagnosis Procedure

INFOID:0000000005532034

Regarding Wiring Diagram information, refer to BCS-69, "Wiring Diagram".

1. CHECK FUSE AND FUSIBLE LINK

Check if the following BCM fuses or fusible link are blown.

Terminal No.	Signal name	Fuse and fusible link No.
1	Battery power supply	H
11		10
24		7

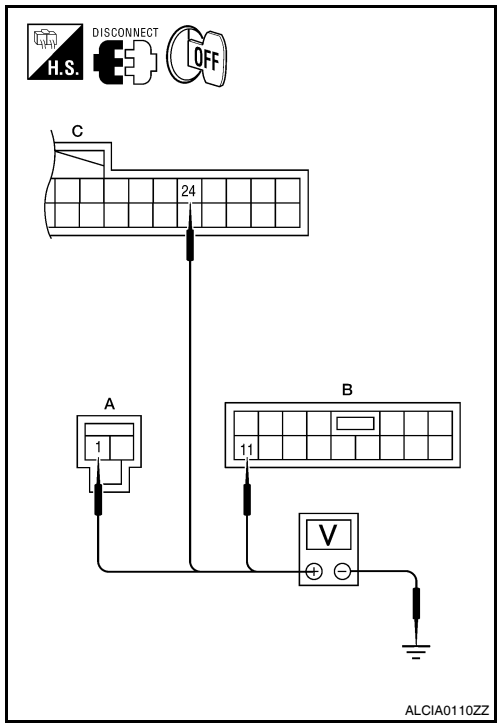
Is the fuse or fusible link blown?

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

2. CHECK POWER SUPPLY CIRCUIT

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

Terminals			Voltage (Approx.)
(+)		(−)	
BCM			
Connector	Terminal		
M16 (A)	1	Ground	Battery voltage
M17 (B)	11		
M18 (C)	24		



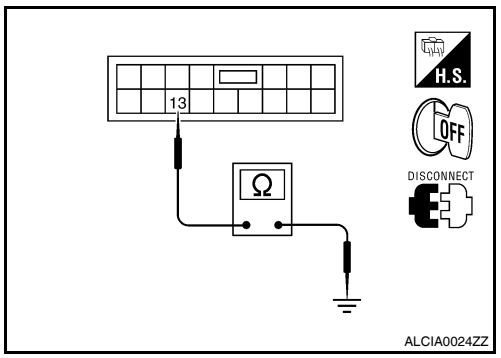
Is the measurement normal?

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

3. CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M17	13		Yes



Does continuity exist?

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

BCM : Special Repair Requirement

INFOID:0000000005532035

1. REQUIRED WORK WHEN REPLACING BCM

Initialize control unit. Refer to BCS-6, "CONFIGURATION (BCM) : Special Repair Requirement".

>> Work End.

POWER WINDOW MAIN SWITCH

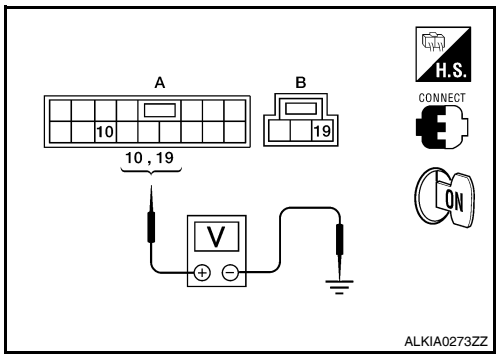
POWER WINDOW MAIN SWITCH : Diagnosis Procedure

INFOID:0000000005461372

Regarding Wiring Diagram information, refer to PWC-54, "Wiring Diagram".

1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch ON.
2. Check voltage between main power window and door lock/unlock switch connectors D7 (A) terminal 10 and D8 (B) terminal 19 and ground.



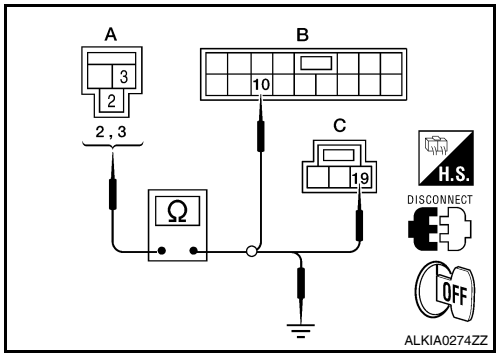
Terminal			Voltage (V) (Approx.)
(+)		(–)	
Main power window and door lock/unlock switch connector	Terminal		
D7 (A)	10	Ground	Battery voltage
D8 (B)	19		

Is the inspection result normal?

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

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect BCM connector M16 and main power window and door lock/unlock switch connectors.
3. Check continuity between BCM connector M16 (A) terminals 2 and 3 and main power window and door lock/unlock switch connectors D7 (B) terminal 10 and D8 (C) terminal 19.



BCM connector	Terminal	Main power window and door lock/unlock switch connector	Terminal	Continuity
M16 (A)	3	D7 (B)	10	Yes
	2	D8 (C)	19	

4. Check continuity between BCM connector M16 (A) terminals 2 and 3 and ground.

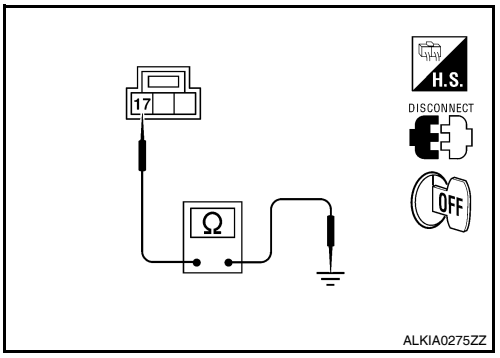
BCM connector	Terminal	Ground	Continuity
M16 (A)	3		No
	2		

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-87, "Removal and Installation".
NO >> Repair or replace harness or connectors.

3. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect main power window and door lock/unlock switch connector D8.
3. Check continuity between main power window and door lock/unlock switch connector D8 terminal 17 and ground.



Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D8	17		Yes

Is the inspection result normal?

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

POWER WINDOW MAIN SWITCH : Special Repair Requirement

INFOID:0000000005461373

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> End.

FRONT POWER WINDOW SWITCH

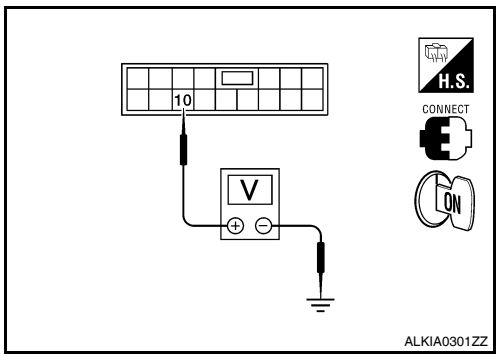
FRONT POWER WINDOW SWITCH : Diagnosis Procedure

INFOID:0000000005461374

Regarding Wiring Diagram information, refer to PWC-65, "Wiring Diagram".

1. CHECK POWER SUPPLY CIRCUIT

Check voltage between power window and door lock/unlock switch RH connector D105 terminal 10 and ground.



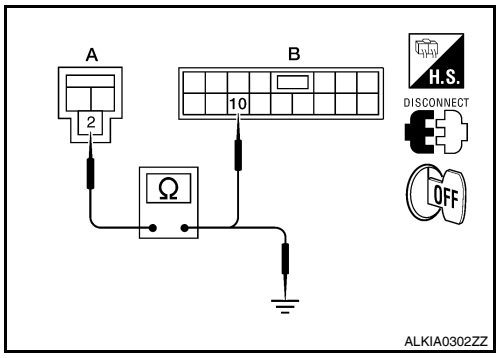
Terminal			Voltage (V) (Approx.)
(+)		(–)	
Power window and door lock/unlock switch RH connector	Terminal		
D105	10	Ground	Battery voltage

Is the inspection result normal?

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

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect BCM connector M16 and power window and door lock/unlock switch RH connector.
3. Check continuity between BCM connector M16 (A) terminal 2 and power window and door lock/unlock switch RH connector D105 (B) terminal 10.



BCM connector	Terminal	Power window and door lock/unlock switch RH connector	Terminal	Continuity
M16 (A)	2	D105 (B)	10	Yes

4. Check continuity between BCM connector M16 (A) terminal 2 and ground.

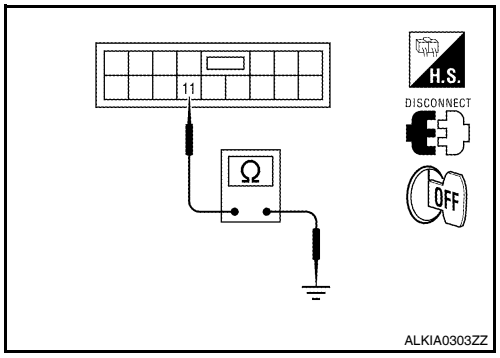
BCM connector	Terminal	Ground	Continuity
M16 (A)	2		No

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-87, "Removal and Installation".
NO >> Repair or replace harness or connectors.

3. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect power window and door lock/unlock switch RH.
3. Check continuity between power window and door lock/unlock switch RH connector D105 terminal 11 and ground.



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

Is the inspection result normal?

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

FRONT POWER WINDOW SWITCH : Special Repair Requirement

INFOID:0000000005461375

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> End.

REAR POWER WINDOW SWITCH

REAR POWER WINDOW SWITCH : Diagnosis Procedure

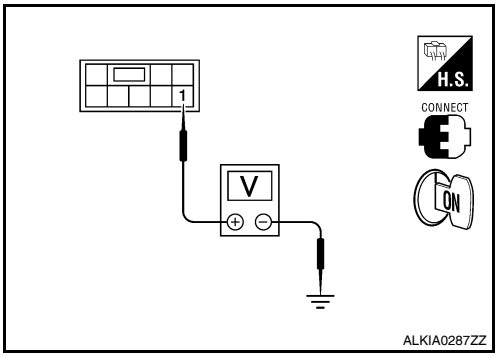
INFOID:0000000005461376

Regarding Wiring Diagram information, refer to PWC-54, "Wiring Diagram".

1. CHECK POWER SUPPLY CIRCUIT

Check voltage between rear power window switch connector terminal 1 and ground.

Terminal				Condition	Voltage (V) (Approx.)
(+)			(–)		
Rear power window switch connector		Terminal			
LH	D203	1	Ground	Ignition switch ON	Battery voltage
RH	D303				



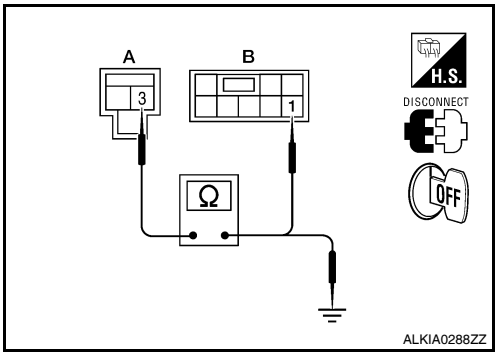
Is the inspection result normal?

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

2. CHECK HARNESS CONTINUITY

1. Disconnect BCM connector M16 and rear power window switch connector.
2. Check continuity between BCM connector M16 (A) terminal 3 and rear power window switch connector (B) terminal 1.

BCM connector	Terminal	Rear power window switch connector		Terminal	Continuity
M16 (A)	3	LH	D203 (B)	1	Yes
		RH	D303 (B)		



3. Check continuity between BCM connector M16 (A) terminal 3 and ground.

BCM connector	Terminal	Ground	Continuity
M16 (A)	3		No

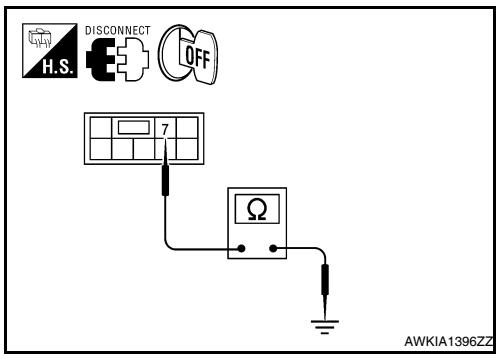
Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-87, "Removal and Installation".
NO >> Repair or replace harness or connectors.

3. CHECK GROUND CIRCUIT

1. Disconnect rear power window switch connector.
2. Check continuity between rear power window switch connector terminal 7 and ground.

Rear power window switch connector	Terminal	Ground	Continuity
D203	7		No
D303			



Is the inspection result normal?

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

REAR POWER WINDOW SWITCH : Special Repair Requirement

INFOID:0000000005461377

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> End.

REAR POWER WINDOW SWITCH

Description

INFOID:0000000005461378

- BCM supplies power.
- Rear power window motor operates when rear power window switch is activated.

Component Function Check

INFOID:0000000005461379

Rear Power Window Switch

1. CHECK REAR POWER WINDOW MOTOR FUNCTION

Check that rear power window motor operates from rear power window switch.

Is the inspection result normal?

YES >> Rear power window switch is OK.
NO >> Refer to PWC-24, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000005461380

Regarding Wiring Diagram information, refer to PWC-54, "Wiring Diagram".

1. CHECK REAR POWER WINDOW SWITCH

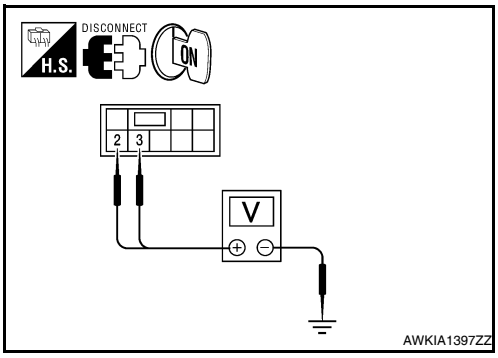
Check rear power window switch. Refer to PWC-25, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 2
NO >> Replace rear power window switch. Refer to PWC-130, "Removal and Installation".

2. 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 connector and ground.



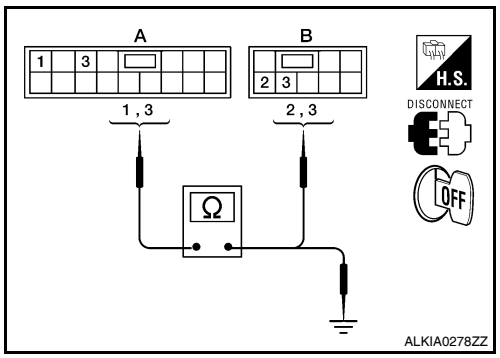
Rear power window switch		Ground	Condition		Voltage (V) (Approx.)
Connector	Terminal				
D203	2	Ground	Power window main switch : LH	UP	Battery voltage
				DOWN	0V
	3			UP	0V
				DOWN	Battery voltage
D303	2		Power window main switch : RH	UP	Battery voltage
				DOWN	0V
	3			UP	0V
				DOWN	Battery voltage

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> • For rear power window switch LH, GO TO 3
• For rear power window switch RH, GO TO 4

3. CHECK HARNESS CONTINUITY (REAR POWER WINDOW SWITCH LH)

1. Turn ignition switch OFF.
2. Disconnect main power window and door lock/unlock switch connector D7 and rear power window switch LH connector.
3. Check continuity between main power window and door lock/unlock switch connector D7 (A) terminals 1, 3 and rear power window switch LH connector D203 (B) terminals 2, 3.



Main power window and door lock/unlock switch connector	Terminal	Rear power window switch LH connector	Terminal	Continuity
D7 (A)	1	D203 (B)	2	Yes
	3		3	

4. Check continuity between main power window and door lock/unlock switch connector D7 (A) terminals 1, 3 and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7 (A)	1		No
	3		

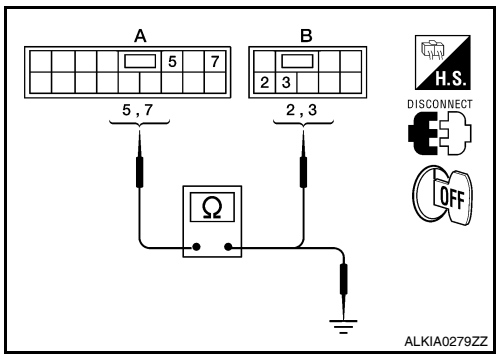
Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-128, "Removal and Installation".

NO >> Repair or replace harness or connectors.

4. CHECK HARNESS CONTINUITY (REAR POWER WINDOW SWITCH RH)

1. Turn ignition switch OFF.
2. Disconnect main power window and door lock/unlock switch connector D7 and rear power window switch RH connector.
3. Check continuity between main power window and door lock/unlock switch connector D7 (A) terminals 5, 7 and rear power window switch RH connector D303 (B) terminals 2, 3.



Main power window and door lock/unlock switch connector	Terminal	Rear power window switch RH connector	Terminal	Continuity
D7 (A)	5	D303 (B)	3	Yes
	7		2	

4. Check continuity between main power window and door lock/unlock switch connector D7 (A) terminals 5, 7 and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7 (A)	5		No
	7		

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-128, "Removal and Installation".

NO >> Repair or replace harness or connectors.

Component Inspection

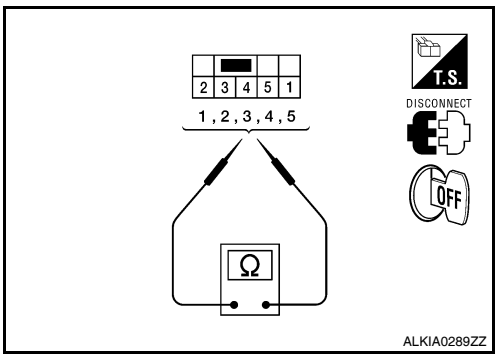
INFOID:0000000005461381

COMPONENT INSPECTION

1.CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.

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



Is the inspection result normal?

YES >> Rear power window switch is OK.
NO >> Replace rear power window switch. Refer to PWC-130, "Removal and Installation".

Special Repair Requirement

INFOID:0000000005461382

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> End.

POWER WINDOW MOTOR
DRIVER SIDE

DRIVER SIDE : Description

INFOID:0000000005461383

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

DRIVER SIDE : Component Function Check

INFOID:0000000005461384

1. CHECK POWER WINDOW MOTOR

Check that front power window motor LH operates with main power window and door lock/unlock switch.

Is the inspection result normal?

YES >> Front power window motor LH is OK.
NO >> Refer to PWC-27, "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE : Diagnosis Procedure

INFOID:0000000005461385

Regarding Wiring Diagram information, refer to PWC-54, "Wiring Diagram".

1. CHECK POWER WINDOW MOTOR

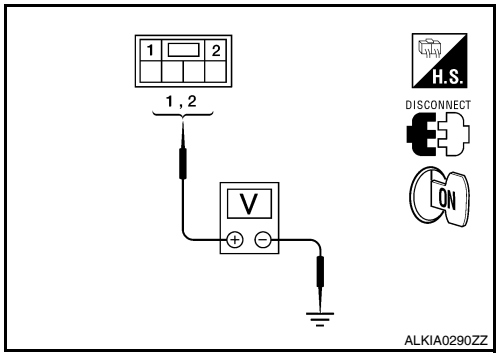
Check front power window motor LH. Refer to PWC-28, "DRIVER SIDE : Component Inspection".

Is the inspection result normal?

YES >> GO TO 2
NO >> Replace power window motor LH. Refer to GW-19, "Removal and Installation".

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

1. Disconnect front power window motor LH connector.
2. Turn ignition switch ON.
3. Check voltage between front power window motor LH connector D9 terminals 1, 2 and ground.



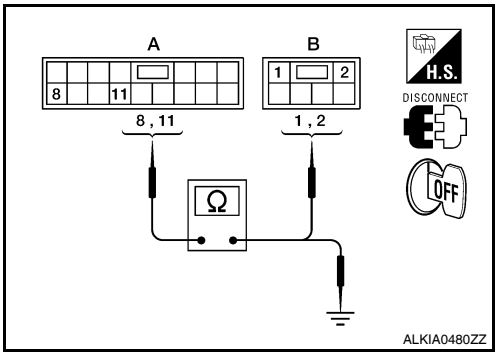
Terminal			Main power window and door lock/unlock switch condition	Voltage (V) (Approx.)
(+)		(–)		
Power window motor LH connector	Terminal			
D9	2	Ground	UP	Battery voltage
			DOWN	0
	1		UP	0
			DOWN	Battery voltage

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> GO TO 3

3. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect main power window and door lock/unlock switch connector D7.
3. Check continuity between main power window and door lock/unlock switch connector D7 (A) terminals 8, 11 and front power window motor connector LH D9 (B) terminals 1, 2.



Main power window and door lock/unlock switch connector	Terminal	Front power window motor LH connector	Terminal	Continuity
D7 (A)	8	D9 (B)	2	Yes
	11		1	

4. Check continuity between main power window and door lock/unlock switch connector D7 (A) terminals 8, 11 and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7 (A)	8		No
	11		

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-128, "Removal and Installation".
NO >> Repair or replace harness or connectors.

DRIVER SIDE : Component Inspection

INFOID:0000000005461386

COMPONENT INSPECTION

1. CHECK FRONT POWER WINDOW MOTOR LH

1. Disconnect front power window motor LH.
2. Check motor operation by connecting battery voltage directly to front power window motor LH.

Terminal		Motor condition
(+)	(–)	
1	2	DOWN
2	1	UP

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace front power window motor LH. Refer to GW-19, "Removal and Installation".

DRIVER SIDE : Special Repair Requirement

INFOID:0000000005461387

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> End.

PASSENGER SIDE

PASSENGER SIDE : Description

INFOID:0000000005461388

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

PASSENGER SIDE : Component Function Check

INFOID:0000000005461389

1. CHECK POWER WINDOW MOTOR CIRCUIT

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

Is the inspection result normal?

YES >> Front power window motor RH is OK.
NO >> Refer to PWC-29, "PASSENGER SIDE : Diagnosis Procedure".

PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000005461390

Regarding Wiring Diagram information, refer to PWC-54, "Wiring Diagram".

1. CHECK FRONT POWER WINDOW MOTOR RH

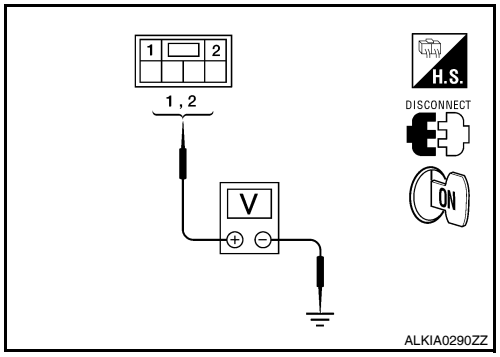
Check front power window motor RH. Refer to PWC-30, "PASSENGER SIDE : Component Inspection".

Is the inspection result normal?

YES >> GO TO 2
NO >> Replace front power window motor RH. Refer to GW-19, "Removal and Installation".

2. CHECK FRONT POWER WINDOW SWITCH RH OUTPUT SIGNAL

1. Disconnect front power window motor RH connector.
2. Turn ignition switch ON.
3. Check voltage between front power window motor RH connector D104 terminals 1, 2 and ground.



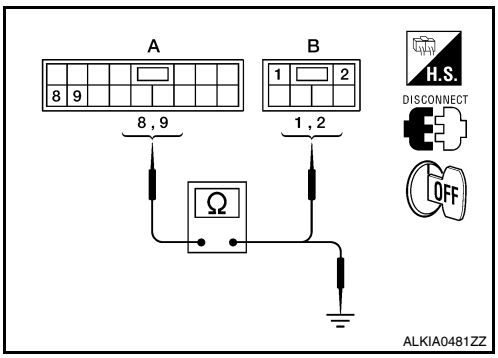
Terminal			Front power window motor RH condition	Voltage (V) (Approx.)
(+)		(–)		
Front power window motor RH connector	Terminal			
D104	2	Ground	UP	Battery voltage
			DOWN	0
	1		UP	0
			DOWN	Battery voltage

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> GO TO 3

3. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect power window and door lock/unlock switch RH connector.
3. Check continuity between power window and door lock/unlock switch RH connector D105 (A) terminals 8, 9 and front power window motor RH connector D104 (B) terminals 1, 2.



Power window and door lock/unlock switch RH connector	Terminal	Front power window motor RH connector	Terminal	Continuity
D105 (A)	8	D104 (B)	2	Yes
	9		1	

4. Check continuity between power window and door lock/unlock switch RH connector D105 (A) terminals 8, 9 and ground.

Power window and door lock/unlock switch RH connector	Terminal	Ground	Continuity
D105 (A)	8		No
	9		

Is the inspection result normal?

YES >> Replace power window and door lock/unlock switch RH. Refer to PWC-129, "Removal and Installation".

NO >> Repair or replace harness or connectors.

PASSENGER SIDE : Component Inspection

INFOID:0000000005461391

COMPONENT INSPECTION

1. CHECK FRONT POWER WINDOW MOTOR RH

1. Disconnect front power window motor RH.
2. Check motor operation by connecting battery voltage directly to front power window motor RH.

Terminal		Motor condition
(+)	(–)	
1	2	DOWN
2	1	UP

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace front power window motor RH. Refer to GW-19, "Removal and Installation".

PASSENGER SIDE : Special Repair Requirement

INFOID:0000000005461392

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> End.

REAR LH

REAR LH : Description

INFOID:0000000005461393

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

REAR LH : Component Function Check

INFOID:0000000005461394

1. CHECK REAR POWER WINDOW MOTOR LH CIRCUIT

Check that rear power window motor LH operates with main power window and door lock/unlock switch or rear power window switch LH.

Is the inspection result normal?

YES >> Rear power window motor LH is OK.
NO >> Refer to PWC-31, "REAR LH : Diagnosis Procedure"

REAR LH : Diagnosis Procedure

INFOID:0000000005461395

Regarding Wiring Diagram information, refer to PWC-54, "Wiring Diagram".

1. CHECK REAR POWER WINDOW MOTOR LH

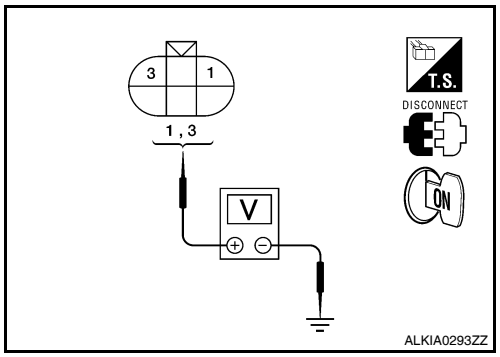
Check rear power window motor LH. Refer to PWC-32, "REAR LH : Component Inspection".

Is the inspection result normal?

YES >> GO TO 2
NO >> Replace rear power window motor LH. Refer to GW-24, "Rear Door Glass Regulator".

2. CHECK REAR POWER WINDOW SWITCH OUTPUT SIGNAL

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



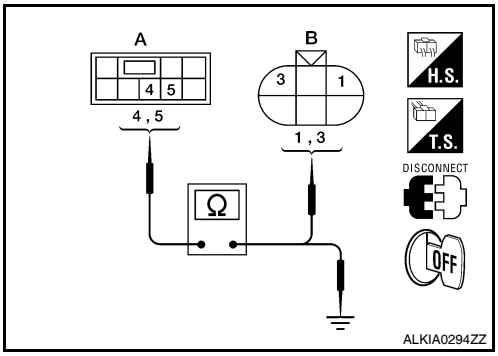
Terminal			Window condition	Voltage (V) (Approx.)
(+)		(–)		
Rear power window motor LH connector	Terminal			
D204	3	Ground	UP	Battery voltage
			DOWN	0
	1		UP	0
			DOWN	Battery voltage

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> GO TO 3

3. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect rear power window switch LH connector.
3. Check continuity between rear power window switch LH connector D203 (A) terminals 4, 5 and rear power window motor LH connector D204 (B) terminals 1, 3.



Rear power window switch LH connector	Terminal	Rear power window motor LH connector	Terminal	Continuity
D203 (A)	5	D204 (B)	1	Yes
	4		3	

4. Check continuity between rear power window switch LH connector D203 (A) terminals 4, 5 and ground.

Rear power window switch LH connector	Terminal	Ground	Continuity
D203 (A)	5		No
	4		

Is the inspection result normal?

YES >> Check rear power window switch LH. Refer to PWC-24, "Diagnosis Procedure".
NO >> Repair or replace harness or connectors.

REAR LH : Component Inspection

INFOID:0000000005461396

COMPONENT INSPECTION

1. CHECK REAR POWER WINDOW MOTOR LH

1. Disconnect rear power window motor LH.
2. Check motor operation by connecting battery voltage directly to rear power window motor LH.

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

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace rear power window motor LH. Refer to GW-24, "Rear Door Glass Regulator".

REAR RH

REAR RH : Description

INFOID:0000000005461397

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

REAR RH : Component Function Check

INFOID:0000000005461398

1. CHECK REAR POWER WINDOW MOTOR RH CIRCUIT

Check that rear power window motor RH operates with main power window and door lock/unlock switch or rear power window switch RH.

Is the inspection result normal?

YES >> Rear power window motor RH is OK.
NO >> Refer to PWC-32, "REAR RH : Diagnosis Procedure".

REAR RH : Diagnosis Procedure

INFOID:0000000005461399

Regarding Wiring Diagram information, refer to PWC-54, "Wiring Diagram".

1. CHECK REAR POWER WINDOW MOTOR RH

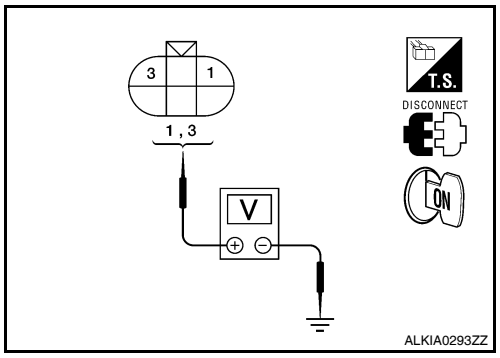
Check rear power window motor RH. Refer to PWC-33, "REAR RH : Component Inspection".

Is the inspection result normal?

YES >> GO TO 2
NO >> Replace rear power window motor RH. Refer to GW-14, "Removal and Installation".

2. CHECK REAR POWER WINDOW SWITCH RH OUTPUT SIGNAL

1. Disconnect rear power window motor RH connector.
2. Turn ignition switch ON.
3. Check voltage between rear power window motor RH connector D304 terminal 1, 3 and ground.



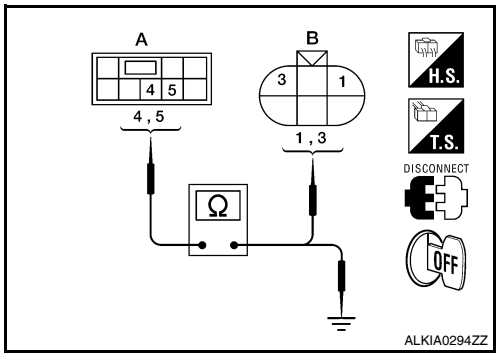
Terminal			Rear power window switch RH condition	Voltage (V) (Approx.)
(+)		(–)		
Rear power window motor RH connector	Terminal			
D304	3	Ground	UP	Battery voltage
			DOWN	0
	1		UP	0
			DOWN	Battery voltage

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> GO TO 3

3. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect rear power window switch RH connector.
3. Check continuity between rear power window switch RH connector D303 (A) terminals 4, 5 and rear power window motor RH connector D304 (B) terminals 1, 3.



Rear power window switch RH connector	Terminal	Rear power window motor RH connector	Terminal	Continuity
D303 (A)	5	D304 (B)	1	Yes
	4		3	

4. Check continuity between rear power window switch RH connector D303 (A) terminals 4, 5 and ground.

Rear power window switch RH connector	Terminal	Ground	Continuity
D303 (A)	5		No
	4		

Is the inspection result normal?

YES >> Check rear power window switch RH. Refer to PWC-24, "Diagnosis Procedure".
NO >> Repair or replace harness or connectors.

REAR RH : Component Inspection

INFOID:0000000005461400

COMPONENT INSPECTION

1. CHECK REAR POWER WINDOW MOTOR RH

1. Disconnect rear power window motor RH.
2. Check motor operation by connecting battery voltage directly to rear power window motor RH.

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

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace rear power window motor RH. Refer to GW-24, "Rear Door Glass Regulator".

ENCODER
DRIVER SIDE

DRIVER SIDE : Description

INFOID:0000000005461401

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

DRIVER SIDE : Component Function Check

INFOID:0000000005461402

1. CHECK ENCODER OPERATION

Check that front door glass LH performs AUTO open/close operation normally when operating main power window and door lock/unlock switch.

Is the inspection result normal?

YES >> Encoder operation is OK.
NO >> Refer to PWC-35, "DRIVER SIDE : Diagnosis Procedure".

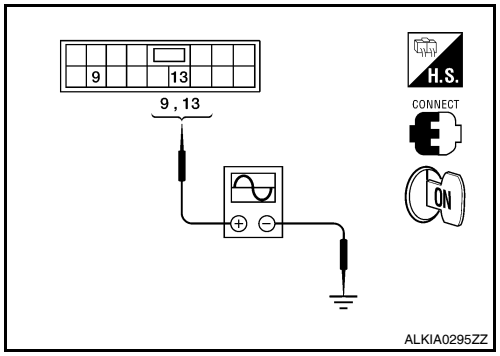
DRIVER SIDE : Diagnosis Procedure

INFOID:0000000005461403

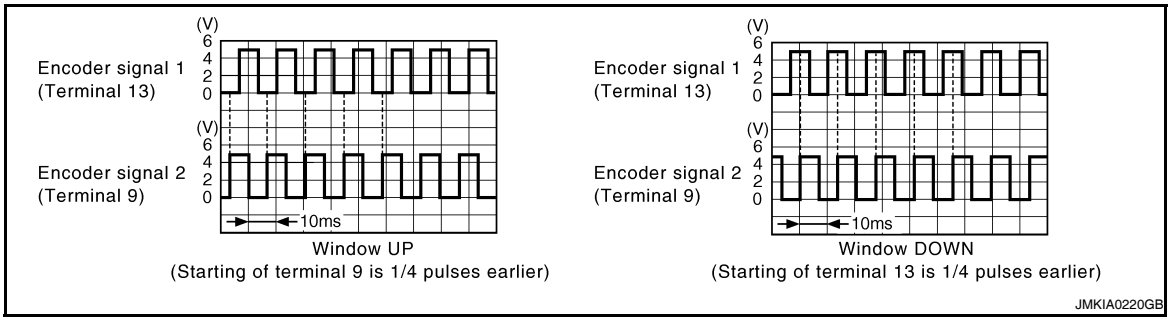
Regarding Wiring Diagram information, refer to PWC-54, "Wiring Diagram".

1. CHECK ENCODER OPERATION

1. Turn ignition switch ON.
2. Check signal between main power window and door lock/unlock switch connector D7 terminals 9, 13 and ground with oscilloscope.



Terminals			Signal (Reference value)
(+)		(–)	
Main power window and door lock/unlock switch connector	Terminal		
D7	9	Ground	Refer to following signal
	13		

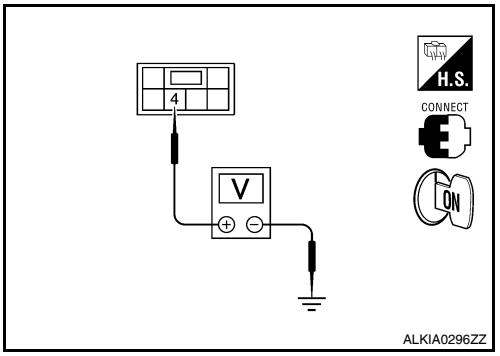


Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> GO TO 2

2. CHECK ENCODER POWER SUPPLY

Check voltage between front power window motor LH connector D9 terminal 4 and ground.



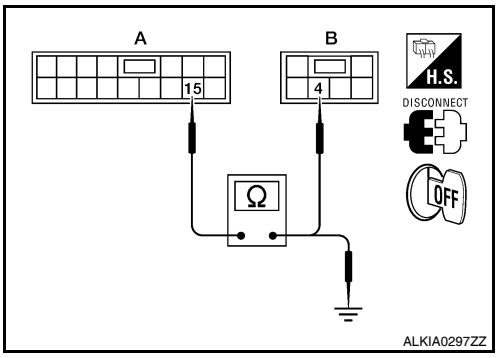
Terminal			Voltage (V) (Approx.)
(+)		(–)	
Front power window motor LH connector	Terminal		
D9	4	Ground	10

Is the inspection result normal?

YES >> GO TO 4
NO >> GO TO 3

3. CHECK HARNESS CONTINUITY 1

1. Turn ignition switch OFF.
2. Disconnect main power window and door lock/unlock switch connector D7 and front power window motor LH connector.
3. Check continuity between main power window and door lock/unlock switch connector D7 (A) terminal 15 and front power window motor LH connector D9 (B) terminal 4.



Main power window and door lock/unlock switch connector	Terminal	Front power window motor LH connector	Terminal	Continuity
D7 (A)	15	D9 (B)	4	Yes

4. Check continuity between main power window and door lock/unlock switch connector D7 (A) terminal 15 and ground.

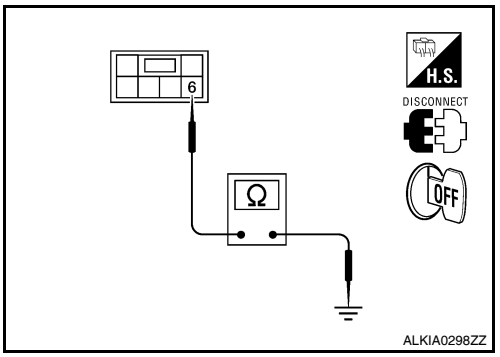
Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7 (A)	15		No

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-128, "Removal and Installation".
NO >> Repair or replace harness or connectors.

4. CHECK ENCODER GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect front power window motor LH connector.
3. Check continuity between front power window motor LH connector D9 terminal 6 and ground.



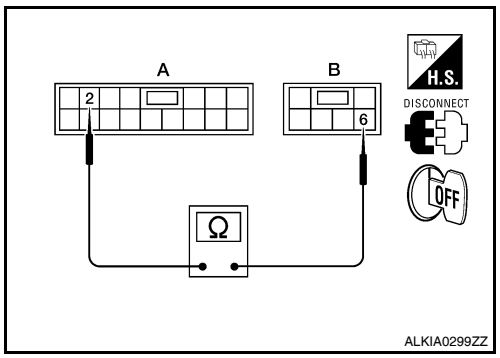
Front power window motor LH connector	Terminal	Ground	Continuity
D9	6		Yes

Is the inspection result normal?

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

5. CHECK HARNESS CONTINUITY 2

1. Disconnect main power window and door lock/unlock switch connector D7.
2. Check continuity between main power window and door lock/unlock switch connector D7 (A) terminal 2 and front power window motor LH connector D9 (B) terminal 6.



Main power window and door lock/unlock switch connector	Terminal	Front power window motor LH connector	Terminal	Continuity
D7 (A)	2	D9 (B)	6	Yes

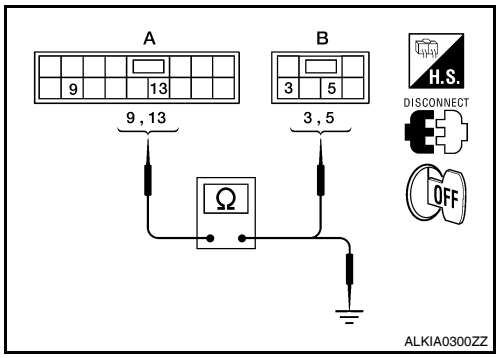
Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-128, "Removal and Installation".

NO >> Repair or replace harness or connectors.

6. CHECK HARNESS CONTINUITY 3

1. Disconnect main power window and door lock/unlock switch connector D7.
2. Check continuity between main power window and door lock/unlock switch connector D7 (A) terminals 9, 13 and front power window motor LH connector D9 (B) terminals 3, 5.



Main power window and door lock/unlock switch connector	Terminal	Front power window motor LH connector	Terminal	Continuity
D7 (A)	9	D9 (B)	5	Yes
	13		3	

3. Check continuity between main power window and door lock/unlock switch connector D7 (A) terminals 9, 13 and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7 (A)	9		No
	13		

Is the inspection result normal?

YES >> Replace front power window motor LH. Refer to GW-19, "Removal and Installation".

NO >> Repair or replace harness or connectors.

DRIVER SIDE : Special Repair Requirement

INFOID:0000000005461404

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> End.

PASSENGER SIDE

PASSENGER SIDE : Description

INFOID:0000000005461405

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

PASSENGER SIDE : Component Function Check

INFOID:0000000005461406

1.CHECK ENCODER OPERATION

Check that front door glass RH performs AUTO open/close operation normally when operating power window and door lock/unlock switch RH.

Is the inspection result normal?

YES >> Encoder operation is OK.
NO >> Refer to PWC-38, "PASSENGER SIDE : Diagnosis Procedure".

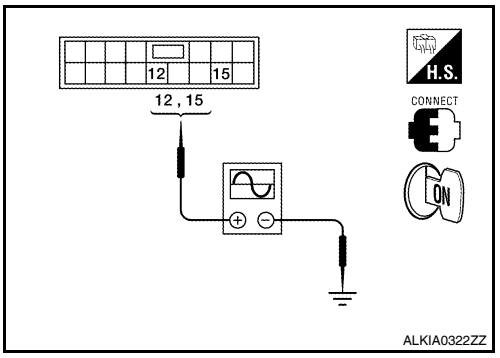
PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000005461407

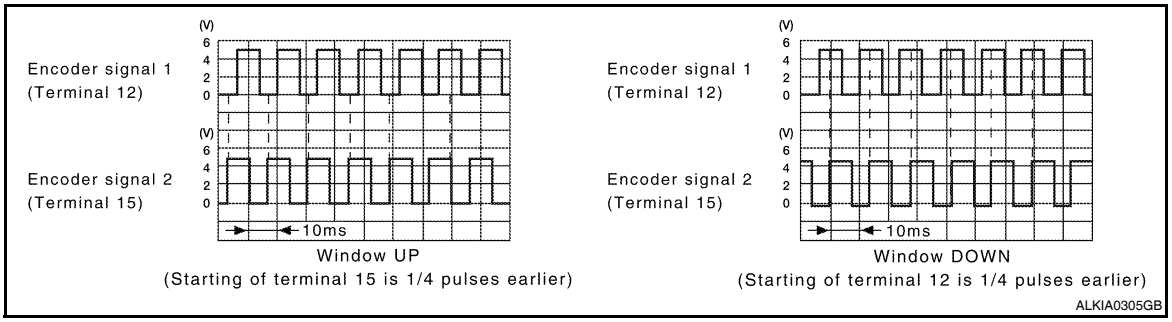
Regarding Wiring Diagram information, refer to PWC-54, "Wiring Diagram".

1. CHECK ENCODER SIGNAL

1. Turn ignition switch ON.
2. Check signal between power window and door lock/unlock switch RH connector D105 terminal 12, 15 and ground with oscilloscope.



Terminals			Signal (Reference value)
(+)		(–)	
Power window and door lock/unlock switch RH connector	Terminal		
D105	12	Ground	Refer to following signal
	15		

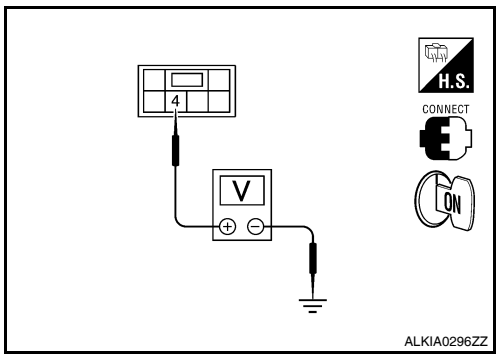


Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> GO TO 2

2. CHECK ENCODER POWER SUPPLY

Check voltage between front power window motor RH connector D104 terminal 4 and ground.



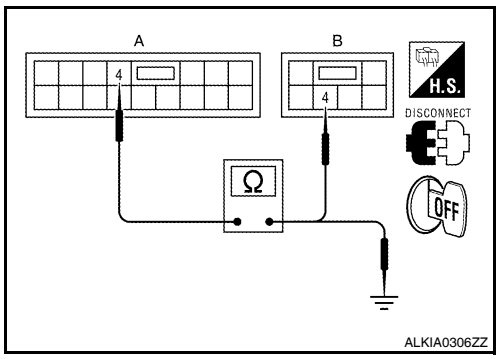
Terminal			Voltage (V) (Approx.)
(+)		(–)	
Front power window motor RH connector	Terminal		
D104	4	Ground	10

Is the inspection result normal?

YES >> GO TO 4
NO >> GO TO 3

3. CHECK HARNESS CONTINUITY 1

1. Turn ignition switch OFF.
2. Disconnect power window and door lock/unlock switch RH and front power window motor RH connectors.
3. Check continuity between power window and door lock/unlock switch RH connector D105 (A) terminal 4 and front power window motor RH connector D104 (B) terminal 4.



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

4. Check continuity between power window and door lock/unlock switch RH connector D105 (A) terminal 4 and ground.

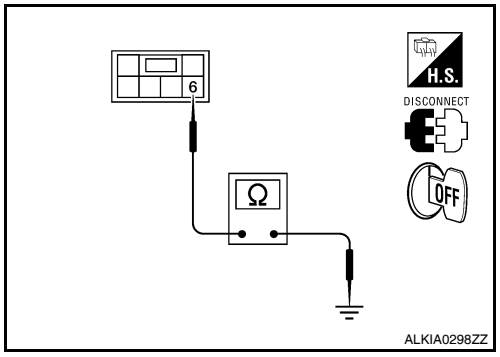
Power window and door lock/unlock switch RH connector	Terminal	Ground	Continuity
D105 (A)	4		No

Is the inspection result normal?

YES >> Replace power window and door lock/unlock switch RH. Refer to PWC-129, "Removal and Installation".
NO >> Repair or replace harness or connectors.

4. CHECK ENCODER GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect front power window motor RH connector.
3. Check continuity between front power window motor RH connector D104 terminal 6 and ground.



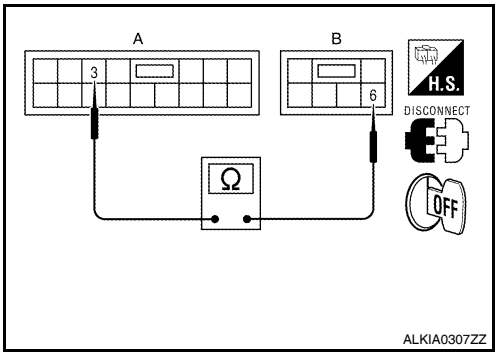
Front power window motor RH connector	Terminal	Ground	Continuity
D104	6		Yes

Is the inspection result normal?

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

5. CHECK HARNESS CONTINUITY 2

1. Disconnect power window and door lock/unlock switch RH connector.
2. Check continuity between power window and door lock/unlock switch RH connector D105 (A) terminal 3 and front power window motor RH connector D104 (B) terminal 6.



Power window and door lock/unlock switch RH connector	Terminal	Front power window motor RH connector	Terminal	Continuity
D105 (A)	3	D104 (B)	6	Yes

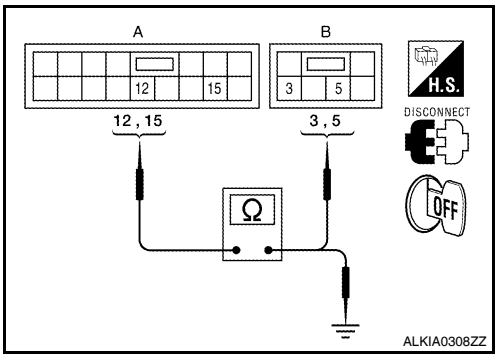
Is the inspection result normal?

YES >> Replace power window and door lock/unlock switch RH. Refer to PWC-129, "Removal and Installation".

NO >> Repair or replace harness or connectors.

6. CHECK HARNESS CONTINUITY 3

1. Disconnect power window and door lock/unlock switch RH connector.
2. Check continuity between power window and door lock/unlock switch RH connector D105 (A) terminals 12, 15 and front power window motor RH connector D104 (B) terminals 3, 5.



Power window and door lock/unlock switch RH connector	Terminal	Front power window motor RH connector	Terminal	Continuity
D105 (A)	12	D104 (B)	3	Yes
	15		5	

3. Check continuity between power window and door lock/unlock switch RH connector D105 (A) terminals 12, 15 and ground.

Power window and door lock/unlock switch RH connector	Terminal	Ground	Continuity
D105 (A)	12		No
	15		

Is the inspection result normal?

YES >> Replace front power window motor RH. Refer to GW-19, "Removal and Installation".

NO >> Repair or replace harness or connectors.

PASSENGER SIDE : Special Repair Requirement

INFOID:0000000005461408

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> End.

DOOR SWITCH

Description

INFOID:0000000005461409

Detects door open/close condition.

Component Function Check

INFOID:0000000005461410

1.CHECK FUNCTION

With CONSULT-III

Check door switches DOOR SW-DR and DOOR SW-AS in Data Monitor mode with CONSULT-III.

Monitor item	Condition
DOOR SW-DR	CLOSE → OPEN: OFF → ON
DOOR SW-AS	

Is the inspection result normal?

YES >> Door switch is OK.
NO >> Refer to PWC-41, "Diagnosis Procedure".

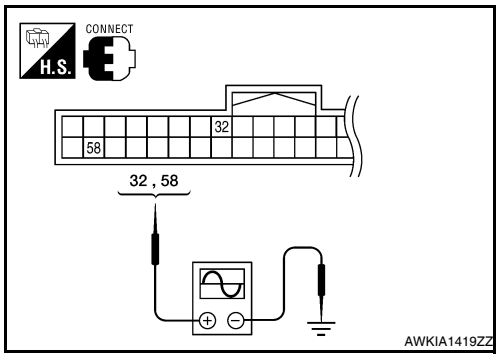
Diagnosis Procedure

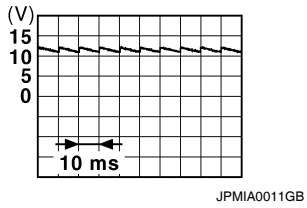
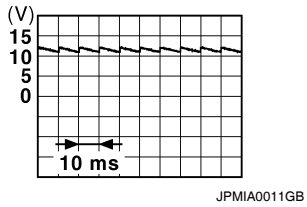
INFOID:0000000005461411

Regarding Wiring Diagram information, refer to PWC-54, "Wiring Diagram".

1.CHECK DOOR SWITCH INPUT SIGNAL

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



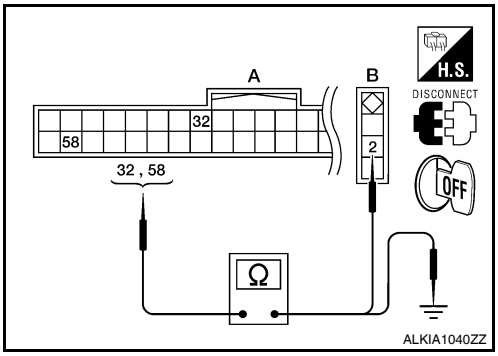
Terminals (+) BCM connector	Terminals (+) Terminal	Terminals (–)	Door condition		Voltage (V) (Approx.)
A: M18	58	Ground	Driver side	OPEN	0
				CLOSE	 JPMIA0011GB
	32		Passenger side	OPEN	0
				CLOSE	 JPMIA0011GB

Is the inspection result normal?

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

2.CHECK DOOR SWITCH CIRCUIT

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



BCM connector	Terminal	Door switch connector	Terminal	Continuity
M18	58	B8 (Driver side)	2	Yes
	32	B108 (Passenger side)		

3. Check continuity between BCM connector and ground.

BCM connector	Terminal	Ground	Continuity
M18	58		No
	32		

Is the inspection result normal?

YES >> GO TO 3
NO >> Repair or replace harness between BCM and door switch.

3.CHECK DOOR SWITCH

Refer to PWC-43, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4
NO >> Replace malfunctioning door switch.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

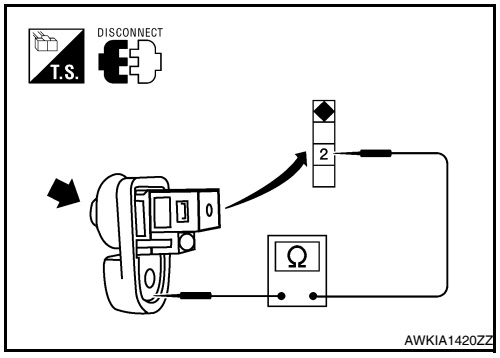
>> Inspection End.

Component Inspection

INFOID:0000000005461412

1.CHECK DOOR SWITCH

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



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

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace malfunctioning door switch.

DOOR KEY CYLINDER SWITCH

Description

INFOID:0000000005461413

The main power window and door lock/unlock switch detects condition of the door key cylinder switch and transmits to BCM as the LOCK or UNLOCK signal.

Component Function Check

INFOID:0000000005461414

1.CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

Check KEY CYL UN-SW, KEY CYL UN-SW in “DATA MONITOR” mode for “POWER DOOR LOCK SYSTEM” with CONSULT-III. Refer to BCS-19, "DOOR LOCK : CONSULT-III Function (BCM - DOOR LOCK)".

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

Is the inspection result normal?

YES >> Key cylinder switch is OK.
NO >> Refer to PWC-172, "Diagnosis Procedure".

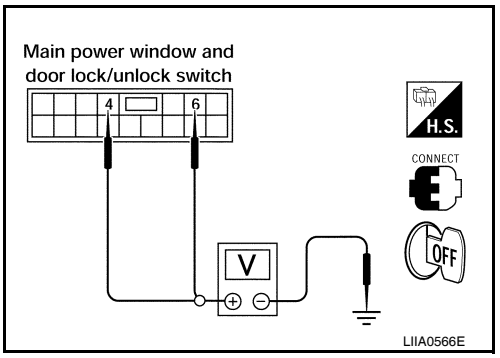
Diagnosis Procedure

INFOID:0000000005461415

Regarding Wiring Diagram information, refer to PWC-54, "Wiring Diagram".

