SECTION POWER WINDOW CONTROL SYSTEM

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BASIC INSPECTION DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

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DETAILED FLOW

1.OBTAIN INFORMATION ABOUT SYMPTOM

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

>> GO TO 2.

2.REPRODUCE THE MALFUNCTION INFORMATION

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

>> GO TO 3.

3. IDENTIFY THE MALFUNCTIONING SYSTEM WITH "SYMPTOM DIAGNOSIS"

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

>> GO TO 4.

4. IDENTIFY MALFUNCTIONING PARTS WITH "COMPONENT DIAGNOSIS"

Perform the diagnosis with "Component diagnosis" of the applicable system.

>> GO TO 5.

5.REPAIR OR REPLACE THE MALFUNCTIONING PARTS

Repair or replace the specified malfunctioning parts.

>> GO TO 6.

6.FINAL CHECK

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

Is the malfunctioning part repaired or replaced?

YES >> Trouble diagnosis is completed.

NO >> GO TO 3.

INSPECTION AND ADJUSTMENT

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INSPECTION AND ADJUSTMENT ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description

When battery negative terminal is disconnected, initialization is necessary.

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

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

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

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

| ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIV | /E TERMINAL : Spe- |
|--|-----------------------|
| cial Repair Requirement | INFOID:00000006210944 |

INITIALIZATION PROCEDURE

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

CHECK ANTI-PINCH FUNCTION

- 1. Fully open door glass.
- 2. Place a piece of wood near the fully closed position.
- 3. Close door glass completely using AUTO-UP.
- Check that door glass lowers approximately 150 mm (5.9 in) without pinching piece of wood and stops.
- Check that door glass does not rise when operating power window main switch while lowering.
- **CAUTION:**
- Perform initialization when AUTO-UP operation or anti-pinch function does not operate normally.
- Check that AUTO-UP operates before inspection when initialization is performed.
- Never check with hands or other body parts because they may be pinched. Never get pinched.
- Finish initialization. Otherwise, the next operation cannot be done.
- 1. AUTO-UP operation
- 2. Anti-pinch function
- 3. Door key cylinder power window function

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description

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When the control unit is replaced, initialization is necessary.

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

• Power supply to the power window control unit is cut off by the removal of battery terminal or the battery fuse is blown.

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[FRONT & REAR WINDOW ANTI-PINCH]

- Disconnection and connection of power window control unit harness connector.
- Removal and installation of motor from regulator assembly.
- Disconnection and connection of battery negative terminal.
- · Removal and installation of rear power window control unit.
- Removal and installation of door glass.
- Removal and installation of door glass run.

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

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

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement

INITIALIZATION PROCEDURE

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

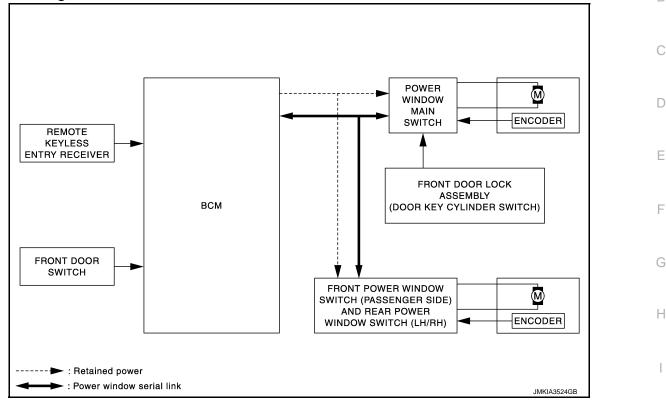
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- 3. Close door glass completely using AUTO-UP.
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- Check that door glass does not rise when operating power window main switch while lowering. CAUTION:
- Perform initialization when AUTO-UP operation or anti-pinch function does not operate normally.
- Check that AUTO-UP operates before inspection when initialization is performed.
- Never check with hands or other body parts because they may be pinched. Never get pinched.
- Finish initialization. Otherwise, the next operation cannot be done.
- 1. AUTO-UP operation
- 2. Anti-pinch function
- 3. Door key cylinder power window function

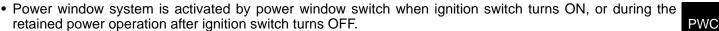
< SYSTEM DESCRIPTION > SYSTEM DESCRIPTION

POWER WINDOW SYSTEM

System Diagram



System Description



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

POWER WINDOW AUTO-OPERATION

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

RETAINED POWER OPERATION

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

Retained Power Cancel Conditions

- Front door CLOSE (door switch OFF) \rightarrow OPEN (door switch ON).
- When ignition switch turns ON again.