1.CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

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



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

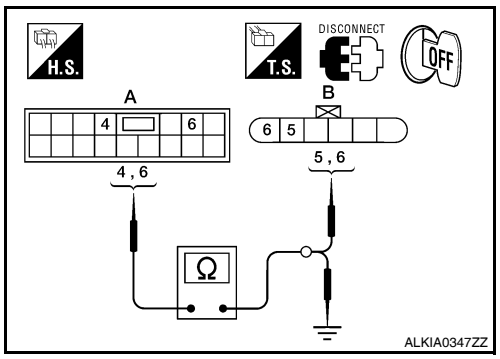
Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-128, "Removal and Installation". After that, refer to PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".
NO >> GO TO 2

2.CHECK DOOR KEY CYLINDER SIGNAL CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect main power window and door lock/unlock switch connector and front door lock assembly LH (key cylinder switch) connector.
3. Check continuity between main power window and door lock/unlock switch connector and front door lock assembly LH (key cylinder switch) connector.



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

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

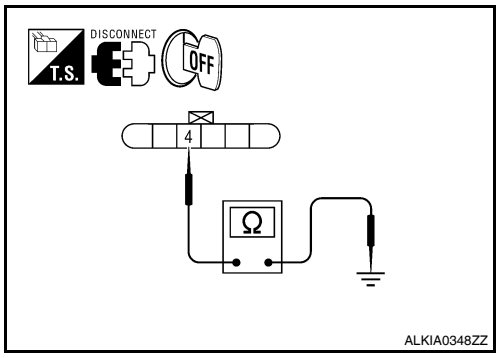
Power window main switch connector	Terminal	Ground	Continuity
A: D7	4		No
	6		

Is the inspection result normal?

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

3.CHECK DOOR KEY CYLINDER SWITCH GROUND CIRCUIT

Check continuity between front door lock assembly LH connector and ground.



Front door lock assembly LH connector	Terminal	Ground	Continuity
D10	4		Yes

Is the inspection result normal?

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

4.CHECK DOOR KEY CYLINDER SWITCH

Check door key cylinder switch.
Refer to PWC-173, "Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> Replace front door lock assembly LH (key cylinder switch). Refer to DLK-225, "FRONT DOOR LOCK : Removal and Installation". After that, Refer to PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

Component Inspection

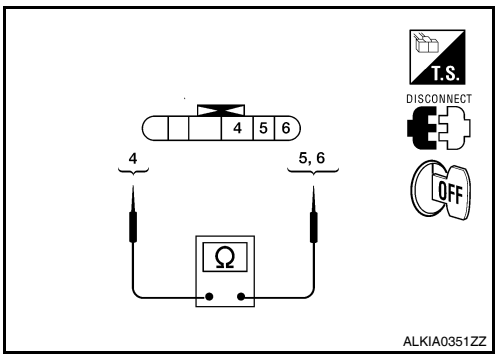
INFOID:0000000005461416

COMPONENT INSPECTION

1.CHECK DOOR KEY CYLINDER SWITCH

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

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



Is the inspection result normal?

YES >> Key cylinder switch is OK.
NO >> Replace front door lock assembly LH (key cylinder switch). Refer to DLK-225, "FRONT DOOR LOCK : Removal and Installation". After that, refer to PWC-174, "Special Repair Requirement".

Special Repair Requirement

INFOID:0000000005461417

1.PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.
Refer to DLK-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.
NO >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

POWER WINDOW SERIAL LINK
POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH : Description

INFOID:0000000005461418

- Main power window and door lock/unlock switch, power window and door lock/unlock switch RH and BCM communicate via the power window serial link.
- The keyless power window down signal is transmitted from BCM to main power window and door lock/unlock switch and power window and door lock/unlock switch RH.
- The following signals are transmitted from main power window and door lock/unlock switch to power window and door lock/unlock switch RH:

- Front door window RH operation
- Power window control by key cylinder switch
- Power window lock switch
- Retained accessory power operation

POWER WINDOW MAIN SWITCH : Component Function Check

INFOID:0000000005461419

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

Check (“CDL LOCK SW ”, “CDL UNLOCK SW”) in “DATA MONITOR” mode for “POWER DOOR LOCK SYSTEM” with CONSULT-III. Refer to BCS-19, "DOOR LOCK : CONSULT-III 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-47, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure".

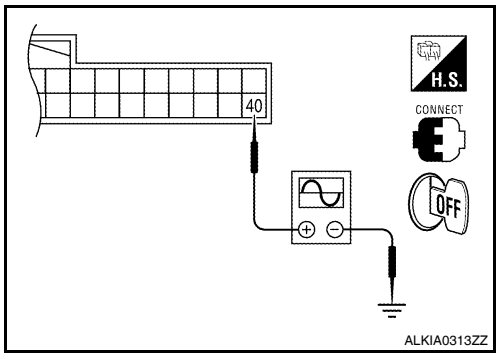
POWER WINDOW MAIN SWITCH : Diagnosis Procedure

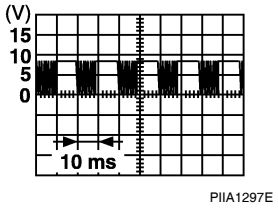
INFOID:0000000005461420

Regarding Wiring Diagram information, refer to PWC-54, "Wiring Diagram".

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

1. Remove Intelligent Key, and close front door LH and RH.
2. Check signal between BCM connector M18 terminal 40 and ground with oscilloscope when door lock and unlock switch (key cylinder switch) is turned to “LOCK” or “UNLOCK”.
3. Check that signals which are shown in the figure below can be detected during 10 seconds just after door lock and unlock switch (key cylinder switch) is turned to “LOCK” or “UNLOCK”.



Terminal			Signal (Reference value)
(+)		(–)	
BCM connector	Terminal		
M18	40	Ground	

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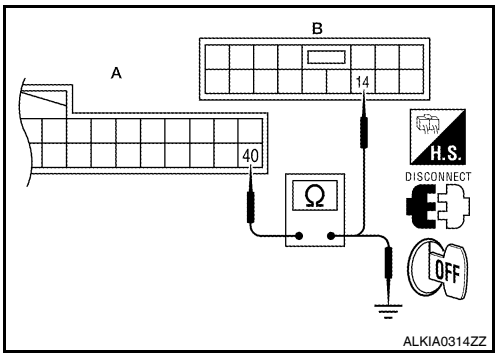
Is the inspection result normal?

YES >> Power window serial link is OK.
NO >> GO TO 2

2. CHECK POWER WINDOW SERIAL LINK CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector M18 and main power window and door lock/unlock switch connector D7.
3. Check continuity between BCM connector M18 (A) terminal 40 and main power window and door lock/unlock switch connector D7 (B) terminal 14.



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BCM connector	Terminal	Main power window and door lock/unlock switch connector	Terminal	Continuity
M18 (A)	40	D7 (B)	14	Yes

4. Check continuity between BCM connector M18 (A) terminal 40 and ground.

BCM connector	Terminal	Ground	Continuity
M18 (A)	40		No

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-128, "Removal and Installation".
NO >> Repair or replace harness or connectors.

POWER WINDOW MAIN SWITCH : Special Repair Requirement

INFOID:0000000005461421

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> End.

FRONT POWER WINDOW SWITCH

FRONT POWER WINDOW SWITCH : Description

INFOID:0000000005461422

- Main power window and door lock/unlock switch, power window and door lock/unlock switch RH and BCM communicate via the power window serial link.
- The keyless power window down signal is transmitted from BCM to main power window and door lock/unlock switch and power window and door lock/unlock switch RH.
- The following signals are transmitted from main power window and door lock/unlock switch to power window and door lock/unlock switch RH:

- Front door window RH operation
- Power window control by key cylinder switch
- Power window lock switch
- Retained accessory power operation

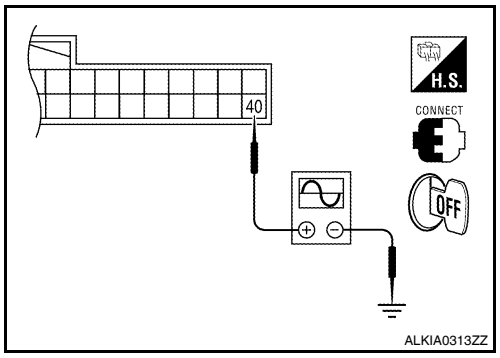
FRONT POWER WINDOW SWITCH : Diagnosis Procedure

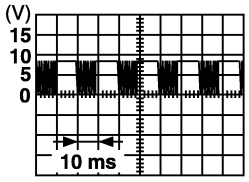
INFOID:0000000005461423

Regarding Wiring Diagram information, refer to PWC-65, "Wiring Diagram".

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

1. Remove Intelligent Key, and close the front door LH and RH.
2. Check signal between BCM connector M18 terminal 40 and ground with oscilloscope when door lock and unlock switch (key cylinder switch) is turned to “LOCK” or “UNLOCK”.
3. Check that signals which are shown in the figure below can be detected during 10 seconds just after door lock and unlock switch (key cylinder switch) is turned to “LOCK” or “UNLOCK”.



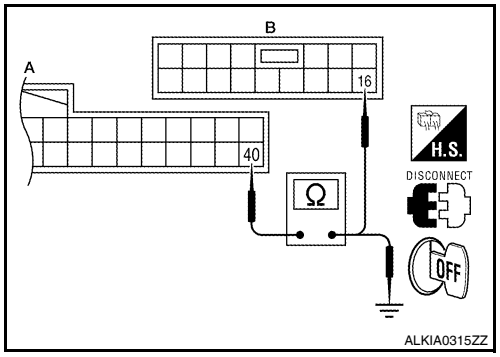
Terminal			Signal (Reference value)
(+)		(–)	
BCM connector	Terminal		
M18	40	Ground	

Is the inspection result normal?

YES >> Power window serial link is OK.
NO >> GO TO 2

2. CHECK POWER WINDOW SERIAL LINK CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector M18 and power window and door lock/unlock switch RH connector.
3. Check continuity between BCM connector M18 (A) terminal 40 and power window and door lock/unlock switch RH connector D105 (B) terminal 16.



BCM connector	Terminal	Power window and door lock/unlock switch RH connector	Terminal	Continuity
M18 (A)	40	D105 (B)	16	Yes

4. Check continuity between BCM connector M18 (A) terminal 40 and ground.

BCM connector	Terminal	Ground	Continuity
M18 (A)	40		No

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-128, "Removal and Installation".

NO >> Repair or replace harness or connectors.

FRONT POWER WINDOW SWITCH : Special Repair Requirement

INFOID:0000000005461424

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> End.

POWER WINDOW LOCK SWITCH

Component Function Check

INFOID:0000000005461425

1. CHECK POWER WINDOW LOCK

Activate the power window lock switch and verify that the front power window RH, rear power window LH and rear power window RH are inoperative.

Is the inspection result normal?

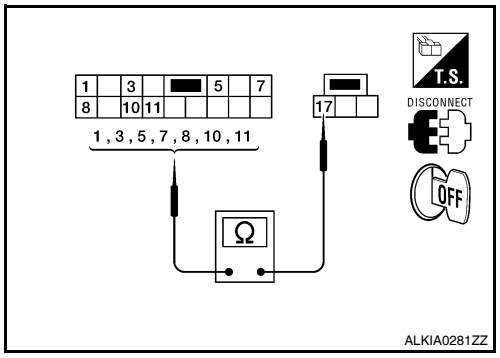
YES >> Power window lock switch is OK.
NO >> Refer to PWC-51, "Component Inspection".

Component Inspection

INFOID:0000000005461426

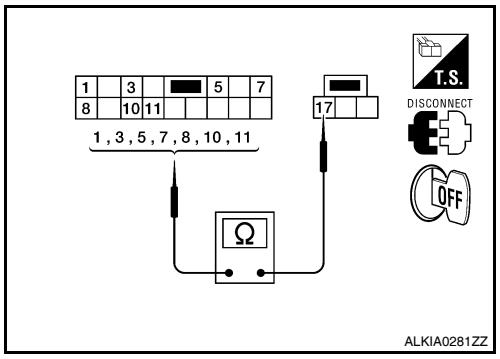
1. CHECK POWER WINDOW LOCK SWITCH

1. Disconnect main power window and door lock/unlock switch connectors.
2. Check continuity between main power window and door lock/unlock switch (lock operation).



Terminal		Main power window and door lock/unlock switch condition		Continuity
3	17	Rear LH	UP	No
5		Rear RH		
1		Rear LH	NEUTRAL	
3				
5		Rear RH		
7				
1		Rear LH	DOWN	
7		Rear RH		

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



Terminal		Main power window and door lock/unlock switch condition		Continuity
3	17	Rear LH	UP	Yes
5		Rear RH		
1		Rear LH	NEUTRAL	
3				
5		Rear RH		
7				
1		Rear LH	DOWN	
7		Rear RH		

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace main power window and door lock/unlock switch. Refer to PWC-128, "Removal and Installation".

Special Repair Requirement

INFOID:0000000005461427

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> End.

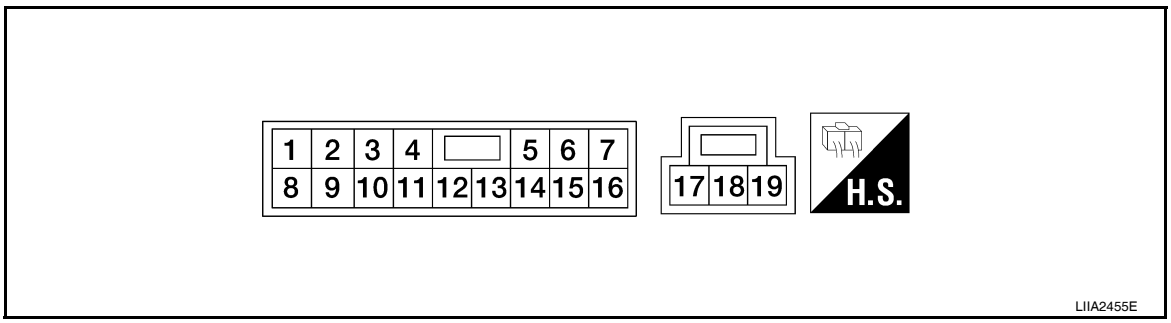
ECU DIAGNOSIS

POWER WINDOW MAIN SWITCH

Reference Value

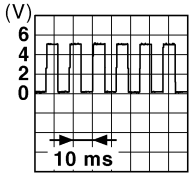
INFOID:0000000005461428

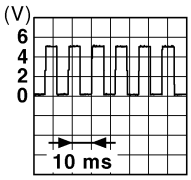
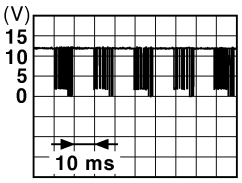
TERMINAL LAYOUT



PHYSICAL VALUES

MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

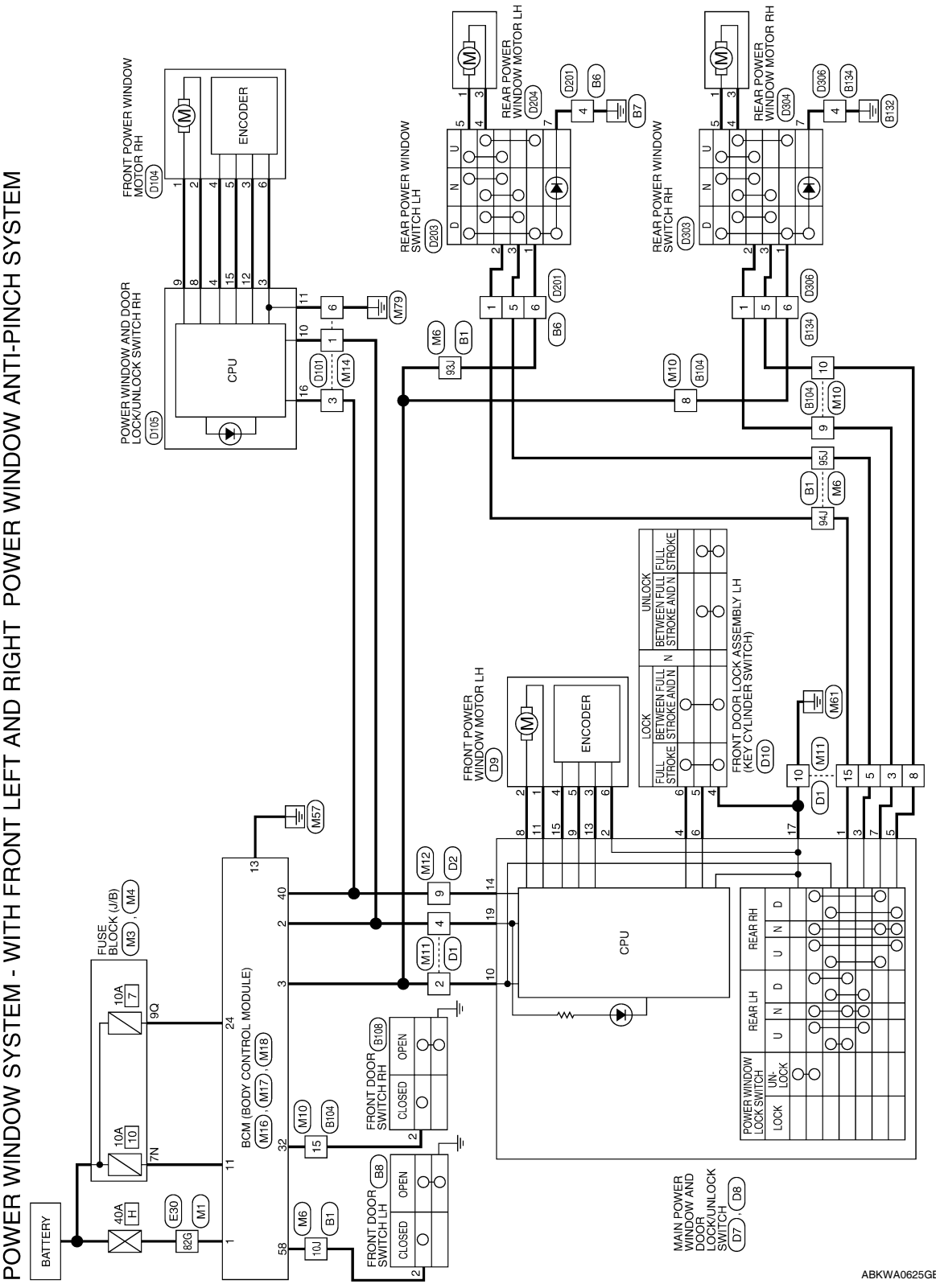
Terminal No.		Description		Condition	Voltage [V] (Approx.)
+	-	Signal name	Input/ Output		
1 (W)	Ground	Rear power window motor LH UP signal	Output	When rear LH switch in power window main switch is operated UP.	Battery voltage
2 (GR)	Ground	Encoder ground	—	—	0
3 (Y)	Ground	Rear power window motor LH DOWN signal	Output	When rear LH switch in power window main switch is operated DOWN.	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 operated DOWN.	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 operated UP.	Battery voltage
8 (L)	11	Front door power window motor LH UP signal	Output	When front LH switch in power window main switch is operated UP.	Battery voltage
9 (Y)	2	Encoder pulse signal 2	Input	When power window motor operates.	 JMKIA0070GB

Terminal No.		Description		Condition	Voltage [V] (Approx.)
+	-	Signal name	Input/ Output		
10 (V)	Ground	RAP signal	Input	IGN SW ON	Battery voltage
				Within 45 seconds after ignition switch is turned to OFF.	Battery voltage
				When front LH or RH door is opened during retained power operation.	0
11 (LG)	8	Front door power window motor LH DOWN signal	Output	When front LH switch in power window main switch is operated DOWN.	Battery voltage
13 (G)	2	Encoder pulse signal 1	Input	When power window motor operates.	 JMKIA0070GB
14 (O)	Ground	Power window serial link	Input/ Output	IGN SW ON or power window timer operating.	 JPMIA0013GB
15 (BR)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates.	10
17 (B)	Ground	Ground	—	—	0
19 (R)		Battery power supply	Input	—	Battery voltage

Wiring Diagram

INFOID:0000000005461429

POWER WINDOW SYSTEM - WITH FRONT LEFT AND RIGHT POWER WINDOW ANTI-PINCH SYSTEM



POWER WINDOW SYSTEM CONNECTORS - WITH FRONT LEFT AND RIGHT POWER WINDOW ANTI-PINCH SYSEM

Connector No.	M1
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
82G	W/B	–

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
7N	Y/R	–

Connector No.	M4
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
9Q	R/W	–

ABKIA1825GB

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
8	L/W	–
9	G	–
10	Y/G	–
15	R/B	–

Connector No.	M14
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2		3	4
5	6	7	8	9	10

Terminal No.	Color of Wire	Signal Name
1	R/Y	–
3	Y/G	–
6	B	–

Terminal No.	Color of Wire	Signal Name
10J	SB	–
93J	L/W	–
94J	BR	–
95J	Y/G	–

Connector No.	M12
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
9	Y/G	–

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

9J	8J	7J	6J	5J	4J	3J		1J
17J	16J	15J	14J	13J	12J	11J	10J	2J
	25J	24J	23J	22J				
	30J	29J	28J	27J	26J	21J	20J	19J	18J
		37J	36J	35J	34J	33J	32J	31J	
		46J	45J	44J	43J	42J	41J	40J	39J	38J
		55J	54J	53J	52J	51J	50J	49J	
		63J	62J	61J	60J	59J	58J	57J	56J	48J	47J
		70J	69J	68J	67J	66J	65J	64J	
		79J	78J	77J	76J	75J	74J	73J	72J	71J
		87J	86J	85J	84J				
		92J	91J	90J	89J	88J	83J	82J	81J	80J
		99J	98J	97J	96J	95J	94J	93J	

Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
2	L/W	–
3	G	–
4	R/Y	–
5	Y/G	–
8	Y/G	–
10	B	–
15	BR	–

ABKIA1826GB

Connector No.	M16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	W/B	BATT (F/L)
2	R/Y	P/W POWER SUPPLY PERM
3	L/W	P/W POWER SUPPLY IGN

Connector No.	M17
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
11	Y/R	BAT BCM FUSE
13	B	GND1

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

H.S.

Terminal No.	Color of Wire	Signal Name
24	R/W	BRAKE SW 1
32	R/B	AS DOOR SW 1
40	Y/G	PW K-LINE
58	SB	DR DOOR SW

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
10J	SB	–
93J	R	–
94J	P	–
95J	SB	–

Connector No.	E30
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
82G	LG	–

ABKIA1827GB

Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2		3	4
5	6	7	8	9

Terminal No.	Color of Wire	Signal Name
1	P	–
4	B	–
5	SB	–
6	R	–

Connector No.	B8
Connector Name	FRONT DOOR SWITCH LH
Connector Color	WHITE

H.S.

1
2
3

Terminal No.	Color of Wire	Signal Name
2	SB	–

Connector No.	B104
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
8	R	–
9	P	–
10	SB	–
15	GR	–

Connector No.	B108
Connector Name	FRONT DOOR SWITCH RH
Connector Color	WHITE

H.S.

1
2
3

Terminal No.	Color of Wire	Signal Name
2	GR	–

Connector No.	B134
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2		3	4
5	6	7	8	9	10

Terminal No.	Color of Wire	Signal Name
1	P	–
4	B	–
5	SB	–
6	R	–

Connector No.	D1
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
2	V	–
3	P	–
4	R	–
5	Y	–
8	SB	–
10	B	–
15	W	–

ABKIA1828GB

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
9	O	–

Connector No.	D7
Connector Name	MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	W	RL UP
2	GR	ENCODER GND
3	Y	RL DOWN
4	L	LOCK
5	SB	RR DOWN
6	R	UNLOCK
7	P	RR UP
8	L	AS UP
9	Y	ENCODER SIG1
10	V	IGN
11	LG	AS DOWN
12	–	–
13	G	ENCODER SIG2
14	O	COM
15	BR	ENCODER POWER
16	–	–

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

H.S.

17	18	19

Terminal No.	Color of Wire	Signal Name
17	B	GND
18	–	–
19	R	BAT

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

H.S.

1		2
3	4	5	6

Terminal No.	Color of Wire	Signal Name
1	LG	–
2	L	–
3	G	–
4	BR	–
5	Y	–
6	GR	–

Connector No.	D10
Connector Name	FRONT DOOR LOCK ASSEMBLY LH
Connector Color	GRAY

H.S.

1	2	3	4	5	6

Terminal No.	Color of Wire	Signal Name
4	B	–
5	R	–
6	L	–

ABKIA1829GB

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

H.S.

4	3		2	1
10	9	8	7	6	5

Terminal No.	Color of Wire	Signal Name
1	P	–
3	R	–
6	B	–

Connector No.	D104
Connector Name	FRONT POWER WINDOW MOTOR RH
Connector Color	WHITE

H.S.

1		2
3	4	5	6

Terminal No.	Color of Wire	Signal Name
1	LG	–
2	L	–
3	G	–
4	BR	–
5	Y	–
6	W	–

Connector No.	D105
Connector Name	POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
3	W	GND
4	BR	ENCODER POWER
8	L	UP
9	LG	DOWN
10	P	BAT
11	B	GND
12	G	ENCODER SIG2
15	Y	ENCODER SIG1
16	R	COM

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

H.S.

4	3		2	1
10	9	8	7	6	5

Terminal No.	Color of Wire	Signal Name
1	P	–
4	B	–
5	SB	–
6	R	–

Connector No.	D203
Connector Name	REAR POWER WINDOW SWITCH LH (WITH FRONT LEFT AND RIGHT POWER WINDOW ANTI-PINCH SYSTEM)
Connector Color	WHITE

H.S.

						7
2	3	4	5	1

Terminal No.	Color of Wire	Signal Name
1	R	–
2	P	–
3	SB	–
4	LG	–
5	L	–
7	B	–

Connector No.	D204
Connector Name	REAR POWER WINDOW MOTOR LH
Connector Color	GREEN

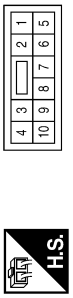
H.S.

1	2	3
4	5	6

Terminal No.	Color of Wire	Signal Name
1	L	–
3	LG	–

ABKIA1830GB

Connector No.	D306
Connector Name	WIRE TO WIRE
Connector Color	WHITE

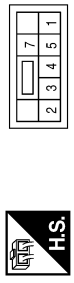


Terminal No.	Color of Wire	Signal Name
1	P	–
4	B	–
5	SB	–
6	R	–

Connector No.	D304
Connector Name	REAR POWER WINDOW MOTOR RH
Connector Color	GREEN

Terminal No.	Color of Wire	Signal Name
1	L	–
3	LG	–

Connector No.	D303
Connector Name	REAR POWER WINDOW SWITCH RH (WITH FRONT LEFT AND RIGHT POWER WINDOW ANTI-PINCH SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	R	–
2	P	–
3	SB	–
4	LG	–
5	L	–
7	B	–

ABKIA1831GB

Fail Safe

INFOID:0000000005461430

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

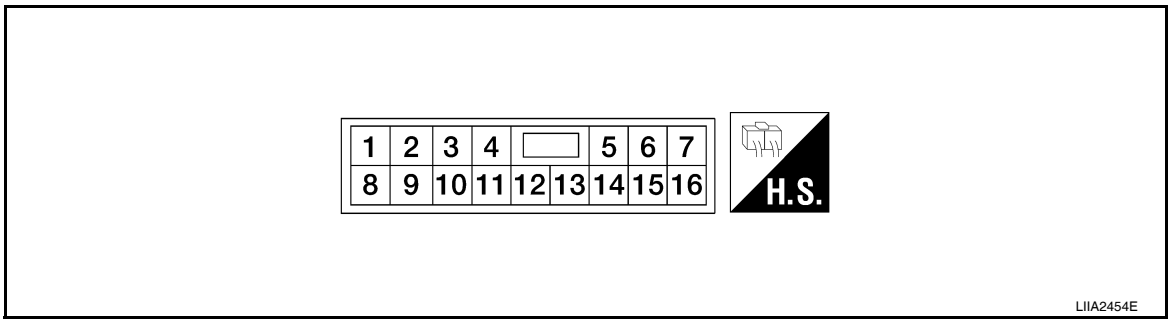
Perform initial operation to recover when switched to fail-safe mode. However, it switches back to fail-safe control when malfunction is found in power window switch or in motor.

FRONT POWER WINDOW SWITCH

Reference Value

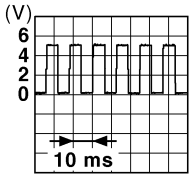
INFOID:0000000005461431

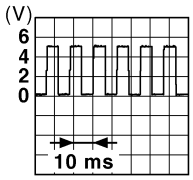
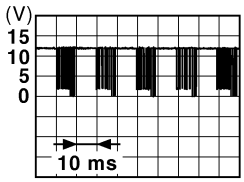
TERMINAL LAYOUT



PHYSICAL VALUES

POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

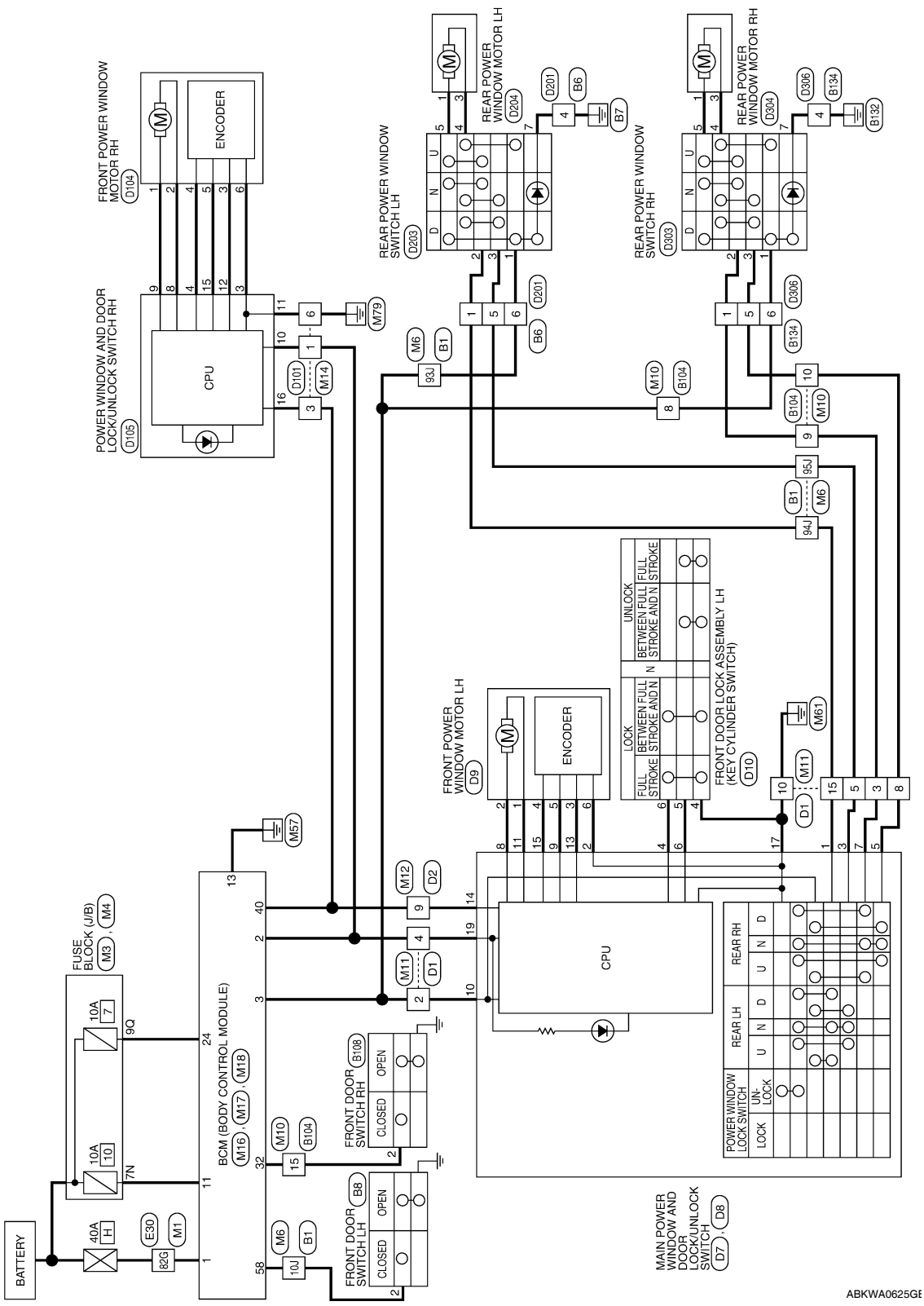
Terminal No.		Description		Condition	Voltage [V] (Approx.)
+	-	Signal name	Input/ Output		
3 (W)	Ground	Encoder ground	—	—	0
4 (BR)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates.	10
8 (L)	9	Power window motor UP signal	Output	When power window motor is operated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

Terminal No.		Description		Condition	Voltage [V] (Approx.)
+	-	Signal name	Input/ Output		
15 (Y)	3	Encoder pulse signal 2	Input	When power window motor operates.	 JMKIA0070GB
16 (R)	Ground	Power window serial link	Input/ Output	IGN SW ON or power window timer operating.	 JPMIA0013GB

Wiring Diagram

INFOID:0000000005532038

POWER WINDOW SYSTEM - WITH FRONT LEFT AND RIGHT POWER WINDOW ANTI-PINCH SYSTEM



POWER WINDOW SYSTEM CONNECTORS - WITH FRONT LEFT AND RIGHT POWER WINDOW ANTI-PINCH SYSEM

Connector No.	M1
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

9G	8G	7G	6G	5G	4G	3G		2G	1G
17G	16G	15G	14G	13G	12G	11G	10G		
	26G	25G	24G	23G	22G	21G	20G	19G	18G
	34G	33G	32G	31G	30G	29G	28G	27G	
		41G	40G	39G	38G	37G	36G	35G	
		50G	49G	48G	47G	46G	45G	44G	43G	42G
			58G	57G	56G	55G			
			63G	62G	61G	60G	59G	54G	53G	52G	51G
			72G	71G	70G	69G	68G	67G	66G		
			80G	79G	78G	77G	76G	75G	74G	73G	65G	64G
				83G		82G			81G		

Terminal No.	Color of Wire	Signal Name
82G	W/B	–

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

H.S.

3N		2N	1N
8N	7N	6N	5N	4N

Terminal No.	Color of Wire	Signal Name
7N	Y/R	–

Connector No.	M4
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

H.S.

4Q	3Q		2Q	1Q
10Q	9Q	8Q	7Q	6Q	5Q

Terminal No.	Color of Wire	Signal Name
9Q	R/W	–

ABKIA1825GB

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

9J	8J	7J	6J	5J	4J	3J		1J
17J	16J	15J	14J	13J	12J	11J	10J	2J
	25J	24J	23J	22J				
	30J	29J	28J	27J	26J	21J	20J	19J	18J
		37J	36J	35J	34J	33J	32J	31J	
		46J	45J	44J	43J	42J	41J	40J	39J	38J
		55J	54J	53J	52J	51J	50J	49J	
		63J	62J	61J	60J	59J	58J	57J	56J	48J	47J
			70J	69J	68J	67J	66J	65J	64J	
		79J	78J	77J	76J	75J	74J	73J	72J	71J	
		87J	86J	85J	84J				
		92J	91J	90J	89J	88J	83J	82J	81J	80J	
			99J	98J	97J	96J	95J	94J	93J		

Terminal No.	Color of Wire	Signal Name
10J	SB	–
93J	L/W	–
94J	BR	–
95J	Y/G	–

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
8	L/W	–
9	G	–
10	Y/G	–
15	R/B	–

Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
2	L/W	–
3	G	–
4	R/Y	–
5	Y/G	–
8	Y/G	–
10	B	–
15	BR	–

Connector No.	M12
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
9	Y/G	–

Connector No.	M14
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2		3	4
5	6	7	8	9	10

Terminal No.	Color of Wire	Signal Name
1	R/Y	–
3	Y/G	–
6	B	–

ABKIA1826GB

Connector No.	M16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	W/B	BATT (F/L)
2	R/Y	P/W POWER SUPPLY PERM
3	L/W	P/W POWER SUPPLY IGN

Connector No.	M17
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
11	Y/R	BAT BCM FUSE
13	B	GND1

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

H.S.

Terminal No.	Color of Wire	Signal Name
24	R/W	BRAKE SW 1
32	R/B	AS DOOR SW 1
40	Y/G	PW K-LINE
58	SB	DR DOOR SW

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
10J	SB	–
93J	R	–
94J	P	–
95J	SB	–

Connector No.	E30
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
82G	LG	–

ABKIA1827GB

Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2		3	4
5	6	7	8	9	10

Terminal No.	Color of Wire	Signal Name
1	P	–
4	B	–
5	SB	–
6	R	–

Connector No.	B8
Connector Name	FRONT DOOR SWITCH LH
Connector Color	WHITE

H.S.

◇	1
	2
	3

Terminal No.	Color of Wire	Signal Name
2	SB	–

Connector No.	B104
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
8	R	–
9	P	–
10	SB	–
15	GR	–

Connector No.	B108
Connector Name	FRONT DOOR SWITCH RH
Connector Color	WHITE

H.S.

◇	1
	2
	3

Terminal No.	Color of Wire	Signal Name
2	GR	–

Connector No.	B134
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2		3	4
5	6	7	8	9	10

Terminal No.	Color of Wire	Signal Name
1	P	–
4	B	–
5	SB	–
6	R	–

Connector No.	D1
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
2	V	–
3	P	–
4	R	–
5	Y	–
8	SB	–
10	B	–
15	W	–

ABKIA1828GB

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
9	O	–

Connector No.	D7
Connector Name	MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	W	RL UP
2	GR	ENCODER GND
3	Y	RL DOWN
4	L	LOCK

Terminal No.	Color of Wire	Signal Name
5	SB	RR DOWN
6	R	UNLOCK
7	P	RR UP
8	L	AS UP
9	Y	ENCODER SIG1
10	V	IGN
11	LG	AS DOWN
12	–	–
13	G	ENCODER SIG2
14	O	COM
15	BR	ENCODER POWER
16	–	–

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

H.S.

17	18	19

Terminal No.	Color of Wire	Signal Name
17	B	GND
18	–	–
19	R	BAT

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

H.S.

1		2
3	4	5	6

Terminal No.	Color of Wire	Signal Name
1	LG	–
2	L	–
3	G	–
4	BR	–
5	Y	–
6	GR	–

Connector No.	D10
Connector Name	FRONT DOOR LOCK ASSEMBLY LH
Connector Color	GRAY

H.S.

1	2	3	4	5	6

Terminal No.	Color of Wire	Signal Name
4	B	–
5	R	–
6	L	–

ABKIA1829GB

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

H.S.

4	3		2	1
10	9	8	7	6	5

Terminal No.	Color of Wire	Signal Name
1	P	–
3	R	–
6	B	–

Connector No.	D104
Connector Name	FRONT POWER WINDOW MOTOR RH
Connector Color	WHITE

H.S.

1		2
3	4	5	6

Terminal No.	Color of Wire	Signal Name
1	LG	–
2	L	–
3	G	–
4	BR	–
5	Y	–
6	W	–

Connector No.	D105
Connector Name	POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
3	W	GND
4	BR	ENCODER POWER
8	L	UP
9	LG	DOWN
10	P	BAT
11	B	GND
12	G	ENCODER SIG2
15	Y	ENCODER SIG1
16	R	COM

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

H.S.

4	3		2	1
10	9	8	7	6	5

Terminal No.	Color of Wire	Signal Name
1	P	–
4	B	–
5	SB	–
6	R	–

Connector No.	D203
Connector Name	REAR POWER WINDOW SWITCH LH (WITH FRONT LEFT AND RIGHT POWER WINDOW ANTI-PINCH SYSTEM)
Connector Color	WHITE

H.S.

				7
2	3	4	5	1

Terminal No.	Color of Wire	Signal Name
1	R	–
2	P	–
3	SB	–
4	LG	–
5	L	–
7	B	–

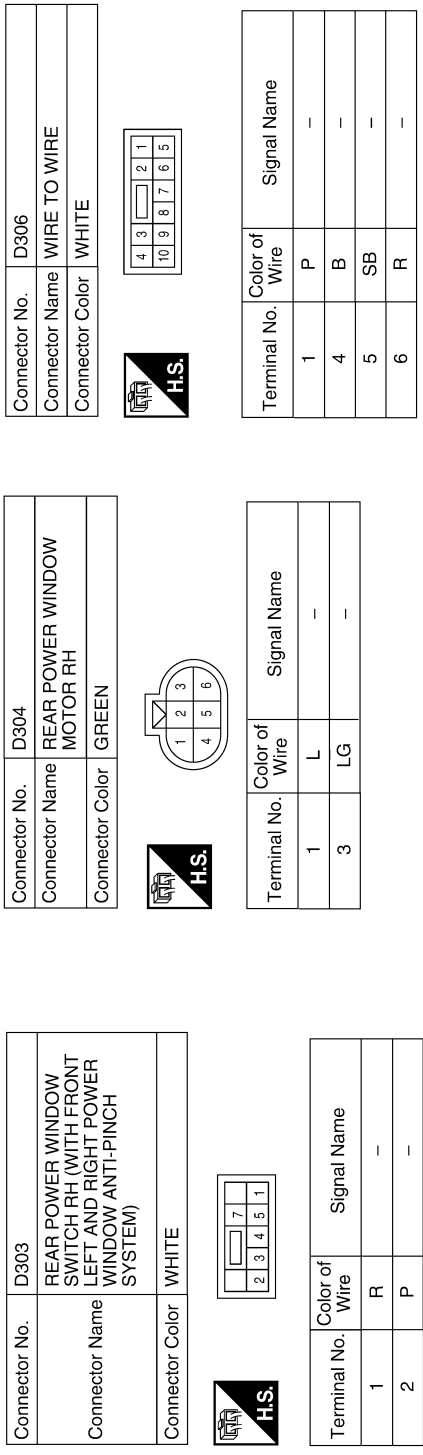
Connector No.	D204
Connector Name	REAR POWER WINDOW MOTOR LH
Connector Color	GREEN

H.S.

1	2	3
4	5	6

Terminal No.	Color of Wire	Signal Name
1	L	–
3	LG	–

ABKIA1830GB



ABKIA1831GB

Fail Safe

INFOID:0000000005461433

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 motor.

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:0000000005532039

VALUES ON THE DIAGNOSIS TOOL

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	OFF
	Front wiper switch INT	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
TURN SIGNAL R	Other than turn signal switch RH	OFF
	Turn signal switch RH	ON
TURN SIGNAL L	Other than turn signal switch LH	OFF
	Turn signal switch LH	ON
TAIL LAMP SW	Other than lighting switch 1ST and 2ND	OFF
	Lighting switch 1ST or 2ND	ON
HI BEAM SW	Other than lighting switch HI	OFF
	Lighting switch HI	ON
HEAD LAMP SW 1	Other than lighting switch 2ND	OFF
	Lighting switch 2ND	ON
HEAD LAMP SW 2	Other than lighting switch 2ND	OFF
	Lighting switch 2ND	ON
PASSING SW	Other than lighting switch PASS	OFF
	Lighting switch PASS	ON
AUTO LIGHT SW	Other than lighting switch AUTO	OFF
	Lighting switch AUTO	ON
FR FOG SW	Front fog lamp switch OFF	OFF
	Front fog lamp switch ON	ON
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 door RH closed	OFF
	Rear door RH opened	ON
DOOR SW-RL	Rear door LH closed	OFF
	Rear door LH opened	ON
CDL LOCK SW	Other than power door lock switch LOCK	OFF
	Power door lock switch LOCK	ON

Monitor Item	Condition	Value/Status
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
HAZARD SW	When hazard switch is not pressed	OFF
	When hazard switch is pressed	ON
REAR DEF SW	When rear window defogger switch is pressed	ON
TR CANCEL SW	Trunk lid opener cancel switch OFF	OFF
	Trunk lid opener cancel switch ON	ON
TR/BD OPEN SW	Trunk lid opener switch OFF	OFF
	While the trunk lid opener switch is turned ON	ON
TRNK/HAT MNTR	Trunk lid closed	OFF
	Trunk lid opened	ON
RKE-LOCK	When LOCK button of Intelligent Key is not pressed	OFF
	When LOCK button of Intelligent Key is pressed	ON
RKE-UNLOCK	When UNLOCK button of Intelligent Key is not pressed	OFF
	When UNLOCK button of Intelligent Key is pressed	ON
RKE-TR/BD	When TRUNK OPEN button of Intelligent Key is not pressed	OFF
	When TRUNK OPEN button of Intelligent Key is pressed	ON
RKE-PANIC	When PANIC button of Intelligent Key is not pressed	OFF
	When PANIC button of Intelligent Key is pressed	ON
RKE-P/W OPEN	When UNLOCK button of Intelligent Key is not pressed and held	OFF
	When UNLOCK button of Intelligent Key is pressed and held	ON
RKE-MODE CHG	When LOCK/UNLOCK button of Intelligent Key is not pressed and held simultaneously	OFF
	When LOCK/UNLOCK button of Intelligent Key is pressed and held simultaneously	ON
OPTICAL SENSOR	When outside of the vehicle is bright	Close to 5 V
	When outside of the vehicle is dark	Close to 0 V
REQ SW-DR	When front door request switch is not pressed (driver side)	OFF
	When front door request switch is pressed (driver side)	ON
REQ SW-AS	When front door request switch is not pressed (passenger side)	OFF
	When front door request switch is pressed (passenger side)	ON
REQ SW-RL	When rear door request switch is not pressed (driver side)	OFF
	When rear door request switch is pressed (driver side)	ON
REQ SW-RR	When rear door request switch is not pressed (passenger side)	OFF
	When rear door request switch is pressed (passenger side)	ON
REQ SW-BD/TR	When trunk request switch is not pressed	OFF
	When trunk request switch is pressed	ON
PUSH SW	When engine switch (push switch) is not pressed	OFF
	When engine switch (push switch) is pressed	ON
IGN RLY 2-F/B	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON

Monitor Item	Condition	Value/Status
ACC RLY-F/B	Ignition switch OFF	OFF
	Ignition switch ACC or ON	ON
BRAKE SW 1	When the brake pedal is not depressed	ON
	When the brake pedal is depressed	OFF
DETE/CANCL SW	When selector lever is in P position	OFF
	When selector lever is in any position other than P	ON
SFT PN/N SW	When selector lever is in any position other than P or N	OFF
	When selector lever is in P or N position	ON
S/L-LOCK*	Electronic steering column lock LOCK status	OFF
	Electronic steering column lock UNLOCK status	ON
S/L-UNLOCK*	Electronic steering column lock UNLOCK status	OFF
	Electronic steering column lock LOCK status	ON
S/L RELAY-F/B*	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON
UNLK SEN-DR	Driver door UNLOCK status	OFF
	Driver door LOCK status	ON
PUSH SW-IPDM	When engine switch (push switch) is not pressed	OFF
	When engine switch (push switch) is pressed	ON
IGN RLY1 F/B	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON
DETE SW -IPDM	When selector lever is in P position	OFF
	When selector lever is in any position other than P	ON
SFT PN -IPDM	When selector lever is in any position other than P or N	OFF
	When selector lever is in P or N position	ON
SFT P-MET	When selector lever is in any position other than P	OFF
	When selector lever is in P position	ON
SFT N-MET	When selector lever is in any position other than N	OFF
	When selector lever is 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*	Electronic steering column lock LOCK status	OFF
	Electronic steering column lock UNLOCK status	ON
S/L UNLK-IPDM*	Electronic steering column lock UNLOCK status	OFF
	Electronic steering column lock LOCK status	ON
S/L RELAY-REQ*	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON
VEH SPEED 1	While driving	Equivalent to speedometer reading
VEH SPEED 2	While driving	Equivalent to speedometer reading
DOOR STAT-DR	Driver door LOCK status	LOCK
	Wait with selective UNLOCK operation (5 seconds)	READY
	Driver door UNLOCK status	UNLK

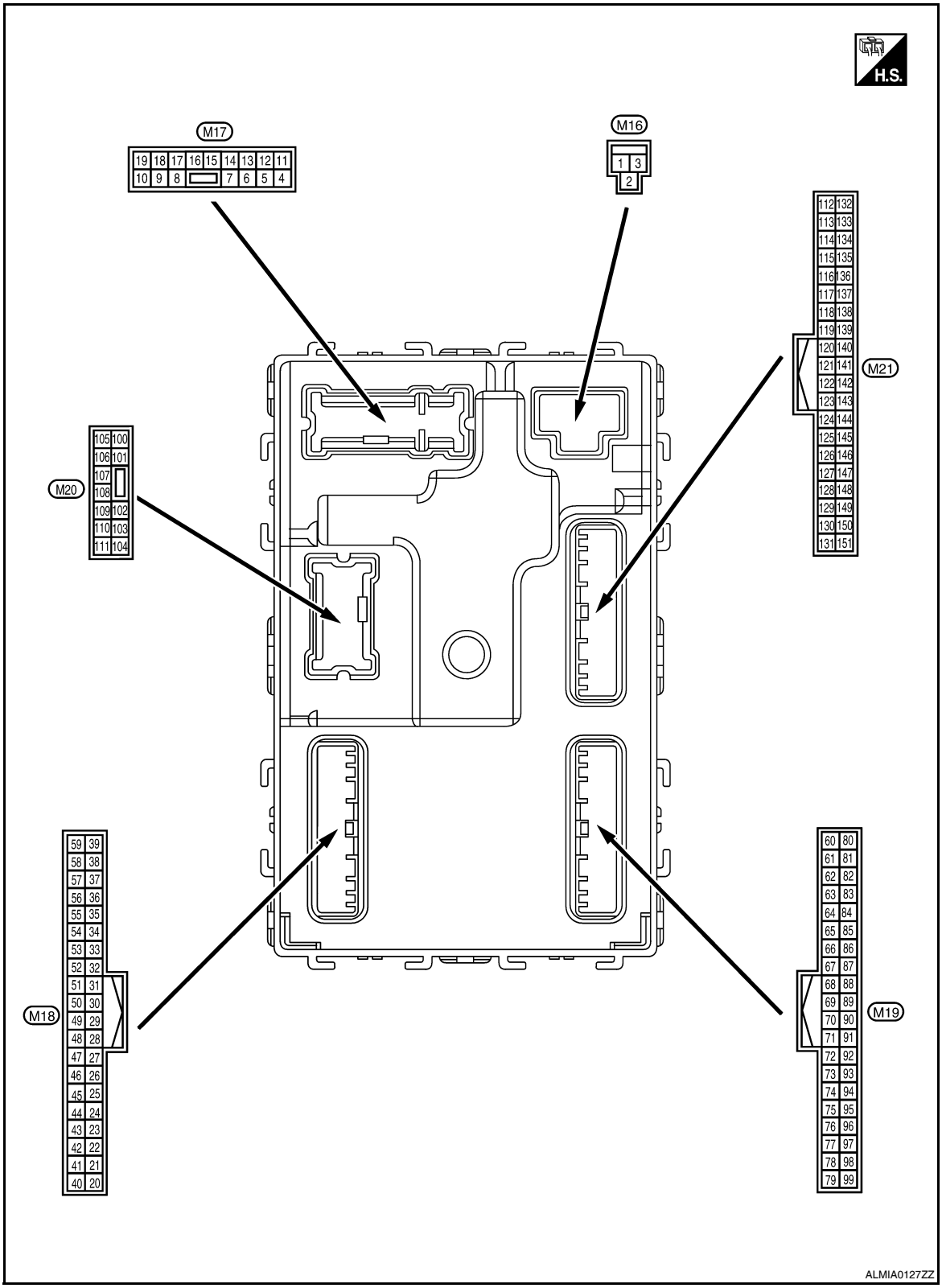
Monitor Item	Condition	Value/Status
DOOR STAT-AS	Passenger door LOCK status	LOCK
	Wait with selective UNLOCK operation (5 seconds)	READY
	Passenger door UNLOCK status	UNLK
ID OK FLAG	Ignition switch ACC or ON	RESET
	Ignition switch OFF	SET
PRMT ENG STRT	When the engine start is prohibited	RESET
	When the engine start is permitted	SET
KEY SW -SLOT	When Intelligent Key is not inserted into key slot	OFF
	When Intelligent Key is inserted into key slot	ON
RKE OPE COUN1	During the operation of Intelligent Key	Operation frequency of Intelligent Key
CONFRM ID ALL	The key ID that the key slot receives does not accord with any key ID registered to BCM.	YET
	The key ID that the key slot receives accords with any key ID registered to BCM.	DONE
CONFIRM ID4	The key ID that the key slot receives does not accord with the fourth key ID registered to BCM.	YET
	The key ID that the key slot receives accords with the fourth key ID registered to BCM.	DONE
CONFIRM ID3	The key ID that the key slot receives does not accord with the third key ID registered to BCM.	YET
	The key ID that the key slot receives accords with the third key ID registered to BCM.	DONE
CONFIRM ID2	The key ID that the key slot receives does not accord with the second key ID registered to BCM.	YET
	The key ID that the key slot receives accords with the second key ID registered to BCM.	DONE
CONFIRM ID1	The key ID that the key slot receives does not accord with the first key ID registered to BCM.	YET
	The key ID that the key slot receives accords with the first key ID registered to BCM.	DONE
TP 4	The ID of fourth key is not registered to BCM	YET
	The ID of fourth key is registered to BCM	DONE
TP 3	The ID of third key is not registered to BCM	YET
	The ID of third key is registered to BCM	DONE
TP 2	The ID of second key is not registered to BCM	YET
	The ID of second key is registered to BCM	DONE
TP 1	The ID of first key is not registered to BCM	YET
	The ID of first 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	When ID of front LH tire transmitter is registered	DONE
	When ID of front LH tire transmitter is not registered	YET

Monitor Item	Condition	Value/Status
ID REGST FR1	When ID of front RH tire transmitter is registered	DONE
	When ID of front RH tire transmitter is not registered	YET
ID REGST RR1	When ID of rear RH tire transmitter is registered	DONE
	When ID of rear RH tire transmitter is not registered	YET
ID REGST RL1	When ID of rear LH tire transmitter is registered	DONE
	When 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