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[FRONT & REAR WINDOW ANTI-PINCH]

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[FRONT & REAR WINDOW ANTI-PINCH]

• When timer times out (45 seconds).

POWER WINDOW LOCK FUNCTION

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

POWER WINDOW SERIAL LINK

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

ANTI-PINCH OPERATION

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

Operation Condition

When 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.

DOOR KEY CYLINDER SWITCH POWER WINDOW FUNCTION

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

KEYLESS POWER WINDOW DOWN FUNCTION

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

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

- When the unlock button is kept pressed more than 15 seconds.
- When the ignition switch is turned ON while the power window opening is operated.
- When the unlock button is released.
- While retained power operation activate, keyless power window down function cannot be operated.

Keyless power window down operation mode can be changed by "PW DOWN SET" mode in "WORK SUP-PORT". Refer to <u>DLK-52, "INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY)"</u>. **NOTE:**

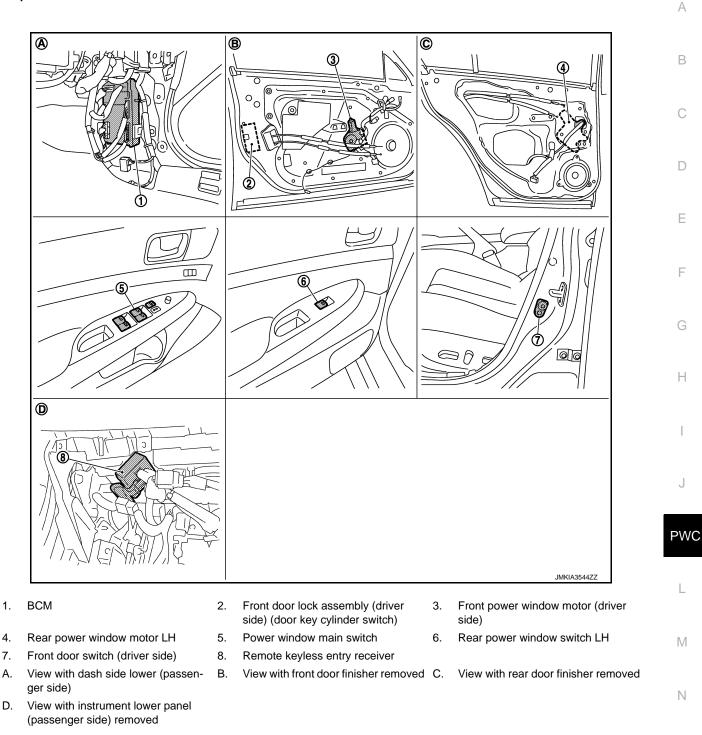
Use CONSULT-III to change settings. MODE 1 (3 sec) / MODE 2 (OFF) / MODE 3 (5 sec)

< SYSTEM DESCRIPTION >

POWER WINDOW SYSTEM [FRONT & REAR WINDOW ANTI-PINCH]

Component Parts Location

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Component Description

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| Component | Function | |
|--|---|--|
| BCM | Supplies power supply to power window switch.Controls retained power function. | |
| Power window main switch | Directly controls all power window motor of all doors.Controls anti-pinch operation of power window. | |
| Front power window switch (passenger side) | Controls anti-pinch operation of power window.Controls power window motor of passenger door. | |

Revision: 2011 November

POWER WINDOW SYSTEM

< SYSTEM DESCRIPTION >

[FRONT & REAR WINDOW ANTI-PINCH]

| Component | Function |
|---|---|
| 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 (door 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. |
| Remote keyless entry receiver | Receives lock/unlock signal from the intelligent Key, and then transmits to BCM. |

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION > DIAGNOSIS SYSTEM (BCM) COMMON ITEM

COMMON ITEM : CONSULT-III Function (BCM - COMMON ITEM)

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[FRONT & REAR WINDOW ANTI-PINCH]