* : With electronic steering column lock

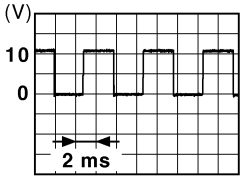
Terminal Layout

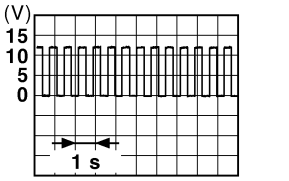
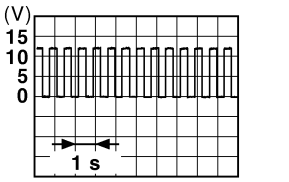
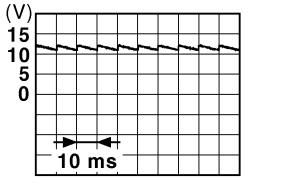
INFOID:0000000005532040

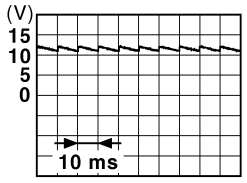
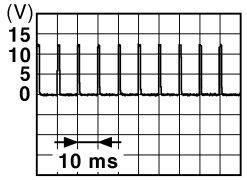
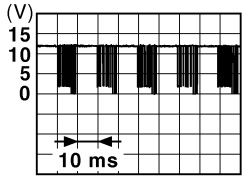


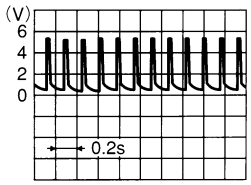
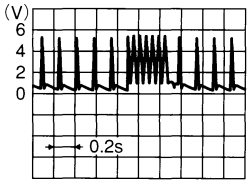
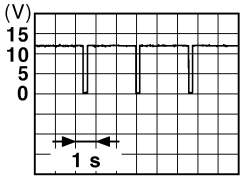
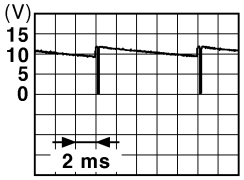
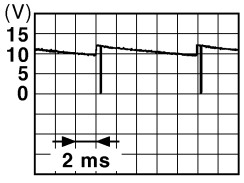
Physical Values

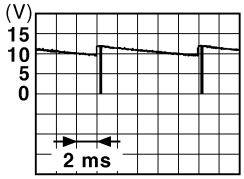
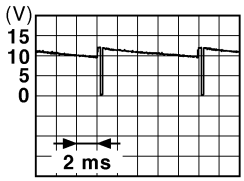
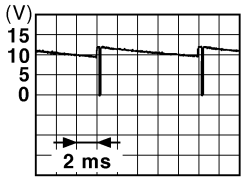
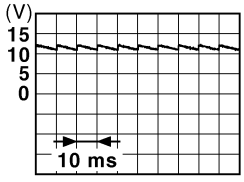
INFOID:0000000005532041

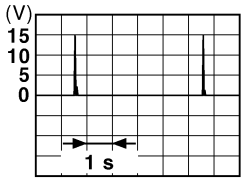
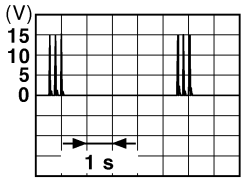
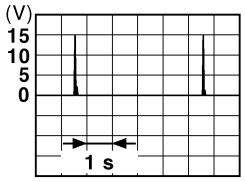
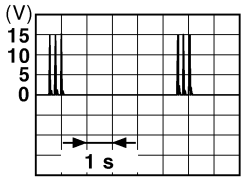
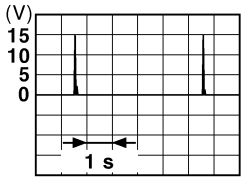
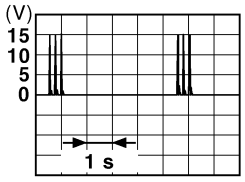
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
1 (W/B)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
2 (R/Y)	Ground	Battery power supply output	Output	Ignition switch OFF		Battery voltage
3 (L/W)	Ground	Ignition power supply output	Output	Ignition switch ON		Battery voltage
4 (P/W)	Ground	Interior room lamp power supply	Output	After passing the interior room lamp battery saver operation time		0V
				Any other time after passing the interior room lamp battery saver operation time		Battery voltage
5 (G)	Ground	Front door RH UNLOCK	Output	Front door RH	UNLOCK (actuator is activated)	Battery voltage
					Other than UNLOCK (actuator is not activated)	0V
7 (R/W)	Ground	Step lamp	Output	Step lamp	ON	0V
					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)	0V
9 (L)	Ground	Front door LH UNLOCK	Output	Front door LH	UNLOCK (actuator is activated)	Battery voltage
					Other than UNLOCK (actuator is not activated)	0V
10 (G)	Ground	Rear door RH and rear door LH UNLOCK	Output	Rear door RH and rear door LH	UNLOCK (actuator is activated)	Battery voltage
					Other than UNLOCK (actuator is not activated)	0V
11 (Y/R)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
13 (B)	Ground	Ground	—	Ignition switch ON		0V
14 (GR/W)	Ground	Engine switch (push switch) illumination ground	Input	Tail lamp	OFF	0V
					ON	**NOTE:** When the illumination brightening/dimming level is in the neutral position  JSNIA0010GB
15 (Y/L)	Ground	ACC indicator lamp	Output	Ignition switch	OFF	Battery voltage
					ACC or ON	0V

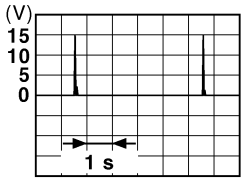
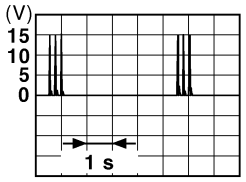
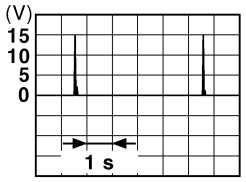
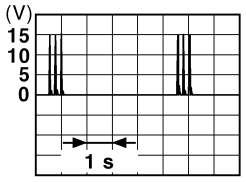
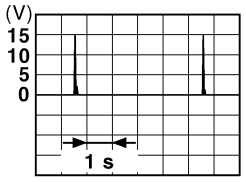
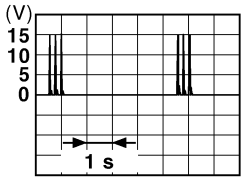
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
17 (G/B)	Ground	Turn signal (RH)	Output	Ignition switch ON	Turn signal switch OFF	0V
					Turn signal switch RH	 PKID0926E 6.5 V
18 (G/Y)	Ground	Turn signal (LH)	Output	Ignition switch ON	Turn signal switch OFF	0V
					Turn signal switch LH	 PKID0926E 6.5 V
19 (Y)	Ground	Room lamp timer control	Output	Interior room lamp	OFF	Battery voltage
					ON	0V
21 (P/B)	Ground	Optical sensor signal	Input	Ignition switch ON	When outside of the vehicle is bright	Close to 5V
					When outside of the vehicle is dark	Close to 0V
24 (R/W)	Ground	Stop lamp switch 1	Input	—		Battery voltage
26 (O/L)	Ground	Stop lamp switch 2	Input	Stop lamp switch	OFF (brake pedal is released)	0V
					ON (brake pedal is depressed)	Battery voltage
27 (O)	Ground	Front door lock assembly LH (unlock sensor)	Input	Front door LH	LOCK status	 JPMIA0011GB 11.8V
					UNLOCK status	0V
29 (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		0V
30 (V/Y)	Ground	ACC feedback signal	Input	Ignition switch	OFF	0
					ACC or ON	Battery voltage
31 (G)	Ground	Rear window defogger feedback signal	Input	Rear window defogger switch	OFF	0V
					ON	Battery voltage

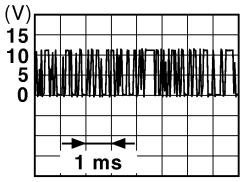
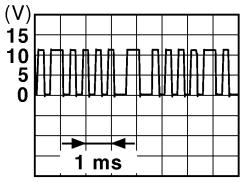
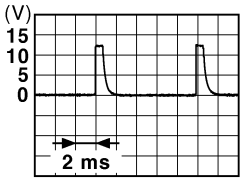
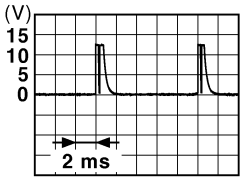
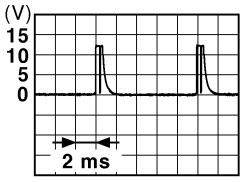
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
32 (R/B)	Ground	Front door RH switch	Input	Front door RH switch	OFF (when front door RH closes)	 JPMIA0011GB 11.8 V
					ON (when front door RH opens)	0V
37 (O)	Ground	Trunk lid opener cancel switch	Input	Trunk lid opener cancel switch	CANCEL	 JPMIA0012GB 1.1V
					ON	0V
38 (GR/ W)	Ground	Rear window defogger ON signal	Input	Rear window defogger switch	OFF	5V
					ON	0V
40 (Y/G)	Ground	Power window serial link	Input/ Output	Ignition switch ON		 JPMIA0013GB 10.2V
				Ignition switch OFF or ACC		0V
41 (W)	Ground	Engine switch (push switch) illumination	Output	Engine switch (push switch) illumination	ON	5.5V
					OFF	0V
42 (R)	Ground	LOCK indicator lamp	Output	LOCK indicator lamp	ON	0V
					OFF	Battery voltage
45 (P)	Ground	Receiver & sensor ground	Input	Ignition switch ON		0V
46 (V/W)	Ground	Receiver & sensor power supply output	Output	Ignition switch	OFF	0V
					ACC or ON	5.0V

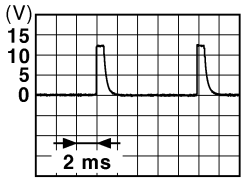
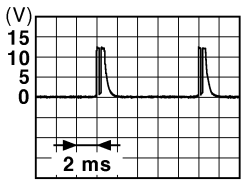
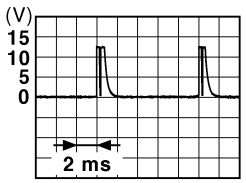
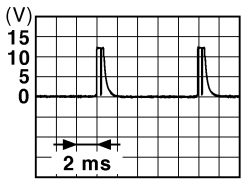
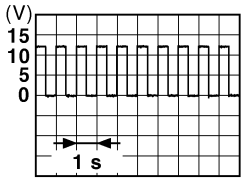
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
47[1] (G/O)	Ground	Tire pressure receiver signal	Input/ Output	Ignition switch ON	Standby state	 OCC3881D
					When receiving the signal from the transmitter	 OCC3880D
48 (R/G)	Ground	Selector lever transmission range switch signal	Input	Selector lever	P or N position	12.0V
					Except P and N positions	0V
49 (L/O)	Ground	Security indicator signal	Output	Security indicator	ON	0V
					Blinking	 JPMIA0014GB 11.3V
					OFF	Battery voltage
50 (LG/ B)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermittent dial 4)	All switch OFF	0V
					Lighting switch 1ST	 JPMIA0031GB 10.7V
					Lighting switch high-beam	
					Lighting switch 2ND	
					Turn signal switch RH	
51 (L/W)	Ground	Combination switch OUTPUT 1	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	0V
					Front wiper switch HI (Wiper intermittent dial 4)	 JPMIA0032GB 10.7V
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • WIper intermittent dial 2 • Wiper intermittent dial 3 • Wiper intermittent dial 6 • Wiper intermittent dial 7	

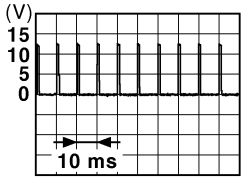
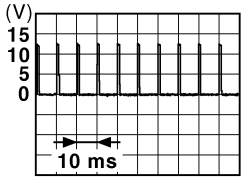
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
52 (G/B)	Ground	Combination switch OUTPUT 2	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	0V
					Front washer switch ON (Wiper intermittent dial 4)	 JPMIA0033GB 10.7V
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • WIper intermittent dial 5 • Wiper intermittent dial 6	
53 (LG/ R)	Ground	Combination switch OUTPUT 3	Output	Combination switch (Wiper intermittent dial 4)	All switch OFF	0V
					Front wiper switch INT	 JPMIA0034GB 10.7V
					Front wiper switch LO	
					Lighting switch AUTO	
54 (G/Y)	Ground	Combination switch OUTPUT 4	Output	Combination switch (Wiper intermittent dial 4)	All switch OFF	0V
					Front fog lamp switch ON	 JPMIA0035GB 10.7V
					Lighting switch 2ND	
					Lighting switch flash-to-pass	
					Turn signal switch LH	
57[1] (W)	Ground	Tire pressure warning check switch	Input	—		5V
58 (SB)	Ground	Front door LH switch	Input	Front door LH switch	OFF (front door LH CLOSE)	 JPMIA0011GB 11.8V
					ON (front door LH OPEN)	0V
59 (G/R)	Ground	Rear window defogger relay	Output	Rear window defogger	Active	Battery voltage
					Not activated	0V

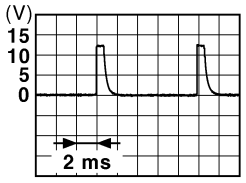
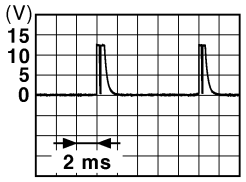
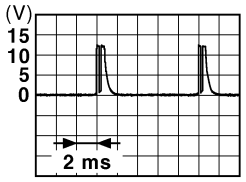
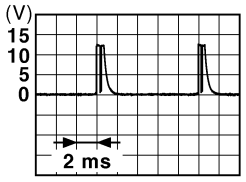
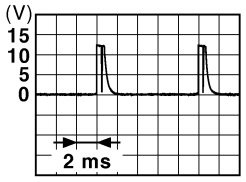
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
60 (B/R)	Ground	Front console antenna 2 (-)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
61 (W/R)	Ground	Center console antenna 2 (+)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
62 (V)	Ground	Front outside handle RH antenna (-)	Output	When the front door RH 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

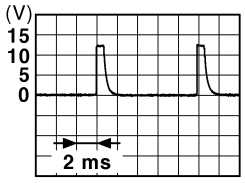
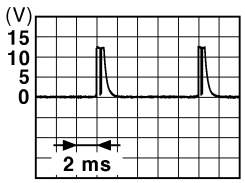
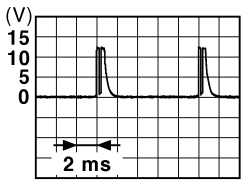
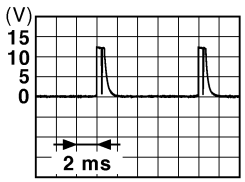
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
63 (P)	Ground	Front outside handle RH antenna (+)	Output	When the front door RH request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB
64 (V)	Ground	Front outside handle LH antenna (-)	Output	When the front door LH 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
65 (P)	Ground	Front outside handle LH antenna (+)	Output	When the front door LH 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

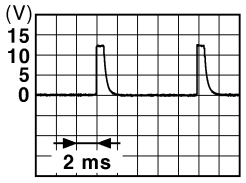
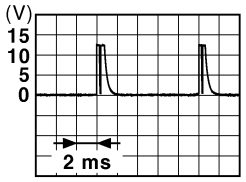
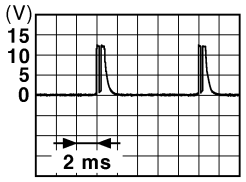
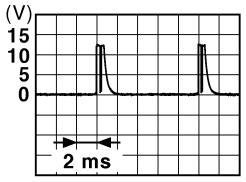
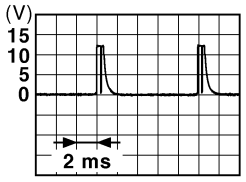
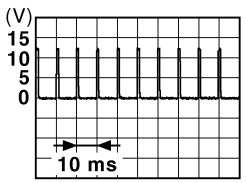
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
68 (G/O)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
69 (O)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
70 (R/B)	Ground	Ignition relay-2 control	Output	Ignition switch	OFF or ACC	0V
					ON	Battery voltage
71 (L/O)	Ground	Remote keyless entry receiver signal	Input/ Output	During waiting		 JMKIA0064GB
				When operating either button on Intelligent Key		 JMKIA0065GB
75 (R/Y)	Ground	Combination switch INPUT 5	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 JPMIA0041GB 1.4V
					Front fog lamp switch ON (Wiper intermittent dial 4)	 JPMIA0037GB 1.3V
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 6 • Wiper intermittent dial 7	 JPMIA0040GB 1.3V

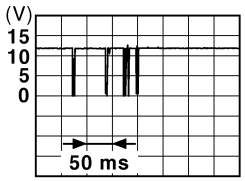
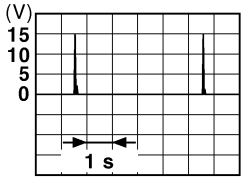
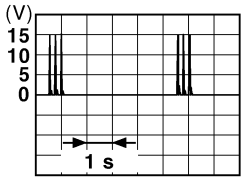
Terminal No. (Wire color) (+)	Terminal No. (Wire color) (-)	Description Signal name	Description Input/ Output	Condition		Value (Approx.)
76 (R/G)	Ground	Combination switch INPUT 3	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 JPMIA0041GB 1.4V
					Lighting switch high-beam (Wiper intermittent dial 4)	 JPMIA0036GB 1.3V
					Lighting switch 2ND (Wiper intermittent dial 4)	 JPMIA0037GB 1.3V
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	 JPMIA0040GB 1.3V
77[2] (BR)	Ground	Engine switch (push switch)	Input	Engine switch (push switch)	Pressed	0V
					Not pressed	Battery voltage
78 (P)	Ground	CAN-L	Input/ Output	—		—
79 (L)	Ground	CAN-H	Input/ Output	—		—
80 (R/L)	Ground	Key slot illumination	Output	Key slot illumination	OFF	0V
					Blinking	 JPMIA0015GB 6.5V
					ON	Battery voltage

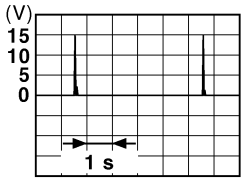
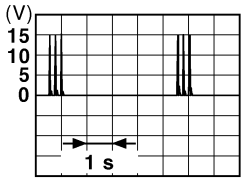
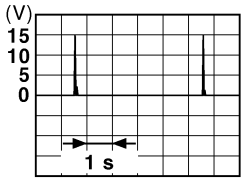
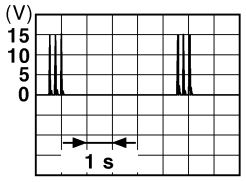
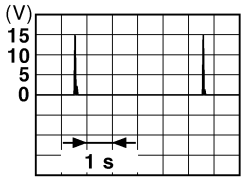
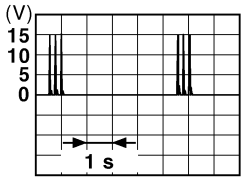
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
81 (LG)	Ground	ON indicator lamp	Output	Ignition switch	OFF or ACC	0V
					ON	Battery voltage
83 (L)	Ground	ACC relay control	Output	Ignition switch	OFF	0V
					ACC or ON	Battery voltage
84 (Y/R)	Ground	CVT shift selector	Output	—		Battery voltage
85[3] (L/O)	Ground	Electronic steering column lock condition No. 1	Input	Electronic steering column lock	Lock status	0V
					Unlock status	Battery voltage
86[3] (G/R)	Ground	Electronic steering column lock condition No. 2	Input	Electronic steering column lock	Lock status	Battery voltage
					Unlock status	0V
87 (G/B)	Ground	Selector lever P position switch	Input	Selector lever	P position	0V
					Any position other than P	Battery voltage
88 (R)	Ground	Front door RH request switch	Input	Front door RH request switch	ON (pressed)	0V
					OFF (not pressed)	 JPMIA0016GB 1.0V
89 (R)	Ground	Front door LH request switch	Input	Front door LH request switch	ON (pressed)	0V
					OFF (not pressed)	 JPMIA0016GB 1.0V
90 (Y)	Ground	Blower fan motor relay control	Output	Ignition switch	OFF or ACC	0V
					ON	Battery voltage
91 (L/R)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OFF		Battery voltage
94[3] (G/Y)	Ground	Steering wheel lock unit power supply	Output	Ignition switch	OFF or ACC	Battery voltage
					ON	0V

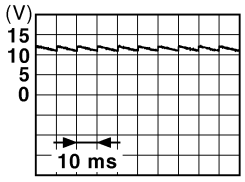
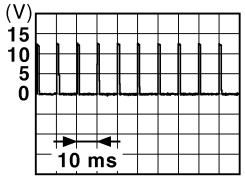
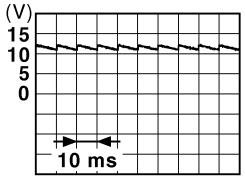
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
95 (R/W)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermittent dial 4)	All switch OFF	 JPMIA0041GB 1.4V
					Turn signal switch LH	 JPMIA0037GB 1.3V
					Turn signal switch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

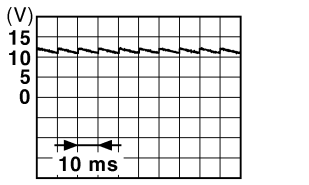
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
96 (P/B)	Ground	Combination switch INPUT 4	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 JPMIA0041GB 1.4V
					Lighting switch AUTO (Wiper intermittent dial 4)	 JPMIA0038GB 1.3V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

Terminal No. (Wire color) (+)	Terminal No. (Wire color) (-)	Description Signal name	Description Input/ Output	Condition		Value (Approx.)
97 (R/B)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermittent dial 4)	All switch OFF	 JPMIA0041GB 1.4V
					Lighting switch flash-to-pass	 JPMIA0037GB 1.3V
					Lighting switch 2ND	 JPMIA0036GB 1.3V
					Front wiper switch INT	 JPMIA0038GB 1.3V
					Front wiper switch HI	 JPMIA0040GB 1.3V
98 (G/O)	Ground	Hazard switch	Input	Hazard switch	Pressed	0 V
					Not pressed	 JPMIA0012GB 1.1V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
		Signal name	Input/ Output			
(+)	(-)					
99[3] (L/Y)	Ground	Electronic steering column lock unit communication	Input/ Output	Electronic steering column lock	LOCK status	Battery voltage
					LOCK or UNLOCK	 JMKIA0066GB
					For 15 seconds after UNLOCK	Battery voltage
					15 seconds or later after UNLOCK	0V
103 (V)	Ground	Trunk lid opening.	Output	Trunk lid	Open (trunk lid opener actuator is activated)	Battery voltage
					Close (trunk lid opener actuator is not activated)	0V
110 (V/W)	Ground	Trunk room lamp	Output	Trunk room lamp	ON	0V
					OFF	Battery voltage
114 (B)	Ground	Trunk room antenna 1 (-)	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			
115 (W)	Ground	Trunk room antenna 1 (+)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
118 (L/O)	Ground	Rear bumper antenna (-)	Output	When the trunk lid 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
119 (BR/ W)	Ground	Rear bumper antenna (+)	Output	When the trunk lid 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

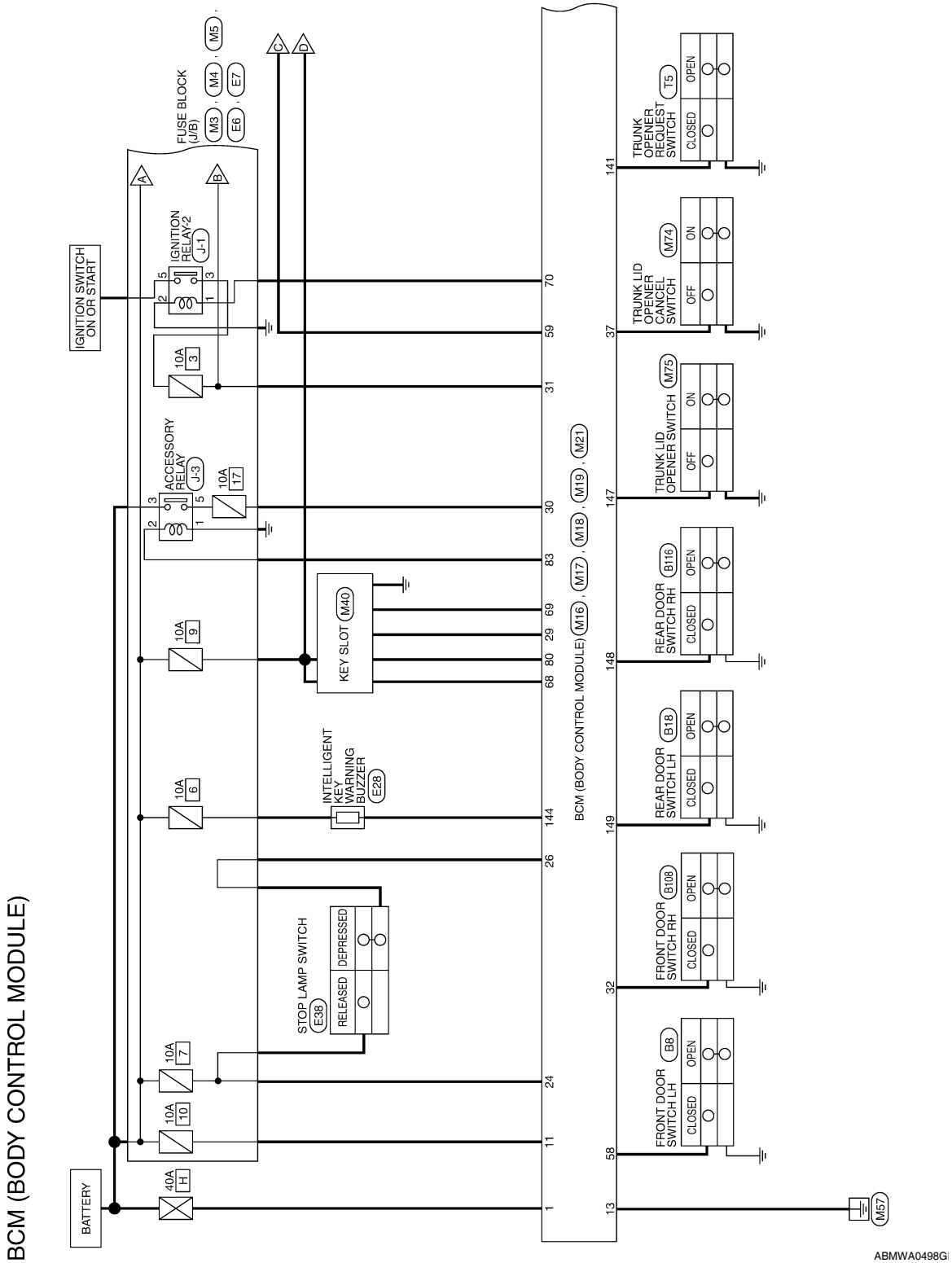
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
127 (BR/ W)	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	OFF or ACC	Battery voltage
					ON	0V
130 (W)	Ground	Trunk room lamp switch	Input	Trunk room lamp switch	OFF (trunk is closed)	 JPMIA0011GB 11.8V
					ON (trunk is open)	0V
132 (R)	Ground	Starter motor relay control	Output	Ignition switch ON	When selector lever is in P or N position and the brake is depressed	Battery voltage
					When selector lever is in P or N position and the brake is not depressed	0V
140[4] (L/R)	Ground	Engine switch (push switch)	Input	Engine switch (push switch)	Pressed	0V
					Not pressed	Battery voltage
141 (BR)	Ground	Trunk request switch	Input	Trunk request switch	ON (pressed)	0V
					OFF (not pressed)	 JPMIA0016GB 1.0V
144 (GR)	Ground	Request switch buzzer	Output	Request switch buzzer	Sounding	0V
					Not sounding	Battery voltage
147 (L/R)	Ground	Trunk lid opener switch	Input	Trunk lid opener switch	Pressed	0V
					Not pressed	Battery voltage
148 (R/W)	Ground	Rear door RH switch	Input	Rear door RH switch	OFF (when rear door RH closes)	 JPMIA0011GB 11.8V
					ON (when rear door RH opens)	0V

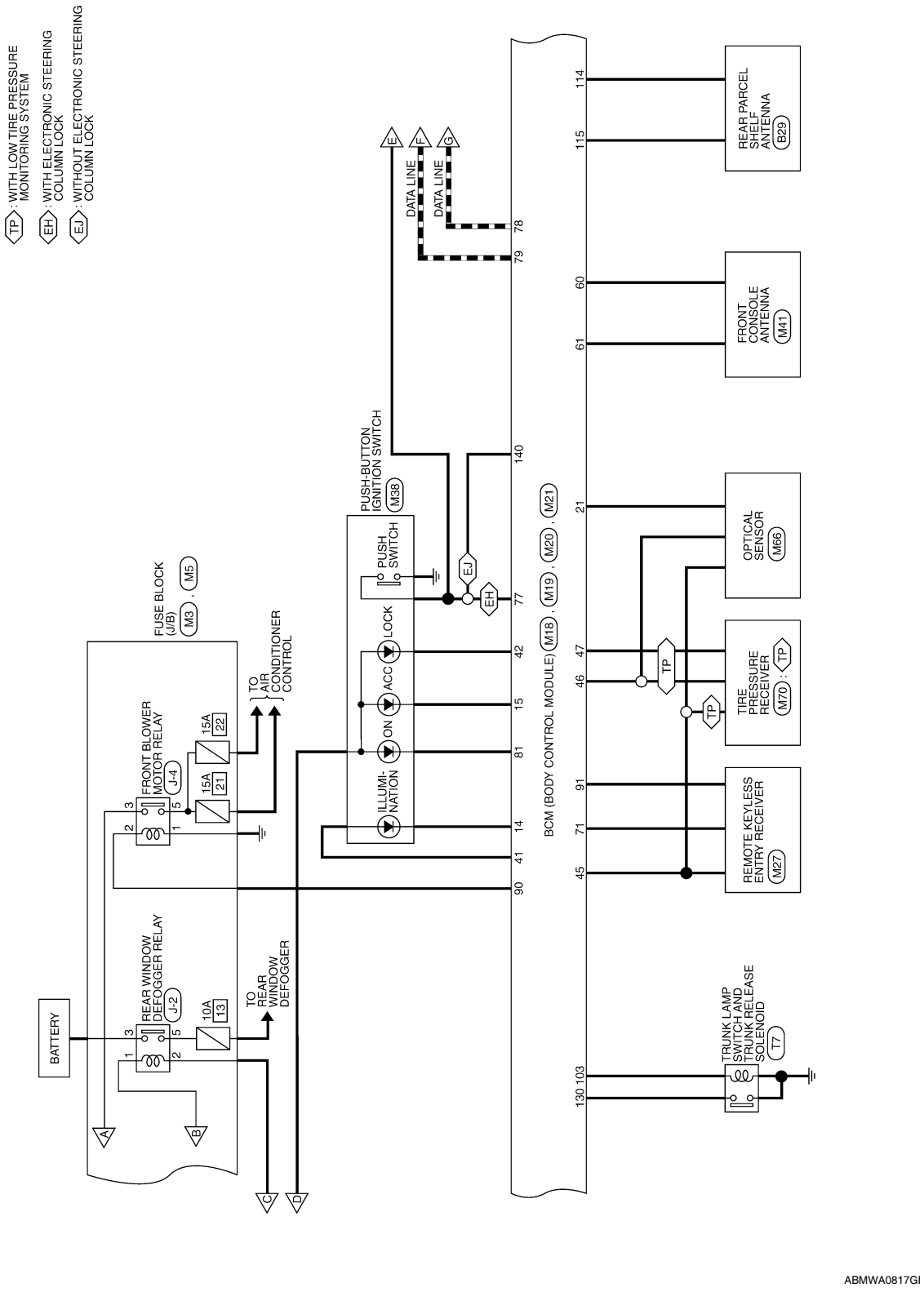
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
149 (R/B)	Ground	Rear door LH switch	Input	Rear door LH switch	OFF (when rear door LH closes)	 JPMIA0011GB 11.8V
					ON (when rear door LH opens)	0V

1 : With low tire pressure monitoring system
2 : With electronic steering column lock
3 : Early production
4 : Without electronic steering column lock

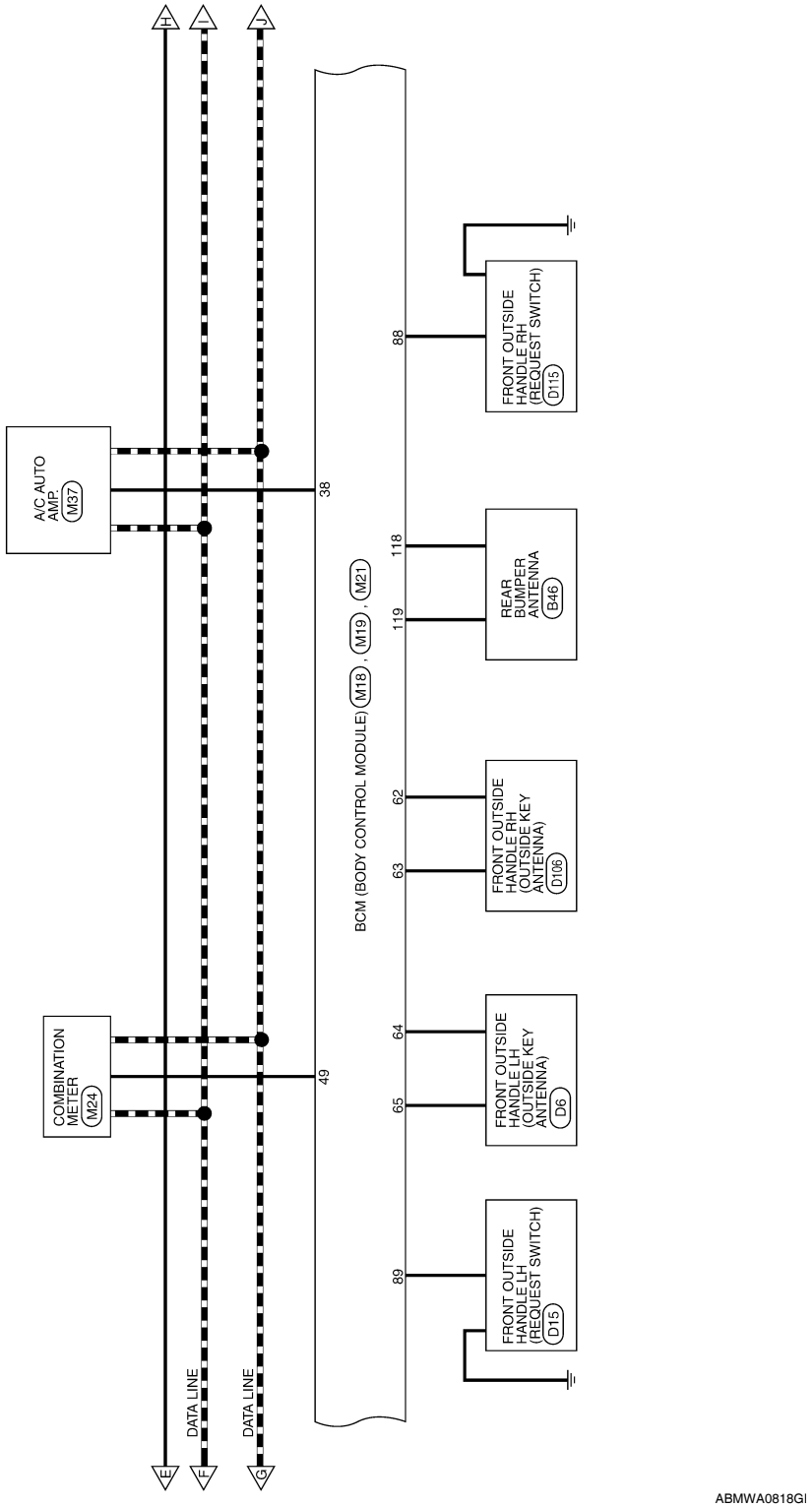
Wiring Diagram

INFOID:0000000005532042

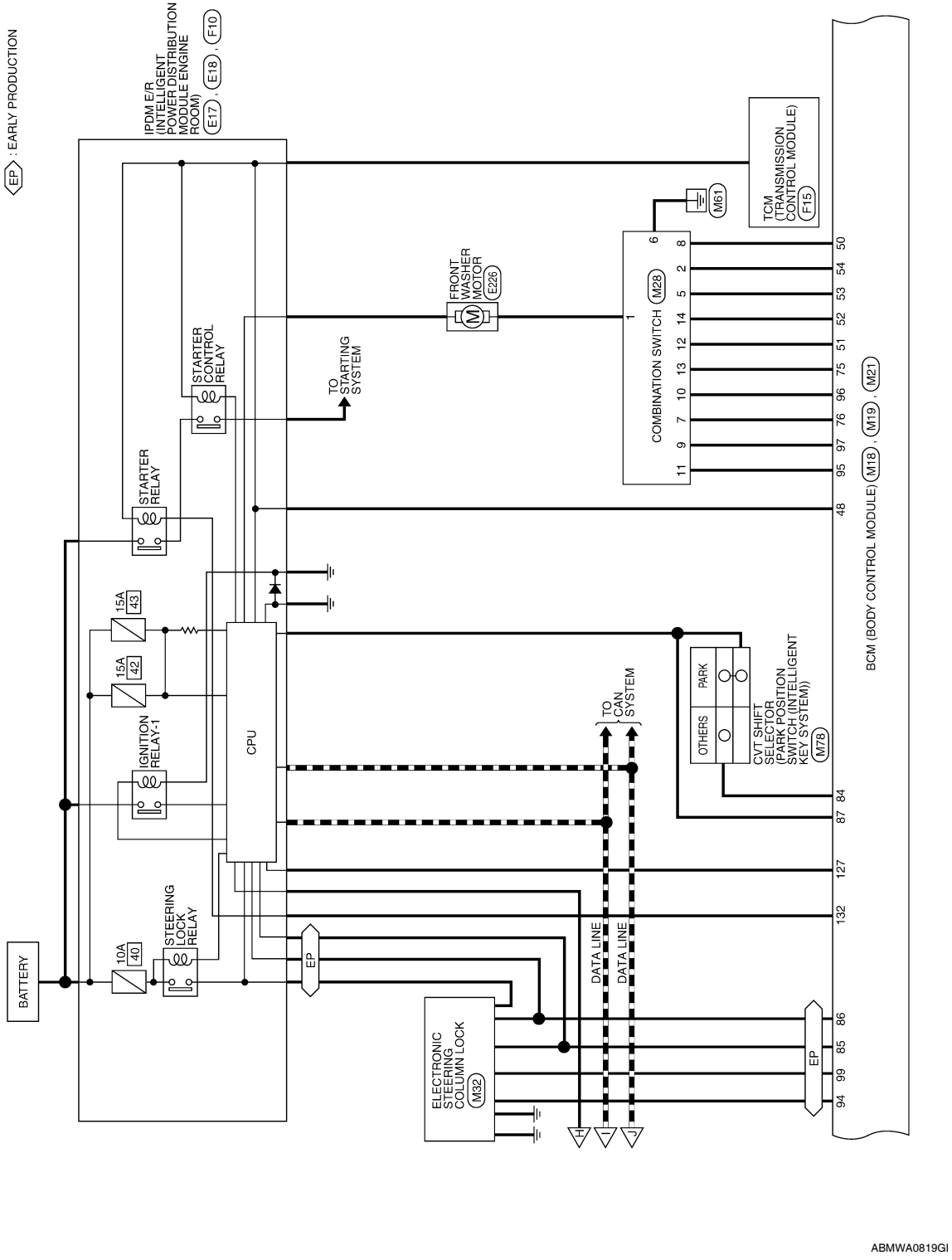


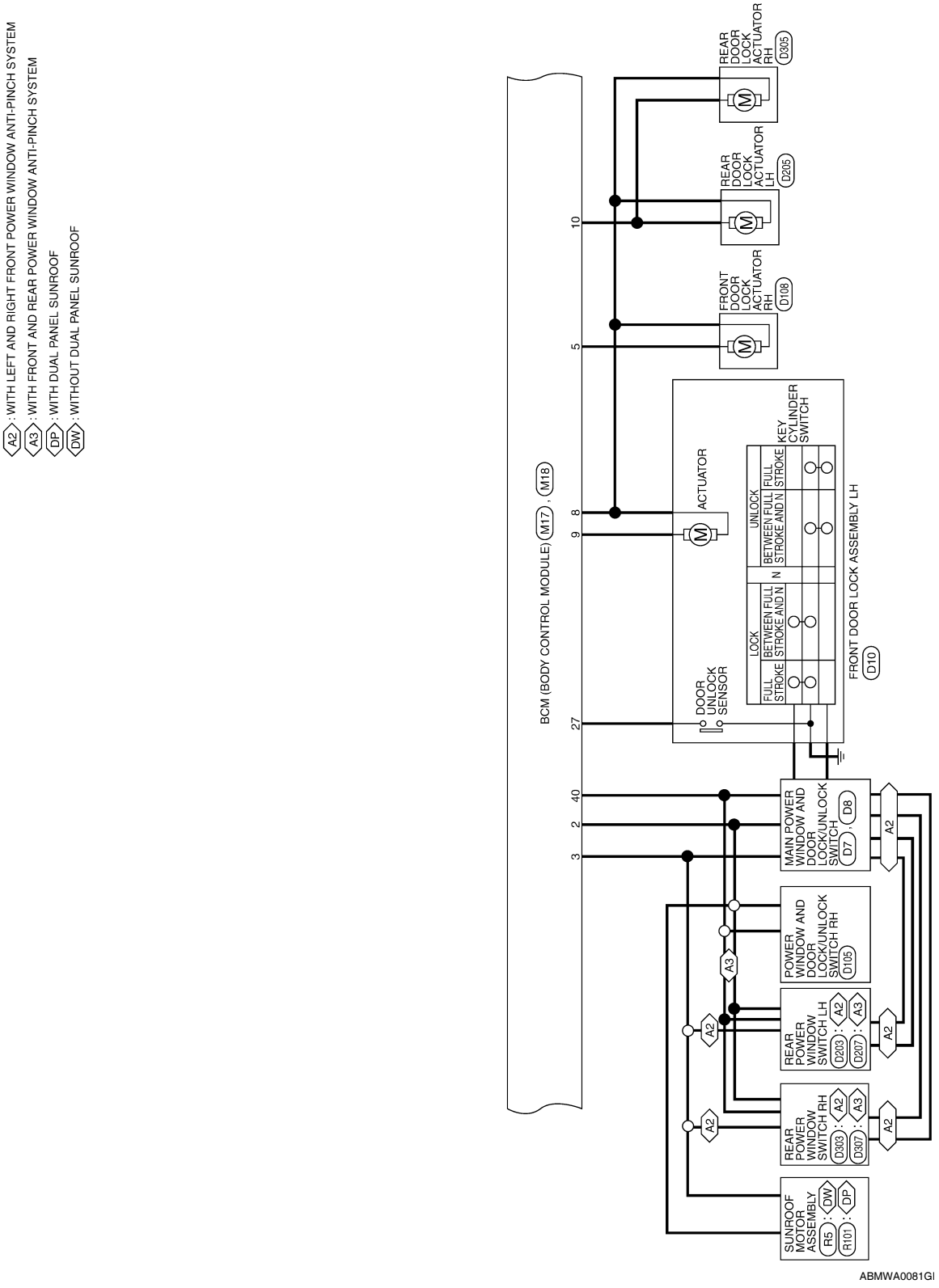


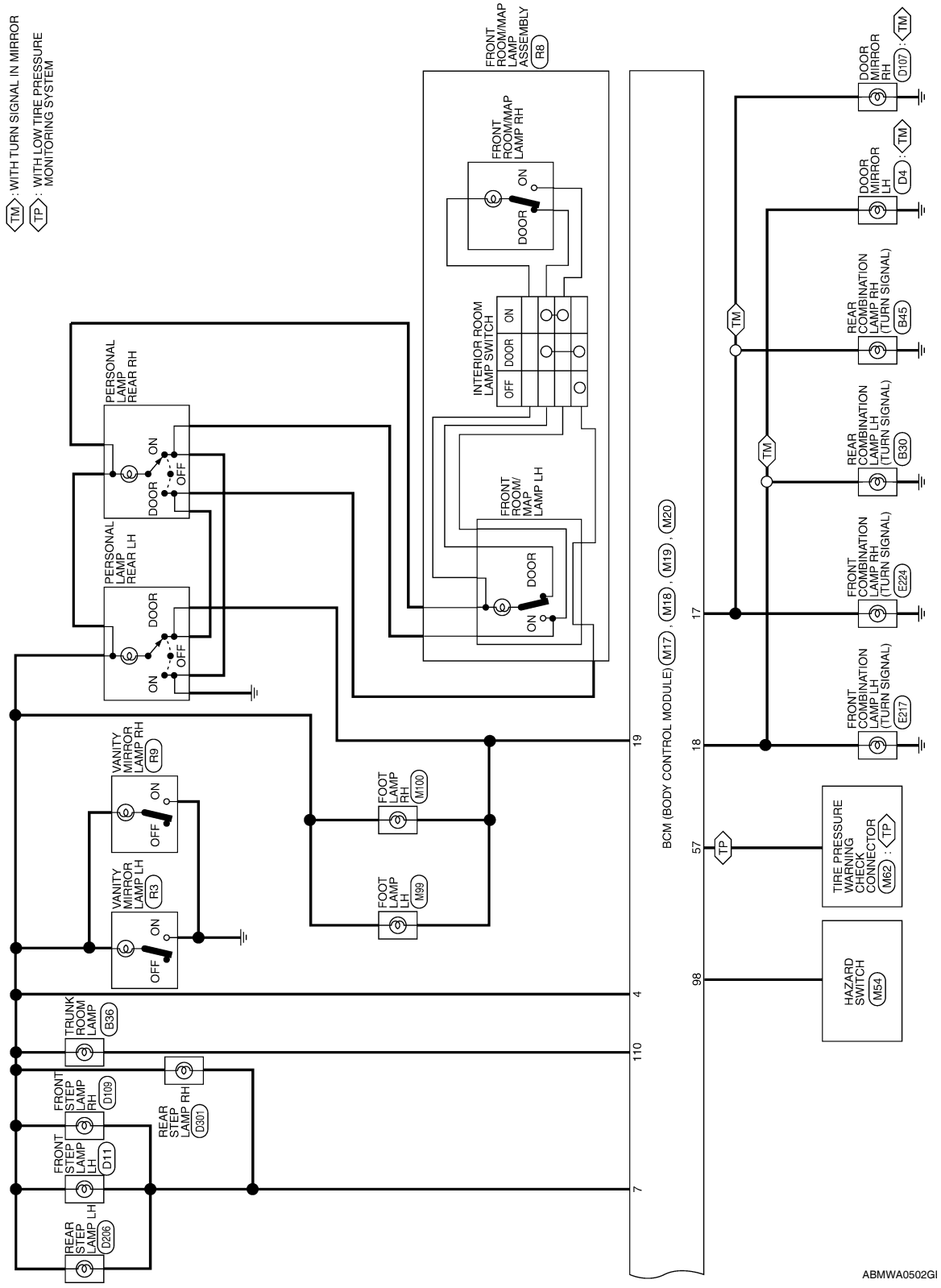
ABMWA0817GI



ABMWA0818GI


EP : EARLY PRODUCTION
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) (E17), (E18), (F10)
STARTER CONTROL RELAY
STARTER RELAY
IGNITION RELAY-1
STEERING LOCK RELAY
15A 43
15A 42
10A 40
CPU
BATTERY
TO STARTING SYSTEM
FRONT WASHER MOTOR (E226)
COMBINATION SWITCH (M28)
TCM (TRANSMISSION CONTROL MODULE) (F15)
M61
CVT SHIFT SELECTOR (PARK POSITION SWITCH (INTELLIGENT KEY SYSTEM)) (M78)
PARK
OTHERS
TO CAN SYSTEM
DATA LINE
DATA LINE
ELECTRONIC STEERING COLUMN LOCK (M32)
BCM (BODY CONTROL MODULE) (M18), (M19), (M21)
ABMWA0819GI


A2 : WITH LEFT AND RIGHT FRONT POWER WINDOW ANTI-PINCH SYSTEM
A3 : WITH FRONT AND REAR POWER WINDOW ANTI-PINCH SYSTEM
DP : WITH DUAL PANEL SUNROOF
DW : WITHOUT DUAL PANEL SUNROOF
BCM (BODY CONTROL MODULE) (M17) , (M18)
REAR DOOR LOCK ACTUATOR RH D305
REAR DOOR LOCK ACTUATOR LH D205
FRONT DOOR LOCK ACTUATOR RH D108
FRONT DOOR LOCK ASSEMBLY LH D10
ACTUATOR
KEY CYLINDER SWITCH
UNLOCK
BETWEEN FULL STROKE AND N
FULL STROKE
LOCK
DOOR UNLOCK SENSOR
MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH D7 : D8
POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH D105
REAR POWER WINDOW SWITCH LH D203 : D207
REAR POWER WINDOW SWITCH RH D303 : D307
SUNROOF MOTOR ASSEMBLY R5 : R101
10
5
9
8
27
40
2
3
ABMWA0081GI

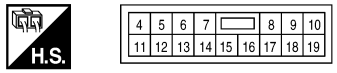

TM : WITH TURN SIGNAL IN MIRROR
TP : WITH LOW TIRE PRESSURE MONITORING SYSTEM
FRONT ROOM/MAP LAMP ASSEMBLY R8
FRONT ROOM/MAP LAMP RH
INTERIOR ROOM LAMP SWITCH
FRONT ROOM/ MAP LAMP LH
PERSONAL LAMP REAR RH
PERSONAL LAMP REAR LH
VANITY MIRROR LAMP RH R9
VANITY MIRROR LAMP LH R3
FOOT LAMP RH M100
FOOT LAMP LH M99
TRUNK ROOM LAMP B36
FRONT STEP LAMP RH D109
REAR STEP LAMP RH D301
FRONT STEP LAMP LH D11
REAR STEP LAMP LH D206
BCM (BODY CONTROL MODULE) M17 , M18 , M19 , M20
DOOR MIRROR RH D107
DOOR MIRROR LH D4
REAR COMBINATION LAMP RH (TURN SIGNAL) B45
REAR COMBINATION LAMP LH (TURN SIGNAL) B30
FRONT COMBINATION LAMP RH (TURN SIGNAL) E224
FRONT COMBINATION LAMP LH (TURN SIGNAL) E217
TIRE PRESSURE WARNING CHECK CONNECTOR M62
HAZARD SWITCH M54
ABMWA0502GI

BCM (BODY CONTROL MODULE) CONNECTORS

Connector No.	M16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

Terminal No.	Color of Wire	Signal Name
1	W/B	BATT (F/L)
2	R/Y	P/W POWER SUPPLY PERM
3	L/W	P/W POWER SUPPLY IGN

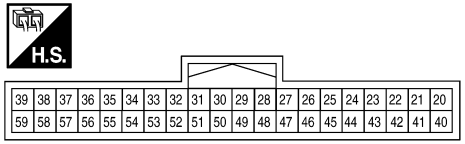
Connector No.	M17
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
4	P/W	R/L POWER SUPPLY
5	G	DOOR UNLOCK OUTPUT AS
6	–	–
7	R/W	STEP LAMP CONT
8	V	DOOR LOCK OUTPUT ALL
9	L	DOOR UNLOCK OUTPUT (DR/FL)

Terminal No.	Color of Wire	Signal Name
10	G	DOOR UNLOCK OUTPUT (RR/RL)
11	Y/R	BAT BCM FUSE
12	–	–
13	B	GND1
14	GR/W	LOW SIDE PUSH LED
15	Y/L	ACC LED
16	–	–
17	G/B	FR FLASHER
18	G/Y	FL FLASHER
19	Y	ROOM LAMP CONT

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



Terminal No.	Color of Wire	Signal Name
20	–	–
21	P/B	A/L SIGNAL TYPE 1
22	–	–
23	–	–
24	R/W	BRAKE SW1
25	–	–
26	O/L	BRAKE SW2

Terminal No.	Color of Wire	Signal Name
27	O	DOOR LOCK STATUS DR
28	–	–
29	Y	FOB IN SW 1
30	V/Y	ACC F/B
31	G	IGN F/B
32	R/B	AS DOOR SW 1
33	–	–
34	–	–
35	–	–
36	–	–
37	O	TRUNK CANCEL SW
38	GR/W	REAR DEFOGGER SW
39	–	–
40	Y/G	PW K-LINE
41	W	RING LED
42	R	S/L LOCK LED
43	–	–
44	–	–

Terminal No.	Color of Wire	Signal Name
45	P	GND RF2 A/L
46	V/W	A/L POWER SUPPLY 5V
47	G/O	RF2 TUNER SIGNAL
48	R/G	SHIFT N/P/ NEUTRAL SW
49	L/O	IMMO LED (SECURITY INDICATOR)
50	LG/B	OUTPUT 5
51	L/W	OUTPUT 1
52	G/B	OUTPUT 2
53	LG/R	OUTPUT 3
54	G/Y	OUTPUT4
55	–	–
56	–	–
57	W	TPMS MODE
58	SB	DR DOOR SW
59	G/R	REAR DEFOGGER

ABMIA1331GB

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

H.S.

79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61	60
99	98	97	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81	80

Terminal No.	Color of Wire	Signal Name
60	B/R	ROOM ANT 2 B
61	W/R	ROOM ANT 2 A
62	V	AS DOOR ANT B
63	P	AS DOOR ANT A
64	V	DR DOOR ANT B
65	P	DR DOOR ANT A
66	–	–
67	–	–
68	G/O	FOB READER CLOCK
69	O	FOB READER DATA
70	R/B	IGN REL OUTPUT 2
71	L/O	RF1 TUNER SIGNAL
72	–	–
73	–	–
74	–	–
75	R/Y	INPUT 5
76	R/G	INPUT 3
77	BR	ENG START SW
78	P	CAN-L
79	L	CAN-H
80	R/L	FOB SLOT ILLUMINATION
81	LG	IGN ON LED
82	–	–
83	L	ACC CONT
84	Y/R	AT DEVICE OUT
85	L/O	S/L CONDITION 1
86	G/R	S/L CONDITION 2
87	G/B	SHIFT P/ASCD CANCEL SW
88	R	AS REQUEST SW
89	R	DR REQUEST SW
90	Y	BLOWER FAN RELAY
91	L/R	RF POWER SUPPLY 12V
92	–	–
93	–	–
94	G/Y	S/L POWER SUPPLY 12V
95	R/W	INPUT 1
96	P/B	INPUT 4
97	R/B	INPUT 2
98	G/O	HAZARD SW
99	L/Y	S/L K-LINE

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

H.S.

100	101		102	103	104
105	106	107	108	109	110	111

Terminal No.	Color of Wire	Signal Name
100	–	–
101	–	–
102	–	–
103	V	CDL BACK TRUNK
104	–	–
105	–	–
106	–	–
107	–	–
108	–	–
109	–	–
110	V/W	TRUNK LAMP CONT
111	–	–

ABMIA1332GB

Terminal No.	Color of Wire	Signal Name
136	–	–
137	–	–
138	–	–
139	–	–
140	BR	ENG START SW W/O ESCL
141	BR	TRUNK REQUEST SW
142	–	–
143	–	–
144	GR	BUZZER
145	–	–
146	–	–
147	L/R	BACK TRUNK OPENER
148	R/W	RR DOOR SW
149	R/B	RL DOOR SW
150	–	–
151	–	–

Terminal No.	Color of Wire	Signal Name
119	BR/W	BACK DOOR ANT A
120	–	–
121	–	–
122	–	–
123	–	–
124	–	–
125	–	–
126	–	–
127	BR/W	IGN RELAY OUTPUT
128	–	–
129	–	–
130	W	TRUNK SW
131	–	–
132	R	ST RELAY OUTPUT
133	–	–
134	–	–
135	–	–

Terminal No.	Color of Wire	Signal Name
10	P/B	INPUT 4
11	R/W	INPUT 1
12	L/W	OUTPUT 1
13	R/Y	INPUT 5
14	G/B	OUTPUT 2

Connector No.	M21
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GRAY

H.S.

131	130	129	128	127	126	125	124	123	122	121	120	119	118	117	116	115	114	113	112
151	150	149	148	147	146	145	144	143	142	141	140	139	138	137	136	135	134	133	132

Terminal No.	Color of Wire	Signal Name
112	–	–
113	–	–
114	B	TRUNK ANT 1 B
115	W	TRUNK ANT 1 A
116	–	–
117	–	–
118	L/O	BACK DOOR ANT B

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE

H.S.

1	2				5	6
7	8	9	10	11	12	13	14

Terminal No.	Color of Wire	Signal Name
1	R/L	–
2	G/Y	OUTPUT 4
5	LG/R	OUTPUT 3
6	B	–
7	R/G	INPUT 3
8	LG/B	OUTPUT 5
9	R/B	INPUT 2

ABMIA2102GB

Fail Safe

INFOID:0000000005532043

Display contents of CONSULT	Fail-safe	Cancellation
B2013: ID DISCORD BCM-S/L*	Inhibit engine cranking	Erase DTC
B2014: CHAIN OF S/L-BCM*	Inhibit engine cranking	Erase DTC
B2190: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC

Display contents of CONSULT	Fail-safe	Cancellation
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	Erase DTC
B2557: VEHICLE SPEED*	Inhibit electronic steering column lock	When normal vehicle speed signals have been received from ABS actuator and electric unit (control unit) for 500 ms
B2560: STARTER CONT RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status has become consistent • Starter control relay signal • Starter relay status signal
B2562: LO VOLTAGE	• Inhibit engine cranking • Inhibit electronic steering column lock*	100 ms after the power supply voltage increases to more than 8.8 V
B2601: SHIFT POSITION*	Inhibit electronic steering column lock	500 ms after the following signal reception status becomes consistent • Selector lever P position switch signal • P range signal (CAN)
B2602: SHIFT POSITION*	Inhibit electronic steering column lock	5 seconds after the following BCM recognition conditions are fulfilled • Ignition switch is in the ON position • Selector lever P position switch signal: Except P position (battery voltage) • Vehicle speed: 4 km/h or more
B2603: SHIFT POSI STATUS*	Inhibit electronic steering column lock	500 ms after the following BCM recognition conditions are fulfilled • Ignition switch is in the ON position • Selector lever P position switch signal: Except P position (battery voltage) • Selector lever transmission range switch signal: Except P and N positions (0 V)
B2604: TRANSMISSION RANGE SWITCH*	Inhibit electronic steering column lock	500 ms after any of the following BCM recognition conditions is fulfilled • Status 1 - Ignition switch is in the ON position - Selector lever transmission range switch signal: P and N position (battery voltage) - P range signal or N range signal (CAN): ON • Status 2 - Ignition switch is in the ON position - Selector lever transmission range switch signal: Except P and N positions (0 V) - P range signal and N range signal (CAN): OFF
B2605: TRANSMISSION RANGE SWITCH*	Inhibit electronic steering column lock	500 ms after any of the following BCM recognition conditions is fulfilled • Ignition switch is in the ON position - Power position: IGN - Selector lever transmission range switch signal: Except P and N positions (0 V) - Transmission range switch signal (CAN): OFF • Status 2 - Ignition switch is in the ON position - Selector lever transmission range switch signal: P or N position (battery voltage) - Transmission range switch signal (CAN): ON
B2606: S/L RELAY*	Inhibit engine cranking	500 ms after the following CAN signal communication status has become consistent • Electronic steering column lock relay signal (Request signal) • Electronic steering column lock relay signal (Condition signal)

Display contents of CONSULT	Fail-safe	Cancellation
B2607: S/L RELAY*	Inhibit engine cranking	500 ms after the following CAN signal communication status has become consistent • Electronic steering column lock relay signal (Request signal) • Electronic steering column lock relay signal (Condition 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)
B2609: S/L STATUS*	• Inhibit engine cranking • Inhibit electronic steering column lock	When the following electronic steering column lock conditions agree • BCM electronic steering column lock control status • Electronic steering column lock condition No. 1 signal status • Electronic steering column lock condition No. 2 signal status
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 is fulfilled • Power position changes to ACC • Receives engine status signal (CAN)
B2612: S/L STATUS*	• Inhibit engine cranking • Inhibit electronic steering column lock	When any of the following conditions is fulfilled • Electronic steering column lock unit status signal (CAN) is received normally • The BCM electronic steering column lock control status matches the electronic steering column lock status recognized by the electronic steering column lock unit status signal (CAN from IPDM E/R)
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
B2619: BCM*	Inhibit engine cranking	1 second after the electronic steering column lock unit power supply output control inside BCM becomes normal
B26E1: ENG STATE NO RECIV	Inhibit engine cranking	When any of the following conditions are fulfilled • Power position changes to ACC • Receives engine status signal (CAN)

* : With electronic steering column lock

DTC Inspection Priority Chart

INFOID:0000000005532044

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

Priority	DTC
1	• B2562: LO VOLTAGE
2	• U1000: CAN COMM CIRCUIT • U1010: CONTROL UNIT (CAN)
3	• B2190: NATS ANTENNA AMP • B2191: DIFFERENCE OF KEY • B2192: ID DISCORD BCM-ECM • B2193: CHAIN OF BCM-ECM

Priority	DTC
4	• B2013: ID DISCORD BCM-S/L* • B2014: CHAIN OF S/L-BCM* • 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: TRANSMISSION RANGE SWITCH • B2605: TRANSMISSION RANGE SWITCH • B2606: S/L RELAY* • B2607: S/L RELAY* • B2608: STARTER RELAY • B2609: S/L STATUS* • B260A: IGNITION RELAY • B260B: STEERING LOCK UNIT* • B260C: STEERING LOCK UNIT* • B260D: STEERING LOCK UNIT* • B260F: ENG STATE SIG LOST • B2612: S/L STATUS* • B2614: ACC RELAY CIRC • B2615: BLOWER RELAY CIRC • B2616: IGN RELAY CIRC • B2617: STARTER RELAY CIRC • B2618: BCM • B2619: BCM* • B261A: PUSH-BTN IGN SW • B26E1: ENG STATE NO RECIV • 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 • C1712: [CHECKSUM ERR] FL • C1713: [CHECKSUM ERR] FR • C1714: [CHECKSUM ERR] RR • C1715: [CHECKSUM ERR] RL • C1716: [PRESSDATA ERR] FL • C1717: [PRESSDATA ERR] FR • C1718: [PRESSDATA ERR] RR • C1719: [PRESSDATA ERR] RL • C1720: [CODE ERR] FL • C1721: [CODE ERR] FR • C1722: [CODE ERR] RR • C1723: [CODE ERR] RL • C1724: [BATT VOLT LOW] FL • C1725: [BATT VOLT LOW] FR • C1726: [BATT VOLT LOW] RR • C1727: [BATT VOLT LOW] RL • C1734: CONTROL UNIT
6	• B2622: INSIDE ANTENNA • B2623: INSIDE ANTENNA

* : With electronic steering column lock

DTC Index

INFOID:0000000005532045

NOTE:

Details of time display

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

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	—	—	—	—
U1000: CAN COMM CIRCUIT	—	—	—	BCS-36
U1010: CONTROL UNIT (CAN)	—	—	—	BCS-37
U0415: VEHICLE SPEED SIG	—	—	—	BCS-38
B2013: ID DISCORD BCM-S/L*	×	—	—	SEC-39
B2014: CHAIN OF S/L-BCM*	×	—	—	SEC-40
B2190: NATS ANTENNA AMP	×	—	—	SEC-43
B2191: DIFFERENCE OF KEY	×	—	—	SEC-46
B2192: ID DISCORD BCM-ECM	×	—	—	SEC-47
B2193: CHAIN OF BCM-ECM	×	—	—	SEC-48
B2553: IGNITION RELAY	—	—	—	PCS-55
B2555: STOP LAMP	—	—	—	SEC-49
B2556: PUSH-BTN IGN SW	—	×	—	SEC-52
B2557: VEHICLE SPEED	×	×	—	SEC-54
B2560: STARTER CONT RELAY	×	×	—	SEC-55
B2562: LOW VOLTAGE	—	—	—	BCS-39
B2601: SHIFT POSITION	×	×	—	SEC-56
B2602: SHIFT POSITION	×	×	—	SEC-59
B2603: SHIFT POSI STATUS	×	×	—	SEC-62
B2604: TRANSMISSION RANGE SWITCH	×	×	—	SEC-65
B2605: TRANSMISSION RANGE SWITCH	×	×	—	SEC-67
B2606: S/L RELAY*	×	×	—	SEC-69
B2607: S/L RELAY*	×	×	—	SEC-70
B2608: STARTER RELAY	×	×	—	SEC-72
B2609: S/L STATUS*	×	×	—	SEC-74
B260A: IGNITION RELAY	×	×	—	PCS-57
B260B: STEERING LOCK UNIT*	—	×	—	SEC-78
B260C: STEERING LOCK UNIT*	—	×	—	SEC-79
B260D: STEERING LOCK UNIT*	—	×	—	SEC-80
B260F: ENG STATE SIG LOST	×	×	—	SEC-81
B2612: S/L STATUS*	×	×	—	SEC-83
B2614: ACC RELAY CIRC	—	×	—	PCS-59

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
B2615: BLOWER RELAY CIRC	—	×	—	PCS-62
B2616: IGN RELAY CIRC	—	×	—	PCS-65
B2617: STARTER RELAY CIRC	×	×	—	PCS-65
B2618: BCM	×	×	—	PCS-68
B2619: BCM*	×	×	—	SEC-89
B261A: PUSH-BTN IGN SW	—	×	—	SEC-90
B2622: INSIDE ANTENNA	—	—	—	DLK-60
B2623: INSIDE ANTENNA	—	—	—	DLK-63
B26E1: ENG STATE NO RES	×	×	—	SEC-82
C1704: LOW PRESSURE FL	—	—	×	WT-48
C1705: LOW PRESSURE FR	—	—	×	WT-48
C1706: LOW PRESSURE RR	—	—	×	WT-48
C1707: LOW PRESSURE RL	—	—	×	WT-48
C1708: [NO DATA] FL	—	—	×	WT-14
C1709: [NO DATA] FR	—	—	×	WT-14
C1710: [NO DATA] RR	—	—	×	WT-14
C1711: [NO DATA] RL	—	—	×	WT-14
C1712: [CHECKSUM ERR] FL	—	—	×	WT-16
C1713: [CHECKSUM ERR] FR	—	—	×	WT-16
C1714: [CHECKSUM ERR] RR	—	—	×	WT-16
C1715: [CHECKSUM ERR] RL	—	—	×	WT-16
C1716: [PRESSDATA ERR] FL	—	—	×	WT-18
C1717: [PRESSDATA ERR] FR	—	—	×	WT-18
C1718: [PRESSDATA ERR] RR	—	—	×	WT-18
C1719: [PRESSDATA ERR] RL	—	—	×	WT-18
C1720: [CODE ERR] FL	—	—	×	WT-16
C1721: [CODE ERR] FR	—	—	×	WT-16
C1722: [CODE ERR] RR	—	—	×	WT-16
C1723: [CODE ERR] RL	—	—	×	WT-16
C1724: [BATT VOLT LOW] FL	—	—	×	WT-16
C1725: [BATT VOLT LOW] FR	—	—	×	WT-16
C1726: [BATT VOLT LOW] RR	—	—	×	WT-16
C1727: [BATT VOLT LOW] RL	—	—	×	WT-16
C1729: VHCL SPEED SIG ERR	—	—	×	WT-20
C1734: CONTROL UNIT	—	—	×	WT-21

* : With electronic steering column lock

SYMPTOM DIAGNOSIS

NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH

Diagnosis Procedure

INFOID:0000000005461441

1. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT

Check BCM power supply and ground circuit. Refer to BCS-40, "Diagnosis Procedure".

Is the inspection result normal?

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

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

Check main power window and door lock/unlock switch power supply and ground circuit. Refer to PWC-19, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> Repair or replace the malfunctioning parts.

DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000005461442

1. CHECK FRONT POWER WINDOW MOTOR LH

Check front power window motor LH. Refer to PWC-27, "DRIVER SIDE : Component Function Check".

Is the inspection result normal?

YES >> Inspection End.
NO >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000005461443

1. CHECK FRONT POWER WINDOW MOTOR RH CIRCUIT

Check front power window motor RH circuit. Refer to PWC-29, "PASSENGER SIDE : Component Function Check".

Is the inspection result normal?

YES >> Inspection End.
NO >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000005461444

1. CHECK REAR POWER WINDOW MOTOR LH

Check rear power window motor LH. Refer to PWC-31, "REAR LH : Component Function Check".

Is the inspection result normal?

YES >> Inspection End.
NO >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000005461445

1. CHECK REAR POWER WINDOW MOTOR RH

Check rear power window motor RH. Refer to PWC-32, "REAR RH : Component Function Check".

Is the inspection result normal?

YES >> Inspection End.
NO >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

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

Diagnosis Procedure

INFOID:0000000005461446

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.
NO >> GO TO 2

2. CHECK ENCODER CIRCUIT

Check encoder circuit. Refer to PWC-35, "DRIVER SIDE : Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> Repair or replace malfunctioning parts.

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

Diagnosis Procedure

INFOID:0000000005461447

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.
NO >> GO TO 2

2. CHECK ENCODER CIRCUIT

Check encoder circuit. Refer to PWC-38, "PASSENGER SIDE : Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> Repair or replace the malfunctioning parts.

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

Diagnosis Procedure

INFOID:0000000005461448

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.
NO >> GO TO 2

2. CHECK ENCODER

Check encoder. Refer to PWC-35, "DRIVER SIDE : Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> Repair or replace the malfunctioning parts.

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

Diagnosis Procedure

INFOID:0000000005461449

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.
NO >> GO TO 2

2. CHECK ENCODER

Check encoder. Refer to PWC-38, "PASSENGER SIDE : Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> Repair or replace the malfunctioning parts.

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

Diagnosis Procedure

INFOID:0000000005461450

1. CHECK FRONT DOOR SWITCH

Check front door switch. Refer to PWC-41, "Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> Repair or replace malfunctioning parts.

DOES NOT OPERATE BY KEY CYLINDER SWITCH

Diagnosis Procedure

INFOID:0000000005461451

1. CHECK FRONT DOOR LOCK ASSEMBLY LH (KEY CYLINDER SWITCH)

Check front door lock assembly LH (key cylinder switch). Refer to PWC-44, "Diagnosis Procedure".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> Repair or replace malfunctioning parts.

KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000005461452

1. CHECK INTELLIGENT KEY FUNCTION

Check Intelligent Key function. Refer to DLK-115, "Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> Replace BCM. Refer to BCS-87, "Removal and Installation".

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

Diagnosis Procedure

INFOID:0000000005461453

1. CHECK POWER WINDOW LOCK SWITCH

Check power window lock switch. Refer to PWC-51, "Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> Repair or replace malfunctioning parts.

PRECAUTION

PRECAUTIONS

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

INFOID:0000000005461454

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 SR and SB section of this Service Manual.

WARNING:

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

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

WARNING:

- **When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**
- **When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.**

Precautions Necessary for Steering Wheel Rotation after Battery Disconnect (Early Production, With Electronic Steering Column Lock)

INFOID:0000000005885934

NOTE:

- Before removing and installing any control units, first turn the push-button ignition switch to the LOCK position, then disconnect both battery cables.
- After finishing work, confirm that all control unit connectors are connected properly, then re-connect both battery cables.
- Always use CONSULT-III to perform self-diagnosis as a part of each function inspection after finishing work. If a DTC is detected, perform trouble diagnosis according to self-diagnosis results.

This vehicle is equipped with a push-button ignition switch and a steering lock unit.
If the battery is disconnected or discharged, the steering wheel will lock and cannot be turned.
If turning the steering wheel is required with the battery disconnected or discharged, follow the procedure below before starting the repair operation.

OPERATION PROCEDURE

1. Connect both battery cables.
   NOTE:
   Supply power using jumper cables if battery is discharged.
2. Carry the Intelligent Key or insert it to the key slot and turn the push-button ignition switch to ACC position. (At this time, the steering lock will be released.)
3. Disconnect both battery cables. The steering lock will remain released with both battery cables disconnected and the steering wheel can be turned.
4. Perform the necessary repair operation.

5. When the repair work is completed, re-connect both battery cables. With the brake pedal released, turn the push-button ignition switch from ACC position to ON position, then to LOCK position. (The steering wheel will lock when the push-button ignition switch is turned to LOCK position.)
6. Perform self-diagnosis check of all control units using CONSULT-III.

ON-VEHICLE MAINTENANCE

PRE-INSPECTION FOR DIAGNOSTIC

Basic Inspection

INFOID:0000000005461456

BASIC INSPECTION

1. INSPECTION START

1. Check the service history.
2. Check the following parts.

- Fuse/circuit breaker blown.
- Poor connection, open or short circuit of harness connector.
- Battery voltage.

Is the inspection result normal?

YES >> Inspection End.
NO >> Repair or replace the malfunctioning parts.

ON-VEHICLE REPAIR

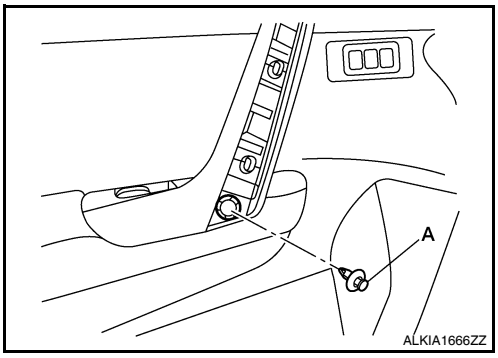
POWER WINDOW MAIN SWITCH

Removal and Installation

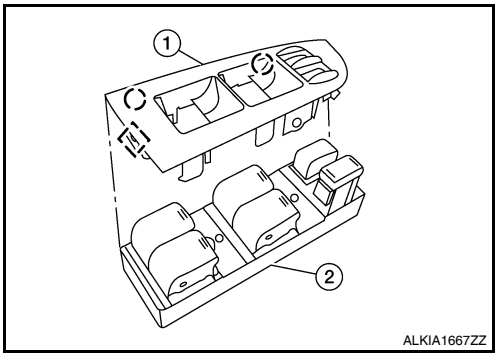
INFOID:0000000005461457

REMOVAL

1. Remove the front door grip cover. Refer to INT-18, "Exploded View".
2. Remove the power window main switch locking clip (A).



3. Using a suitable tool, release the metal clip and lift the power window main switch and finisher as an assembly upward to remove it from the front door finisher.
   : Metal clip
   : Pawl
4. Disconnect the harness connector.
5. Release the pawls on each side, then separate the switch finisher (1) from the power window main switch (2) and remove.
   CAUTION:
   Do not fold the pawl of power window main switch finisher.



INSTALLATION

Installation is in the reverse order of removal.

NOTE:

After every switch harness disconnection, it is necessary to perform the initialization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

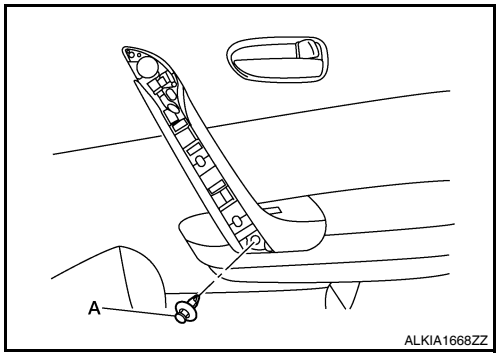
FRONT POWER WINDOW SWITCH

Removal and Installation

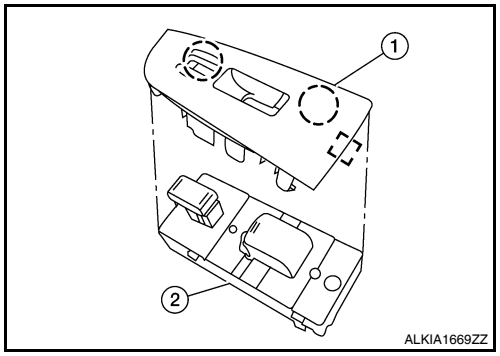
INFOID:0000000005461458

REMOVAL

1. Remove the front door grip cover. Refer to INT-18, "Exploded View".
2. Remove the front power window switch locking clip (A).



3. Using a suitable tool, release the metal clip and lift the front power window switch and finisher as an assembly upward to remove it from the front door finisher.
   : Metal clip
   : Pawl
   CAUTION:
   Wrap a cloth around suitable tool to protect components from damage.
4. Disconnect the harness connector.
5. Release the pawls on each side, then separate the switch finisher (1) from the front power window switch (2) and remove.
   CAUTION:
   Do not fold the pawl of front power window switch finisher.



INSTALLATION

Installation is in the reverse order of removal.

NOTE:

After every switch harness disconnection, it is necessary to perform the Initilization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

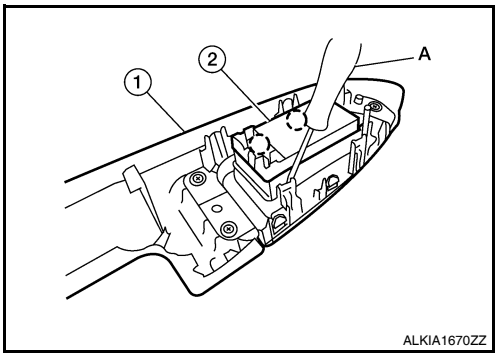
REAR POWER WINDOW SWITCH

Removal and Installation

INFOID:0000000005461459

REMOVAL

1. Remove the rear door arm rest finisher (1). Refer to INT-21, "Exploded View".
2. Release the pawls on each side with suitable tool (A), then separate the rear power window switch (2) from the finisher (1) and remove.
   ◌: Pawl
   CAUTION:
   Wrap a cloth around suitable tools to protect components from damage.



INSTALLATION

Installation is in the reverse order of removal.

NOTE:

After every switch harness disconnection, it is necessary to perform the initialization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

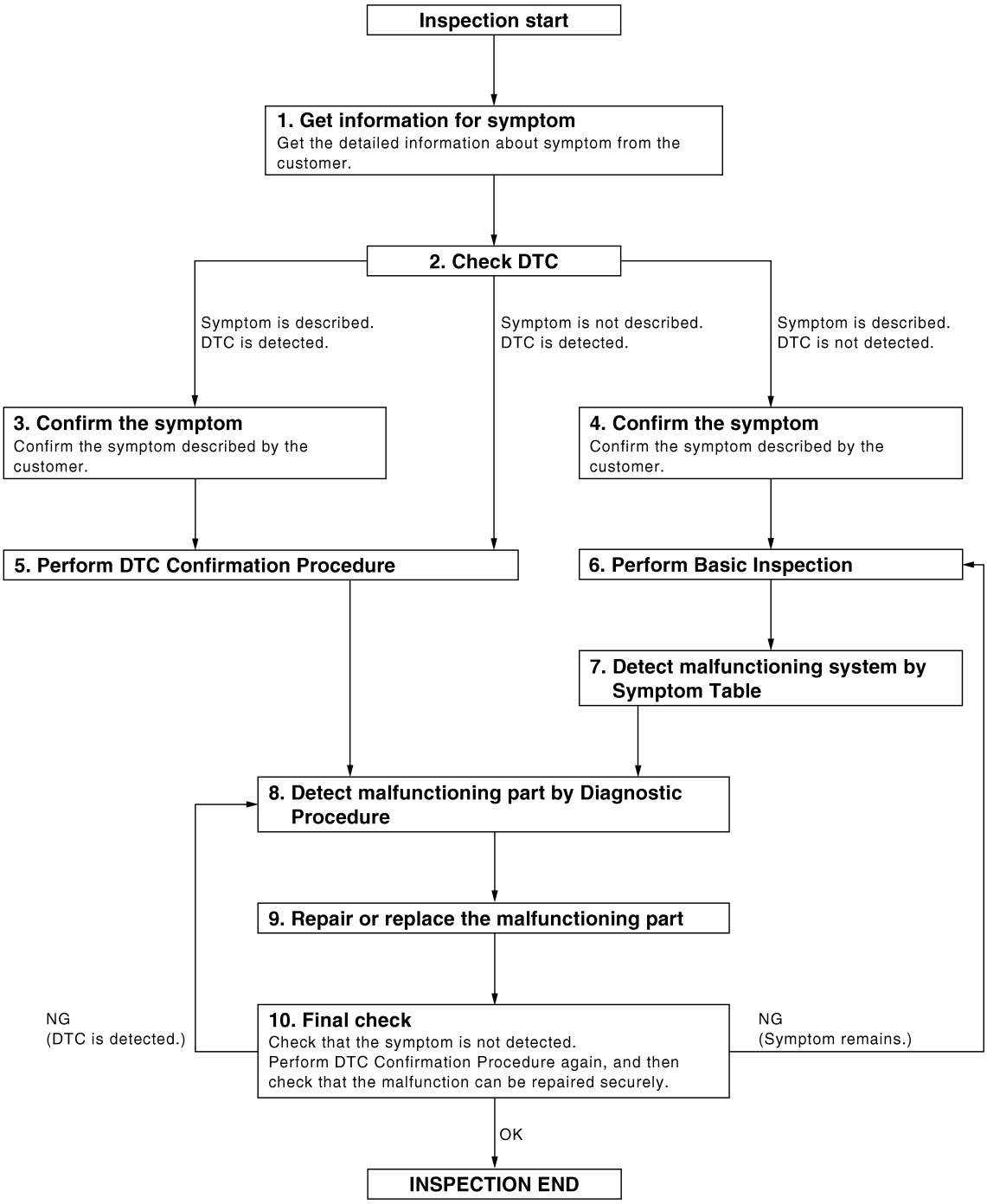
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000005461460

OVERALL SEQUENCE



JMKIA0101GB

DETAILED FLOW

1. GET INFORMATION FOR SYMPTOM

Get the detailed information from the customer about the symptom (the condition and the environment when the incident/malfunction occurred).

>> GO TO 2

2. CHECK DTC

1. Check DTC.
2. Perform the following procedure if DTC is displayed.
- Record DTC and freeze frame data (Print them out with CONSULT-III.)
- Erase DTC.
- Study the relationship between the cause detected by DTC and the symptom described by the customer.
3. Check related service bulletins for information.

Is any symptom described and any DTC detected?

Symptom is described, DTC is displayed>>GO TO 3
Symptom is described, DTC is not displayed>>GO TO 4
Symptom is not described, DTC is displayed>>GO TO 5

3. CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.
Connect CONSULT-III to the vehicle in “DATA MONITOR” mode and check real time diagnosis results.
Verify relation between the symptom and the condition when the symptom is detected.

>> GO TO 5

4. CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.
Connect CONSULT-III to the vehicle in “DATA MONITOR” mode and check real time diagnosis results.
Verify relation between the symptom and the condition when the symptom is detected.

>> GO TO 6

5. PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC Confirmation Procedure for the displayed DTC, and then check that DTC is detected again.
At this time, always connect CONSULT-III to the vehicle, and check diagnostic results in real time.
If two or more DTCs are detected, refer to BCS-79, "DTC Inspection Priority Chart" and determine trouble diagnosis order.

NOTE:

- Freeze frame data is useful if the DTC is not detected.
- Perform Component Function Check if DTC Confirmation Procedure is not included in Service Manual. This simplified check procedure is an effective alternative though DTC cannot be detected during this check.
  If the result of Component Function Check is NG, it is the same as the detection of DTC by DTC Confirmation Procedure.

Is DTC detected?

YES >> GO TO 8
NO >> Refer to GI-39, "Intermittent Incident".

6. PERFORM BASIC INSPECTION

Perform PWC-131, "Work Flow".

Inspection End>>GO TO 7

7. DETECT MALFUNCTIONING SYSTEM BY SYMPTOM TABLE

Detect malfunctioning system based on the confirmed symptom in step 4, and determine the trouble diagnosis order based on possible causes and symptom.

>> GO TO 8

8. DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

NOTE:

The Diagnostic Procedure described based on open circuit inspection. A short circuit inspection is also required for the circuit check in the Diagnostic Procedure.

Is malfunctioning part detected?

YES >> GO TO 9
NO >> Check voltage of related BCM terminals using CONSULT-III.

9. REPAIR OR REPLACE THE MALFUNCTIONING PART

1. Repair or replace the malfunctioning part.
2. Reconnect parts or connectors disconnected during Diagnostic Procedure again after repair and replacement.
3. Check DTC. If DTC is displayed, erase it.

>> GO TO 10

10. FINAL CHECK

When DTC was detected in step 2, perform DTC Confirmation Procedure or Component Function Check again, and then check that the malfunction has been repaired securely.

When symptom was described from the customer, refer to confirmed symptom in step 3 or 4, and check that the symptom is not detected.

Does the symptom reappear?

YES (DTC is detected)>>GO TO 8
YES (Symptom remains)>>GO TO 6
NO >> Inspection End.

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description

INFOID:0000000005461461

Initial setting is necessary when battery terminal is diconnected.

CAUTION:

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

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

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement

INFOID:0000000005461462

INITIALIZATION PROCEDURE

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

CHECK ANTI-PINCH FUNCTION

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

- Check that glass lowers for approximately 150 mm (5.91 in) or 2 seconds without pinching piece of wood and stops.
- Check that glass does not rise when operating the power window main switch while lowering.

CAUTION:

- **Do not check with hands and other parts of the body because they may be pinched. Do not get pinched.**
- **Check that AUTO-UP operates before inspection when system initialization is performed.**
- **It may switch to fail-safe mode if open/close operation is performed continuously. Perform initial setting in that situation. Refer to PWC-192, "Fail Safe", PWC-203, "Fail Safe" or PWC-214, "Fail Safe".**
- **Perform initial setting when auto-up operation or anti-pinch function does not operate normally.**
- **Finish initial setting. Otherwise, next operation cannot be done.**

1. **Auto-up operation**
2. **Anti-pinch function**
3. **Retained power operation when ignition switch is OFF.**

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description

INFOID:0000000005461463

Initial setting is necessary when replacing main power window and door lock/unlock switch.

CAUTION:

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

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

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement

INFOID:0000000005461464

INITIALIZATION PROCEDURE

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

CHECK ANTI-PINCH FUNCTION

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

- Check that glass lowers for approximately 150 mm (5.91 in) or 2 seconds without pinching piece of wood and stops.
- Check that glass does not rise when operating the main power window and door lock/unlock switch while lowering.

CAUTION:

- **Do not check with hands and other parts of the body because they may be pinched. Do not get pinched.**
- **Check that AUTO-UP operates before inspection when system initialization is performed.**
- **It may switch to fail-safe mode if open/close operation is performed continuously. Perform initial setting in that situation. Refer to PWC-192, "Fail Safe", PWC-203, "Fail Safe" or PWC-214, "Fail Safe".**
- **Perform initial setting when auto-up operation or anti-pinch function does not operate normally.**
- **Finish initial setting. Otherwise, next operation cannot be done.**

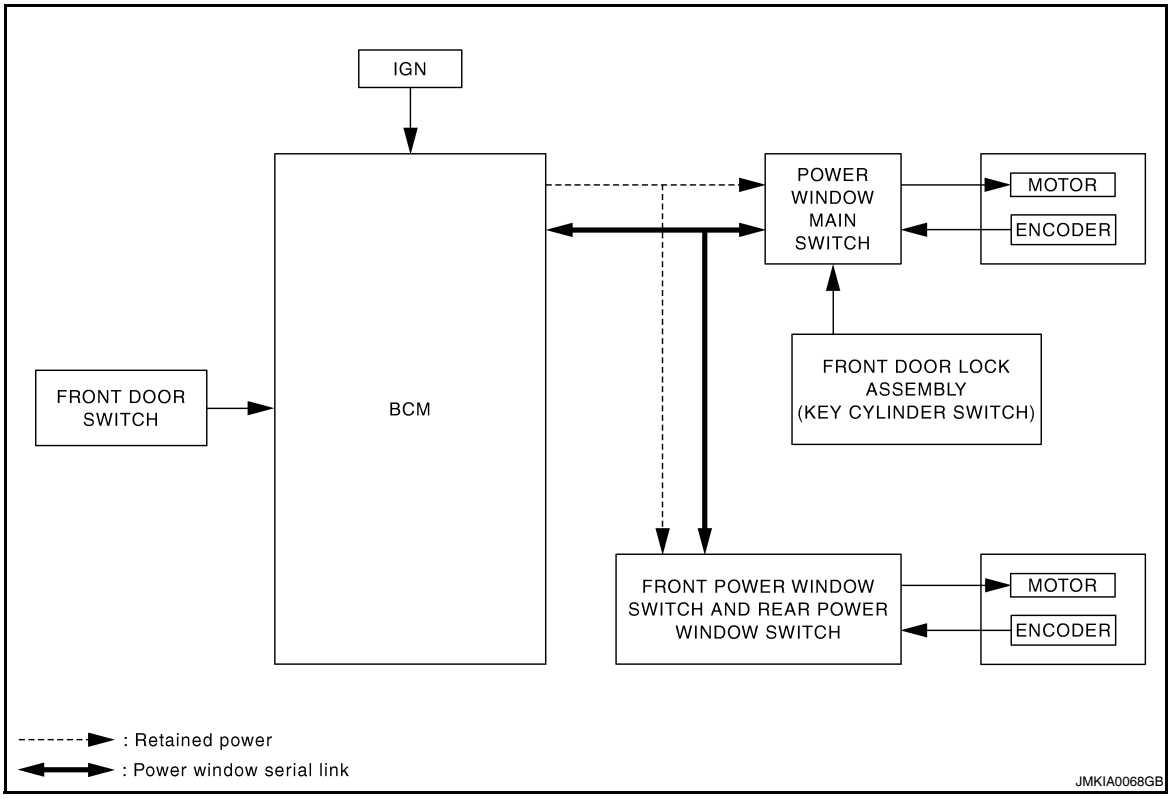
1. **Auto-up operation**
2. **Anti-pinch function**
3. **Retained power operation when ignition switch is OFF.**

FUNCTION DIAGNOSIS

POWER WINDOW SYSTEM

System Diagram

INFOID:0000000005461465



System Description

INFOID:0000000005461466

POWER WINDOW MAIN SWITCH
INPUT/OUTPUT SIGNAL CHART

Item	Input signal to power window main switch	Power window main switch function	Actuator
Key cylinder switch	LOCK/UNLOCK signal (more than 1 second over)	Power window control	Each power window motor
Encoder	Encoder pulse signal		
Power window main switch	Front power window motor (driver side) UP/DOWN signal		
Front power window switch (passenger side)	Front power window motor (passenger side) UP/DOWN signal		
Rear power window switch	Rear power window motor UP/DOWN signal		
BCM	RAP signal		

FRONT POWER WINDOW & REAR POWER WINDOW SWITCH
INPUT/OUTPUT SIGNAL CHART

Item	Input signal to front power window & rear power window switch	Front power window & rear power window switch function	Actuator
Encoder	Encoder pulse signal	Power window control	Front power window motor (passenger side) & rear power window motor
BCM	RAP signal		
Front power window switch (passenger side) & rear power window switch	Front power window motor (passenger side) & rear power window motor UP/DOWN signal		

POWER WINDOW OPERATION

- Power window system is operable during the retained power operation timer after turning ignition switch ON and OFF.
- Power window main switch (driver side) can open/close all windows.
- Front & rear power window switch can open/close the corresponding windows.

POWER WINDOW AUTO-OPERATION

- AUTO UP/DOWN operation can be performed when each 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 during the 45 seconds even when ignition switch is turned OFF.

Retained power function cancel conditions

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

POWER WINDOW LOCK

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

ANTI-PINCH OPERATION

- Pinch foreign material in the door glass during AUTO-UP operation, and it is the anti-pinch function that lowers the door glass 150 mm (5.91 in) or 2 seconds when detected.
- Encoder continues detecting the movement of power window motor and transmits to power window switch as the encoder pulse signal while power window motor is operating.
- Resistance is applied to the power window motor rotation that changes the frequency of encoder pulse signal if foreign material is trapped in the door glass.
- Power window switch controls to lower the window glass for 150 mm or 2 seconds after it detects encoder pulse signal frequency change.

OPERATION CONDITION

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

NOTE:

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

KEY CYLINDER SWITCH OPERATION

Hold the door key cylinder to the LOCK or UNLOCK direction for 1 second or more to OPEN or CLOSE all 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 second or more to perform CLOSE operation of the door glass.

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

KEYLESS POWER WINDOW DOWN FUNCTION

All power windows open when the unlock button on Intelligent Key is activated and kept pressed for more than 3 seconds[NOTE] 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 is active, 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 BCS-25, "INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY)".

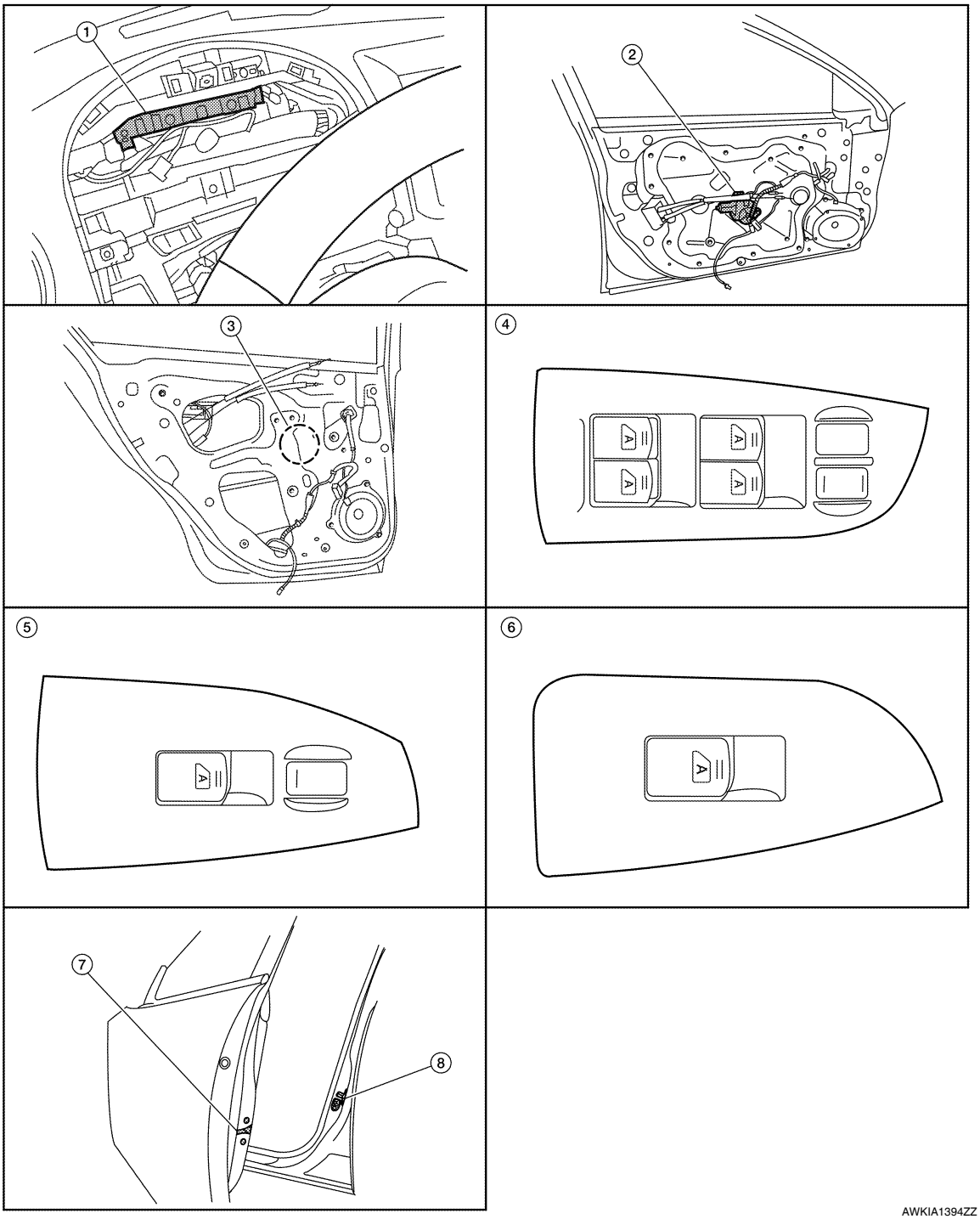
NOTE:

Use CONSULT-III to change settings.

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

Component Parts Location

INFOID:0000000005461467



1. BCM M16, M17, M18 (view with combination meter removed)
2. Front power window motor LH D9 Front power window motor RH D104
3. Rear power window motor LH D204 Rear power window motor RH D304
4. Main power window and door lock/ unlock switch D7, D8
5. Power window and door lock/unlock switch RH D105
6. Rear power window switch LH D207 Rear power window switch RH D307
7. Front door lock assembly LH (key cylinder switch) D10
8. Front door switch LH B8 Front door switch RH B108

Component Description

INFOID:0000000005461468

Component	Function
BCM	• Supplies power supply to power window switch. • Controls retained power.
Power window main switch	• Directly controls all power window motor of all doors. • Controls anti-pinch operation of power window.
Front power window switch	• Controls anti-pinch operation of power window. • Controls power window motor of passenger door.
Rear power window switch	• Controls anti-pinch operation of power window. • Controls power window motor of rear right and left doors.
Power window motor	• Integrates the ENCODER and WINDOW MOTOR. • Starts operating with signals from each power window switch. • Transmits power window motor rotation as a pulse signal to power window switch.
Front door lock assembly (key cylinder switch)	Transmits operation condition of key cylinder switch to power window main switch.
Front door switch	Detects door open/close condition and transmits to BCM.

DIAGNOSIS SYSTEM (BCM)
COMMON ITEM
COMMON ITEM : Diagnosis Description

INFOID:0000000005532046

BCM CONSULT-III FUNCTION
CONSULT-III 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 MNTR	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	• Enables to read and save the vehicle specification. • Enables to 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.

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	HEADLAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
Intelligent Key system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
BCM	BCM	×		
Immobilizer	IMMU		×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Trunk open	TRUNK		×	×
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	AIR PRESSURE MONITOR	×	×	×

COMMON ITEM : CONSULT-III Function

INFOID:0000000005532047

ECU IDENTIFICATION
Displays the BCM part No.

SELF-DIAG RESULT
Refer to BCS-81, "DTC Index".

RETAINED PWR

RETAINED PWR : CONSULT-III Function (BCM - RETAINED PWR)

INFOID:0000000005532048

Data monitor

Monitor Item [Unit]	Description
DOOR SW-DR [ON/OFF]	Indicates condition of front door switch LH.
DOOR SW-AS [ON/OFF]	Indicates condition of front door switch RH.

COMPONENT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

BCM

BCM : Diagnosis Procedure

INFOID:0000000005532049

Regarding Wiring Diagram information, refer to BCS-69, "Wiring Diagram".

1. CHECK FUSE AND FUSIBLE LINK

Check if the following BCM fuses or fusible link are blown.

Terminal No.	Signal name	Fuse and fusible link No.
1	Battery power supply	H
11		10
24		7

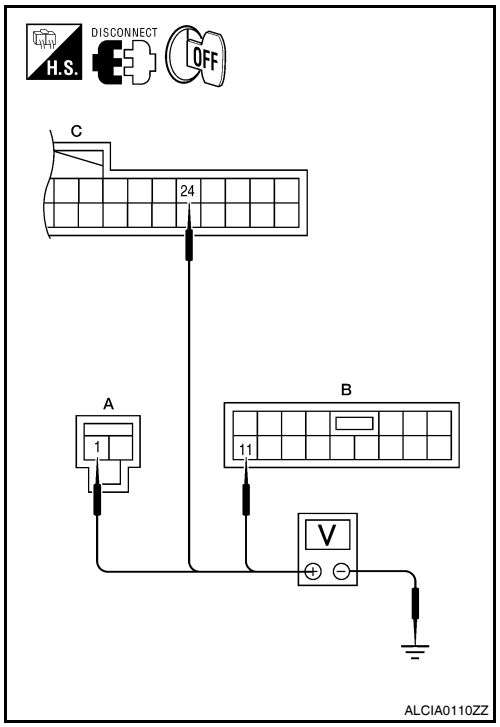
Is the fuse or fusible link blown?

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

2. CHECK POWER SUPPLY CIRCUIT

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

Terminals			Voltage (Approx.)
(+)		(−)	
BCM			
Connector	Terminal		
M16 (A)	1	Ground	Battery voltage
M17 (B)	11		
M18 (C)	24		



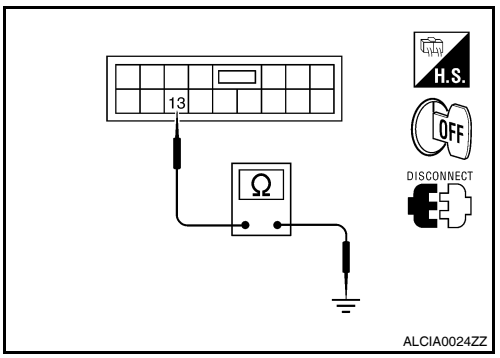
Is the measurement normal?

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

3. CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M17	13		Yes



Does continuity exist?

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

BCM : Special Repair Requirement

INFOID:0000000005532050

1. REQUIRED WORK WHEN REPLACING BCM

Initialize control unit. Refer to BCS-6, "CONFIGURATION (BCM) : Special Repair Requirement".

>> Work End.

POWER WINDOW MAIN SWITCH

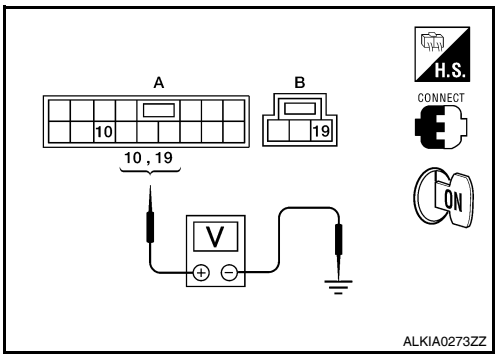
POWER WINDOW MAIN SWITCH : Diagnosis Procedure

INFOID:0000000005461474

Regarding Wiring Diagram information, refer to PWC-184, "Wiring Diagram".

1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch ON.
2. Check voltage between main power window and door lock/unlock switch connectors D7 (A) terminal 10 and D8 (B) terminal 19 and ground.



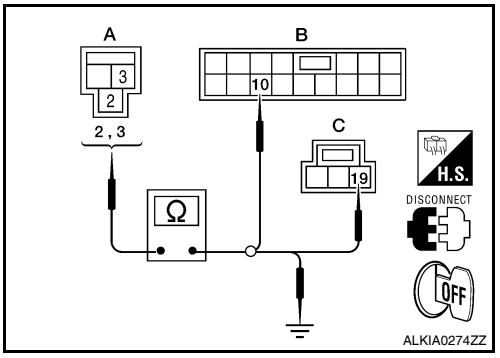
Terminal			Voltage (V) (Approx.)
(+)		(–)	
Main power window and door lock/unlock switch connector	Terminal		
D7 (A)	10	Ground	Battery voltage
D8 (B)	19		

Is the inspection result normal?

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

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect BCM connector M16 and main power window and door lock/unlock switch connectors.
3. Check continuity between BCM connector M16 (A) terminals 2 and 3 and main power window and door lock/unlock switch connectors D7 (B) terminal 10 and D8 (C) terminal 19.



BCM connector	Terminal	Main power window and door lock/unlock switch connector	Terminal	Continuity
M16 (A)	3	D7 (B)	10	Yes
	2	D8 (C)	19	

4. Check continuity between BCM connector M16 (A) terminals 2 and 3 and ground.

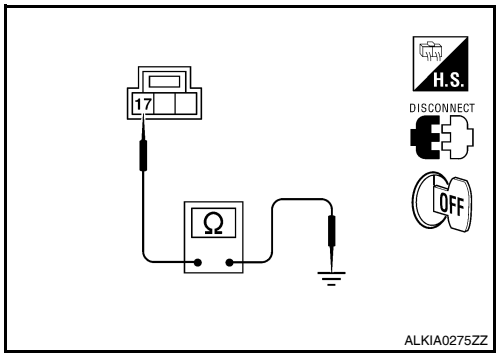
BCM connector	Terminal	Ground	Continuity
M16 (A)	3		No
	2		

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-87, "Removal and Installation".
NO >> Repair or replace harness or connectors.

3. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect main power window and door lock/unlock switch connector D8.
3. Check continuity between main power window and door lock/unlock switch connector D8 terminal 17 and ground.



Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D8	17		Yes

Is the inspection result normal?

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

POWER WINDOW MAIN SWITCH : Special Repair Requirement

INFOID:0000000005461475

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> End.

FRONT POWER WINDOW SWITCH

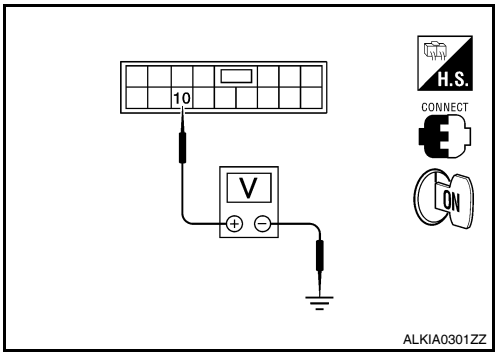
FRONT POWER WINDOW SWITCH : Diagnosis Procedure

INFOID:0000000005461476

Regarding Wiring Diagram information, refer to PWC-195, "Wiring Diagram".

1. CHECK POWER SUPPLY CIRCUIT

Check voltage between power window and door lock/unlock switch RH connector D105 terminal 10 and ground.



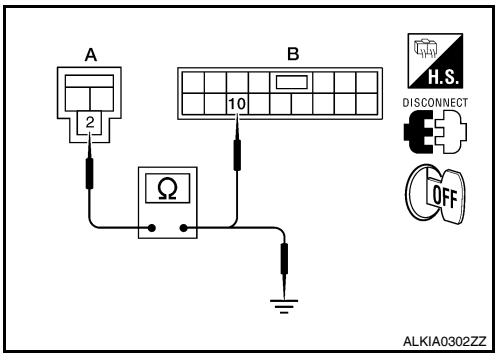
Terminal			Voltage (V) (Approx.)
(+)		(–)	
Power window and door lock/unlock switch RH connector	Terminal		
D105	10	Ground	Battery voltage

Is the inspection result normal?

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

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect BCM connector M16 and power window and door lock/unlock switch RH connector.
3. Check continuity between BCM connector M16 (A) terminal 2 and power window and door lock/unlock switch RH connector D105 (B) terminal 10.



BCM connector	Terminal	Power window and door lock/unlock switch RH connector	Terminal	Continuity
M16 (A)	2	D105 (B)	10	Yes

4. Check continuity between BCM connector M16 (A) terminal 2 and ground.

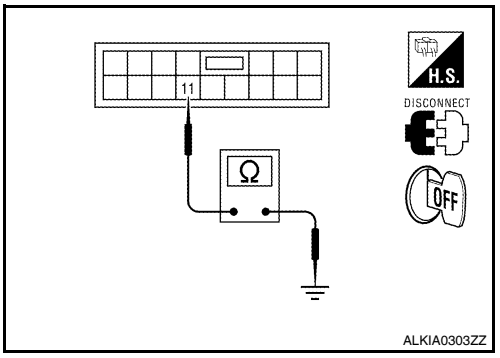
BCM connector	Terminal	Ground	Continuity
M16 (A)	2		No

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-87, "Removal and Installation".
NO >> Repair or replace harness or connectors.

3. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect power window and door lock/unlock switch RH.
3. Check continuity between power window and door lock/unlock switch RH connector D105 terminal 11 and ground.



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

Is the inspection result normal?

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

FRONT POWER WINDOW SWITCH : Special Repair Requirement

INFOID:0000000005461477

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> End.

REAR POWER WINDOW SWITCH

REAR POWER WINDOW SWITCH : Diagnosis Procedure

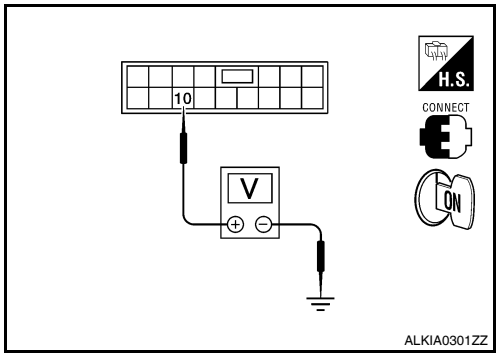
INFOID:0000000005461478

Regarding Wiring Diagram information, refer to PWC-184, "Wiring Diagram".

1. CHECK POWER SUPPLY CIRCUIT

Check voltage between rear power window switch connector terminal 10 and ground.