APPLICATION ITEM

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. | L |
| CAN Diag Support Monitor | Monitors the reception status of CAN communication viewed from BCM. Refer to CONSULT-III opera- tion manual. | |
| Data Monitor | The BCM input/output signals are displayed. | E |
| Active Test | The signals used to activate each device are forcibly supplied from BCM. | |
| Ecu Identification | The BCM part number is displayed. | F |
| Configuration | This function is not used even though it is displayed. | |

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.

| | | | | $\times\!\!:$ Applicable item | Н |
|--|-----------------------------|---------------------|----------------|-------------------------------|----|
| Sustem | Sub system aslastian item | | Diagnosis mode | | |
| System | Sub system selection item | Work Support Data M | | Active Test | |
| Door lock | DOOR LOCK | × | × | × | |
| Rear window defogger | REAR DEFOGGER | | × | × | |
| Warning chime | BUZZER | | × | × | J |
| Interior room lamp timer | INT LAMP | × | × | × | |
| Exterior lamp | HEAD LAMP | × | × | × | |
| Wiper and washer | WIPER | × | × | × | PW |
| Turn signal and hazard warning lamps | FLASHER | × | × | × | |
| | AIR CONDITONER* | | | | L |
| Intelligent Key systemEngine start system | INTELLIGENT KEY | × | × | × | |
| Combination switch | COMB SW | | × | | M |
| Body control system | ВСМ | × | | | |
| IVIS - NATS | IMMU | | × | × | |
| Interior room lamp battery saver | BATTERY SAVER | × | × | × | Ν |
| Trunk lid open | TRUNK | | × | × | |
| Vehicle security system | THEFT ALM | × | × | × | 0 |
| RAP system | RETAINED PWR | | × | |) |
| Signal buffer system | SIGNAL BUFFER | | × | × | |
| TPMS | TPMS (AIR PRESSURE MONITOR) | × | × | × | Ρ |

NOTE:

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

FREEZE FRAME DATA (FFD)

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

PWC-13

< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (BCM)

[FRONT & REAR WINDOW ANTI-PINCH]

| CONSULT screen item | Indication/Unit | Description | | | | |
|---|-----------------|--|--|--|--|--|
| Vehicle Speed | km/h | Vehicle speed of the mo | ment a particular DTC is detected | | | |
| Odo/Trip Meter | km | Total mileage (Odomete | r value) of the moment a particular DTC is detected | | | |
| | SLEEP>LOCK | | While turning BCM status from low power consumption mode to normal mode (Power supply position is "LOCK") | | | |
| | SLEEP>OFF | | While turning BCM status from low power consumption mode to normal mode (Power supply position is "OFF".) | | | |
| | LOCK>ACC | | While turning power supply position from "LOCK" to "ACC" | | | |
| | ACC>ON | | While turning power supply position from "ACC" to "IGN" | | | |
| CF RL AC Vehicle Condition OF | RUN>ACC | Power position status of the moment a particular DTC is detected | While turning power supply position from "RUN" to "ACC" (Vehicle is stopping and selector lever is except P position.) | | | |
| | CRANK>RUN | | | While turning power supply position from "CRANKING" to "RUN" (From cranking up the engine to run it) | | |
| | RUN>URGENT | | While turning power supply position from "RUN" to "ACC" (Emer- gency stop operation) | | | |
| | ACC>OFF | | While turning power supply position from "ACC" to "OFF" | | | |
| | OFF>LOCK | | While turning power supply position from "OFF" to "LOCK" | | | |
| | OFF>ACC | | While turning power supply position from "OFF" to "ACC" | | | |
| | ON>CRANK | | While turning power supply position from "IGN" to "CRANKING" | | | |
| | OFF>SLEEP | | While turning BCM status from normal mode (Power supply position is "OFF".) to low power consumption mode | | | |
| | LOCK>SLEEP | | While turning BCM status from normal mode (Power supply posi- tion is "LOCK".) to low power consumption mode | | | |
| | LOCK | | Power supply position is "LOCK" (Ignition switch OFF with steer- ing is locked.) | | | |
| | OFF | | Power supply position is "OFF" (Ignition switch OFF with steering is unlocked.) | | | |
| | ACC | | Power supply position is "ACC" (Ignition switch ACC) | | | |
| | ON | | Power supply position is "IGN" (Ignition switch ON with engine stopped) | | | |
| | ENGINE RUN | | Power supply position is "RUN" (Ignition switch ON with engine running) | | | |
| | CRANKING | | Power supply position is "CRANKING" (At engine cranking) | | | |
| IGN Counter | 0 - 39 | The number of times that ignition switch is turned ON after DTC is detected The number is 0 when a malfunction is detected now. The number increases like 1 → 2 → 338 → 39 after returning to the normal condition whenever ignition switch OFF → ON. The number is fixed to 39 until the self-diagnosis results are erased if it is over 39. | | | | |