(+)		(–)	Voltage (V) (Approx.)
Rear power window switch			
Connector	Terminal		
D207 (LH)	10	Ground	Battery voltage
D307 (RH)			



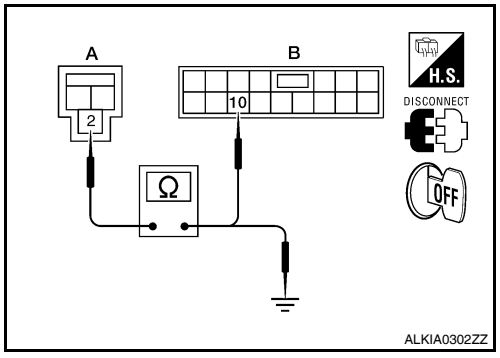
Is the inspection result normal?

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

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect BCM connector M16 and rear power window switch connector.
3. Check continuity between BCM connector M16 (A) terminal 2 and rear power window switch connector (B) terminal 10.

BCM connector	Terminal	Rear power window switch connector	Terminal	Continuity
M16 (A)	2	D207 (LH) (B)	10	Yes
		D307 (RH) (B)		



4. Check continuity between BCM connector M16 (A) terminal 2 and ground.

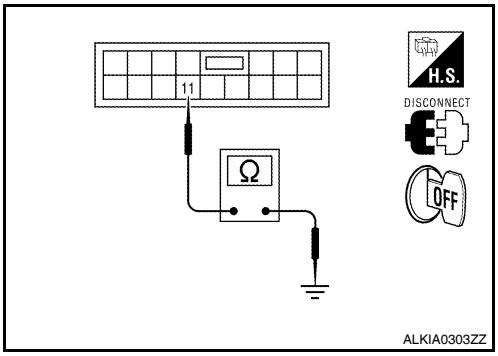
BCM connector	Terminal	Ground	Continuity
M16 (A)	2		No

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-87, "Removal and Installation".
NO >> Repair or replace harness or connectors.

3. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect rear power window switch connector.
3. Check continuity between rear power window switch connector terminal 11 and ground.



Rear power window switch connector	Terminal	Ground	Continuity
D207 (LH)	11		Yes
D307 (RH)			

Is the inspection result normal?

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

REAR POWER WINDOW SWITCH : Special Repair Requirement

INFOID:0000000005461479

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> End.

POWER WINDOW MOTOR
DRIVER SIDE

DRIVER SIDE : Description

INFOID:0000000005461480

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

DRIVER SIDE : Component Function Check

INFOID:0000000005461481

1. CHECK POWER WINDOW MOTOR

Check that front power window motor LH operates with main power window and door lock/unlock switch.

Is the inspection result normal?

YES >> Front power window motor LH is OK.
NO >> Refer to PWC-149, "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE : Diagnosis Procedure

INFOID:0000000005461482

Regarding Wiring Diagram information, refer to PWC-184, "Wiring Diagram".

1. CHECK POWER WINDOW MOTOR

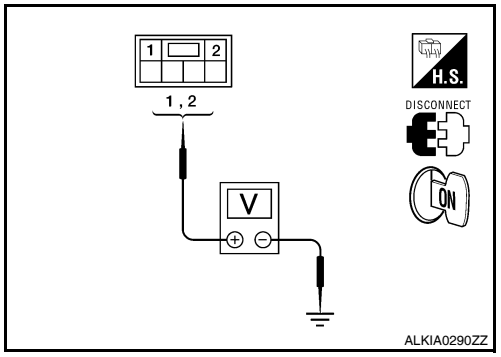
Check front power window motor LH. Refer to PWC-150, "DRIVER SIDE : Component Inspection".

Is the inspection result normal?

YES >> GO TO 2
NO >> Replace power window motor LH. Refer to GW-19, "Removal and Installation".

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

1. Disconnect front power window motor LH connector.
2. Turn ignition switch ON.
3. Check voltage between front power window motor LH connector D9 terminals 1, 2 and ground.



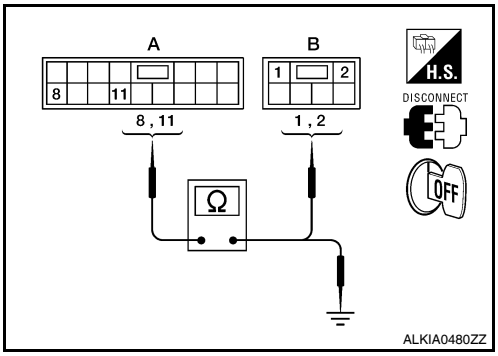
Terminal			Main power window and door lock/unlock switch condition	Voltage (V) (Approx.)
(+)		(–)		
Power window motor LH connector	Terminal			
D9	2	Ground	UP	Battery voltage
			DOWN	0
	1		UP	0
			DOWN	Battery voltage

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> GO TO 3

3. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect main power window and door lock/unlock switch connector D7.
3. Check continuity between main power window and door lock/unlock switch connector D7 (A) terminals 8, 11 and front power window motor connector LH D9 (B) terminals 1, 2.



Main power window and door lock/unlock switch connector	Terminal	Front power window motor LH connector	Terminal	Continuity
D7 (A)	8	D9 (B)	2	Yes
	11		1	

4. Check continuity between main power window and door lock/unlock switch connector D7 (A) terminals 8, 11 and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7 (A)	8		No
	11		

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-128, "Removal and Installation".
NO >> Repair or replace harness or connectors.

DRIVER SIDE : Component Inspection

INFOID:0000000005461483

COMPONENT INSPECTION

1. CHECK FRONT POWER WINDOW MOTOR LH

1. Disconnect front power window motor LH.
2. Check motor operation by connecting battery voltage directly to front power window motor LH.

Terminal		Motor condition
(+)	(–)	
1	2	DOWN
2	1	UP

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace front power window motor LH. Refer to GW-19, "Removal and Installation".

DRIVER SIDE : Special Repair Requirement

INFOID:0000000005461484

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> End.

PASSENGER SIDE

PASSENGER SIDE : Description

INFOID:0000000005461485

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

PASSENGER SIDE : Component Function Check

INFOID:0000000005461486

1. CHECK POWER WINDOW MOTOR CIRCUIT

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

Is the inspection result normal?

YES >> Front power window motor RH is OK.
NO >> Refer to PWC-151, "PASSENGER SIDE : Diagnosis Procedure".

PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000005461487

Regarding Wiring Diagram information, refer to PWC-195, "Wiring Diagram".

1. CHECK FRONT POWER WINDOW MOTOR RH

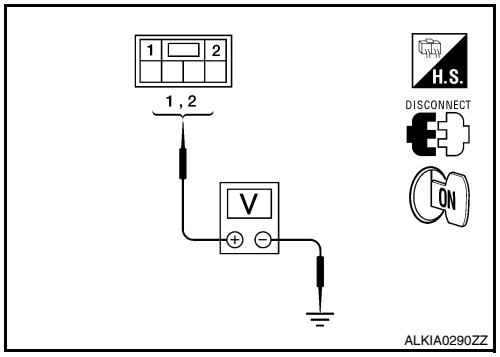
Check front power window motor RH. Refer to PWC-152, "PASSENGER SIDE : Component Inspection".

Is the inspection result normal?

YES >> GO TO 2
NO >> Replace front power window motor RH. Refer to GW-19, "Removal and Installation".

2. CHECK FRONT POWER WINDOW SWITCH RH OUTPUT SIGNAL

1. Disconnect front power window motor RH connector.
2. Turn ignition switch ON.
3. Check voltage between front power window motor RH connector D104 terminals 1, 2 and ground.



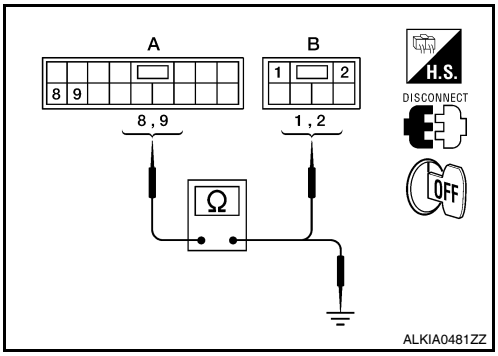
Terminal			Front power window motor RH condition	Voltage (V) (Approx.)
(+)		(–)		
Front power window motor RH connector	Terminal			
D104	2	Ground	UP	Battery voltage
			DOWN	0
	1		UP	0
			DOWN	Battery voltage

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> GO TO 3

3. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect power window and door lock/unlock switch RH connector.
3. Check continuity between power window and door lock/unlock switch RH connector D105 (A) terminals 8, 9 and front power window motor RH connector D104 (B) terminals 1, 2.



Power window and door lock/unlock switch RH connector	Terminal	Front power window motor RH connector	Terminal	Continuity
D105 (A)	8	D104 (B)	2	Yes
	9		1	

4. Check continuity between power window and door lock/unlock switch RH connector D105 (A) terminals 8, 9 and ground.

Power window and door lock/unlock switch RH connector	Terminal	Ground	Continuity
D105 (A)	8		No
	9		

Is the inspection result normal?

YES >> Replace power window and door lock/unlock switch RH. Refer to PWC-129, "Removal and Installation".

NO >> Repair or replace harness or connectors.

PASSENGER SIDE : Component Inspection

INFOID:0000000005461488

COMPONENT INSPECTION

1. CHECK FRONT POWER WINDOW MOTOR RH

1. Disconnect front power window motor RH.
2. Check motor operation by connecting battery voltage directly to front power window motor RH.

Terminal		Motor condition
(+)	(–)	
1	2	DOWN
2	1	UP

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace front power window motor RH. Refer to GW-19, "Removal and Installation".

PASSENGER SIDE : Special Repair Requirement

INFOID:0000000005461489

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> End.

REAR LH

REAR LH : Description

INFOID:0000000005461490

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

REAR LH : Component Function Check

INFOID:0000000005461491

1. CHECK POWER WINDOW MOTOR CIRCUIT

Check that rear power window motor LH operates with main power window and door lock/unlock switch or rear power window switch LH.

Is the inspection result normal?

YES >> Rear power window motor LH is OK.
NO >> Refer to PWC-153, "REAR LH : Diagnosis Procedure".

REAR LH : Diagnosis Procedure

INFOID:0000000005461492

Regarding Wiring Diagram information, refer to PWC-206, "Wiring Diagram".

1. CHECK REAR POWER WINDOW MOTOR LH

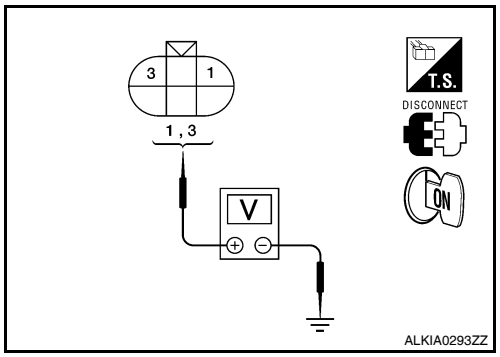
Check rear power window motor LH. Refer to PWC-154, "REAR LH : Component Inspection".

Is the inspection result normal?

YES >> GO TO 2
NO >> Replace rear power window motor LH. Refer to GW-24, "Rear Door Glass Regulator".

2. CHECK REAR POWER WINDOW SWITCH LH OUTPUT SIGNAL

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



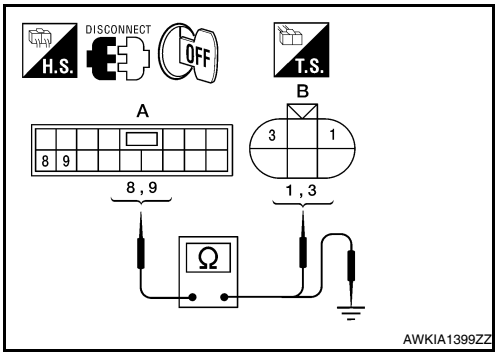
Terminal			Condition	Voltage (V) (Approx.)
(+)		(–)		
Rear power window motor LH connector	Terminal			
D204	1	Ground	UP	Battery voltage
			DOWN	0
	3		UP	0
			DOWN	Battery voltage

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> GO TO 3

3. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect rear power window switch LH connector.
3. Check continuity between rear power window switch LH connector D207 (A) terminals 8, 9 and rear power window motor LH connector D204 (B) terminals 1, 3.



Rear power window switch LH connector	Terminal	Rear power window motor LH connector	Terminal	Continuity
D207 (A)	8	D204 (B)	1	Yes
	9		3	

4. Check continuity between rear power window switch LH connector D207 (A) terminals 8, 9 and ground.

Rear power window switch LH connector	Terminal	Ground	Continuity
D207 (A)	8		No
	9		

Is the inspection result normal?

YES >> Replace rear power window switch LH. Refer to PWC-129, "Removal and Installation".
NO >> Repair or replace harness or connectors.

REAR LH : Component Inspection

INFOID:0000000005461493

COMPONENT INSPECTION

1. CHECK REAR POWER WINDOW MOTOR LH

1. Disconnect rear power window motor LH.
2. Check motor operation by connecting battery voltage directly to rear power window motor LH.

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

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace rear power window motor LH. Refer to GW-19, "Removal and Installation".

REAR LH : Special Repair Requirement

INFOID:0000000005461494

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> End.

REAR RH

REAR RH : Description

INFOID:0000000005461495

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

REAR RH : Component Function Check

INFOID:0000000005461496

1. CHECK POWER WINDOW MOTOR CIRCUIT

Check that rear power window motor RH operates with main power window and door lock/unlock switch or rear power window switch RH.

Is the inspection result normal?

YES >> Rear power window motor RH is OK.
NO >> Refer to PWC-155, "REAR RH : Diagnosis Procedure".

REAR RH : Diagnosis Procedure

INFOID:0000000005461497

Regarding Wiring Diagram information, refer to PWC-184, "Wiring Diagram".

1. CHECK REAR POWER WINDOW MOTOR RH

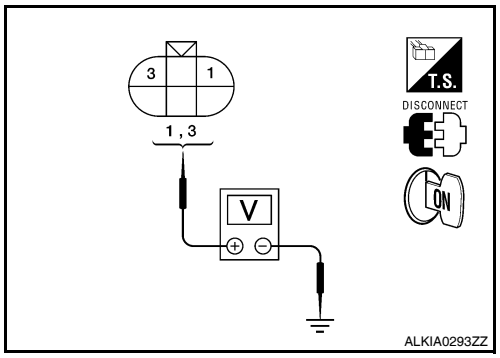
Check rear power window motor RH. Refer to PWC-156, "REAR RH : Component Inspection".

Is the inspection result normal?

YES >> GO TO 2
NO >> Replace rear power window motor RH. Refer to GW-24, "Rear Door Glass Regulator".

2. CHECK REAR POWER WINDOW SWITCH RH OUTPUT SIGNAL

1. Disconnect rear power window motor RH connector.
2. Turn ignition switch ON.
3. Check voltage between rear power window motor RH connector D304 terminals 1, 3 and ground.



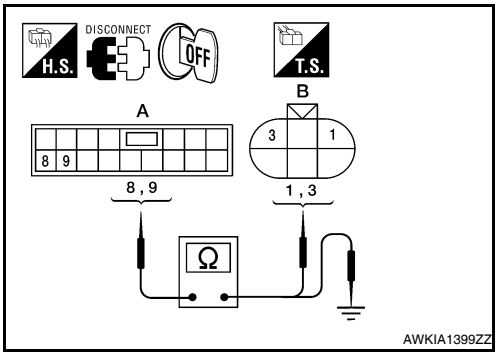
Terminal			Condition	Voltage (V) (Approx.)
(+)		(–)		
Rear power window motor RH connector	Terminal			
D304	1	Ground	UP	Battery voltage
			DOWN	0
	3		UP	0
			DOWN	Battery voltage

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> GO TO 3

3. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect rear power window switch RH connector.
3. Check continuity between rear power window switch RH connector D307 (A) terminals 8, 9 and rear power window motor RH connector D304 (B) terminals 1, 3.



Rear power window switch RH connector	Terminal	Rear power window motor RH connector	Terminal	Continuity
D307 (A)	8	D304 (B)	1	Yes
	9		3	

4. Check continuity between rear power window switch RH connector D307 (A) terminals 8, 9 and ground.

Rear power window switch RH connector	Terminal	Ground	Continuity
D307 (A)	8		No
	9		

Is the inspection result normal?

YES >> Replace rear power window switch RH. Refer to PWC-129, "Removal and Installation".
NO >> Repair or replace harness or connectors.

REAR RH : Component Inspection

INFOID:0000000005461498

COMPONENT INSPECTION

1. CHECK REAR POWER WINDOW MOTOR RH

1. Disconnect rear power window motor RH.
2. Check motor operation by connecting battery voltage directly to rear power window motor RH.

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

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace rear power window motor RH. Refer to GW-19, "Removal and Installation".

REAR RH : Special Repair Requirement

INFOID:0000000005461499

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> End.

ENCODER
DRIVER SIDE

DRIVER SIDE : Description

INFOID:0000000005461500

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

DRIVER SIDE : Component Function Check

INFOID:0000000005461501

1. CHECK ENCODER OPERATION

Check that front door glass LH performs AUTO open/close operation normally when operating main power window and door lock/unlock switch.

Is the inspection result normal?

YES >> Encoder operation is OK.
NO >> Refer to PWC-157, "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE : Diagnosis Procedure

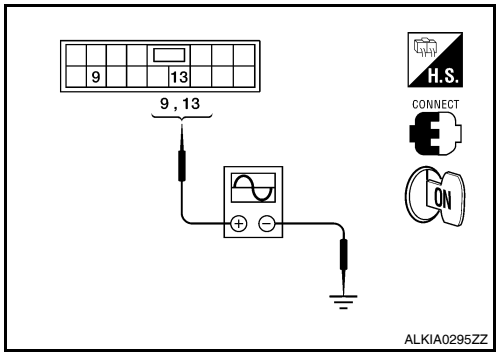
INFOID:0000000005461502

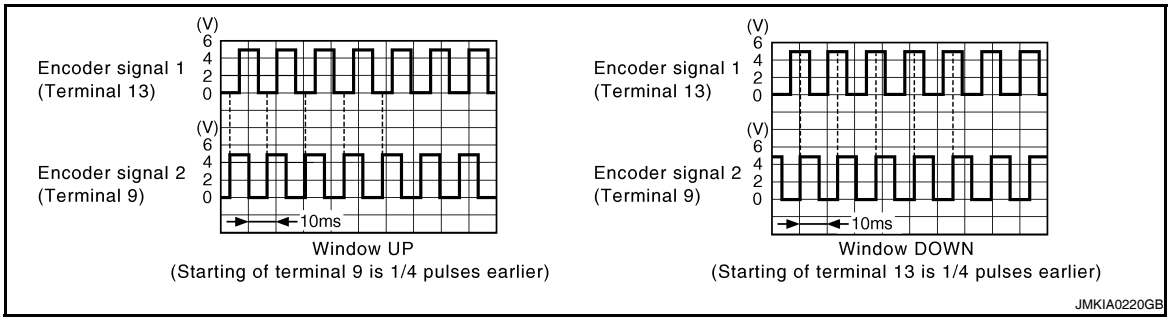
Regarding Wiring Diagram information, refer to PWC-184, "Wiring Diagram".

1. CHECK ENCODER OPERATION

1. Turn ignition switch ON.
2. Check signal between main power window and door lock/unlock switch connector D7 terminals 9, 13 and ground with oscilloscope.

Terminals			Signal (Reference value)
(+)		(–)	
Main power window and door lock/unlock switch connector	Terminal		
D7	9	Ground	Refer to following signal
	13		



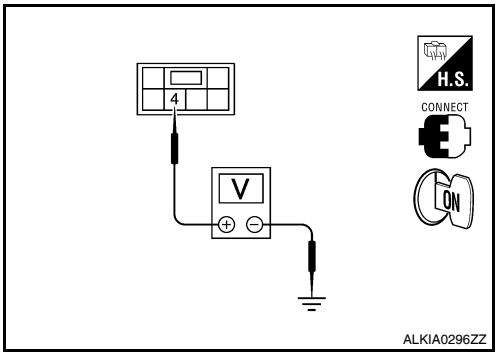


Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> GO TO 2

2. CHECK ENCODER POWER SUPPLY

Check voltage between front power window motor LH connector D9 terminal 4 and ground.



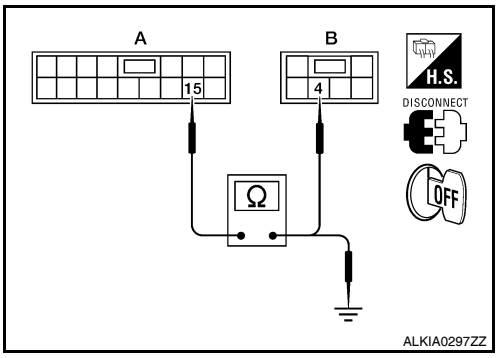
Terminal			Voltage (V) (Approx.)
(+)		(–)	
Front power window motor LH connector	Terminal		
D9	4	Ground	10

Is the inspection result normal?

YES >> GO TO 4
NO >> GO TO 3

3. CHECK HARNESS CONTINUITY 1

1. Turn ignition switch OFF.
2. Disconnect main power window and door lock/unlock switch connector D7 and front power window motor LH connector.
3. Check continuity between main power window and door lock/unlock switch connector D7 (A) terminal 15 and front power window motor LH connector D9 (B) terminal 4.



Main power window and door lock/unlock switch connector	Terminal	Front power window motor LH connector	Terminal	Continuity
D7 (A)	15	D9 (B)	4	Yes

4. Check continuity between main power window and door lock/unlock switch connector D7 (A) terminal 15 and ground.

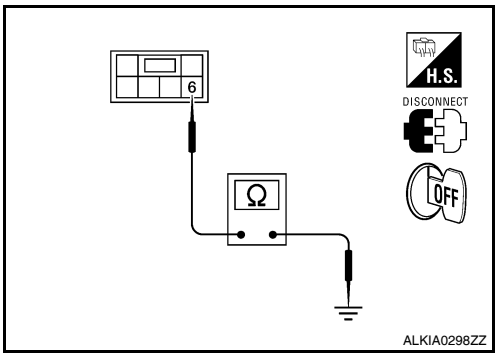
Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7 (A)	15		No

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-128, "Removal and Installation".
NO >> Repair or replace harness or connectors.

4. CHECK ENCODER GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect front power window motor LH connector.
3. Check continuity between front power window motor LH connector D9 terminal 6 and ground.



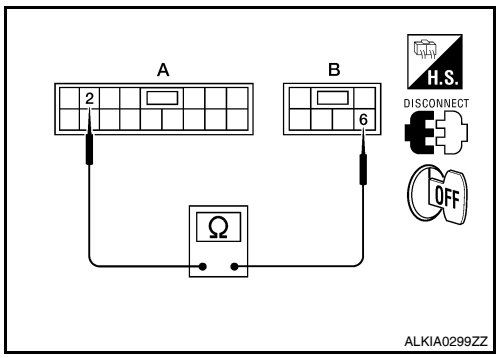
Front power window motor LH connector	Terminal	Ground	Continuity
D9	6		Yes

Is the inspection result normal?

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

5. CHECK HARNESS CONTINUITY 2

1. Disconnect main power window and door lock/unlock switch connector D7.
2. Check continuity between main power window and door lock/unlock switch connector D7 (A) terminal 2 and front power window motor LH connector D9 (B) terminal 6.



Main power window and door lock/unlock switch connector	Terminal	Front power window motor LH connector	Terminal	Continuity
D7 (A)	2	D9 (B)	6	Yes

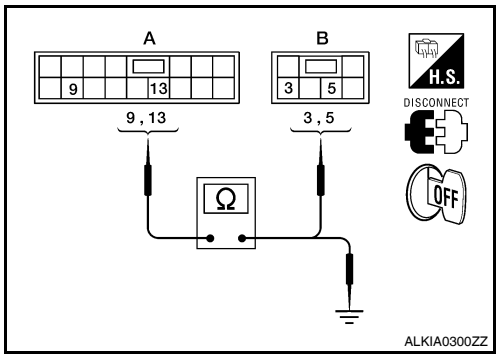
Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-128, "Removal and Installation".

NO >> Repair or replace harness or connectors.

6. CHECK HARNESS CONTINUITY 3

1. Disconnect main power window and door lock/unlock switch connector D7.
2. Check continuity between main power window and door lock/unlock switch connector D7 (A) terminals 9, 13 and front power window motor LH connector D9 (B) terminals 3, 5.



Main power window and door lock/unlock switch connector	Terminal	Front power window motor LH connector	Terminal	Continuity
D7 (A)	9	D9 (B)	5	Yes
	13		3	

3. Check continuity between main power window and door lock/unlock switch connector D7 (A) terminals 9, 13 and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7 (A)	9		No
	13		

Is the inspection result normal?

YES >> Replace front power window motor LH. Refer to GW-19, "Removal and Installation".

NO >> Repair or replace harness or connectors.

DRIVER SIDE : Special Repair Requirement

INFOID:0000000005461503

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> End.

PASSENGER SIDE

PASSENGER SIDE : Description

INFOID:0000000005461504

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

PASSENGER SIDE : Component Function Check

INFOID:0000000005461505

1.CHECK ENCODER OPERATION

Check that front door glass RH performs AUTO open/close operation normally when operating power window and door lock/unlock switch RH.

Is the inspection result normal?

YES >> Encoder operation is OK.
NO >> Refer to PWC-160, "PASSENGER SIDE : Diagnosis Procedure".

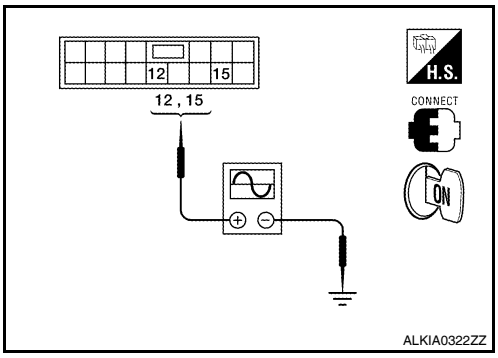
PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000005461506

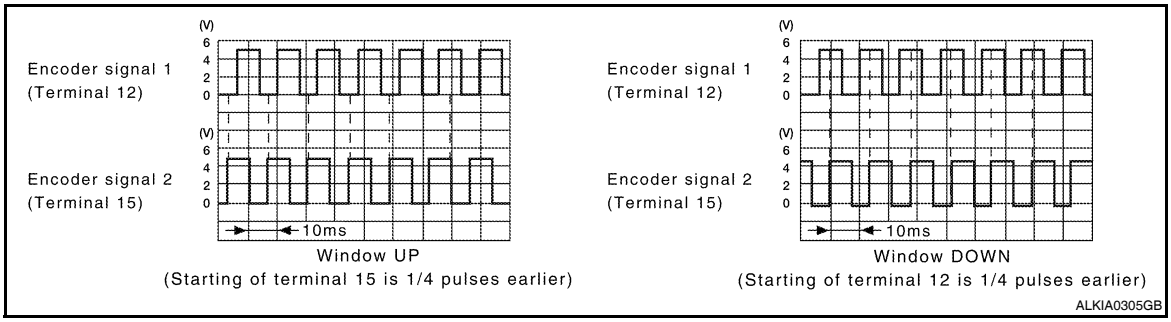
Regarding Wiring Diagram information, refer to PWC-195, "Wiring Diagram".

1. CHECK ENCODER SIGNAL

1. Turn ignition switch ON.
2. Check signal between power window and door lock/unlock switch RH connector D105 terminal 12, 15 and ground with oscilloscope.



Terminals			Signal (Reference value)
(+)		(–)	
Power window and door lock/unlock switch RH connector	Terminal		
D105	12	Ground	Refer to following signal
	15		

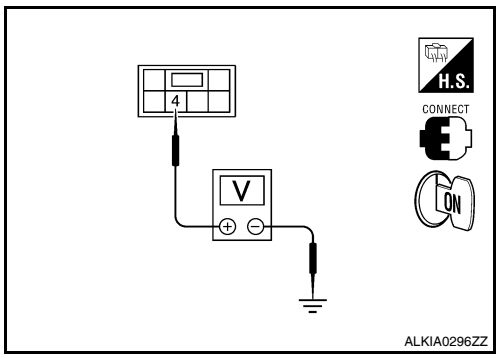


Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> GO TO 2

2. CHECK ENCODER POWER SUPPLY

Check voltage between front power window motor RH connector D104 terminal 4 and ground.



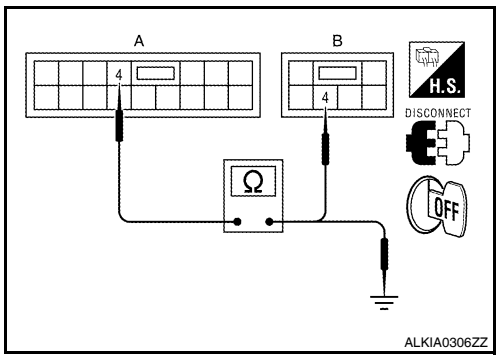
Terminal			Voltage (V) (Approx.)
(+)		(–)	
Front power window motor RH connector	Terminal		
D104	4	Ground	10

Is the inspection result normal?

YES >> GO TO 4
NO >> GO TO 3

3. CHECK HARNESS CONTINUITY 1

1. Turn ignition switch OFF.
2. Disconnect power window and door lock/unlock switch RH and front power window motor RH connectors.
3. Check continuity between power window and door lock/unlock switch RH connector D105 (A) terminal 4 and front power window motor RH connector D104 (B) terminal 4.



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

4. Check continuity between power window and door lock/unlock switch RH connector D105 (A) terminal 4 and ground.

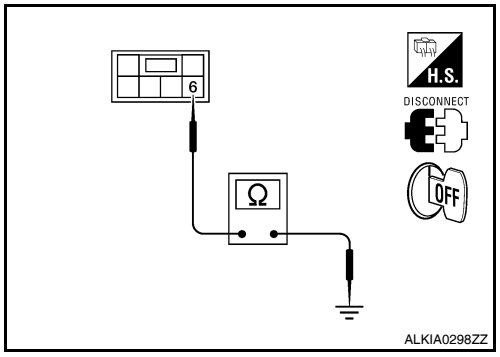
Power window and door lock/unlock switch RH connector	Terminal	Ground	Continuity
D105 (A)	4		No

Is the inspection result normal?

YES >> Replace power window and door lock/unlock switch RH. Refer to PWC-129, "Removal and Installation".
NO >> Repair or replace harness or connectors.

4. CHECK ENCODER GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect front power window motor RH connector.
3. Check continuity between front power window motor RH connector D104 terminal 6 and ground.



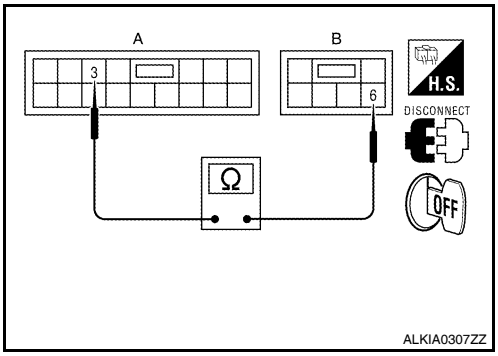
Front power window motor RH connector	Terminal	Ground	Continuity
D104	6		Yes

Is the inspection result normal?

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

5. CHECK HARNESS CONTINUITY 2

1. Disconnect power window and door lock/unlock switch RH connector.
2. Check continuity between power window and door lock/unlock switch RH connector D105 (A) terminal 3 and front power window motor RH connector D104 (B) terminal 6.



Power window and door lock/unlock switch RH connector	Terminal	Front power window motor RH connector	Terminal	Continuity
D105 (A)	3	D104 (B)	6	Yes

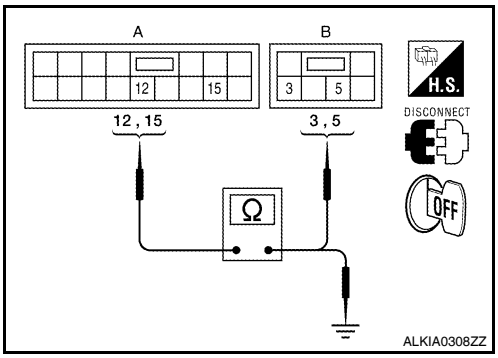
Is the inspection result normal?

YES >> Replace power window and door lock/unlock switch RH. Refer to PWC-129, "Removal and Installation".

NO >> Repair or replace harness or connectors.

6. CHECK HARNESS CONTINUITY 3

1. Disconnect power window and door lock/unlock switch RH connector.
2. Check continuity between power window and door lock/unlock switch RH connector D105 (A) terminals 12, 15 and front power window motor RH connector D104 (B) terminals 3, 5.



Power window and door lock/unlock switch RH connector	Terminal	Front power window motor RH connector	Terminal	Continuity
D105 (A)	12	D104 (B)	3	Yes
	15		5	

3. Check continuity between power window and door lock/unlock switch RH connector D105 (A) terminals 12, 15 and ground.

Power window and door lock/unlock switch RH connector	Terminal	Ground	Continuity
D105 (A)	12		No
	15		

Is the inspection result normal?

YES >> Replace front power window motor RH. Refer to GW-19, "Removal and Installation".

NO >> Repair or replace harness or connectors.

PASSENGER SIDE : Special Repair Requirement

INFOID:0000000005461507

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> End.

REAR LH

REAR LH : Description

INFOID:0000000005461508

Detects condition of the rear power window motor LH operation and transmits to rear power window switch LH as pulse signal.

REAR LH : Component Function Check

INFOID:0000000005461509

1.CHECK ENCODER OPERATION

Check that rear door window motor LH performs AUTO open/close operation normally when operating rear power window switch LH.

Is the inspection result normal?

YES >> Encoder operation is OK.
NO >> Refer to PWC-163, "REAR LH : Diagnosis Procedure".

REAR LH : Diagnosis Procedure

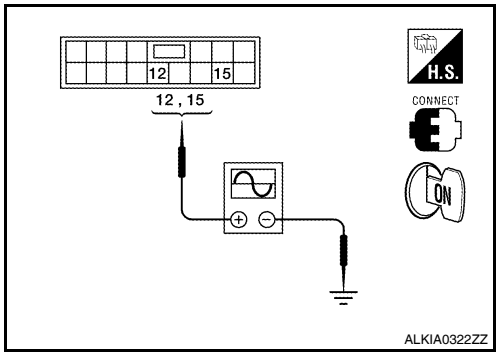
INFOID:0000000005461510

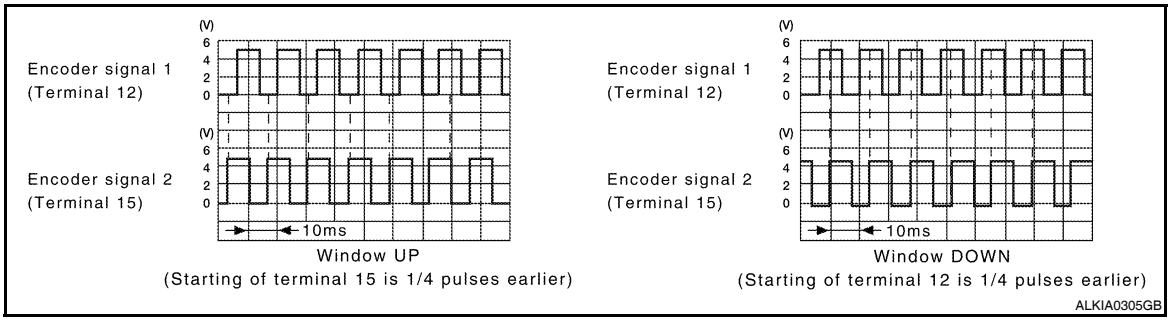
Regarding Wiring Diagram information, refer to PWC-206, "Wiring Diagram".

1. CHECK ENCODER SIGNAL

1. Turn ignition switch ON.
2. Check signal between rear power window switch LH connector D207 terminal 12, 15 and ground with oscilloscope.

Terminals			Signal (Reference value)
(+)		(–)	
Rear power window switch LH connector	Terminal		
D207	12	Ground	Refer to following signal
	15		



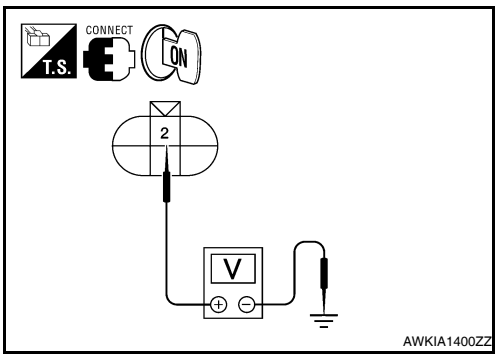


Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> GO TO 2

2. CHECK ENCODER POWER SUPPLY

Check voltage between rear power window motor LH connector D204 terminal 2 and ground.



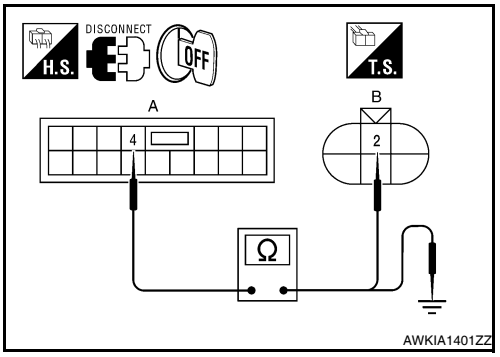
Terminal			Voltage (V) (Approx.)
(+)		(–)	
Rear power window motor LH connector	Terminal		
D204	2	Ground	10

Is the inspection result normal?

YES >> GO TO 4
NO >> GO TO 3

3. CHECK HARNESS CONTINUITY 1

1. Turn ignition switch OFF.
2. Disconnect rear power window switch LH and rear power window motor LH connectors.
3. Check continuity between rear power window switch LH connector D207 (A) terminal 4 and rear power window motor LH connector D204 (B) terminal 2.



Rear power window switch LH connector	Terminal	Rear power window motor LH connector	Terminal	Continuity
D207 (A)	4	D204 (B)	2	Yes

4. Check continuity between rear power window switch LH connector D207 (A) terminal 4 and ground.

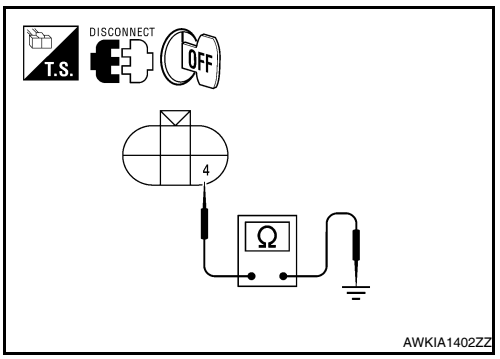
Rear power window switch LH connector	Terminal	Ground	Continuity
D207 (A)	4		No

Is the inspection result normal?

YES >> Replace rear power window switch LH. Refer to PWC-275, "Removal and Installation".
NO >> Repair or replace harness or connectors.

4. CHECK ENCODER GROUND CIRCUIT

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



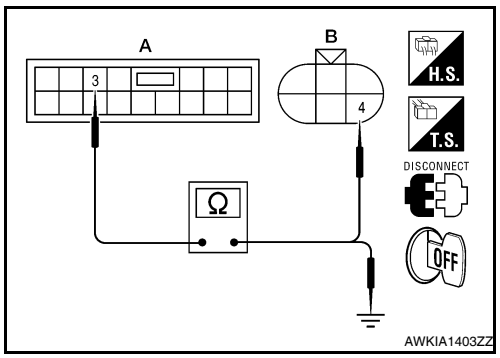
Rear power window motor LH connector	Terminal	Ground	Continuity
D204	4		Yes

Is the inspection result normal?

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

5. CHECK HARNESS CONTINUITY 2

1. Disconnect rear power window switch LH connector.
2. Check continuity between rear power window switch LH connector D207 (A) terminal 3 and rear power window motor LH connector D204 (B) terminal 4.



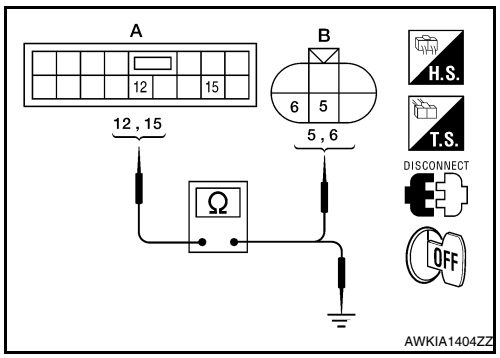
Rear power window switch LH connector	Terminal	Rear power window motor LH connector	Terminal	Continuity
D207 (A)	3	D204 (B)	4	Yes

Is the inspection result normal?

YES >> Replace rear power window switch LH. Refer to PWC-275, "Removal and Installation".
NO >> Repair or replace harness or connectors.

6. CHECK HARNESS CONTINUITY 3

1. Disconnect rear power window switch LH connector.
2. Check continuity between rear power window switch LH connector D207 (A) terminals 12, 15 and rear power window motor LH connector D204 (B) terminals 5, 6.



Rear power window switch LH connector	Terminal	Rear power window motor LH connector	Terminal	Continuity
D207 (A)	12	D204 (B)	5	Yes
	15		6	

3. Check continuity between rear power window switch LH connector D207 (A) terminals 12, 15 and ground.

Rear power window switch LH connector	Terminal	Ground	Continuity
D207 (A)	12		No
	15		

Is the inspection result normal?

YES >> Replace rear power window motor LH. Refer to GW-19, "Removal and Installation".
NO >> Repair or replace harness or connectors.

REAR LH : Special Repair Requirement

INFOID:0000000005461511

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> End.

REAR RH

REAR RH : Description

INFOID:0000000005461512

Detects condition of the rear power window motor RH operation and transmits to rear power window switch RH as pulse signal.

REAR RH : Component Function Check

INFOID:0000000005461513

1.CHECK ENCODER OPERATION

Check that rear door window motor RH performs AUTO open/close operation normally when operating rear power window switch RH.

Is the inspection result normal?

YES >> Encoder operation is OK.
NO >> Refer to PWC-166, "REAR RH : Diagnosis Procedure".

REAR RH : Diagnosis Procedure

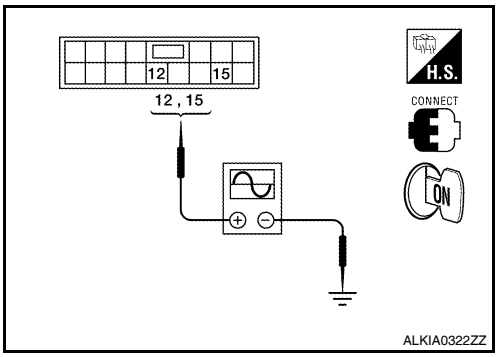
INFOID:0000000005461514

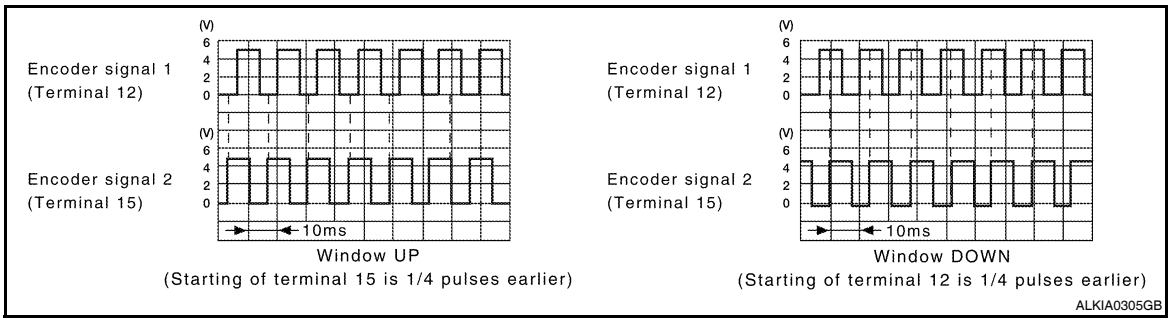
Regarding Wiring Diagram information, refer to PWC-184, "Wiring Diagram".

1. CHECK ENCODER SIGNAL

1. Turn ignition switch ON.
2. Check signal between rear power window switch RH connector D307 terminal 12, 15 and ground with oscilloscope.

Terminals			Signal (Reference value)
(+)		(–)	
Rear power window switch RH connector	Terminal		
D307	12	Ground	Refer to following signal
	15		



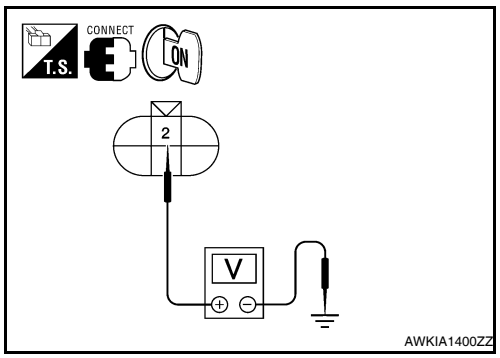


Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> GO TO 2

2. CHECK ENCODER POWER SUPPLY

Check voltage between rear power window motor RH connector D304 terminal 2 and ground.



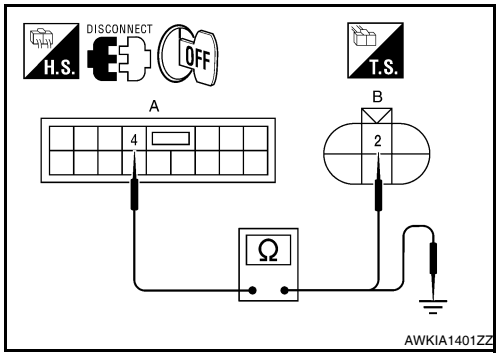
Terminal			Voltage (V) (Approx.)
(+)		(–)	
Rear power window motor RH connector	Terminal		
D304	2	Ground	10

Is the inspection result normal?

YES >> GO TO 4
NO >> GO TO 3

3. CHECK HARNESS CONTINUITY 1

1. Turn ignition switch OFF.
2. Disconnect rear power window switch RH and rear power window motor RH connectors.
3. Check continuity between rear power window switch RH connector D307 (A) terminal 4 and rear power window motor RH connector D304 (B) terminal 2.



Rear power window switch RH connector	Terminal	Rear power window motor RH connector	Terminal	Continuity
D307 (A)	4	D304 (B)	2	Yes

4. Check continuity between rear power window switch RH connector D307 (A) terminal 4 and ground.

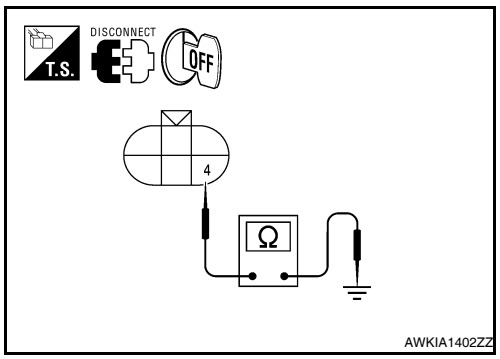
Rear power window switch RH connector	Terminal	Ground	Continuity
D307 (A)	4		No

Is the inspection result normal?

YES >> Replace rear power window switch RH. Refer to PWC-129, "Removal and Installation".
NO >> Repair or replace harness or connectors.

4. CHECK ENCODER GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect rear power window motor RH connector.
3. Check continuity between rear power window motor RH connector D304 terminal 4 and ground.



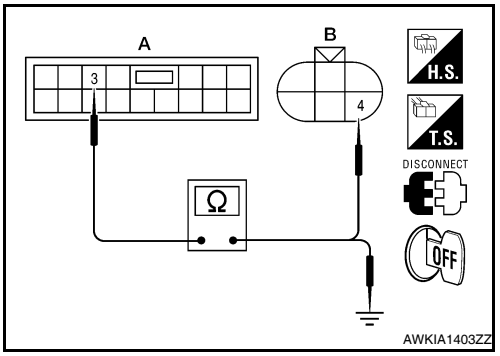
Rear power window motor RH connector	Terminal	Ground	Continuity
D304	4		Yes

Is the inspection result normal?

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

5. CHECK HARNESS CONTINUITY 2

1. Disconnect rear power window switch RH connector.
2. Check continuity between rear power window switch RH connector D307 (A) terminal 3 and rear power window motor RH connector D304 (B) terminal 4.



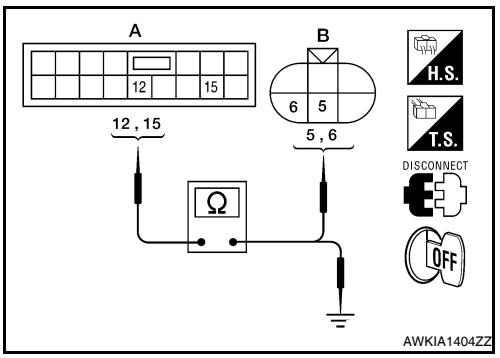
Rear power window switch RH connector	Terminal	Rear power window motor RH connector	Terminal	Continuity
D307 (A)	3	D304 (B)	4	Yes

Is the inspection result normal?

YES >> Replace rear power window switch RH. Refer to PWC-275, "Removal and Installation".
NO >> Repair or replace harness or connectors.

6. CHECK HARNESS CONTINUITY 3

1. Disconnect rear power window switch RH connector.
2. Check continuity between rear power window switch RH connector D307 (A) terminals 12, 15 and rear power window motor RH connector D304 (B) terminals 5, 6.



Rear power window switch RH connector	Terminal	Rear power window motor RH connector	Terminal	Continuity
D307 (A)	12	D304 (B)	5	Yes
	15		6	

3. Check continuity between rear power window switch RH connector D307 (A) terminals 12, 15 and ground.

Rear power window switch RH connector	Terminal	Ground	Continuity
D307 (A)	12		No
	15		

Is the inspection result normal?

YES >> Replace rear power window motor RH. Refer to GW-19, "Removal and Installation".
NO >> Repair or replace harness or connectors.

REAR RH : Special Repair Requirement

INFOID:0000000005461515

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> End.

DOOR SWITCH

Description

INFOID:0000000005461516

Detects door open/close condition.

Component Function Check

INFOID:0000000005461517

1. CHECK FUNCTION

With CONSULT-III

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

Monitor item	Condition
DOOR SW-DR	CLOSE → OPEN: OFF → ON
DOOR SW-AS	
DOOR SW-RL	
DOOR SW-RR	

Is the inspection result normal?

YES >> Door switch is OK.
NO >> Refer to PWC-169, "Diagnosis Procedure".

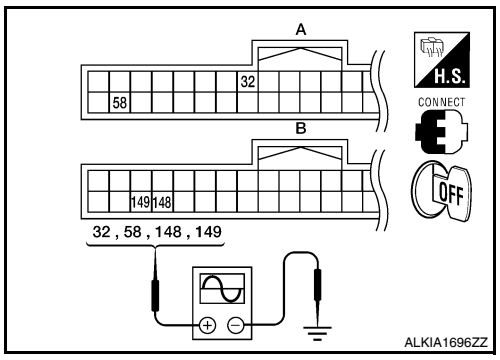
Diagnosis Procedure

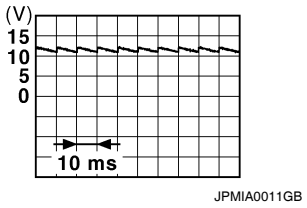
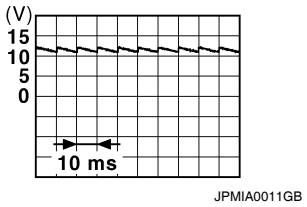
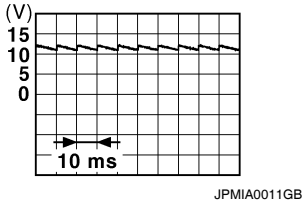
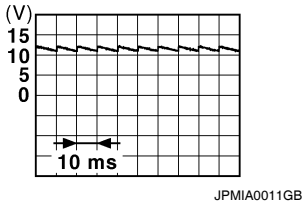
INFOID:0000000005461518

Regarding Wiring Diagram information, refer to PWC-184, "Wiring Diagram".

1. CHECK DOOR SWITCH INPUT SIGNAL

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



Terminals (+) BCM connector	Terminals (+) Terminal	Terminals (–)	Door condition		Voltage (V) (Approx.)
A: M18	58	Ground	Driver side	OPEN	0
				CLOSE	 JPMIA0011GB
	32		Passenger side	OPEN	0
				CLOSE	 JPMIA0011GB
B: M21	148		Rear RH	OPEN	0
				CLOSE	 JPMIA0011GB
	149		Rear LH	OPEN	0
				CLOSE	 JPMIA0011GB

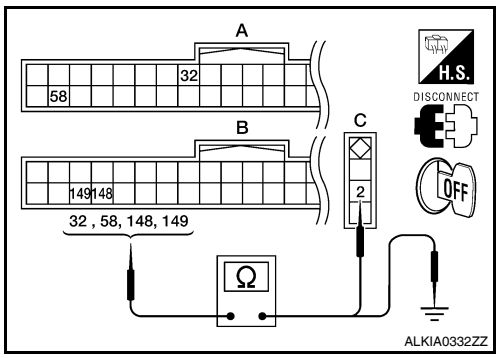
Is the inspection result normal?

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

2.CHECK DOOR SWITCH CIRCUIT

1. Disconnect BCM connector.

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



BCM connector	Terminal	Door switch connector	Terminal	Continuity
A: M18	58	C: B8 (Driver side)	2	Yes
	32	C: B108 (Passenger side)		
B: M21	148	C: B116 (Rear RH)		
	149	C: B18 (Rear LH)		

3. Check continuity between BCM connector and ground.

BCM connector	Terminal		Continuity
A: M18	58	Ground	No
	32		
B: M21	148		
	149		

Is the inspection result normal?

YES >> GO TO 3
NO >> Repair or replace harness between BCM and door switch.

3.CHECK DOOR SWITCH

Refer to PWC-171, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4
NO >> Replace malfunctioning door switch.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

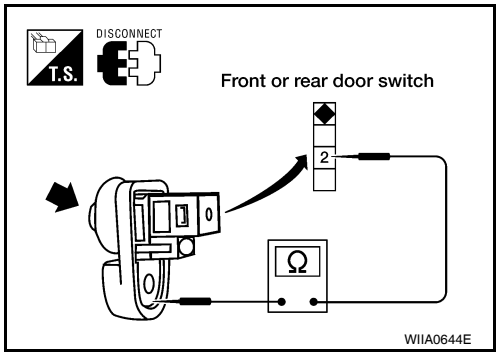
>> Inspection End.

Component Inspection

INFOID:0000000005461519

1.CHECK DOOR SWITCH

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



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

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace malfunctioning door switch.

DOOR KEY CYLINDER SWITCH

Description

INFOID:0000000005461520

The main power window and door lock/unlock switch detects condition of the door key cylinder switch and transmits to BCM as the LOCK or UNLOCK signal.

Component Function Check

INFOID:0000000005461521

1.CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

Check KEY CYL UN-SW, KEY CYL UN-SW in “DATA MONITOR” mode for “POWER DOOR LOCK SYSTEM” with CONSULT-III. Refer to BCS-19, "DOOR LOCK : CONSULT-III Function (BCM - DOOR LOCK)".

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

Is the inspection result normal?

YES >> Key cylinder switch is OK.
NO >> Refer to PWC-172, "Diagnosis Procedure".

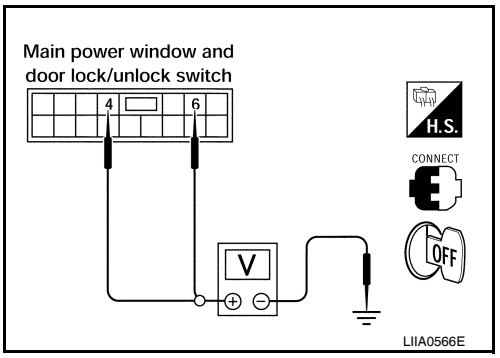
Diagnosis Procedure

INFOID:0000000005461522

Regarding Wiring Diagram information, refer to PWC-184, "Wiring Diagram".

1.CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

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



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

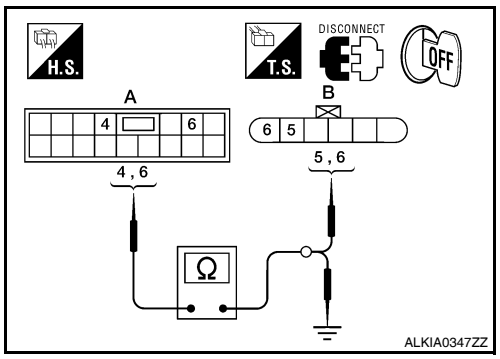
Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-128, "Removal and Installation". After that, refer to PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".
NO >> GO TO 2

2.CHECK DOOR KEY CYLINDER SIGNAL CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect main power window and door lock/unlock switch connector and front door lock assembly LH (key cylinder switch) connector.
3. Check continuity between main power window and door lock/unlock switch connector and front door lock assembly LH (key cylinder switch) connector.



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

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

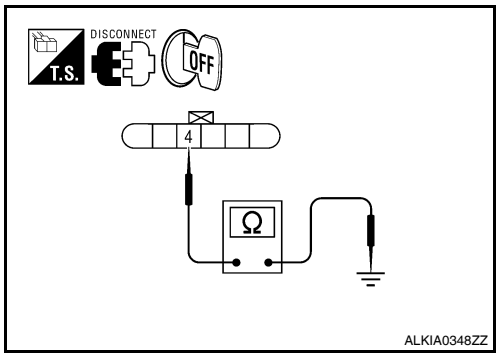
Power window main switch connector	Terminal	Ground	Continuity
A: D7	4		No
	6		

Is the inspection result normal?

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

3.CHECK DOOR KEY CYLINDER SWITCH GROUND CIRCUIT

Check continuity between front door lock assembly LH connector and ground.



Front door lock assembly LH connector	Terminal	Ground	Continuity
D10	4		Yes

Is the inspection result normal?

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

4.CHECK DOOR KEY CYLINDER SWITCH

Check door key cylinder switch.
Refer to PWC-173, "Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> Replace front door lock assembly LH (key cylinder switch). Refer to DLK-225, "FRONT DOOR LOCK : Removal and Installation". After that, Refer to PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

Component Inspection

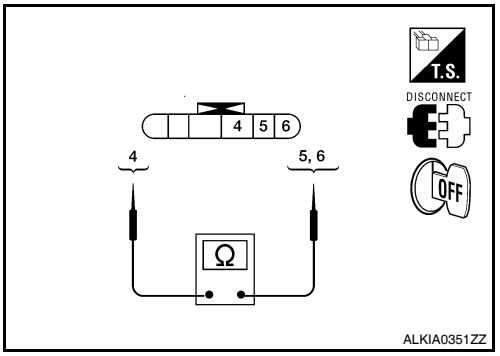
INFOID:0000000005461523

COMPONENT INSPECTION

1.CHECK DOOR KEY CYLINDER SWITCH

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

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



Is the inspection result normal?

YES >> Key cylinder switch is OK.
NO >> Replace front door lock assembly LH (key cylinder switch). Refer to DLK-225, "FRONT DOOR LOCK : Removal and Installation". After that, refer to PWC-174, "Special Repair Requirement".

Special Repair Requirement

INFOID:0000000005461524

1.PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.
Refer to DLK-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.
NO >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

POWER WINDOW SERIAL LINK
POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH : Description

INFOID:0000000005461525

- Main power window and door lock/unlock switch, power window and door lock/unlock switch RH and BCM communicate via the power window serial link.
- The keyless power window down signal is transmitted from BCM to main power window and door lock/unlock switch and power window and door lock/unlock switch RH.
- The following signals are transmitted from main power window and door lock/unlock switch to power window and door lock/unlock switch RH:

- Front door window RH operation
- Power window control by key cylinder switch
- Power window lock switch
- Retained accessory power operation

POWER WINDOW MAIN SWITCH : Component Function Check

INFOID:0000000005461526

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

Check (“CDL LOCK SW ”, “CDL UNLOCK SW”) in “DATA MONITOR” mode for “POWER DOOR LOCK SYSTEM” with CONSULT-III. Refer to BCS-19, "DOOR LOCK : CONSULT-III 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-175, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure".

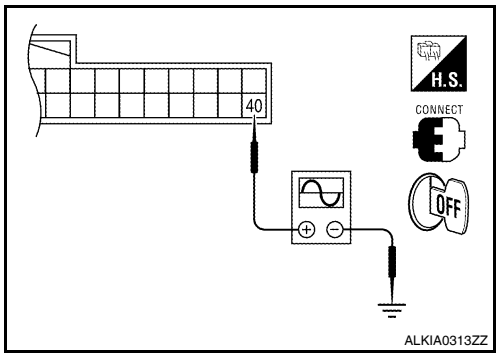
POWER WINDOW MAIN SWITCH : Diagnosis Procedure

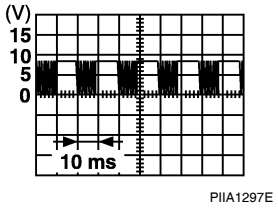
INFOID:0000000005461527

Regarding Wiring Diagram information, refer to PWC-184, "Wiring Diagram".

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

1. Remove Intelligent Key, and close front door LH and RH.
2. Check signal between BCM connector M18 terminal 40 and ground with oscilloscope when door lock and unlock switch (key cylinder switch) is turned to “LOCK” or “UNLOCK”.
3. Check that signals which are shown in the figure below can be detected during 10 seconds just after door lock and unlock switch (key cylinder switch) is turned to “LOCK” or “UNLOCK”.



Terminal			Signal (Reference value)
(+)		(–)	
BCM connector	Terminal		
M18	40	Ground	

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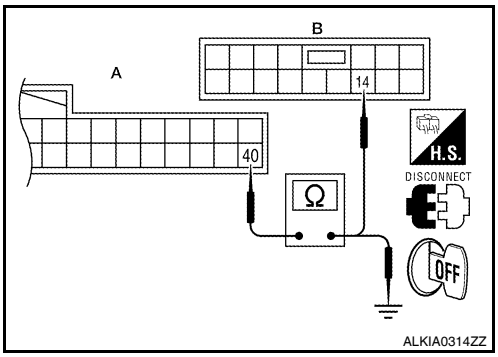
Is the inspection result normal?

YES >> Power window serial link is OK.
NO >> GO TO 2

2. CHECK POWER WINDOW SERIAL LINK CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector M18 and main power window and door lock/unlock switch connector D7.
3. Check continuity between BCM connector M18 (A) terminal 40 and main power window and door lock/unlock switch connector D7 (B) terminal 14.



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BCM connector	Terminal	Main power window and door lock/unlock switch connector	Terminal	Continuity
M18 (A)	40	D7 (B)	14	Yes

4. Check continuity between BCM connector M18 (A) terminal 40 and ground.

BCM connector	Terminal	Ground	Continuity
M18 (A)	40		No

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-128, "Removal and Installation".
NO >> Repair or replace harness or connectors.

POWER WINDOW MAIN SWITCH : Special Repair Requirement

INFOID:0000000005461528

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> End.

FRONT POWER WINDOW SWITCH

FRONT POWER WINDOW SWITCH : Description

INFOID:0000000005461529

- Main power window and door lock/unlock switch, power window and door lock/unlock switch RH and BCM communicate via the power window serial link.
- The keyless power window down signal is transmitted from BCM to main power window and door lock/unlock switch and power window and door lock/unlock switch RH.
- The following signals are transmitted from main power window and door lock/unlock switch to power window and door lock/unlock switch RH:

- Front door window RH operation
- Power window control by key cylinder switch
- Power window lock switch
- Retained accessory power operation

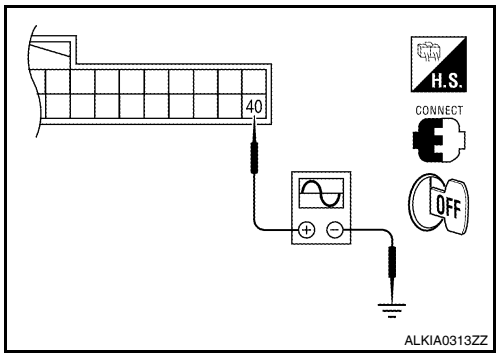
FRONT POWER WINDOW SWITCH : Diagnosis Procedure

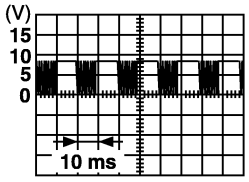
INFOID:0000000005461530

Regarding Wiring Diagram information, refer to PWC-195, "Wiring Diagram".

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

1. Remove Intelligent Key, and close the front door LH and RH.
2. Check signal between BCM connector M18 terminal 40 and ground with oscilloscope when door lock and unlock switch (key cylinder switch) is turned to “LOCK” or “UNLOCK”.
3. Check that signals which are shown in the figure below can be detected during 10 seconds just after door lock and unlock switch (key cylinder switch) is turned to “LOCK” or “UNLOCK”.



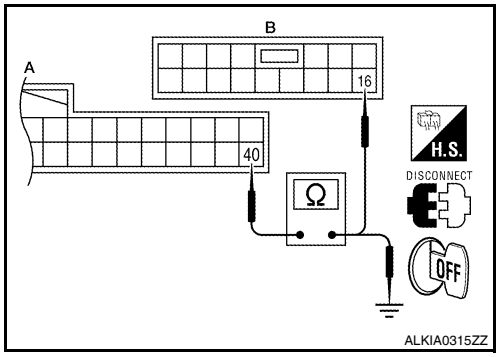
Terminal			Signal (Reference value)
(+)		(–)	
BCM connector	Terminal		
M18	40	Ground	

Is the inspection result normal?

YES >> Power window serial link is OK.
NO >> GO TO 2

2. CHECK POWER WINDOW SERIAL LINK CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector M18 and power window and door lock/unlock switch RH connector.
3. Check continuity between BCM connector M18 (A) terminal 40 and power window and door lock/unlock switch RH connector D105 (B) terminal 16.



BCM connector	Terminal	Power window and door lock/unlock switch RH connector	Terminal	Continuity
M18 (A)	40	D105 (B)	16	Yes

4. Check continuity between BCM connector M18 (A) terminal 40 and ground.

BCM connector	Terminal	Ground	Continuity
M18 (A)	40		No

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-128, "Removal and Installation".

NO >> Repair or replace harness or connectors.

FRONT POWER WINDOW SWITCH : Special Repair Requirement

INFOID:0000000005461531

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> End.

REAR LH

REAR LH : Description

INFOID:0000000005461532

- Main power window and door lock/unlock switch, power window and door lock/unlock switch RH, rear power window switch LH, rear power window switch RH and BCM communicate via the power window serial link.
- The keyless power window down signal is transmitted from BCM to main power window and door lock/unlock switch and power window and door lock/unlock switch RH, rear power window switch LH and rear power window switch RH.
- The following signals are transmitted from main power window and door lock/unlock switch to power window and door lock/unlock switch RH, rear power window switch LH, rear power window switch RH:

- Front door window RH operation
- Rear door window LH operation
- Rear door window RH operation
- Power window control by key cylinder switch
- Power window lock switch
- Retained accessory power operation

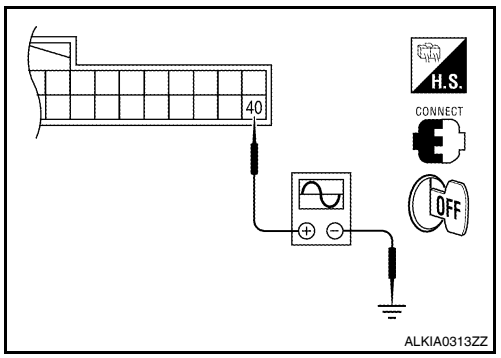
REAR LH : Diagnosis Procedure

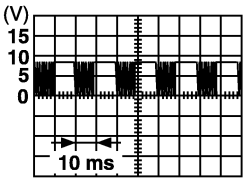
INFOID:0000000005461533

Regarding Wiring Diagram information, refer to PWC-184, "Wiring Diagram".

1. CHECK REAR POWER WINDOW SWITCH LH

1. Remove Intelligent Key, and close all doors.
2. Check signal between BCM connector M18 terminal 40 and ground with oscilloscope when door lock and unlock switch (key cylinder switch) is turned to “LOCK” or “UNLOCK”.
3. Check that signals which are shown in the figure below can be detected during 10 seconds just after door lock and unlock switch (key cylinder switch) is turned to “LOCK” or “UNLOCK”.



Terminal			Signal (Reference value)
(+)		(–)	
BCM connector	Terminal		
M18	40	Ground	

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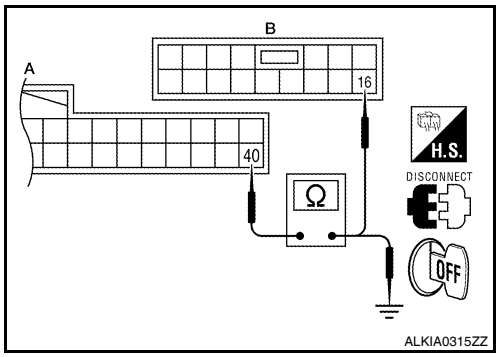
Is the inspection result normal?

YES >> Power window serial link is OK.
NO >> GO TO 2

2. CHECK POWER WINDOW SERIAL LINK CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector M18 and rear power window switch LH connector.
3. Check continuity between BCM connector M18 (A) terminal 40 and rear power window switch LH connector D207 (B) terminal 16.



BCM connector	Terminal	Rear power window switch LH connector	Terminal	Continuity
M18 (A)	40	D207 (B)	16	Yes

4. Check continuity between BCM connector M18 (A) terminal 40 and ground.

BCM connector	Terminal	Ground	Continuity
M18 (A)	40		No

Is the inspection result normal?

YES >> Replace rear power window switch LH. Refer to PWC-128, "Removal and Installation".
NO >> Repair or replace harness or connectors.

REAR LH : Special Repair Requirement

INFOID:0000000005461534

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> End.

REAR RH

REAR RH : Description

INFOID:0000000005461535

- Main power window and door lock/unlock switch, power window and door lock/unlock switch RH, rear power window switch LH, rear power window switch RH and BCM communicate via the power window serial link.
- The keyless power window down signal is transmitted from BCM to main power window and door lock/unlock switch and power window and door lock/unlock switch RH, rear power window switch LH and rear power window switch RH.
- The following signals are transmitted from main power window and door lock/unlock switch to power window and door lock/unlock switch RH, rear power window switch LH, rear power window switch RH:

- Front door window RH operation
- Rear door window LH operation
- Rear door window RH operation
- Power window control by key cylinder switch
- Power window lock switch
- Retained accessory power operation

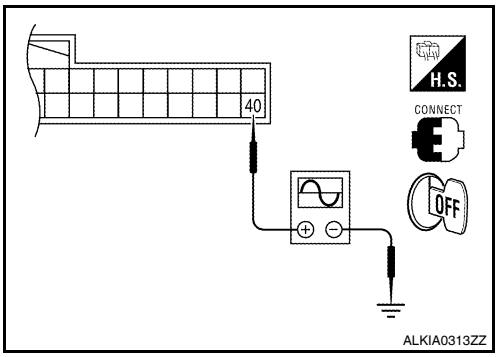
REAR RH : Diagnosis Procedure

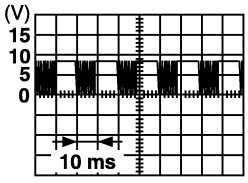
INFOID:0000000005461536

Regarding Wiring Diagram information, refer to PWC-184, "Wiring Diagram".

1. CHECK REAR POWER WINDOW SWITCH RH

1. Remove Intelligent Key, and close all doors.
2. Check signal between BCM connector M18 terminal 40 and ground with oscilloscope when door lock and unlock switch (key cylinder switch) is turned to “LOCK” or “UNLOCK”.
3. Check that signals which are shown in the figure below can be detected during 10 seconds just after door lock and unlock switch (key cylinder switch) is turned to “LOCK” or “UNLOCK”.



Terminal			Signal (Reference value)
(+)		(–)	
BCM connector	Terminal		
M18	40	Ground	

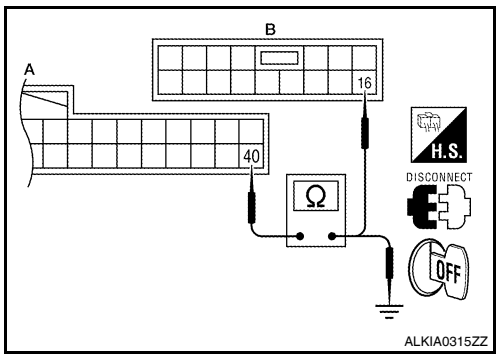
PIIA1297E

Is the inspection result normal?

YES >> Power window serial link is OK.
NO >> GO TO 2

2. CHECK POWER WINDOW SERIAL LINK CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector M18 and rear power window switch RH connector.
3. Check continuity between BCM connector M18 (A) terminal 40 and rear power window switch RH connector D307 (B) terminal 16.



BCM connector	Terminal	Rear power window switch RH connector	Terminal	Continuity
M18 (A)	40	D307 (B)	16	Yes

4. Check continuity between BCM connector M18 (A) terminal 40 and ground.

BCM connector	Terminal	Ground	Continuity
M18 (A)	40		No

Is the inspection result normal?

YES >> Replace rear power window switch RH. Refer to PWC-128, "Removal and Installation".
NO >> Repair or replace harness or connectors.

REAR RH : Special Repair Requirement

INFOID:0000000005461537

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> End.

POWER WINDOW LOCK SWITCH

Component Function Check

INFOID:0000000005461538

1. CHECK POWER WINDOW LOCK

Activate the power window lock switch and verify that the front power window RH, rear power window LH and rear power window RH are inoperative.

Is the inspection result normal?

YES >> Power window lock switch is OK.
NO >> Replace the main power window and door lock/unlock switch. Refer to PWC-273, "Removal and Installation".

Special Repair Requirement

INFOID:0000000005461539

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> End.

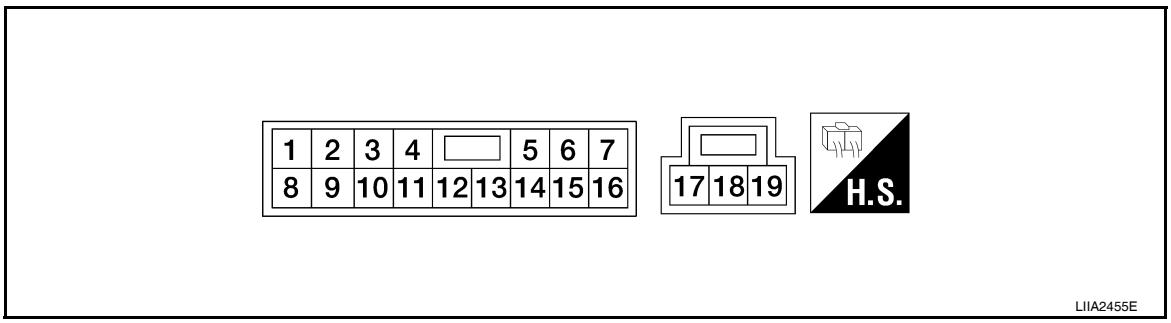
ECU DIAGNOSIS

POWER WINDOW MAIN SWITCH

Reference Value

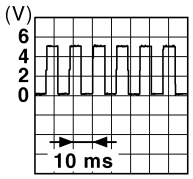
INFOID:0000000005461540

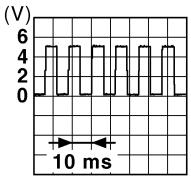
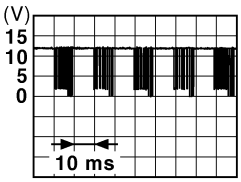
TERMINAL LAYOUT



PHYSICAL VALUES

MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

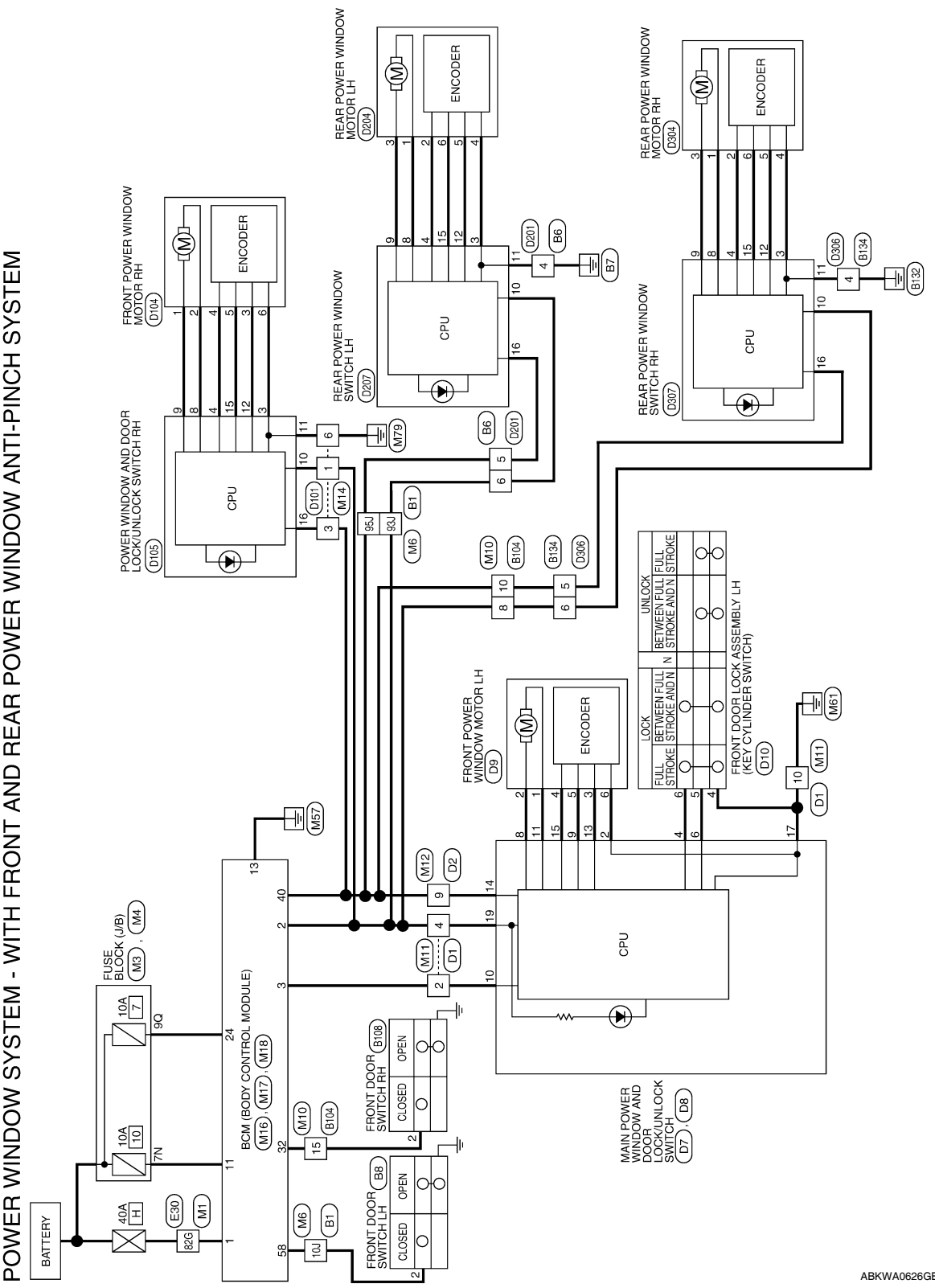
Terminal No.		Description		Condition	Voltage [V] (Approx.)
+	-	Signal name	Input/ Output		
2 (GR)	Ground	Encoder ground	—	—	0
4 (L)	Ground	Door key cylinder switch LH LOCK signal	Input	Key position (Neutral → Locked)	5 → 0
6 (R)	Ground	Door key cylinder switch LH UNLOCK signal	Input	Key position (Neutral → Unlocked)	5 → 0
8 (L)	11	Front door power window motor LH UP signal	Output	When front LH switch in power window main switch is operated UP.	Battery voltage
9 (Y)	2	Encoder pulse signal 2	Input	When power window motor operates.	 JMKIA0070GB
10 (V)	Ground	RAP signal	Input	IGN SW ON	Battery voltage
				Within 45 second after ignition switch is turned to OFF.	Battery voltage
				When front LH or RH door is opened during retained power operation.	0
11 (LG)	8	Front door power window motor LH DOWN signal	Output	When front LH switch in power window main switch is operated DOWN.	Battery voltage

Terminal No.		Description		Condition	Voltage [V] (Approx.)
+	-	Signal name	Input/ Output		
13 (G)	2	Encoder pulse signal 1	Input	When power window motor operates.	 JMKIA0070GB
14 (O)	Ground	Power window serial link	Input/ Output	IGN SW ON or power window timer operating.	 JPMIA0013GB
15 (BR)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates.	10

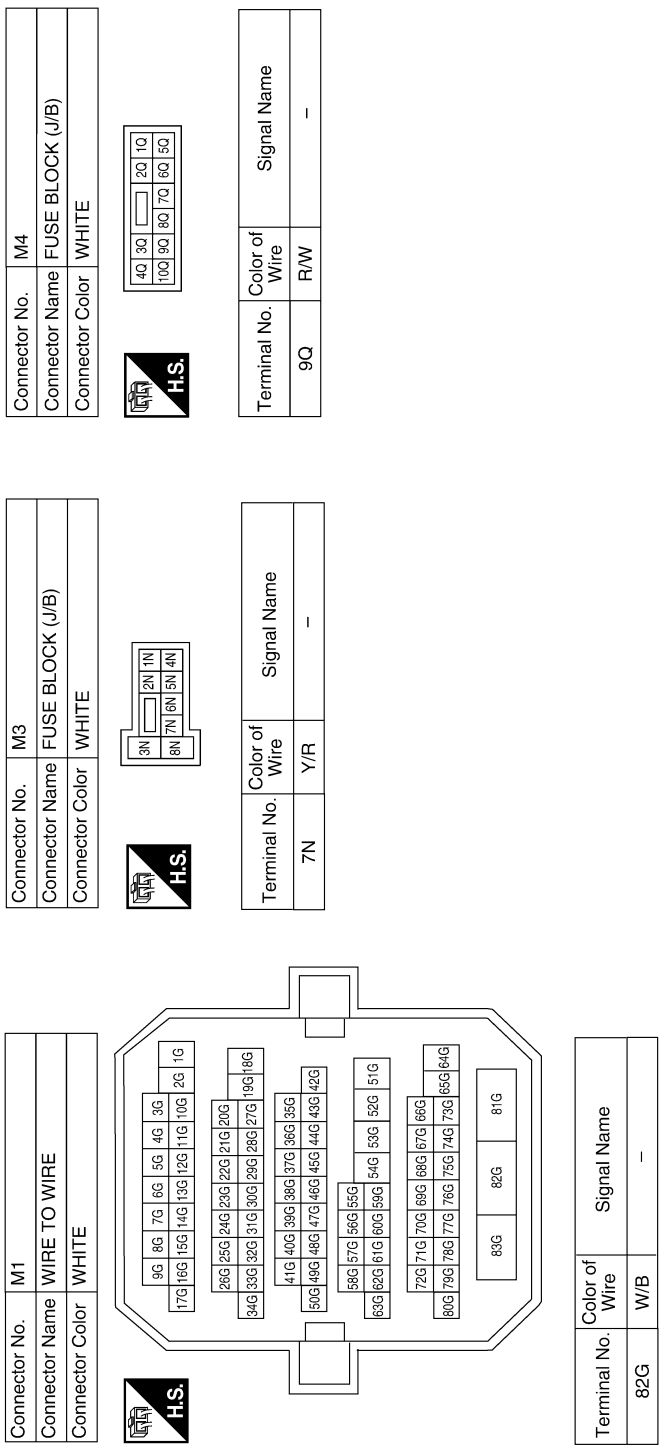
Wiring Diagram

INFOID:0000000005461541

POWER WINDOW SYSTEM - WITH FRONT AND REAR POWER WINDOW ANTI-PINCH SYSTEM



POWER WINDOW SYSTEM CONNECTORS - WITH FRONT AND REAR POWER WINDOW ANTI-PINCH SYSTEM



ABKIA1832GB

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
8	R/Y	–
10	Y/G	–
15	R/B	–

Connector No.	M14
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

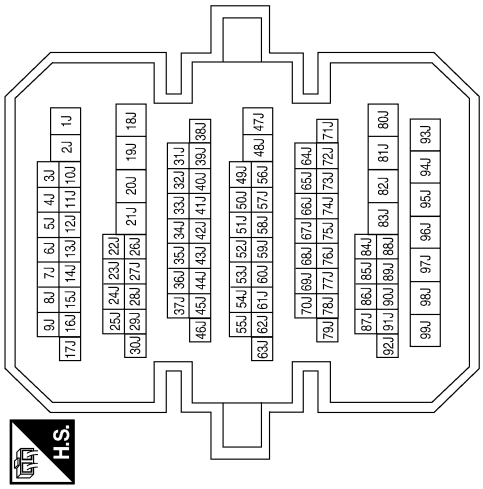
1	2		3	4
5	6	7	8	9	10

Terminal No.	Color of Wire	Signal Name
1	R/Y	–
3	Y/G	–
6	B	–

Terminal No.	Color of Wire	Signal Name
10J	SB	–
93J	R/Y	–
95J	Y/G	–

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Connector No.	M12
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
9	Y/G	–

Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
2	L/W	–
4	R/Y	–
10	B	–

ABKIA1833GB

Connector No.	M16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	W/B	BATT (F/L)
2	R/Y	P/W POWER SUPPLY PERM
3	L/W	P/W POWER SUPPLY IGN

Connector No.	M17
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
11	Y/R	BAT BCM FUSE
13	B	GND1

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

H.S.

Terminal No.	Color of Wire	Signal Name
24	R/W	BRAKE SW 1
32	R/B	AS DOOR SW 1
40	Y/G	PW K LINE
58	SB	DR DOOR SW

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
10J	SB	–
93J	R	–
95J	SB	–

Connector No.	E30
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
82G	LG	–

ABKIA1834GB

Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2		3	4
5	6	7	8	9	10

Terminal No.	Color of Wire	Signal Name
4	B	–
5	SB	–
6	R	–

Connector No.	B8
Connector Name	FRONT DOOR SWITCH LH
Connector Color	WHITE

H.S.

◇	1
	2
	3

Terminal No.	Color of Wire	Signal Name
2	SB	–

Connector No.	B104
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
8	R	–
10	SB	–
15	GR	–

Connector No.	B108
Connector Name	FRONT DOOR SWITCH RH
Connector Color	WHITE

H.S.

◇	1
	2
	3

Terminal No.	Color of Wire	Signal Name
2	GR	–

Connector No.	B134
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2		3	4
5	6	7	8	9	10

Terminal No.	Color of Wire	Signal Name
4	B	–
5	SB	–
6	R	–

Connector No.	D1
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
2	V	–
4	R	–
10	B	–

ABKIA1835GB

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
9	O	–

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

H.S.

17	18	19

Terminal No.	Color of Wire	Signal Name
17	B	GND
18	–	–
19	R	BAT

Connector No.	D7
Connector Name	MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	–	–
2	GR	ENCODER GND
3	–	–
4	L	LOCK
5	–	–

Terminal No.	Color of Wire	Signal Name
6	R	UNLOCK
7	–	–
8	L	AS UP
9	Y	ENCODER SIG1
10	V	IGN
11	LG	AS DOWN
12	–	–
13	G	ENCODER SIG2
14	O	COM
15	BR	ENCODER POWER
16	–	–

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

H.S.

1	2
3	4	5	6

Terminal No.	Color of Wire	Signal Name
1	LG	–
2	L	–
3	G	–
4	BR	–
5	Y	–
6	GR	–

Connector No.	D10
Connector Name	FRONT DOOR LOCK ASSEMBLY LH
Connector Color	GRAY

H.S.

1	2	3	4	5	6

Terminal No.	Color of Wire	Signal Name
4	B	–
5	R	–
6	L	–

ABKIA1836GB

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

H.S.

4	3		2	1
10	9	8	7	6	5

Terminal No.	Color of Wire	Signal Name
1	P	–
3	R	–
6	B	–

Connector No.	D104
Connector Name	FRONT POWER WINDOW MOTOR RH
Connector Color	WHITE

H.S.

1		2
3	4	5	6

Terminal No.	Color of Wire	Signal Name
1	LG	–
2	L	–
3	G	–
4	BR	–
5	Y	–
6	W	–

Connector No.	D105
Connector Name	POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
3	W	GND
4	BR	ENCODER POWER
8	L	UP
9	LG	DOWN
10	P	BAT
11	B	GND
12	G	ENCODER SIG2
15	Y	ENCODER SIG1
16	R	COM

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

H.S.

4	3		2	1
10	9	8	7	6	5

Terminal No.	Color of Wire	Signal Name
4	B	–
5	SB	–
6	R	–

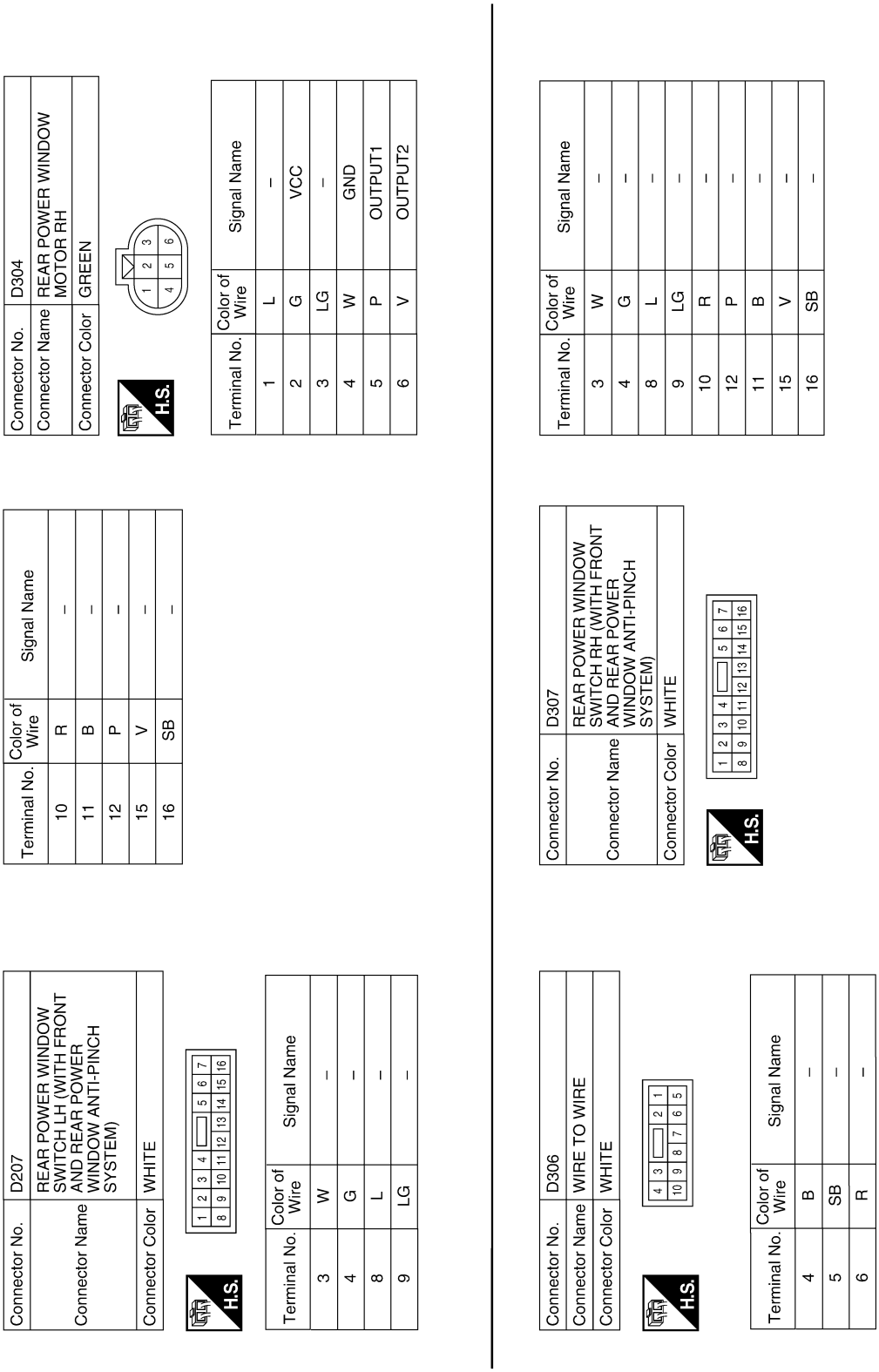
Connector No.	D204
Connector Name	REAR POWER WINDOW MOTOR LH
Connector Color	GREEN

H.S.

1	2	3
4	5	6

Terminal No.	Color of Wire	Signal Name
1	L	–
2	G	VCC
3	LG	–
4	W	GND
5	P	OUTPUT1
6	V	OUTPUT2

ABKIA1837GB



ABKIA1838GB

Fail Safe

INFOID:0000000005461542

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

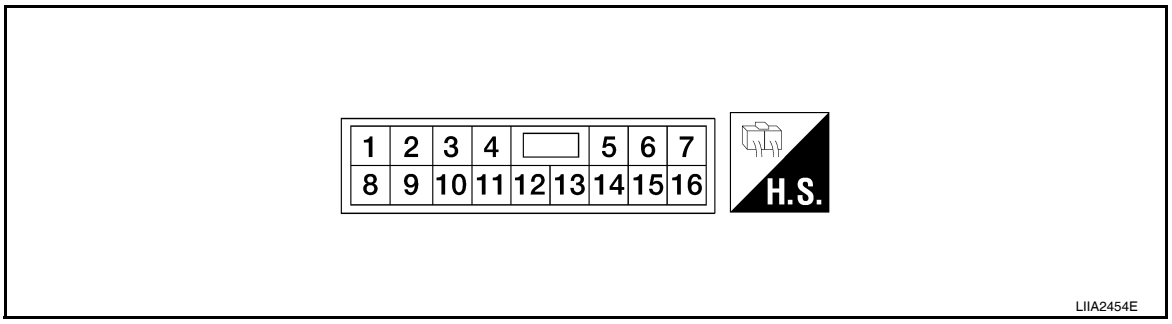
Perform initial operation to recover when switched to fail-safe mode. However, it switches back to fail-safe control when malfunction is found in power window switch or in motor.

FRONT POWER WINDOW SWITCH

Reference Value

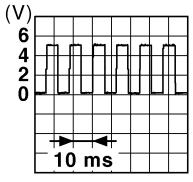
INFOID:0000000005461543

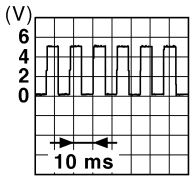
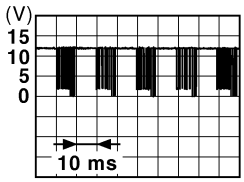
TERMINAL LAYOUT



PHYSICAL VALUES

POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

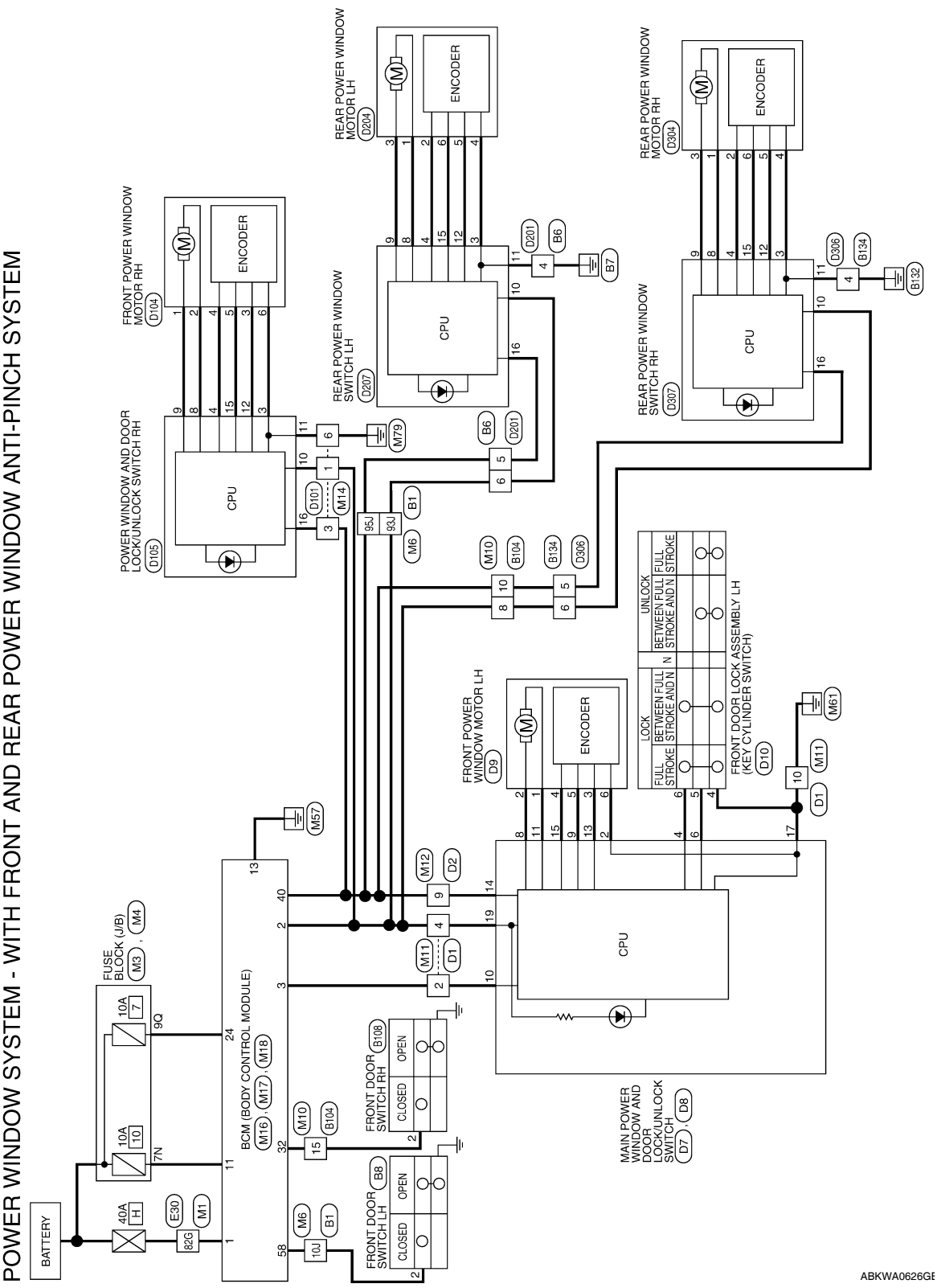
Terminal No.		Description		Condition	Voltage [V] (Approx.)
+	-	Signal name	Input/ Output		
3 (W)	Ground	Encoder ground	—	—	0
4 (BR)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates.	10
8 (L)	9	Power window motor UP signal	Output	When power window motor is operated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

Terminal No.		Description		Condition	Voltage [V] (Approx.)
+	-	Signal name	Input/ Output		
15 (Y)	3	Encoder pulse signal 2	Input	When power window motor operates.	 JMKIA0070GB
16 (R)	Ground	Power window serial link	Input/ Output	IGN SW ON or power window timer operating.	 JPMIA0013GB

Wiring Diagram

INFOID:0000000005533817

POWER WINDOW SYSTEM - WITH FRONT AND REAR POWER WINDOW ANTI-PINCH SYSTEM



POWER WINDOW SYSTEM CONNECTORS - WITH FRONT AND REAR POWER WINDOW ANTI-PINCH SYSTEM

Connector No.	M1
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

9G	8G	7G	6G	5G	4G	3G	2G	1G
17G	16G	15G	14G	13G	12G	11G	10G	
26G	25G	24G	23G	22G	21G	20G	19G	18G
34G	33G	32G	31G	30G	29G	28G	27G	
41G	40G	39G	38G	37G	36G	35G		
50G	49G	48G	47G	46G	45G	44G	43G	42G
58G	57G	56G	55G					
63G	62G	61G	60G	59G	54G	53G	52G	51G
72G	71G	70G	69G	68G	67G	66G		
80G	79G	78G	77G	76G	75G	74G	73G	65G
								64G
		83G		82G			81G	

Terminal No.	Color of Wire	Signal Name
82G	W/B	–

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

H.S.

3N		2N	1N
8N	7N	6N	5N
			4N

Terminal No.	Color of Wire	Signal Name
7N	Y/R	–

Connector No.	M4
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

H.S.

4Q	3Q		2Q	1Q
10Q	9Q	8Q	7Q	6Q
				5Q

Terminal No.	Color of Wire	Signal Name
9Q	R/W	–

ABKIA1832GB

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
8	R/Y	–
10	Y/G	–
15	R/B	–

Connector No.	M14
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2		3	4
5	6	7	8	9	10

Terminal No.	Color of Wire	Signal Name
1	R/Y	–
3	Y/G	–
6	B	–

Terminal No.	Color of Wire	Signal Name
10J	SB	–
93J	R/Y	–
95J	Y/G	–

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

9J	8J	7J	6J	5J	4J	3J		1J
17J	16J	15J	14J	13J	12J	11J	10J	2J
25J	24J	23J	22J					
30J	29J	28J	27J	26J	21J	20J	19J	18J
37J	36J	35J	34J	33J	32J	31J		
46J	45J	44J	43J	42J	41J	40J	39J	38J
55J	54J	53J	52J	51J	50J	49J		
63J	62J	61J	60J	59J	58J	57J	56J	47J
70J	69J	68J	67J	66J	65J	64J		
79J	78J	77J	76J	75J	74J	73J	72J	71J
87J	86J	85J	84J					
92J	91J	90J	89J	88J	83J	82J	81J	80J
99J	98J	97J	96J	95J	94J	93J		

Connector No.	M12
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
9	Y/G	–

Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
2	L/W	–
4	R/Y	–
10	B	–

ABKIA1833GB

Connector No.	M16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	W/B	BATT (F/L)
2	R/Y	P/W POWER SUPPLY PERM
3	L/W	P/W POWER SUPPLY IGN

Connector No.	M17
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
11	Y/R	BAT BCM FUSE
13	B	GND1

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

H.S.

Terminal No.	Color of Wire	Signal Name
24	R/W	BRAKE SW 1
32	R/B	AS DOOR SW 1
40	Y/G	PW K LINE
58	SB	DR DOOR SW

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
10J	SB	–
93J	R	–
95J	SB	–

Connector No.	E30
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
82G	LG	–

ABKIA1834GB

Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2		3	4
5	6	7	8	9	10

Terminal No.	Color of Wire	Signal Name
4	B	–
5	SB	–
6	R	–

Connector No.	B8
Connector Name	FRONT DOOR SWITCH LH
Connector Color	WHITE

H.S.

1
2
3

Terminal No.	Color of Wire	Signal Name
2	SB	–

Connector No.	B104
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
8	R	–
10	SB	–
15	GR	–

Connector No.	B108
Connector Name	FRONT DOOR SWITCH RH
Connector Color	WHITE

H.S.

1
2
3

Terminal No.	Color of Wire	Signal Name
2	GR	–

Connector No.	B134
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2		3	4
5	6	7	8	9	10

Terminal No.	Color of Wire	Signal Name
4	B	–
5	SB	–
6	R	–

Connector No.	D1
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
2	V	–
4	R	–
10	B	–

ABKIA1835GB

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

H.S.

Terminal No.	Color of Wire	Signal Name
9	O	–

Connector No.	D7
Connector Name	MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	–	–
2	GR	ENCODER GND
3	–	–
4	L	LOCK
5	–	–
6	R	UNLOCK
7	–	–
8	L	AS UP
9	Y	ENCODER SIG1
10	V	IGN
11	LG	AS DOWN
12	–	–
13	G	ENCODER SIG2
14	O	COM
15	BR	ENCODER POWER
16	–	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
17	B	GND
18	–	–
19	R	BAT

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	LG	–
2	L	–
3	G	–
4	BR	–
5	Y	–
6	GR	–

Connector No.	D10
Connector Name	FRONT DOOR LOCK ASSEMBLY LH
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
4	B	–
5	R	–
6	L	–

ABKIA1836GB

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

H.S.

4	3		2	1
10	9	8	7	6	5

Terminal No.	Color of Wire	Signal Name
1	P	–
3	R	–
6	B	–

Connector No.	D104
Connector Name	FRONT POWER WINDOW MOTOR RH
Connector Color	WHITE

H.S.

1		2
3	4	5	6

Terminal No.	Color of Wire	Signal Name
1	LG	–
2	L	–
3	G	–
4	BR	–
5	Y	–
6	W	–

Connector No.	D105
Connector Name	POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
3	W	GND
4	BR	ENCODER POWER
8	L	UP
9	LG	DOWN
10	P	BAT
11	B	GND
12	G	ENCODER SIG2
15	Y	ENCODER SIG1
16	R	COM

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

H.S.

4	3		2	1
10	9	8	7	6	5

Terminal No.	Color of Wire	Signal Name
4	B	–
5	SB	–
6	R	–

Connector No.	D204
Connector Name	REAR POWER WINDOW MOTOR LH
Connector Color	GREEN

H.S.

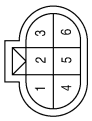
1	2	3
4	5	6

Terminal No.	Color of Wire	Signal Name
1	L	–
2	G	VCC
3	LG	–
4	W	GND
5	P	OUTPUT1
6	V	OUTPUT2

ABKIA1837GB

Connector No.	D304
Connector Name	REAR POWER WINDOW MOTOR RH
Connector Color	GREEN

H.S.

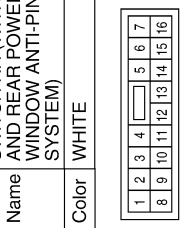


Terminal No.	Color of Wire	Signal Name
1	L	–
2	G	VCC
3	LG	–
4	W	GND
5	P	OUTPUT1
6	V	OUTPUT2

Terminal No.	Color of Wire	Signal Name
3	W	–
4	G	–
8	L	–
9	LG	–
10	R	–
12	P	–
11	B	–
15	V	–
16	SB	–

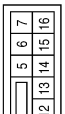
Connector No.	D307
Connector Name	REAR POWER WINDOW SWITCH RH (WITH FRONT AND REAR POWER WINDOW ANTI-PINCH SYSTEM)
Connector Color	WHITE

H.S.



Connector No.	D207
Connector Name	REAR POWER WINDOW SWITCH LH (WITH FRONT AND REAR POWER WINDOW ANTI-PINCH SYSTEM)
Connector Color	WHITE

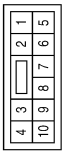
H.S.



Terminal No.	Color of Wire	Signal Name
3	W	–
4	G	–
8	L	–
9	LG	–

Connector No.	D306
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
4	B	–
5	SB	–
6	R	–

ABKIA1838GB

Fail Safe

INFOID:0000000005461545

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

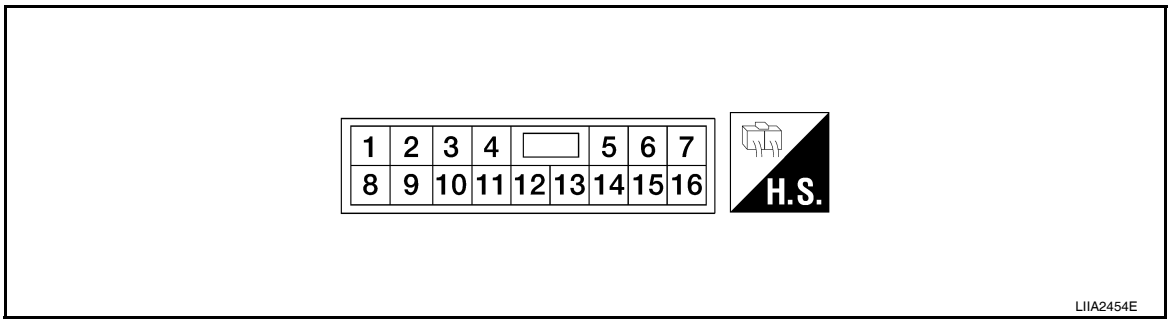
Perform initial operation to recover when switched to fail-safe mode. However, it switches back to fail-safe control when malfunction is found in power window switch or in motor.