RETAIND PWR

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

INFOID:000000006210952

Data monitor

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

| < DTC/CIRCUIT DIAG | POWER SUP | PLY AN | | | C R WINDOW ANTI-PINCH] |
|--|--|-------------|-------------|-------------------|---------------------------|
| DTC/CIRCU | IT DIAGNO | SIS | | | |
| POWER SUPPL | Y AND GROUI | | CUIT | | |
| POWER WINDO | | | 0011 | | |
| POWER WINDOW | | | osis Pro | cedure | INFOID:000000006210954 |
| 1.CHECK POWER SL | JPPLY CIRCUIT 1 | | | | |
| 3. Turn ignition switch | window main switch c | | | connector and gro | ound. |
| | (+) | | | | Voltage (V) |
| Power | Power window main switch (-) | | (Approx.) | | |
| Connector | Termina | al | | | |
| D8 | 10 | | | Ground | 12 |
| CHECK POWER SI Turn ignition switch Disconnect BCM co Check continuity be | n OFF. onnector. | connector | and powe | er window main sv | witch harness connector. |
| , | CM | | • | w main switch | |
| Connector | Terminal | | rower windo | Terminal | Continuity |
| | 2 | |)9 | 19 | |
| M118 | 3 | C |)8 | 10 | Existed |
| 1. Check continuity be | etween BCM harness | connector | and grour | nd. | |
| | BCM | | | | |
| Connector | Termina | al | | Oracia | Continuity |
| M118 | 2 | | | Ground — | Not existed |
| NO >> Repair or ro 3.CHECK GROUND C 1. Turn ignition switch | CM. Refer to <u>BCS-82</u> eplace harness. CIRCUIT | - | | | |
| 2. Check continuity be | etween power windov | v main swit | icn narnes | s connector and g | grouna. |
| | window main switch | -1 | | Orana | Continuity |
| Connector D9 | Termina 17 | ai | | Ground | Evistod |
| | | | | | Existed |
| Is the inspection result YES >> INSPECTION NO >> Repair or ro FRONT POWER | ON END eplace harness. | CH (PA | SSENG | ER SIDE) | |

PWC-15

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH] FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure

INFOID:000000006210955

1.CHECK POWER SUPPLY CIRCUIT 1

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

| (· Front power window se | (+) Front power window switch (passenger side) | | Voltage (V) (Approx.) | |
|-----------------------------|---|--------|--------------------------|--|
| Connector | Terminal | | (//pp/0x.) | |
| D38 | 10 | Ground | 12 | |

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> GO TO 2.

2. Check power supply circuit 2

1. Disconnect BCM connector.

Check continuity between BCM harness connector and front power window switch (passenger side) har-2 ness connector.

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

Check continuity between BCM harness connector and ground. 3.

| BC | CM | | |
|-----------|----------|--------|-------------|
| Connector | Terminal | Ground | Continuity |
| M118 | 2 | | Not existed |

Is the inspection result normal?

>> Replace BCM. Refer to BCS-82, "Exploded View". YES

NO >> Repair or replace harness.

${ m 3.}$ CHECK GROUND CIRCUIT

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

| Front power window s | witch (passenger side) | | Continuity |
|----------------------|------------------------|--------|------------|
| Connector | Terminal | Ground | Continuity |
| D38 | 11 | | Existed |

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace harness.

REAR POWER WINDOW SWITCH

REAR POWER WINDOW SWITCH : Diagnosis Procedure

INFOID:000000006210956

1.CHECK POWER SUPPLY CIRCUIT 1

1. Turn ignition switch OFF.

Disconnect rear power window switch LH connector or power window switch RH connector. 2.