REAR POWER WINDOW SWITCH

Reference Value

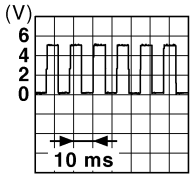
INFOID:0000000005461546

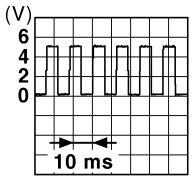
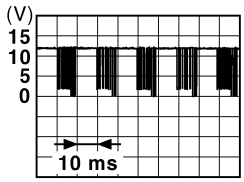
TERMINAL LAYOUT



PHYSICAL VALUES

REAR POWER WINDOW SWITCH

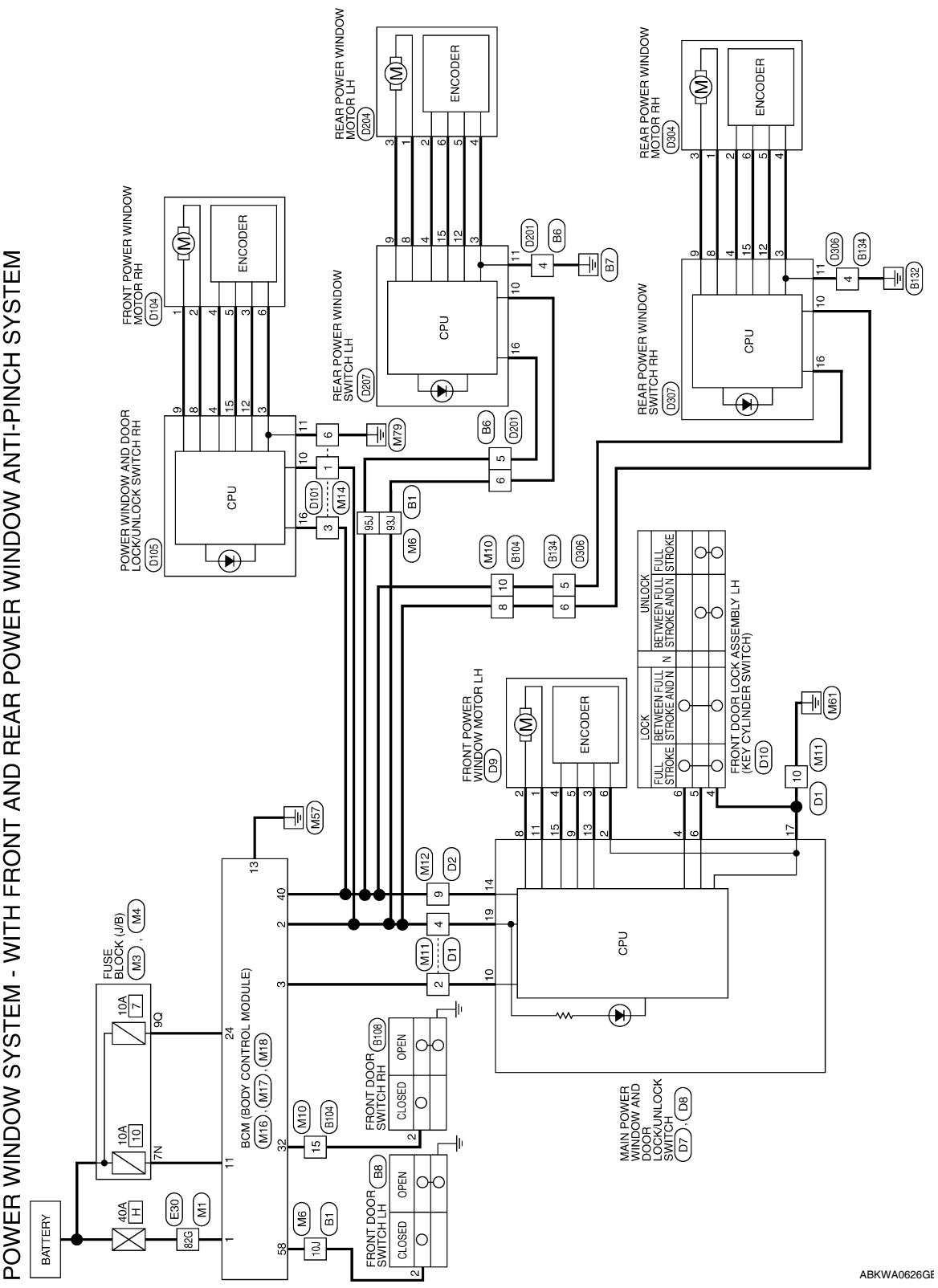
Terminal No.		Description		Condition	Voltage [V] (Approx.)
+	-	Signal name	Input/ Output		
3 (W)	Ground	Encoder ground	—	—	0
4 (G)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates.	10
8 (L)	9	Power window motor UP signal	Output	When power window motor is operated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

Terminal No.		Description		Condition	Voltage [V] (Approx.)
+	-	Signal name	Input/ Output		
15 (V)	3	Encoder pulse signal 2	Input	When power window motor operates.	 JMKIA0070GB
16 (SB)	Ground	Power window serial link	Input/ Output	IGN SW ON or power window timer operating.	 JPMIA0013GB

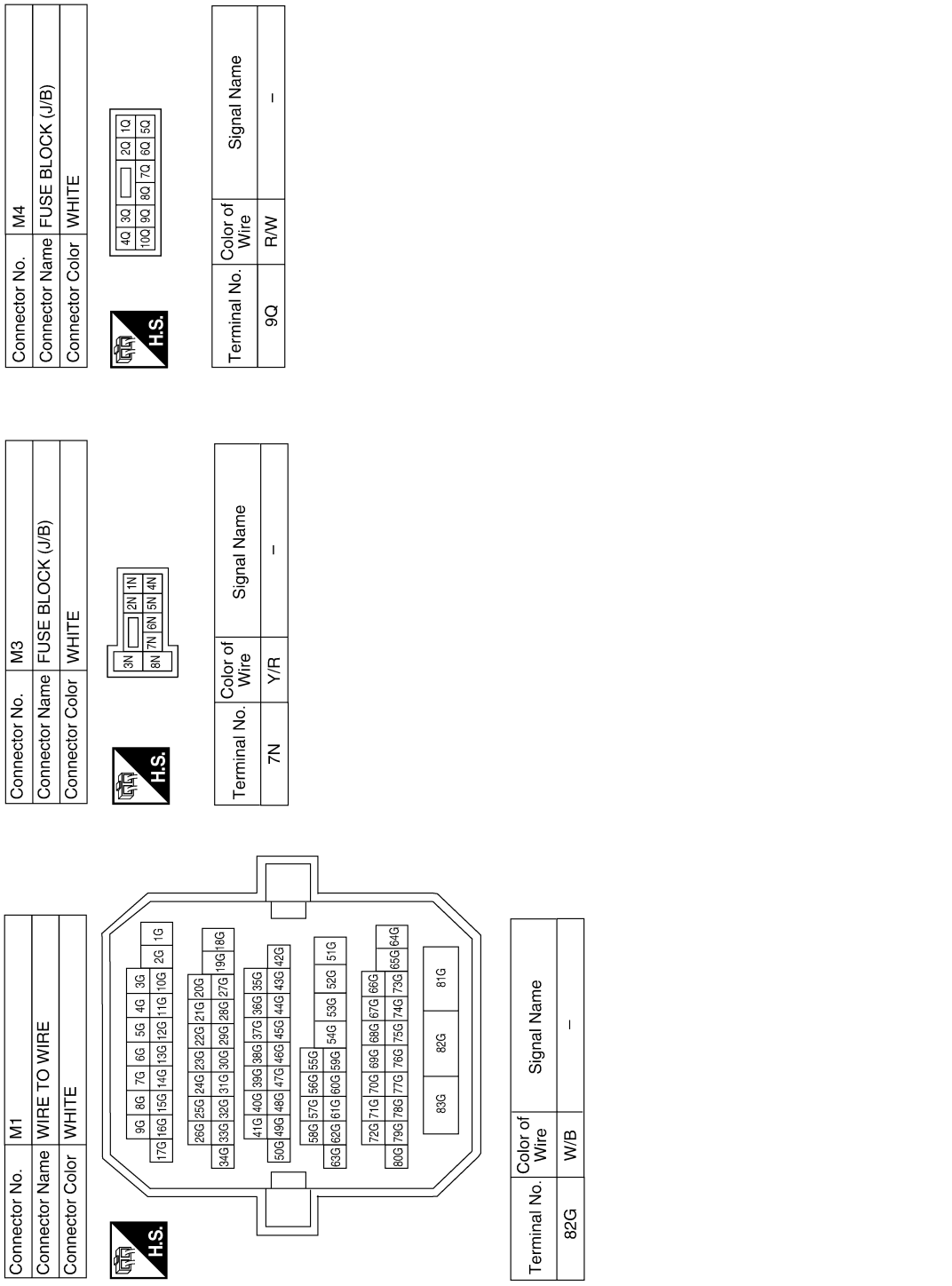
Wiring Diagram

INFOID:0000000005533818

POWER WINDOW SYSTEM - WITH FRONT AND REAR POWER WINDOW ANTI-PINCH SYSTEM



POWER WINDOW SYSTEM CONNECTORS - WITH FRONT AND REAR POWER WINDOW ANTI-PINCH SYSTEM



ABKIA1832GB

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
8	R/Y	–
10	Y/G	–
15	R/B	–

Connector No.	M14
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2		3	4
5	6	7	8	9	10

Terminal No.	Color of Wire	Signal Name
1	R/Y	–
3	Y/G	–
6	B	–

Terminal No.	Color of Wire	Signal Name
10J	SB	–
93J	R/Y	–
95J	Y/G	–

Connector No.	M12
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
9	Y/G	–

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

9J	8J	7J	6J	5J	4J	3J		1J
17J	16J	15J	14J	13J	12J	11J	10J	2J
	25J	24J	23J	22J		21J	20J	19J	18J
	30J	29J	28J	27J	26J				
		37J	36J	35J	34J	33J	32J	31J	
	46J	45J	44J	43J	42J	41J	40J	39J	38J
		55J	54J	53J	52J	51J	50J	49J	
	63J	62J	61J	60J	59J	58J	57J	56J	48J	47J
		70J	69J	68J	67J	66J	65J	64J	
	79J	78J	77J	76J	75J	74J	73J	72J	71J
		87J	86J	85J	84J				
	92J	91J	90J	89J	88J	83J	82J	81J	80J
		99J	98J	97J	96J	95J	94J	93J	

Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
2	L/W	–
4	R/Y	–
10	B	–

ABKIA1833GB

Connector No.	M16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	W/B	BATT (F/L)
2	R/Y	P/W POWER SUPPLY PERM
3	L/W	P/W POWER SUPPLY IGN

Connector No.	M17
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
11	Y/R	BAT BCM FUSE
13	B	GND1

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

H.S.

Terminal No.	Color of Wire	Signal Name
24	R/W	BRAKE SW 1
32	R/B	AS DOOR SW 1
40	Y/G	PW K LINE
58	SB	DR DOOR SW

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
10J	SB	–
93J	R	–
95J	SB	–

Connector No.	E30
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
82G	LG	–

ABKIA1834GB

Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3	4
5	6	7	8	9	10

Terminal No.	Color of Wire	Signal Name
4	B	–
5	SB	–
6	R	–

Connector No.	B8
Connector Name	FRONT DOOR SWITCH LH
Connector Color	WHITE

H.S.

1	2	3

Terminal No.	Color of Wire	Signal Name
2	SB	–

Connector No.	B104
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
8	R	–
10	SB	–
15	GR	–

Connector No.	B108
Connector Name	FRONT DOOR SWITCH RH
Connector Color	WHITE

H.S.

1
2
3

Terminal No.	Color of Wire	Signal Name
2	GR	–

Connector No.	B134
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3	4
5	6	7	8	9	10

Terminal No.	Color of Wire	Signal Name
4	B	–
5	SB	–
6	R	–

Connector No.	D1
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
2	V	–
4	R	–
10	B	–

ABKIA1835GB

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
9	O	–

Connector No.	D7
Connector Name	MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	–	–
2	GR	ENCODER GND
3	–	–
4	L	LOCK
5	–	–
6	–	–
7	–	–
8	L	AS UP
9	Y	ENCODER SIG1
10	V	IGN
11	LG	AS DOWN
12	–	–
13	G	ENCODER SIG2
14	O	COM
15	BR	ENCODER POWER
16	–	–

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

H.S.

17	18	19

Terminal No.	Color of Wire	Signal Name
17	B	GND
18	–	–
19	R	BAT

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

H.S.

1	2
3	4	5	6
---	---	---	---

Terminal No.	Color of Wire	Signal Name
1	LG	–
2	L	–
3	G	–
4	BR	–
5	Y	–
6	GR	–

Connector No.	D10
Connector Name	FRONT DOOR LOCK ASSEMBLY LH
Connector Color	GRAY

H.S.

1	2	3	4	5	6

Terminal No.	Color of Wire	Signal Name
4	B	–
5	R	–
6	L	–

ABKIA1836GB

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

H.S.

4	3		2	1
10	9	8	7	6	5

Terminal No.	Color of Wire	Signal Name
1	P	–
3	R	–
6	B	–

Connector No.	D104
Connector Name	FRONT POWER WINDOW MOTOR RH
Connector Color	WHITE

H.S.

1		2
3	4	5	6

Terminal No.	Color of Wire	Signal Name
1	LG	–
2	L	–
3	G	–
4	BR	–
5	Y	–
6	W	–

Connector No.	D105
Connector Name	POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
3	W	GND
4	BR	ENCODER POWER
8	L	UP
9	LG	DOWN
10	P	BAT
11	B	GND
12	G	ENCODER SIG2
15	Y	ENCODER SIG1
16	R	COM

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

H.S.

4	3		2	1
10	9	8	7	6	5

Terminal No.	Color of Wire	Signal Name
4	B	–
5	SB	–
6	R	–

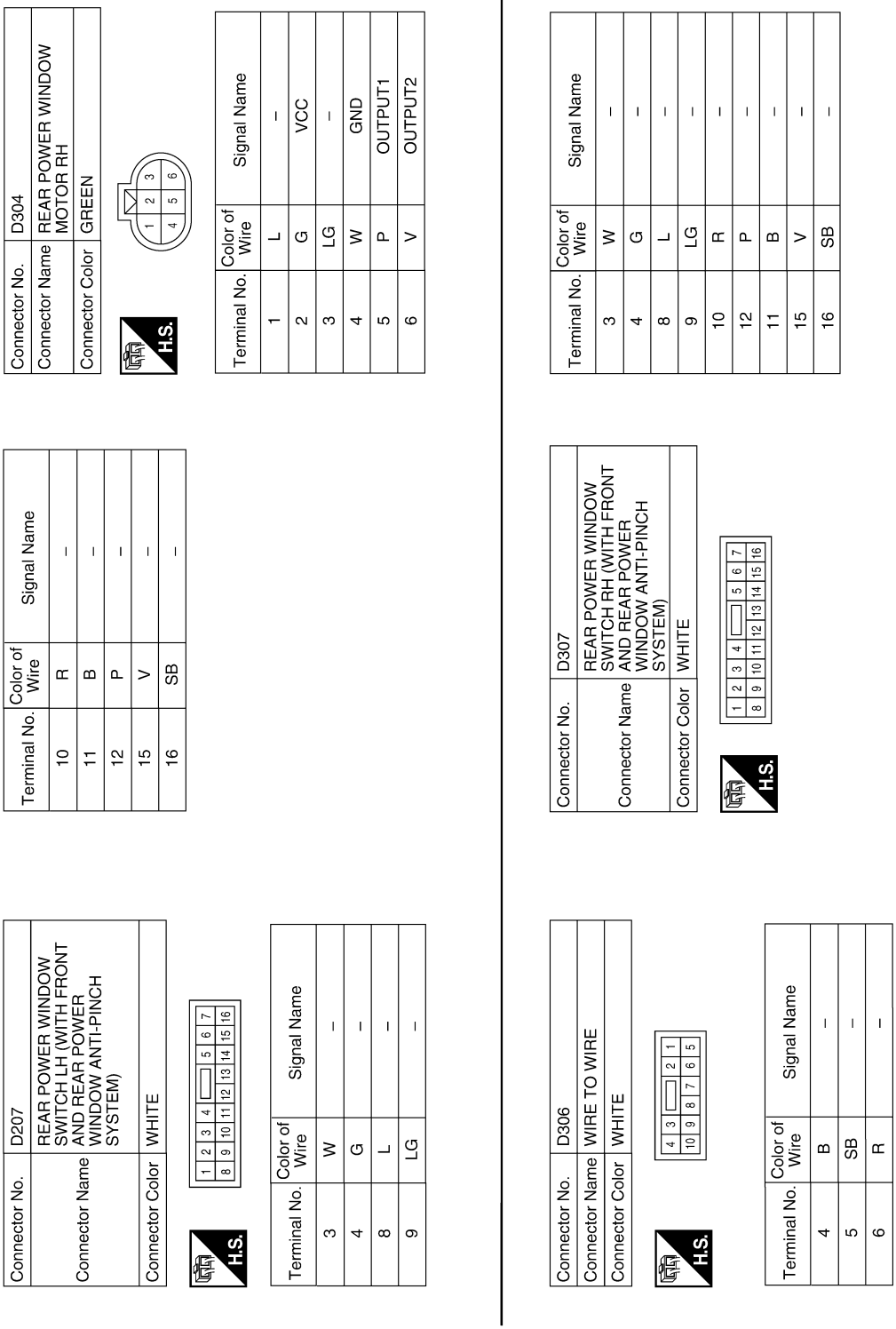
Connector No.	D204
Connector Name	REAR POWER WINDOW MOTOR LH
Connector Color	GREEN

H.S.

1	2	3
4	5	6

Terminal No.	Color of Wire	Signal Name
1	L	–
2	G	VCC
3	LG	–
4	W	GND
5	P	OUTPUT1
6	V	OUTPUT2

ABKIA1837GB



ABKIA1838GB

Fail Safe

INFOID:0000000005461548

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 motor.

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:0000000005533819

VALUES ON THE DIAGNOSIS TOOL

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	OFF
	Front wiper switch INT	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
TURN SIGNAL R	Other than turn signal switch RH	OFF
	Turn signal switch RH	ON
TURN SIGNAL L	Other than turn signal switch LH	OFF
	Turn signal switch LH	ON
TAIL LAMP SW	Other than lighting switch 1ST and 2ND	OFF
	Lighting switch 1ST or 2ND	ON
HI BEAM SW	Other than lighting switch HI	OFF
	Lighting switch HI	ON
HEAD LAMP SW 1	Other than lighting switch 2ND	OFF
	Lighting switch 2ND	ON
HEAD LAMP SW 2	Other than lighting switch 2ND	OFF
	Lighting switch 2ND	ON
PASSING SW	Other than lighting switch PASS	OFF
	Lighting switch PASS	ON
AUTO LIGHT SW	Other than lighting switch AUTO	OFF
	Lighting switch AUTO	ON
FR FOG SW	Front fog lamp switch OFF	OFF
	Front fog lamp switch ON	ON
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 door RH closed	OFF
	Rear door RH opened	ON
DOOR SW-RL	Rear door LH closed	OFF
	Rear door LH opened	ON
CDL LOCK SW	Other than power door lock switch LOCK	OFF
	Power door lock switch LOCK	ON

Monitor Item	Condition	Value/Status
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
HAZARD SW	When hazard switch is not pressed	OFF
	When hazard switch is pressed	ON
REAR DEF SW	When rear window defogger switch is pressed	ON
TR CANCEL SW	Trunk lid opener cancel switch OFF	OFF
	Trunk lid opener cancel switch ON	ON
TR/BD OPEN SW	Trunk lid opener switch OFF	OFF
	While the trunk lid opener switch is turned ON	ON
TRNK/HAT MNTR	Trunk lid closed	OFF
	Trunk lid opened	ON
RKE-LOCK	When LOCK button of Intelligent Key is not pressed	OFF
	When LOCK button of Intelligent Key is pressed	ON
RKE-UNLOCK	When UNLOCK button of Intelligent Key is not pressed	OFF
	When UNLOCK button of Intelligent Key is pressed	ON
RKE-TR/BD	When TRUNK OPEN button of Intelligent Key is not pressed	OFF
	When TRUNK OPEN button of Intelligent Key is pressed	ON
RKE-PANIC	When PANIC button of Intelligent Key is not pressed	OFF
	When PANIC button of Intelligent Key is pressed	ON
RKE-P/W OPEN	When UNLOCK button of Intelligent Key is not pressed and held	OFF
	When UNLOCK button of Intelligent Key is pressed and held	ON
RKE-MODE CHG	When LOCK/UNLOCK button of Intelligent Key is not pressed and held simultaneously	OFF
	When LOCK/UNLOCK button of Intelligent Key is pressed and held simultaneously	ON
OPTICAL SENSOR	When outside of the vehicle is bright	Close to 5 V
	When outside of the vehicle is dark	Close to 0 V
REQ SW-DR	When front door request switch is not pressed (driver side)	OFF
	When front door request switch is pressed (driver side)	ON
REQ SW-AS	When front door request switch is not pressed (passenger side)	OFF
	When front door request switch is pressed (passenger side)	ON
REQ SW-RL	When rear door request switch is not pressed (driver side)	OFF
	When rear door request switch is pressed (driver side)	ON
REQ SW-RR	When rear door request switch is not pressed (passenger side)	OFF
	When rear door request switch is pressed (passenger side)	ON
REQ SW-BD/TR	When trunk request switch is not pressed	OFF
	When trunk request switch is pressed	ON
PUSH SW	When engine switch (push switch) is not pressed	OFF
	When engine switch (push switch) is pressed	ON
IGN RLY 2-F/B	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON

Monitor Item	Condition	Value/Status
ACC RLY-F/B	Ignition switch OFF	OFF
	Ignition switch ACC or ON	ON
BRAKE SW 1	When the brake pedal is not depressed	ON
	When the brake pedal is depressed	OFF
DETE/CANCL SW	When selector lever is in P position	OFF
	When selector lever is in any position other than P	ON
SFT PN/N SW	When selector lever is in any position other than P or N	OFF
	When selector lever is in P or N position	ON
S/L-LOCK*	Electronic steering column lock LOCK status	OFF
	Electronic steering column lock UNLOCK status	ON
S/L-UNLOCK*	Electronic steering column lock UNLOCK status	OFF
	Electronic steering column lock LOCK status	ON
S/L RELAY-F/B*	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON
UNLK SEN-DR	Driver door UNLOCK status	OFF
	Driver door LOCK status	ON
PUSH SW-IPDM	When engine switch (push switch) is not pressed	OFF
	When engine switch (push switch) is pressed	ON
IGN RLY1 F/B	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON
DETE SW -IPDM	When selector lever is in P position	OFF
	When selector lever is in any position other than P	ON
SFT PN -IPDM	When selector lever is in any position other than P or N	OFF
	When selector lever is in P or N position	ON
SFT P-MET	When selector lever is in any position other than P	OFF
	When selector lever is in P position	ON
SFT N-MET	When selector lever is in any position other than N	OFF
	When selector lever is 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*	Electronic steering column lock LOCK status	OFF
	Electronic steering column lock UNLOCK status	ON
S/L UNLK-IPDM*	Electronic steering column lock UNLOCK status	OFF
	Electronic steering column lock LOCK status	ON
S/L RELAY-REQ*	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON
VEH SPEED 1	While driving	Equivalent to speedometer reading
VEH SPEED 2	While driving	Equivalent to speedometer reading
DOOR STAT-DR	Driver door LOCK status	LOCK
	Wait with selective UNLOCK operation (5 seconds)	READY
	Driver door UNLOCK status	UNLK

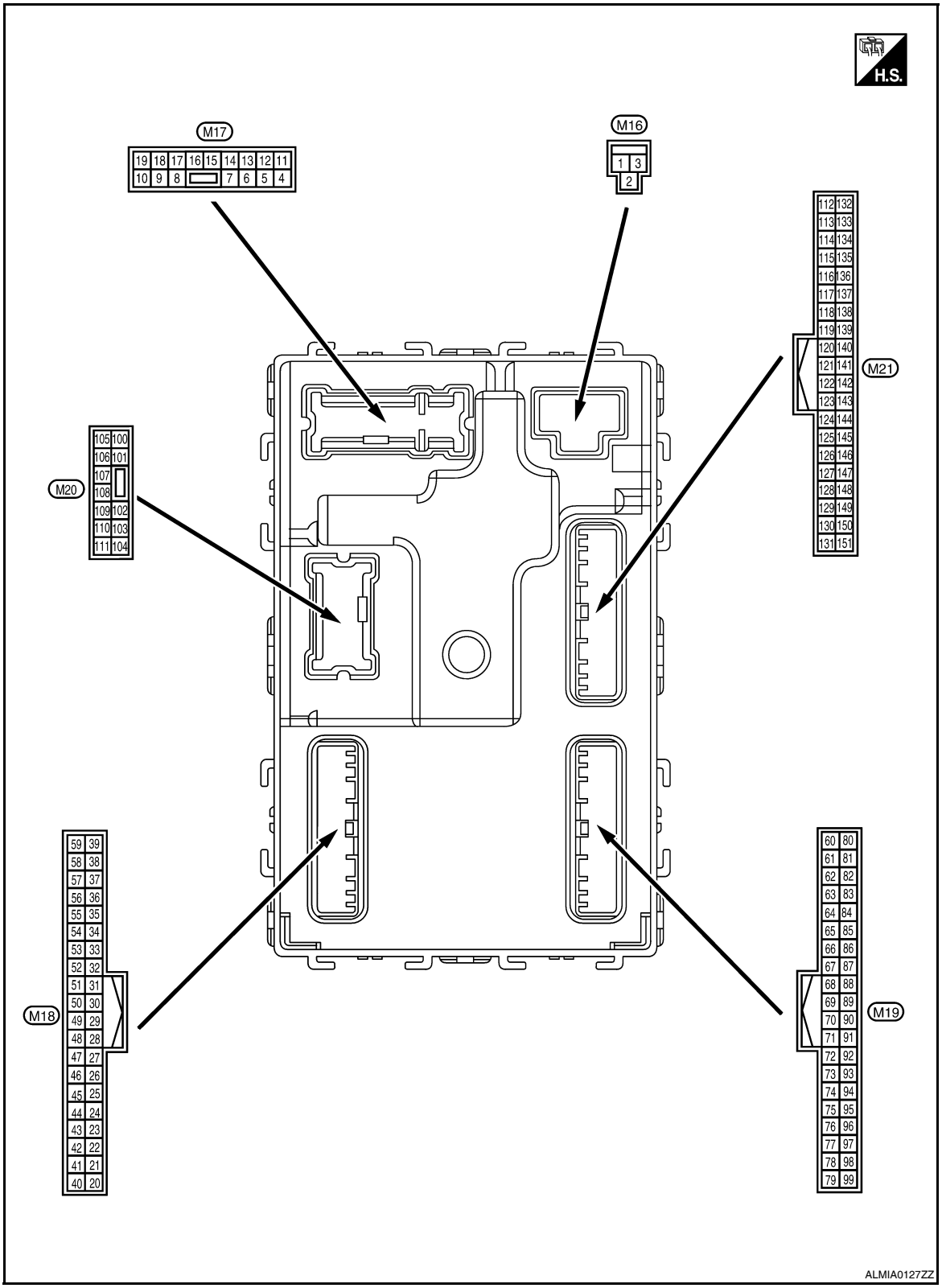
Monitor Item	Condition	Value/Status
DOOR STAT-AS	Passenger door LOCK status	LOCK
	Wait with selective UNLOCK operation (5 seconds)	READY
	Passenger door UNLOCK status	UNLK
ID OK FLAG	Ignition switch ACC or ON	RESET
	Ignition switch OFF	SET
PRMT ENG STRT	When the engine start is prohibited	RESET
	When the engine start is permitted	SET
KEY SW -SLOT	When Intelligent Key is not inserted into key slot	OFF
	When Intelligent Key is inserted into key slot	ON
RKE OPE COUN1	During the operation of Intelligent Key	Operation frequency of Intelligent Key
CONFRM ID ALL	The key ID that the key slot receives does not accord with any key ID registered to BCM.	YET
	The key ID that the key slot receives accords with any key ID registered to BCM.	DONE
CONFIRM ID4	The key ID that the key slot receives does not accord with the fourth key ID registered to BCM.	YET
	The key ID that the key slot receives accords with the fourth key ID registered to BCM.	DONE
CONFIRM ID3	The key ID that the key slot receives does not accord with the third key ID registered to BCM.	YET
	The key ID that the key slot receives accords with the third key ID registered to BCM.	DONE
CONFIRM ID2	The key ID that the key slot receives does not accord with the second key ID registered to BCM.	YET
	The key ID that the key slot receives accords with the second key ID registered to BCM.	DONE
CONFIRM ID1	The key ID that the key slot receives does not accord with the first key ID registered to BCM.	YET
	The key ID that the key slot receives accords with the first key ID registered to BCM.	DONE
TP 4	The ID of fourth key is not registered to BCM	YET
	The ID of fourth key is registered to BCM	DONE
TP 3	The ID of third key is not registered to BCM	YET
	The ID of third key is registered to BCM	DONE
TP 2	The ID of second key is not registered to BCM	YET
	The ID of second key is registered to BCM	DONE
TP 1	The ID of first key is not registered to BCM	YET
	The ID of first 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	When ID of front LH tire transmitter is registered	DONE
	When ID of front LH tire transmitter is not registered	YET

Monitor Item	Condition	Value/Status
ID REGST FR1	When ID of front RH tire transmitter is registered	DONE
	When ID of front RH tire transmitter is not registered	YET
ID REGST RR1	When ID of rear RH tire transmitter is registered	DONE
	When ID of rear RH tire transmitter is not registered	YET
ID REGST RL1	When ID of rear LH tire transmitter is registered	DONE
	When 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

* : With electronic steering column lock

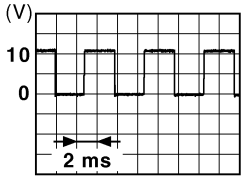
Terminal Layout

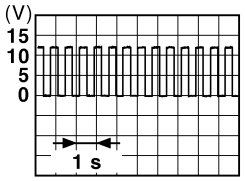
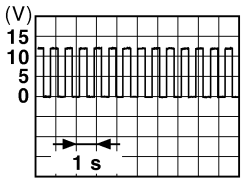
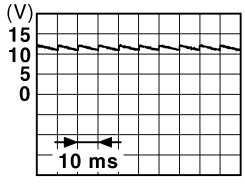
INFOID:0000000005533820

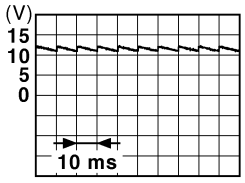
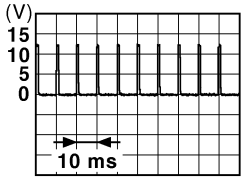
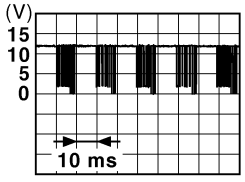


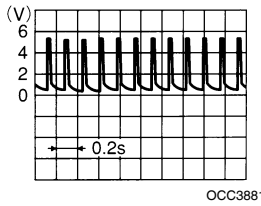
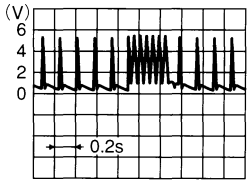
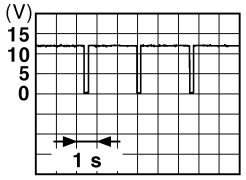
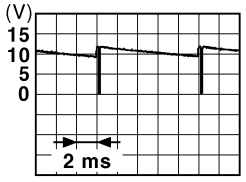
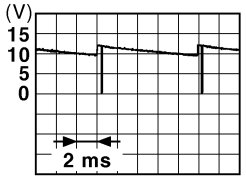
Physical Values

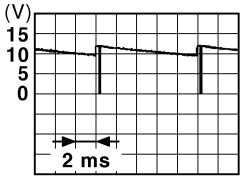
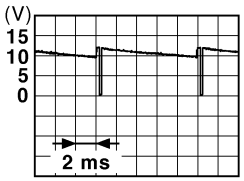
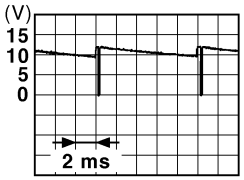
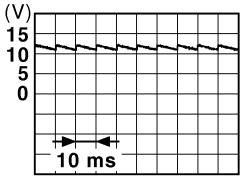
INFOID:0000000005533821

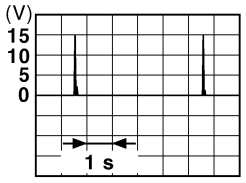
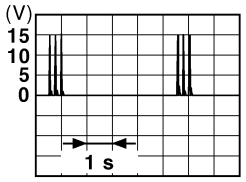
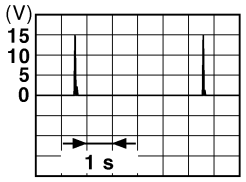
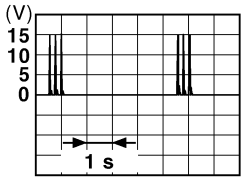
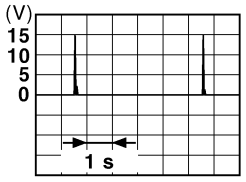
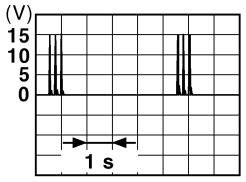
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
1 (W/B)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
2 (R/Y)	Ground	Battery power supply output	Output	Ignition switch OFF		Battery voltage
3 (L/W)	Ground	Ignition power supply output	Output	Ignition switch ON		Battery voltage
4 (P/W)	Ground	Interior room lamp power supply	Output	After passing the interior room lamp battery saver operation time		0V
				Any other time after passing the interior room lamp battery saver operation time		Battery voltage
5 (G)	Ground	Front door RH UNLOCK	Output	Front door RH	UNLOCK (actuator is activated)	Battery voltage
					Other than UNLOCK (actuator is not activated)	0V
7 (R/W)	Ground	Step lamp	Output	Step lamp	ON	0V
					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)	0V
9 (L)	Ground	Front door LH UNLOCK	Output	Front door LH	UNLOCK (actuator is activated)	Battery voltage
					Other than UNLOCK (actuator is not activated)	0V
10 (G)	Ground	Rear door RH and rear door LH UNLOCK	Output	Rear door RH and rear door LH	UNLOCK (actuator is activated)	Battery voltage
					Other than UNLOCK (actuator is not activated)	0V
11 (Y/R)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
13 (B)	Ground	Ground	—	Ignition switch ON		0V
14 (GR/W)	Ground	Engine switch (push switch) illumination ground	Input	Tail lamp	OFF	0V
					ON	**NOTE:** When the illumination brightening/dimming level is in the neutral position  JSNIA0010GB
15 (Y/L)	Ground	ACC indicator lamp	Output	Ignition switch	OFF	Battery voltage
					ACC or ON	0V

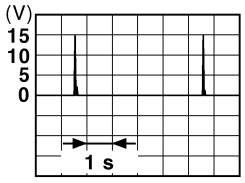
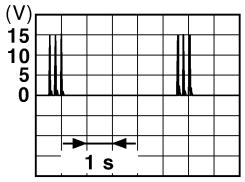
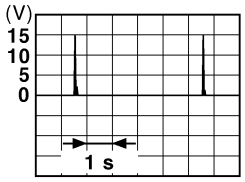
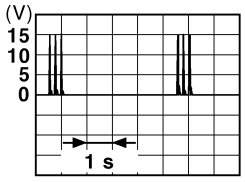
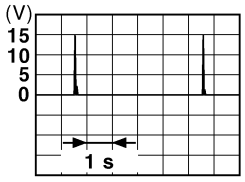
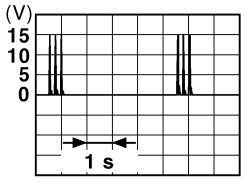
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
17 (G/B)	Ground	Turn signal (RH)	Output	Ignition switch ON	Turn signal switch OFF	0V
					Turn signal switch RH	 PKID0926E 6.5 V
18 (G/Y)	Ground	Turn signal (LH)	Output	Ignition switch ON	Turn signal switch OFF	0V
					Turn signal switch LH	 PKID0926E 6.5 V
19 (Y)	Ground	Room lamp timer control	Output	Interior room lamp	OFF	Battery voltage
					ON	0V
21 (P/B)	Ground	Optical sensor signal	Input	Ignition switch ON	When outside of the vehicle is bright	Close to 5V
					When outside of the vehicle is dark	Close to 0V
24 (R/W)	Ground	Stop lamp switch 1	Input	—		Battery voltage
26 (O/L)	Ground	Stop lamp switch 2	Input	Stop lamp switch	OFF (brake pedal is released)	0V
					ON (brake pedal is depressed)	Battery voltage
27 (O)	Ground	Front door lock assembly LH (unlock sensor)	Input	Front door LH	LOCK status	 JPMIA0011GB 11.8V
					UNLOCK status	0V
29 (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		0V
30 (V/Y)	Ground	ACC feedback signal	Input	Ignition switch	OFF	0
					ACC or ON	Battery voltage
31 (G)	Ground	Rear window defogger feedback signal	Input	Rear window defogger switch	OFF	0V
					ON	Battery voltage

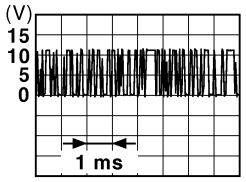
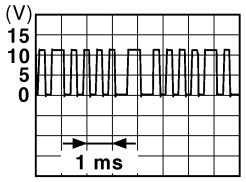
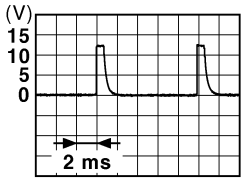
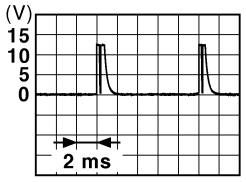
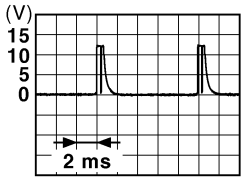
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
32 (R/B)	Ground	Front door RH switch	Input	Front door RH switch	OFF (when front door RH closes)	 JPMIA0011GB 11.8 V
					ON (when front door RH opens)	0V
37 (O)	Ground	Trunk lid opener cancel switch	Input	Trunk lid opener cancel switch	CANCEL	 JPMIA0012GB 1.1V
					ON	0V
38 (GR/ W)	Ground	Rear window defogger ON signal	Input	Rear window defogger switch	OFF	5V
					ON	0V
40 (Y/G)	Ground	Power window serial link	Input/ Output	Ignition switch ON		 JPMIA0013GB 10.2V
				Ignition switch OFF or ACC		0V
41 (W)	Ground	Engine switch (push switch) illumination	Output	Engine switch (push switch) illumination	ON	5.5V
					OFF	0V
42 (R)	Ground	LOCK indicator lamp	Output	LOCK indicator lamp	ON	0V
					OFF	Battery voltage
45 (P)	Ground	Receiver & sensor ground	Input	Ignition switch ON		0V
46 (V/W)	Ground	Receiver & sensor power supply output	Output	Ignition switch	OFF	0V
					ACC or ON	5.0V

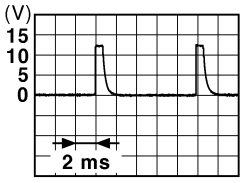
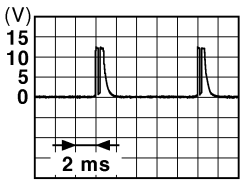
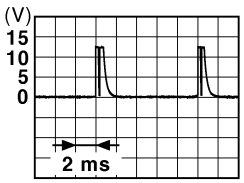
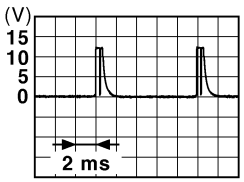
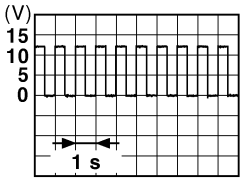
Terminal No. (Wire color) (+)	Terminal No. (Wire color) (-)	Description: Signal name	Description: Input/ Output	Condition		Value (Approx.)
47[1] (G/O)	Ground	Tire pressure receiver signal	Input/ Output	Ignition switch ON	Standby state	 OCC3881D
					When receiving the signal from the transmitter	 OCC3880D
48 (R/G)	Ground	Selector lever transmission range switch signal	Input	Selector lever	P or N position	12.0V
					Except P and N positions	0V
49 (L/O)	Ground	Security indicator signal	Output	Security indicator	ON	0V
					Blinking	 JPMIA0014GB 11.3V
					OFF	Battery voltage
50 (LG/ B)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermittent dial 4)	All switch OFF	0V
					Lighting switch 1ST	 JPMIA0031GB 10.7V
					Lighting switch high-beam	
					Lighting switch 2ND	
					Turn signal switch RH	
51 (L/W)	Ground	Combination switch OUTPUT 1	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	0V
					Front wiper switch HI (Wiper intermittent dial 4)	 JPMIA0032GB 10.7V
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • WIper intermittent dial 2 • Wiper intermittent dial 3 • Wiper intermittent dial 6 • Wiper intermittent dial 7	

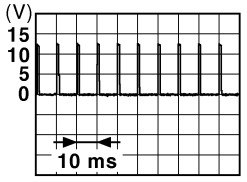
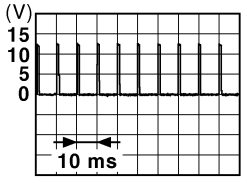
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
52 (G/B)	Ground	Combination switch OUTPUT 2	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	0V
					Front washer switch ON (Wiper intermittent dial 4)	 JPMIA0033GB 10.7V
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • WIper intermittent dial 5 • Wiper intermittent dial 6	
53 (LG/ R)	Ground	Combination switch OUTPUT 3	Output	Combination switch (Wiper intermittent dial 4)	All switch OFF	0V
					Front wiper switch INT	 JPMIA0034GB 10.7V
					Front wiper switch LO	
					Lighting switch AUTO	
54 (G/Y)	Ground	Combination switch OUTPUT 4	Output	Combination switch (Wiper intermittent dial 4)	All switch OFF	0V
					Front fog lamp switch ON	 JPMIA0035GB 10.7V
					Lighting switch 2ND	
					Lighting switch flash-to-pass	
					Turn signal switch LH	
57[1] (W)	Ground	Tire pressure warning check switch	Input	—		5V
58 (SB)	Ground	Front door LH switch	Input	Front door LH switch	OFF (front door LH CLOSE)	 JPMIA0011GB 11.8V
					ON (front door LH OPEN)	0V
59 (G/R)	Ground	Rear window defogger relay	Output	Rear window defogger	Active	Battery voltage
					Not activated	0V

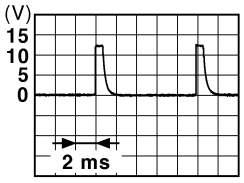
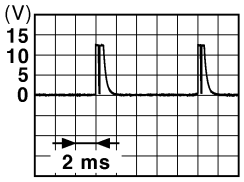
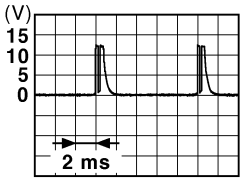
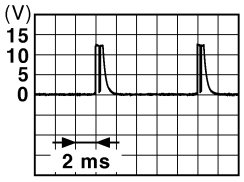
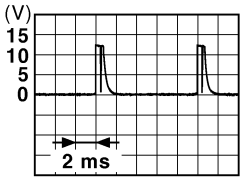
Terminal No. (Wire color) (+)	Terminal No. (Wire color) (-)	Description: Signal name	Description: Input/ Output	Condition		Value (Approx.)
60 (B/R)	Ground	Front console antenna 2 (-)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
61 (W/R)	Ground	Center console antenna 2 (+)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
62 (V)	Ground	Front outside handle RH antenna (-)	Output	When the front door RH 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

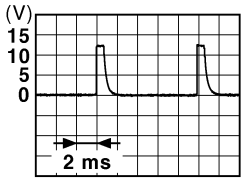
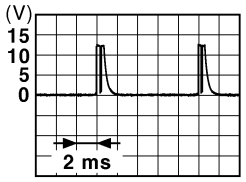
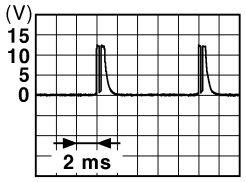
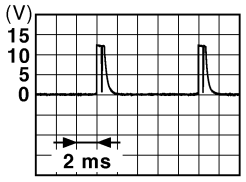
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
63 (P)	Ground	Front outside handle RH antenna (+)	Output	When the front door RH request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB
64 (V)	Ground	Front outside handle LH antenna (-)	Output	When the front door LH 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
65 (P)	Ground	Front outside handle LH antenna (+)	Output	When the front door LH 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

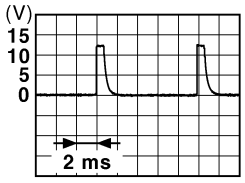
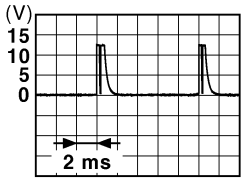
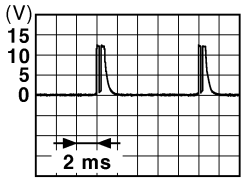
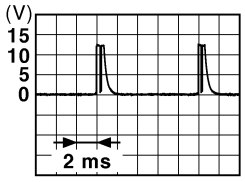
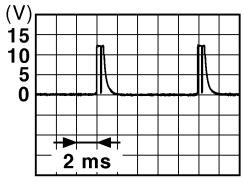
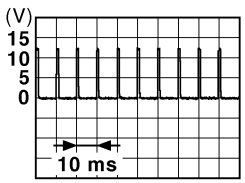
Terminal No. (Wire color) (+)	Terminal No. (Wire color) (-)	Description: Signal name	Description: Input/ Output	Condition		Value (Approx.)
68 (G/O)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
69 (O)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
70 (R/B)	Ground	Ignition relay-2 control	Output	Ignition switch	OFF or ACC	0V
					ON	Battery voltage
71 (L/O)	Ground	Remote keyless entry receiver signal	Input/ Output	During waiting		 JMKIA0064GB
				When operating either button on Intelligent Key		 JMKIA0065GB
75 (R/Y)	Ground	Combination switch INPUT 5	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 JPMIA0041GB 1.4V
					Front fog lamp switch ON (Wiper intermittent dial 4)	 JPMIA0037GB 1.3V
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 6 • Wiper intermittent dial 7	 JPMIA0040GB 1.3V

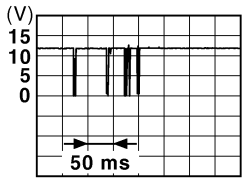
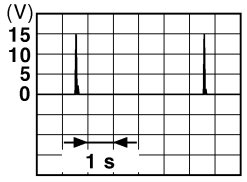
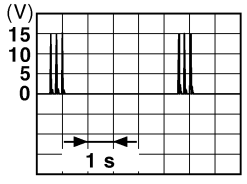
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
76 (R/G)	Ground	Combination switch INPUT 3	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 JPMIA0041GB 1.4V
					Lighting switch high-beam (Wiper intermittent dial 4)	 JPMIA0036GB 1.3V
					Lighting switch 2ND (Wiper intermittent dial 4)	 JPMIA0037GB 1.3V
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	 JPMIA0040GB 1.3V
77[2] (BR)	Ground	Engine switch (push switch)	Input	Engine switch (push switch)	Pressed	0V
					Not pressed	Battery voltage
78 (P)	Ground	CAN-L	Input/ Output	—		—
79 (L)	Ground	CAN-H	Input/ Output	—		—
80 (R/L)	Ground	Key slot illumination	Output	Key slot illumination	OFF	0V
					Blinking	 JPMIA0015GB 6.5V
					ON	Battery voltage

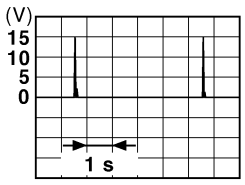
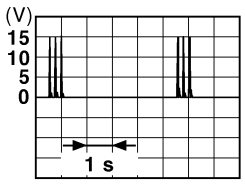
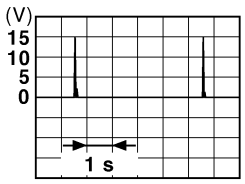
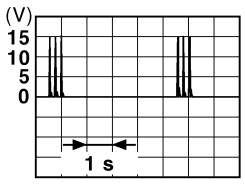
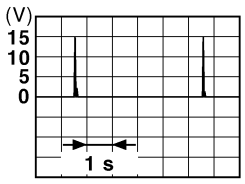
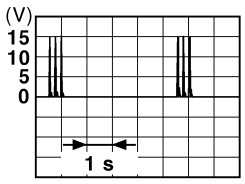
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
81 (LG)	Ground	ON indicator lamp	Output	Ignition switch	OFF or ACC	0V
					ON	Battery voltage
83 (L)	Ground	ACC relay control	Output	Ignition switch	OFF	0V
					ACC or ON	Battery voltage
84 (Y/R)	Ground	CVT shift selector	Output	—		Battery voltage
85[3] (L/O)	Ground	Electronic steering column lock condition No. 1	Input	Electronic steering column lock	Lock status	0V
					Unlock status	Battery voltage
86[3] (G/R)	Ground	Electronic steering column lock condition No. 2	Input	Electronic steering column lock	Lock status	Battery voltage
					Unlock status	0V
87 (G/B)	Ground	Selector lever P position switch	Input	Selector lever	P position	0V
					Any position other than P	Battery voltage
88 (R)	Ground	Front door RH request switch	Input	Front door RH request switch	ON (pressed)	0V
					OFF (not pressed)	 JPMIA0016GB 1.0V
89 (R)	Ground	Front door LH request switch	Input	Front door LH request switch	ON (pressed)	0V
					OFF (not pressed)	 JPMIA0016GB 1.0V
90 (Y)	Ground	Blower fan motor relay control	Output	Ignition switch	OFF or ACC	0V
					ON	Battery voltage
91 (L/R)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OFF		Battery voltage
94[3] (G/Y)	Ground	Steering wheel lock unit power supply	Output	Ignition switch	OFF or ACC	Battery voltage
					ON	0V

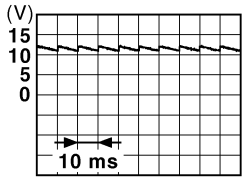
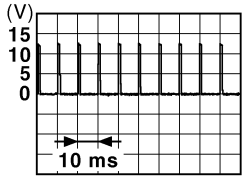
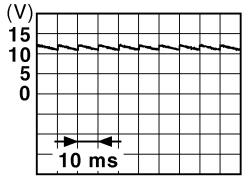
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
95 (R/W)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermittent dial 4)	All switch OFF	 JPMIA0041GB 1.4V
					Turn signal switch LH	 JPMIA0037GB 1.3V
					Turn signal switch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

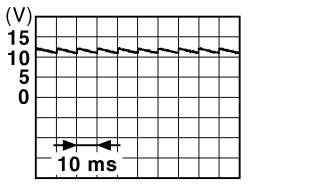
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
96 (P/B)	Ground	Combination switch INPUT 4	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 JPMIA0041GB 1.4V
					Lighting switch AUTO (Wiper intermittent dial 4)	 JPMIA0038GB 1.3V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

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
97 (R/B)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermittent dial 4)	All switch OFF	 JPMIA0041GB 1.4V
					Lighting switch flash-to-pass	 JPMIA0037GB 1.3V
					Lighting switch 2ND	 JPMIA0036GB 1.3V
					Front wiper switch INT	 JPMIA0038GB 1.3V
					Front wiper switch HI	 JPMIA0040GB 1.3V
98 (G/O)	Ground	Hazard switch	Input	Hazard switch	Pressed	0 V
					Not pressed	 JPMIA0012GB 1.1V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
99[3] (L/Y)	Ground	Electronic steering column lock unit communication	Input/ Output	Electronic steering column lock	LOCK status	Battery voltage
					LOCK or UNLOCK	 JMKIA0066GB
					For 15 seconds after UNLOCK	Battery voltage
					15 seconds or later after UNLOCK	0V
103 (V)	Ground	Trunk lid opening.	Output	Trunk lid	Open (trunk lid opener actuator is activated)	Battery voltage
					Close (trunk lid opener actuator is not activated)	0V
110 (V/W)	Ground	Trunk room lamp	Output	Trunk room lamp	ON	0V
					OFF	Battery voltage
114 (B)	Ground	Trunk room antenna 1 (-)	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			
115 (W)	Ground	Trunk room antenna 1 (+)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
118 (L/O)	Ground	Rear bumper antenna (-)	Output	When the trunk lid 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
119 (BR/ W)	Ground	Rear bumper antenna (+)	Output	When the trunk lid 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			
127 (BR/ W)	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	OFF or ACC	Battery voltage
					ON	0V
130 (W)	Ground	Trunk room lamp switch	Input	Trunk room lamp switch	OFF (trunk is closed)	 JPMIA0011GB 11.8V
					ON (trunk is open)	0V
132 (R)	Ground	Starter motor relay control	Output	Ignition switch ON	When selector lever is in P or N position and the brake is depressed	Battery voltage
					When selector lever is in P or N position and the brake is not depressed	0V
140[4] (L/R)	Ground	Engine switch (push switch)	Input	Engine switch (push switch)	Pressed	0V
					Not pressed	Battery voltage
141 (BR)	Ground	Trunk request switch	Input	Trunk request switch	ON (pressed)	0V
					OFF (not pressed)	 JPMIA0016GB 1.0V
144 (GR)	Ground	Request switch buzzer	Output	Request switch buzzer	Sounding	0V
					Not sounding	Battery voltage
147 (L/R)	Ground	Trunk lid opener switch	Input	Trunk lid opener switch	Pressed	0V
					Not pressed	Battery voltage
148 (R/W)	Ground	Rear door RH switch	Input	Rear door RH switch	OFF (when rear door RH closes)	 JPMIA0011GB 11.8V
					ON (when rear door RH opens)	0V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
149 (R/B)	Ground	Rear door LH switch	Input	Rear door LH switch	OFF (when rear door LH closes)	 JPMIA0011GB 11.8V
					ON (when rear door LH opens)	0V

1 : With low tire pressure monitoring system

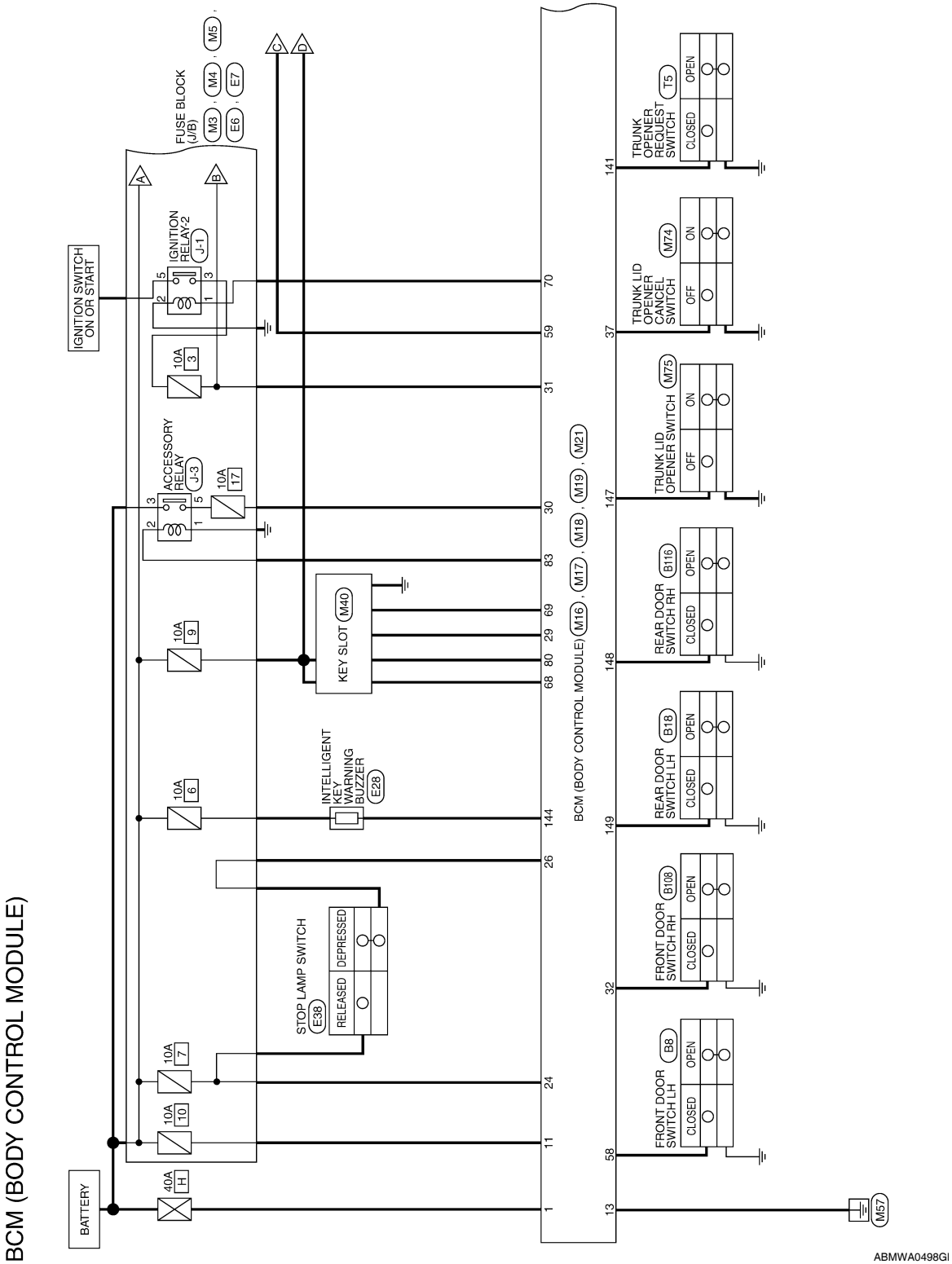
2 : With electronic steering column lock

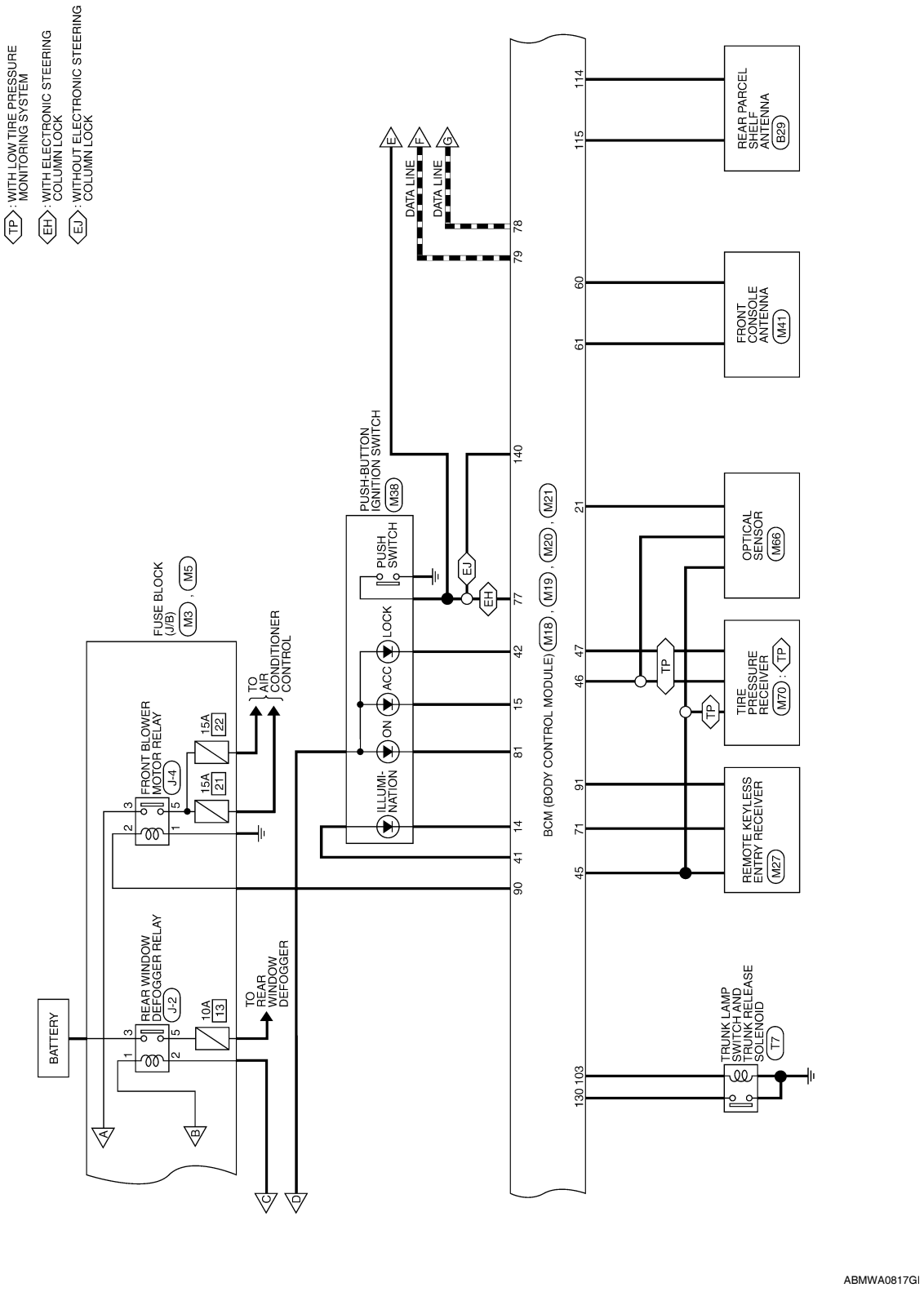
3 : Early production

4 : Without electronic steering column lock

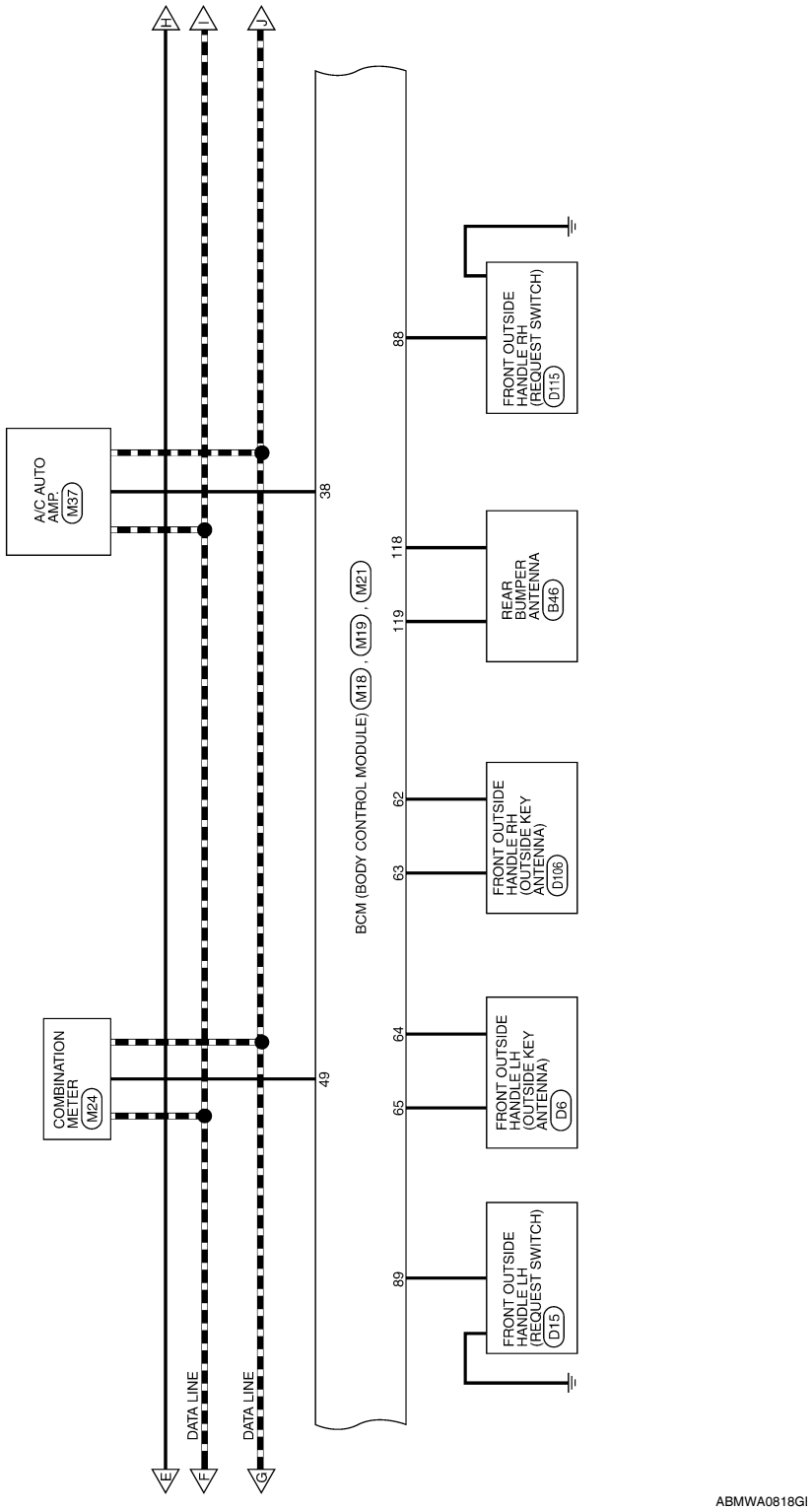
Wiring Diagram

INFOID:0000000005533822

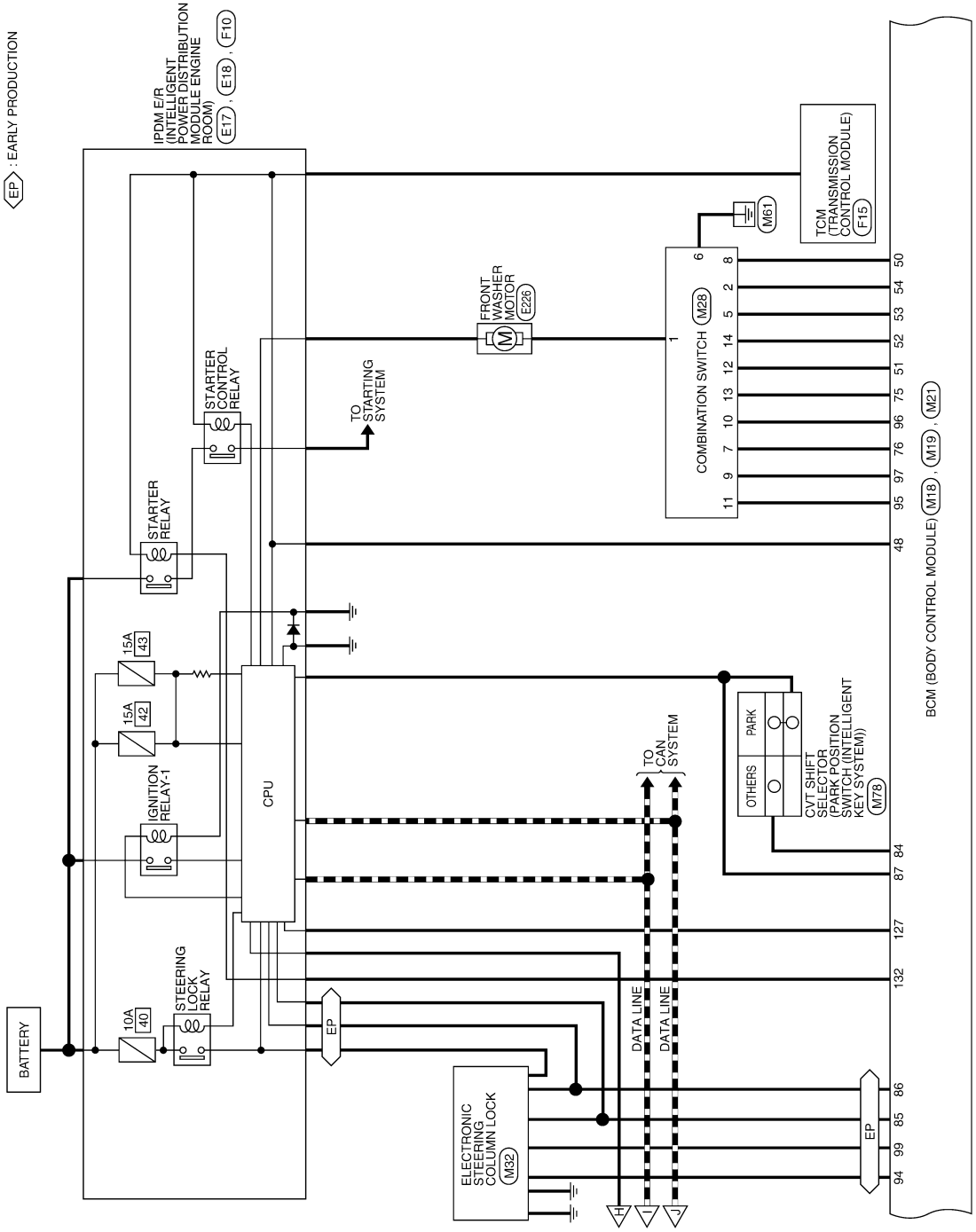




ABMWA0817GI



ABMWA0818GI



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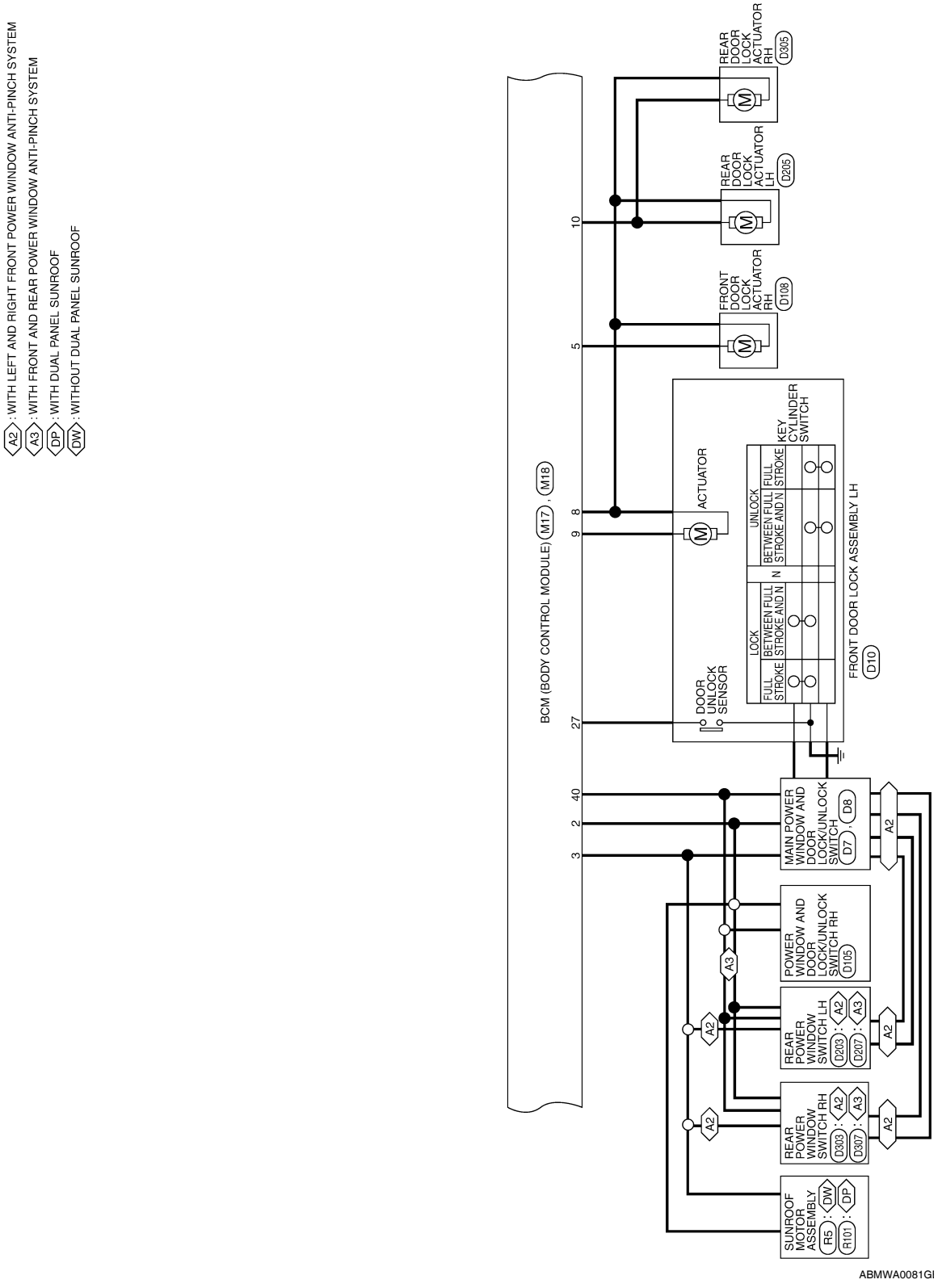
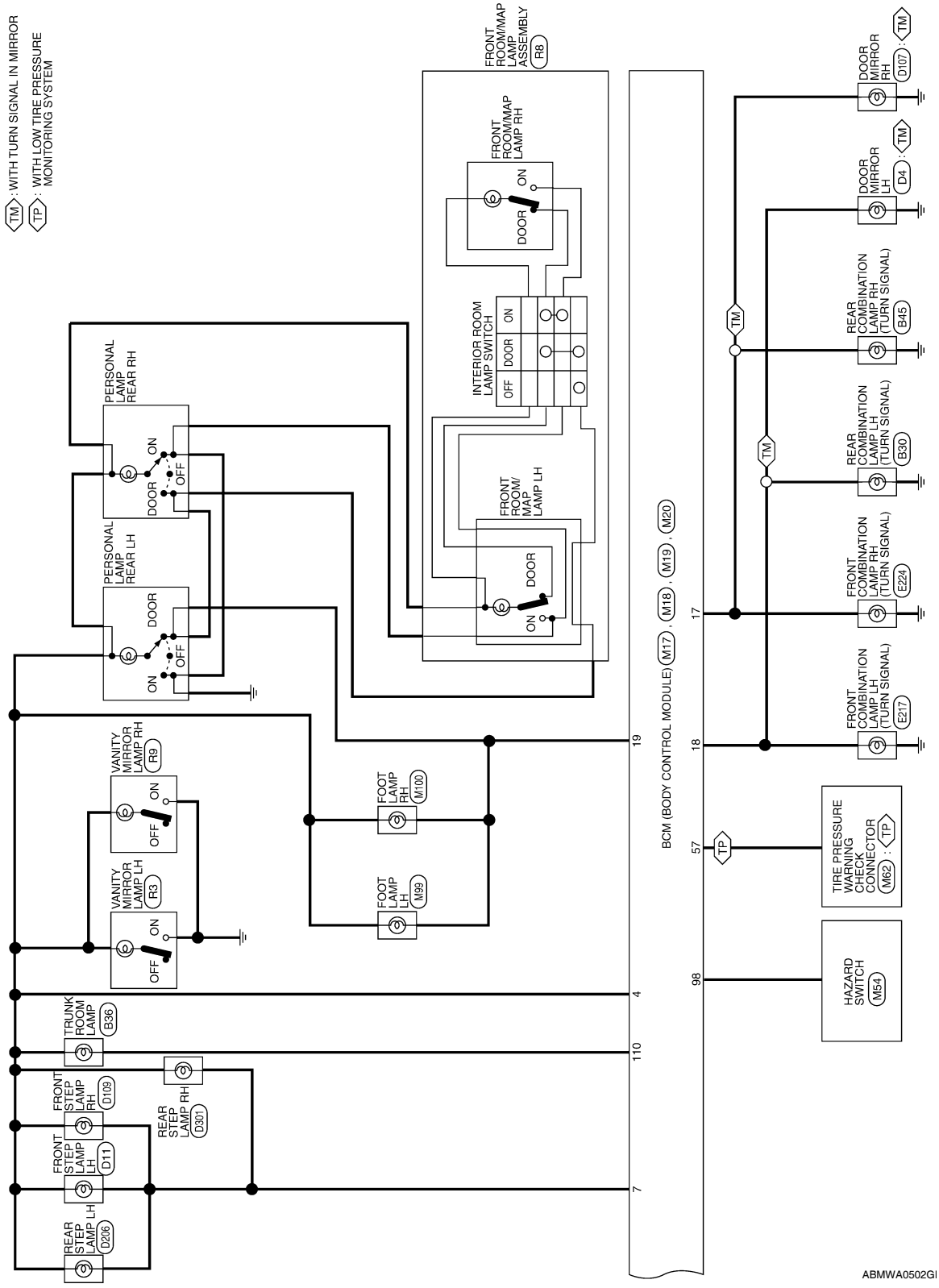


ABMWA0081GI


TM : WITH TURN SIGNAL IN MIRROR
TP : WITH LOW TIRE PRESSURE MONITORING SYSTEM
FRONT ROOM/MAP LAMP ASSEMBLY R8
FRONT ROOM/MAP LAMP RH
INTERIOR ROOM LAMP SWITCH
FRONT ROOM/ MAP LAMP LH
PERSONAL LAMP REAR RH
PERSONAL LAMP REAR LH
VANITY MIRROR LAMP RH R9
VANITY MIRROR LAMP LH R3
FOOT LAMP RH M100
FOOT LAMP LH M99
TRUNK ROOM LAMP B36
FRONT STEP LAMP RH D109
REAR STEP LAMP RH D301
FRONT STEP LAMP LH D11
REAR STEP LAMP LH D206
BCM (BODY CONTROL MODULE) M17 , M18 , M19 , M20
DOOR MIRROR RH D107
DOOR MIRROR LH D4
REAR COMBINATION LAMP RH (TURN SIGNAL) B45
REAR COMBINATION LAMP LH (TURN SIGNAL) B30
FRONT COMBINATION LAMP RH (TURN SIGNAL) E224
FRONT COMBINATION LAMP LH (TURN SIGNAL) E217
TIRE PRESSURE WARNING CHECK CONNECTOR M62
HAZARD SWITCH M54
ABMWA0502GI

BCM (BODY CONTROL MODULE) CONNECTORS

Connector No.	M16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

H.S.

1	3
2	

Terminal No.	Color of Wire	Signal Name
1	W/B	BATT (F/L)
2	R/Y	P/W POWER SUPPLY PERM
3	L/W	P/W POWER SUPPLY IGN

Connector No.	M17
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE

H.S.

4	5	6	7		8	9	10
11	12	13	14	15	16	17	18	19

Terminal No.	Color of Wire	Signal Name
4	P/W	R/L POWER SUPPLY
5	G	DOOR UNLOCK OUTPUT AS
6	–	–
7	R/W	STEP LAMP CONT
8	V	DOOR LOCK OUTPUT ALL
9	L	DOOR UNLOCK OUTPUT (DR/FL)

Terminal No.	Color of Wire	Signal Name
10	G	DOOR UNLOCK OUTPUT (RR/RL)
11	Y/R	BAT BCM FUSE
12	–	–
13	B	GND1
14	GR/W	LOW SIDE PUSH LED
15	Y/L	ACC LED
16	–	–
17	G/B	FR FLASHER
18	G/Y	FL FLASHER
19	Y	ROOM LAMP CONT

Terminal No.	Color of Wire	Signal Name
27	O	DOOR LOCK STATUS DR
28	–	–
29	Y	FOB IN SW 1
30	V/Y	ACC F/B
31	G	IGN F/B
32	R/B	AS DOOR SW 1
33	–	–
34	–	–
35	–	–
36	–	–
37	O	TRUNK CANCEL SW
38	GR/W	REAR DEFOGGER SW
39	–	–
40	Y/G	PW K-LINE
41	W	RING LED
42	R	S/L LOCK LED
43	–	–
44	–	–

Terminal No.	Color of Wire	Signal Name
45	P	GND RF2 A/L
46	V/W	A/L POWER SUPPLY 5V
47	G/O	RF2 TUNER SIGNAL
48	R/G	SHIFT N/P/ NEUTRAL SW
49	L/O	IMMO LED (SECURITY INDICATOR)
50	LG/B	OUTPUT 5
51	L/W	OUTPUT 1
52	G/B	OUTPUT 2
53	LG/R	OUTPUT 3
54	G/Y	OUTPUT4
55	–	–
56	–	–
57	W	TPMS MODE
58	SB	DR DOOR SW
59	G/R	REAR DEFOGGER

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

H.S.

39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20
59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40

Terminal No.	Color of Wire	Signal Name
20	–	–
21	P/B	A/L SIGNAL TYPE 1
22	–	–
23	–	–
24	R/W	BRAKE SW1
25	–	–
26	O/L	BRAKE SW2

ABMIA1331GB

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

H.S.

79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61	60
99	98	97	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81	80

Terminal No.	Color of Wire	Signal Name
60	B/R	ROOM ANT 2 B
61	W/R	ROOM ANT 2 A
62	V	AS DOOR ANT B
63	P	AS DOOR ANT A
64	V	DR DOOR ANT B
65	P	DR DOOR ANT A
66	–	–
67	–	–
68	G/O	FOB READER CLOCK
69	O	FOB READER DATA
70	R/B	IGN REL OUTPUT 2
71	L/O	RF1 TUNER SIGNAL
72	–	–
73	–	–
74	–	–
75	R/Y	INPUT 5
76	R/G	INPUT 3
77	BR	ENG START SW
78	P	CAN-L
79	L	CAN-H
80	R/L	FOB SLOT ILLUMINATION
81	LG	IGN ON LED
82	–	–
83	L	ACC CONT
84	Y/R	AT DEVICE OUT
85	L/O	S/L CONDITION 1
86	G/R	S/L CONDITION 2
87	G/B	SHIFT P/ASCD CANCEL SW
88	R	AS REQUEST SW
89	R	DR REQUEST SW
90	Y	BLOWER FAN RELAY
91	L/R	RF POWER SUPPLY 12V
92	–	–
93	–	–
94	G/Y	S/L POWER SUPPLY 12V
95	R/W	INPUT 1
96	P/B	INPUT 4
97	R/B	INPUT 2
98	G/O	HAZARD SW
99	L/Y	S/L K-LINE

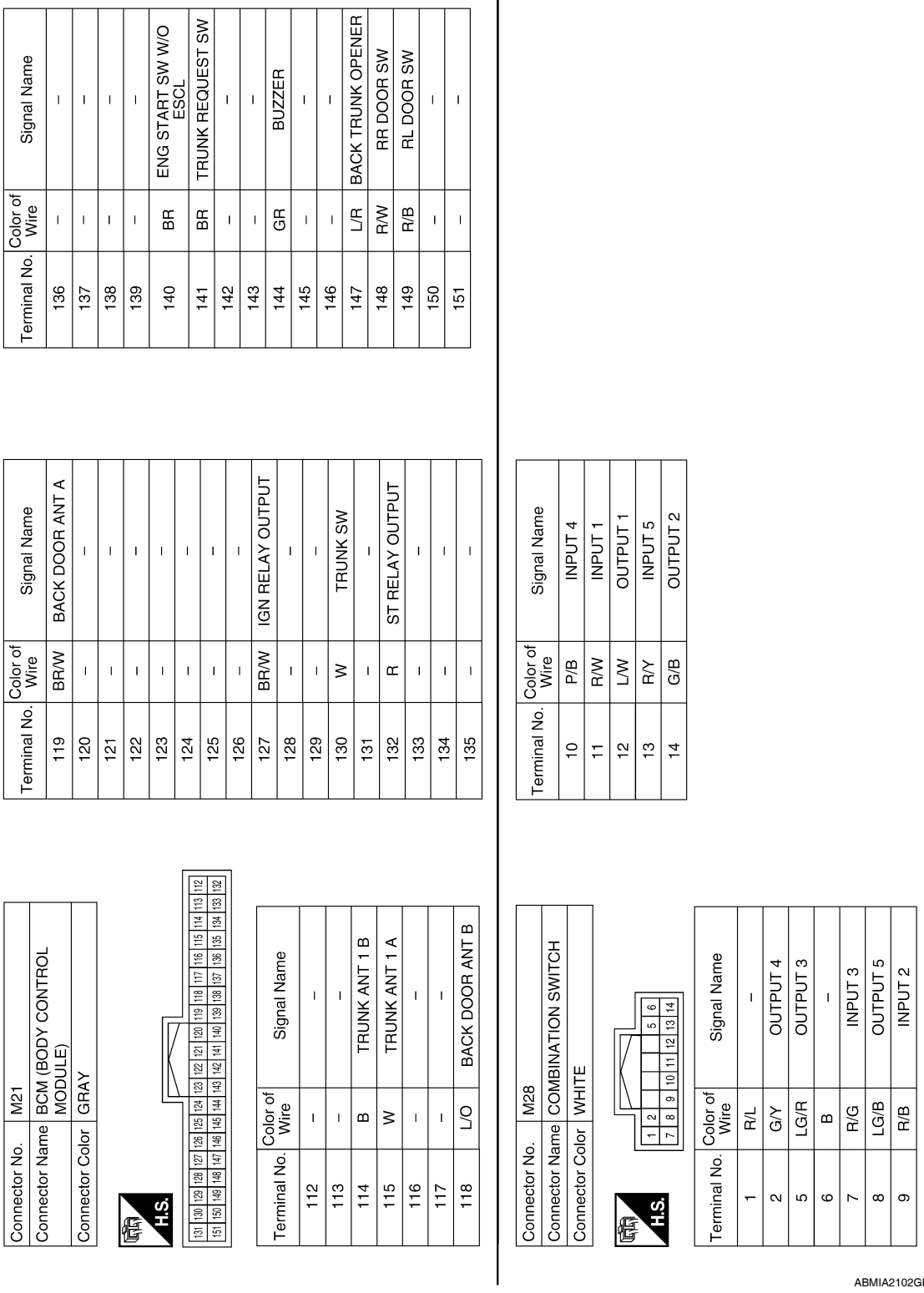
Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE

H.S.

100	101		102	103	104
105	106	107	108	109	110	111

Terminal No.	Color of Wire	Signal Name
100	–	–
101	–	–
102	–	–
103	V	CDL BACK TRUNK
104	–	–
105	–	–
106	–	–
107	–	–
108	–	–
109	–	–
110	V/W	TRUNK LAMP CONT
111	–	–

ABMIA1332GB



ABMIA2102GB

Fail Safe

INFOID:0000000005533823

Display contents of CONSULT	Fail-safe	Cancellation
B2013: ID DISCORD BCM-S/L*	Inhibit engine cranking	Erase DTC
B2014: CHAIN OF S/L-BCM*	Inhibit engine cranking	Erase DTC
B2190: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC

Display contents of CONSULT	Fail-safe	Cancellation
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	Erase DTC
B2557: VEHICLE SPEED*	Inhibit electronic steering column lock	When normal vehicle speed signals have been received from ABS actuator and electric unit (control unit) for 500 ms
B2560: STARTER CONT RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status has become consistent • Starter control relay signal • Starter relay status signal
B2562: LO VOLTAGE	• Inhibit engine cranking • Inhibit electronic steering column lock*	100 ms after the power supply voltage increases to more than 8.8 V
B2601: SHIFT POSITION*	Inhibit electronic steering column lock	500 ms after the following signal reception status becomes consistent • Selector lever P position switch signal • P range signal (CAN)
B2602: SHIFT POSITION*	Inhibit electronic steering column lock	5 seconds after the following BCM recognition conditions are fulfilled • Ignition switch is in the ON position • Selector lever P position switch signal: Except P position (battery voltage) • Vehicle speed: 4 km/h or more
B2603: SHIFT POSI STATUS*	Inhibit electronic steering column lock	500 ms after the following BCM recognition conditions are fulfilled • Ignition switch is in the ON position • Selector lever P position switch signal: Except P position (battery voltage) • Selector lever transmission range switch signal: Except P and N positions (0 V)
B2604: TRANSMISSION RANGE SWITCH*	Inhibit electronic steering column lock	500 ms after any of the following BCM recognition conditions is fulfilled • Status 1 - Ignition switch is in the ON position - Selector lever transmission range switch signal: P and N position (battery voltage) - P range signal or N range signal (CAN): ON • Status 2 - Ignition switch is in the ON position - Selector lever transmission range switch signal: Except P and N positions (0 V) - P range signal and N range signal (CAN): OFF
B2605: TRANSMISSION RANGE SWITCH*	Inhibit electronic steering column lock	500 ms after any of the following BCM recognition conditions is fulfilled • Ignition switch is in the ON position - Power position: IGN - Selector lever transmission range switch signal: Except P and N positions (0 V) - Transmission range switch signal (CAN): OFF • Status 2 - Ignition switch is in the ON position - Selector lever transmission range switch signal: P or N position (battery voltage) - Transmission range switch signal (CAN): ON
B2606: S/L RELAY*	Inhibit engine cranking	500 ms after the following CAN signal communication status has become consistent • Electronic steering column lock relay signal (Request signal) • Electronic steering column lock relay signal (Condition signal)

Display contents of CONSULT	Fail-safe	Cancellation
B2607: S/L RELAY*	Inhibit engine cranking	500 ms after the following CAN signal communication status has become consistent • Electronic steering column lock relay signal (Request signal) • Electronic steering column lock relay signal (Condition 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)
B2609: S/L STATUS*	• Inhibit engine cranking • Inhibit electronic steering column lock	When the following electronic steering column lock conditions agree • BCM electronic steering column lock control status • Electronic steering column lock condition No. 1 signal status • Electronic steering column lock condition No. 2 signal status
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 is fulfilled • Power position changes to ACC • Receives engine status signal (CAN)
B2612: S/L STATUS*	• Inhibit engine cranking • Inhibit electronic steering column lock	When any of the following conditions is fulfilled • Electronic steering column lock unit status signal (CAN) is received normally • The BCM electronic steering column lock control status matches the electronic steering column lock status recognized by the electronic steering column lock unit status signal (CAN from IPDM E/R)
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
B2619: BCM*	Inhibit engine cranking	1 second after the electronic steering column lock unit power supply output control inside BCM becomes normal
B26E1: ENG STATE NO RECIV	Inhibit engine cranking	When any of the following conditions are fulfilled • Power position changes to ACC • Receives engine status signal (CAN)

* : With electronic steering column lock

DTC Inspection Priority Chart

INFOID:0000000005533824

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

Priority	DTC
1	• B2562: LO VOLTAGE
2	• U1000: CAN COMM CIRCUIT • U1010: CONTROL UNIT (CAN)
3	• B2190: NATS ANTENNA AMP • B2191: DIFFERENCE OF KEY • B2192: ID DISCORD BCM-ECM • B2193: CHAIN OF BCM-ECM

Priority	DTC
4	• B2013: ID DISCORD BCM-S/L* • B2014: CHAIN OF S/L-BCM* • 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: TRANSMISSION RANGE SWITCH • B2605: TRANSMISSION RANGE SWITCH • B2606: S/L RELAY* • B2607: S/L RELAY* • B2608: STARTER RELAY • B2609: S/L STATUS* • B260A: IGNITION RELAY • B260B: STEERING LOCK UNIT* • B260C: STEERING LOCK UNIT* • B260D: STEERING LOCK UNIT* • B260F: ENG STATE SIG LOST • B2612: S/L STATUS* • B2614: ACC RELAY CIRC • B2615: BLOWER RELAY CIRC • B2616: IGN RELAY CIRC • B2617: STARTER RELAY CIRC • B2618: BCM • B2619: BCM* • B261A: PUSH-BTN IGN SW • B26E1: ENG STATE NO RECIV • 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 • C1712: [CHECKSUM ERR] FL • C1713: [CHECKSUM ERR] FR • C1714: [CHECKSUM ERR] RR • C1715: [CHECKSUM ERR] RL • C1716: [PRESSDATA ERR] FL • C1717: [PRESSDATA ERR] FR • C1718: [PRESSDATA ERR] RR • C1719: [PRESSDATA ERR] RL • C1720: [CODE ERR] FL • C1721: [CODE ERR] FR • C1722: [CODE ERR] RR • C1723: [CODE ERR] RL • C1724: [BATT VOLT LOW] FL • C1725: [BATT VOLT LOW] FR • C1726: [BATT VOLT LOW] RR • C1727: [BATT VOLT LOW] RL • C1734: CONTROL UNIT
6	• B2622: INSIDE ANTENNA • B2623: INSIDE ANTENNA

* : With electronic steering column lock

DTC Index

INFOID:0000000005533825

NOTE:

Details of time display

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

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	—	—	—	—
U1000: CAN COMM CIRCUIT	—	—	—	BCS-36
U1010: CONTROL UNIT (CAN)	—	—	—	BCS-37
U0415: VEHICLE SPEED SIG	—	—	—	BCS-38
B2013: ID DISCORD BCM-S/L*	×	—	—	SEC-39
B2014: CHAIN OF S/L-BCM*	×	—	—	SEC-40
B2190: NATS ANTENNA AMP	×	—	—	SEC-43
B2191: DIFFERENCE OF KEY	×	—	—	SEC-46
B2192: ID DISCORD BCM-ECM	×	—	—	SEC-47
B2193: CHAIN OF BCM-ECM	×	—	—	SEC-48
B2553: IGNITION RELAY	—	—	—	PCS-55
B2555: STOP LAMP	—	—	—	SEC-49
B2556: PUSH-BTN IGN SW	—	×	—	SEC-52
B2557: VEHICLE SPEED	×	×	—	SEC-54
B2560: STARTER CONT RELAY	×	×	—	SEC-55
B2562: LOW VOLTAGE	—	—	—	BCS-39
B2601: SHIFT POSITION	×	×	—	SEC-56
B2602: SHIFT POSITION	×	×	—	SEC-59
B2603: SHIFT POSI STATUS	×	×	—	SEC-62
B2604: TRANSMISSION RANGE SWITCH	×	×	—	SEC-65
B2605: TRANSMISSION RANGE SWITCH	×	×	—	SEC-67
B2606: S/L RELAY*	×	×	—	SEC-69
B2607: S/L RELAY*	×	×	—	SEC-70
B2608: STARTER RELAY	×	×	—	SEC-72
B2609: S/L STATUS*	×	×	—	SEC-74
B260A: IGNITION RELAY	×	×	—	PCS-57
B260B: STEERING LOCK UNIT*	—	×	—	SEC-78
B260C: STEERING LOCK UNIT*	—	×	—	SEC-79
B260D: STEERING LOCK UNIT*	—	×	—	SEC-80
B260F: ENG STATE SIG LOST	×	×	—	SEC-81
B2612: S/L STATUS*	×	×	—	SEC-83
B2614: ACC RELAY CIRC	—	×	—	PCS-59

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
B2615: BLOWER RELAY CIRC	—	×	—	PCS-62
B2616: IGN RELAY CIRC	—	×	—	PCS-65
B2617: STARTER RELAY CIRC	×	×	—	PCS-65
B2618: BCM	×	×	—	PCS-68
B2619: BCM*	×	×	—	SEC-89
B261A: PUSH-BTN IGN SW	—	×	—	SEC-90
B2622: INSIDE ANTENNA	—	—	—	DLK-60
B2623: INSIDE ANTENNA	—	—	—	DLK-63
B26E1: ENG STATE NO RES	×	×	—	SEC-82
C1704: LOW PRESSURE FL	—	—	×	WT-48
C1705: LOW PRESSURE FR	—	—	×	WT-48
C1706: LOW PRESSURE RR	—	—	×	WT-48
C1707: LOW PRESSURE RL	—	—	×	WT-48
C1708: [NO DATA] FL	—	—	×	WT-14
C1709: [NO DATA] FR	—	—	×	WT-14
C1710: [NO DATA] RR	—	—	×	WT-14
C1711: [NO DATA] RL	—	—	×	WT-14
C1712: [CHECKSUM ERR] FL	—	—	×	WT-16
C1713: [CHECKSUM ERR] FR	—	—	×	WT-16
C1714: [CHECKSUM ERR] RR	—	—	×	WT-16
C1715: [CHECKSUM ERR] RL	—	—	×	WT-16
C1716: [PRESSDATA ERR] FL	—	—	×	WT-18
C1717: [PRESSDATA ERR] FR	—	—	×	WT-18
C1718: [PRESSDATA ERR] RR	—	—	×	WT-18
C1719: [PRESSDATA ERR] RL	—	—	×	WT-18
C1720: [CODE ERR] FL	—	—	×	WT-16
C1721: [CODE ERR] FR	—	—	×	WT-16
C1722: [CODE ERR] RR	—	—	×	WT-16
C1723: [CODE ERR] RL	—	—	×	WT-16
C1724: [BATT VOLT LOW] FL	—	—	×	WT-16
C1725: [BATT VOLT LOW] FR	—	—	×	WT-16
C1726: [BATT VOLT LOW] RR	—	—	×	WT-16
C1727: [BATT VOLT LOW] RL	—	—	×	WT-16
C1729: VHCL SPEED SIG ERR	—	—	×	WT-20
C1734: CONTROL UNIT	—	—	×	WT-21

* : With electronic steering column lock

SYMPTOM DIAGNOSIS

NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH

Diagnosis Procedure

INFOID:0000000005461556

1. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT

Check BCM power supply and ground circuit. Refer to BCS-40, "Diagnosis Procedure".

Is the inspection result normal?

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

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

Check main power window and door lock/unlock switch power supply and ground circuit. Refer to PWC-144, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> Repair or replace the malfunctioning parts.

DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000005461557

1. CHECK FRONT POWER WINDOW MOTOR LH

Check front power window motor LH. Refer to PWC-149, "DRIVER SIDE : Component Function Check".

Is the inspection result normal?

YES >> Inspection End.
NO >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000005461558

1. CHECK FRONT POWER WINDOW MOTOR RH CIRCUIT

Check front power window motor RH circuit. Refer to PWC-151, "PASSENGER SIDE : Component Function Check".

Is the inspection result normal?

YES >> Inspection End.
NO >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000005461559

1. CHECK REAR POWER WINDOW MOTOR LH

Check rear power window motor LH. Refer to PWC-31, "REAR LH : Component Function Check".

Is the inspection result normal?

YES >> Inspection End.
NO >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000005461560

1. CHECK REAR POWER WINDOW MOTOR RH

Check rear power window motor RH. Refer to PWC-32, "REAR RH : Component Function Check".

Is the inspection result normal?

YES >> Inspection End.
NO >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

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

Diagnosis Procedure

INFOID:0000000005461561

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.
NO >> GO TO 2

2. CHECK ENCODER CIRCUIT

Check encoder circuit. Refer to PWC-157, "DRIVER SIDE : Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> Repair or replace malfunctioning parts.

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

Diagnosis Procedure

INFOID:0000000005461562

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.
NO >> GO TO 2

2. CHECK ENCODER CIRCUIT

Check encoder circuit. Refer to PWC-160, "PASSENGER SIDE : Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> Repair or replace the malfunctioning parts.

ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (REAR LH SIDE)

Diagnosis Procedure

INFOID:0000000005461563

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.
NO >> GO TO 2

2. CHECK ENCODER CIRCUIT

Check encoder circuit. Refer to PWC-163, "REAR LH : Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> Repair or replace the malfunctioning parts.

ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (REAR RH SIDE)

Diagnosis Procedure

INFOID:0000000005461564

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.
NO >> GO TO 2

2. CHECK ENCODER CIRCUIT

Check encoder circuit. Refer to PWC-166, "REAR RH : Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> Repair or replace the malfunctioning parts.

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

Diagnosis Procedure

INFOID:0000000005461565

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.
NO >> GO TO 2

2. CHECK ENCODER

Check encoder. Refer to PWC-157, "DRIVER SIDE : Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> Repair or replace the malfunctioning parts.

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

Diagnosis Procedure

INFOID:0000000005461566

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.
NO >> GO TO 2

2. CHECK ENCODER

Check encoder. Refer to PWC-160, "PASSENGER SIDE : Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> Repair or replace the malfunctioning parts.

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

Diagnosis Procedure

INFOID:0000000005461567

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.
NO >> GO TO 2

2. CHECK ENCODER

Check encoder. Refer to PWC-163, "REAR LH : Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> Repair or replace the malfunctioning parts.

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

Diagnosis Procedure

INFOID:0000000005461568

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.
NO >> GO TO 2

2. CHECK ENCODER

Check encoder. Refer to PWC-166, "REAR RH : Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> Repair or replace the malfunctioning parts.

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

Diagnosis Procedure

INFOID:0000000005461569

1. CHECK FRONT DOOR SWITCH

Check front door switch. Refer to PWC-41, "Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> Repair or replace malfunctioning parts.

DOES NOT OPERATE BY KEY CYLINDER SWITCH

Diagnosis Procedure

INFOID:0000000005461570

1. CHECK FRONT DOOR LOCK ASSEMBLY LH (KEY CYLINDER SWITCH)

Check front door lock assembly LH (key cylinder switch). Refer to PWC-172, "Diagnosis Procedure".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> Repair or replace malfunctioning parts.

KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000005461571

1. CHECK INTELLIGENT KEY FUNCTION

Check Intelligent Key function. Refer to DLK-115, "Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> Replace BCM. Refer to BCS-87, "Removal and Installation".

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

Diagnosis Procedure

INFOID:0000000005461572

1. CHECK POWER WINDOW LOCK SWITCH

Check power window lock switch. Refer to PWC-51, "Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".
NO >> Repair or replace malfunctioning parts.

PRECAUTION

PRECAUTIONS

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

INFOID:0000000005461573

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 SR and SB section of this Service Manual.

WARNING:

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

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

WARNING:

- **When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**
- **When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.**

Precautions Necessary for Steering Wheel Rotation after Battery Disconnect (Early Production, With Electronic Steering Column Lock)

INFOID:0000000005885935

NOTE:

- Before removing and installing any control units, first turn the push-button ignition switch to the LOCK position, then disconnect both battery cables.
- After finishing work, confirm that all control unit connectors are connected properly, then re-connect both battery cables.
- Always use CONSULT-III to perform self-diagnosis as a part of each function inspection after finishing work. If a DTC is detected, perform trouble diagnosis according to self-diagnosis results.

This vehicle is equipped with a push-button ignition switch and a steering lock unit.
If the battery is disconnected or discharged, the steering wheel will lock and cannot be turned.
If turning the steering wheel is required with the battery disconnected or discharged, follow the procedure below before starting the repair operation.

OPERATION PROCEDURE

1. Connect both battery cables.
   NOTE:
   Supply power using jumper cables if battery is discharged.
2. Carry the Intelligent Key or insert it to the key slot and turn the push-button ignition switch to ACC position. (At this time, the steering lock will be released.)
3. Disconnect both battery cables. The steering lock will remain released with both battery cables disconnected and the steering wheel can be turned.
4. Perform the necessary repair operation.

5. When the repair work is completed, re-connect both battery cables. With the brake pedal released, turn the push-button ignition switch from ACC position to ON position, then to LOCK position. (The steering wheel will lock when the push-button ignition switch is turned to LOCK position.)
6. Perform self-diagnosis check of all control units using CONSULT-III.

ON-VEHICLE MAINTENANCE

PRE-INSPECTION FOR DIAGNOSTIC

Basic Inspection

INFOID:0000000005461575

BASIC INSPECTION

1. INSPECTION START

1. Check the service history.
2. Check the following parts.

- Fuse/circuit breaker blown.
- Poor connection, open or short circuit of harness connector.
- Battery voltage.

Is the inspection result normal?

YES >> Inspection End.
NO >> Repair or replace the malfunctioning parts.

ON-VEHICLE REPAIR

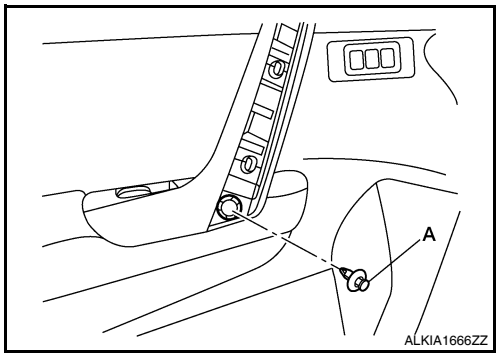
POWER WINDOW MAIN SWITCH

Removal and Installation

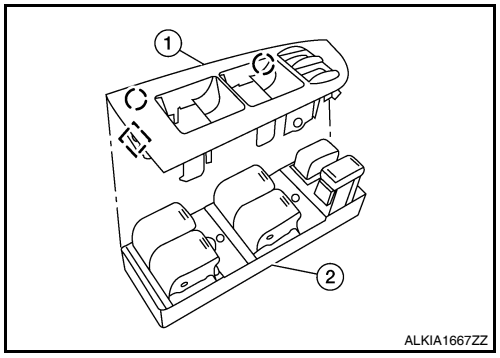
INFOID:0000000005461576

REMOVAL

1. Remove the front door grip cover. Refer to INT-18, "Exploded View".
2. Remove the power window main switch locking clip (A).



3. Using a suitable tool, release the metal clip and lift the power window main switch and finisher as an assembly upward to remove it from the front door finisher.
   : Metal clip
   : Pawl
4. Disconnect the harness connector.
5. Release the pawls on each side, then separate the switch finisher (1) from the power window main switch (2) and remove.
   CAUTION:
   Do not fold the pawl of power window main switch finisher.



INSTALLATION

Installation is in the reverse order of removal.

NOTE:

After every switch harness disconnection, it is necessary to perform the initialization procedure. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

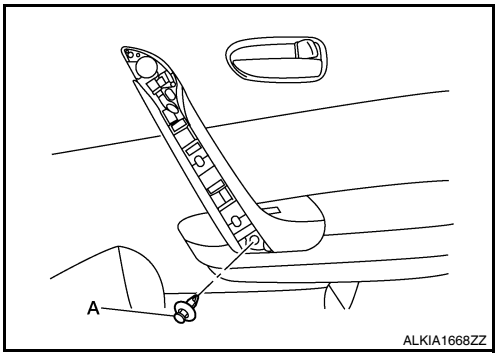
FRONT POWER WINDOW SWITCH

Removal and Installation

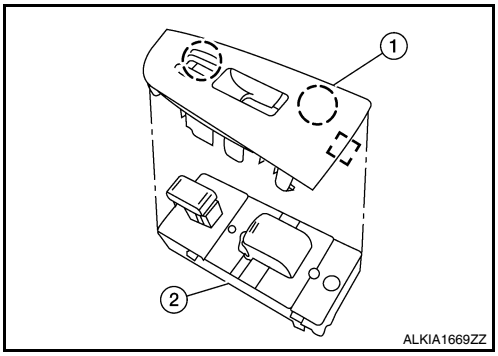
INFOID:0000000005461577

REMOVAL

1. Using a suitable tool, remove the front door grip cover. Refer to INT-18, "Exploded View".
2. Remove the front power window switch locking clip (A).



3. Using a suitable tool, release the metal clip and lift the front power window switch and finisher as an assembly upward to remove it from the front door finisher.
   : Metal clip
   : Pawl
   CAUTION:
   Wrap a cloth around suitable tools to protect components from damage.
4. Disconnect the harness connector.
5. Release the pawls on each side, then separate the switch finisher (1) from the front power window switch (2) and remove.
   CAUTION:
   Do not fold the pawl of front power window switch finisher.



INSTALLATION

Installation is in the reverse order of removal.

NOTE:

After every switch harness disconnection, it is necessary to perform the Initilization procedure Refer to PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

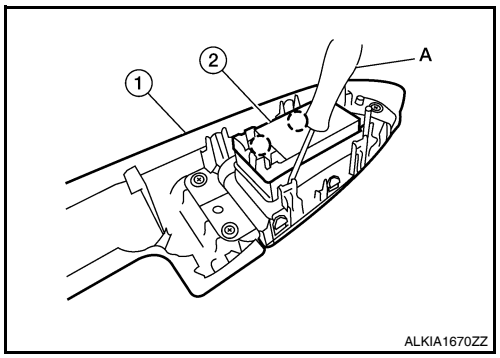
REAR POWER WINDOW SWITCH

Removal and Installation

INFOID:0000000005461578

REMOVAL

1. Remove the rear door arm rest finisher (1), then disconnect the harness connector. Refer to INT-21, "Exploded View".
2. Release the pawls on each side with suitable tool (A), then separate the rear power window switch (2) from the finisher (1) and remove.
   : Pawl
   CAUTION:
   Wrap a cloth around suitable tools to protect components from damage.



INSTALLATION

Installation is in the reverse order of removal.

NOTE:

After every switch harness disconnection, it is necessary to perform the initialization procedure. Refer to PWC-134, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".