3. Turn ignition switch ON.

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

PWC-16

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

| Rear pow Connector LH RH the measurement value within YES >> GO TO 3. NO >> GO TO 2. • CHECK POWER SUPPLY of Turn ignition switch OFF. Disconnect BCM connecto Check continuity between I BCM | CIRCUIT 2 | | (-) | | Voltage (V) (Approx.) 12 | | | |
|---|--|-------------------|-------------------|------------------|--------------------------------|--|--|--|
| LH RH the measurement value withing (ES >> GO TO 3. NO >> GO TO 2. CHECK POWER SUPPLY (C) Turn ignition switch OFF. Disconnect BCM connector Check continuity between I | D77 In the specifica CIRCUIT 2 r. | 10 Ition? | Ground | | 12 | | | |
| RH the measurement value within YES >> GO TO 3. NO >> GO TO 2. • CHECK POWER SUPPLY Turn ignition switch OFF. Disconnect BCM connecto Check continuity between I | D77 In the specifica CIRCUIT 2 r. | <u>ition?</u> | Ground | | 12 | | | |
| the measurement value withi YES >> GO TO 3. NO >> GO TO 2. • CHECK POWER SUPPLY Turn ignition switch OFF. Disconnect BCM connecto Check continuity between I | n the specifica | <u>ition?</u> | | | | | | |
| YES >> GO TO 3. NO >> GO TO 2. CHECK POWER SUPPLY O Turn ignition switch OFF. Disconnect BCM connecto Check continuity between I | CIRCUIT 2 | | | | | | | |
| NO >> GO TO 2. CHECK POWER SUPPLY Turn ignition switch OFF. Disconnect BCM connecto Check continuity between I | r. | | | | | | | |
| CHECK POWER SUPPLY Turn ignition switch OFF. Disconnect BCM connecto Check continuity between I | r. | | | | | | | |
| Turn ignition switch OFF. Disconnect BCM connecto Check continuity between I | r. | | | | | | | |
| Disconnect BCM connecto Check continuity between | | , I | | | | | | |
| Check continuity between I | | | | | | | | |
| BCM | | connector and rea | ar power window s | witch harne | ess connector | | | |
| | | Rear power | window switch | | | | | |
| Connector | al | Connector | | Terminal Continu | | | | |
| | | | D57 | | | | | |
| M118 2 | | RH | D77 | 10 E | | | | |
| Check continuity between I | | | | | | | | |
| | | | | | | | | |
| BCM | | | Ground | | Continuity | | | |
| Connector | Terminal | | | | - | | | |
| M118 | 2 | | | No | ot existed | | | |
| the inspection result normal? | | | | | | | | |
| YES >> Replace BCM. Ref | | "Exploded View". | | | | | | |
| CHECK GROUND CIRCUIT | | | | | | | | |
| | | | | | | | | |
| Turn ignition switch OFF. Check continuity between | rear power win | dow switch harne | ess connector and | around. | | | | |
| | | | | J - - - | | | | |
| | or window owitch | | | | Continuity | | | |
| Rear pow | | | | | Continuity | | | |
| Connector | | Terminal | Ground | | Continuity | | | |
| Connector LH | D57 | Terminal | Ground | | Existed | | | |
| Connector | | | Ground | | · · · | | | |
| Connector LH RH the inspection result normal? | D57 D77 | | Ground | | | | | |
| Connector LH RH | D57 D77 | | Ground | | | | | |

< DTC/CIRCUIT DIAGNOSIS >

POWER WINDOW MOTOR DRIVER SIDE

DRIVER SIDE : Description

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

DRIVER SIDE : Component Function Check

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

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

Is the inspection result normal?

YES >> Power window motor (driver side) is OK.

NO >> Refer to <u>PWC-18</u>, "DRIVER SIDÉ : Diagnosis Procedure".

DRIVER SIDE : Diagnosis Procedure

INFOID:000000006210959

INFOID-000000006210957

INFOID:000000006210958

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

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

| (+) Front power window motor (driver side) | | () | Condition | | Voltage (V) (Approx.) |
|---|----------|--------|---------------------------------|---------|--------------------------|
| Connector | Terminal | | | | (* + +) |
| | 4 | 4 | | NEUTRAL | 0 |
| D10 | I | Ground | Ground Power window main switch | DOWN | 12 |
| 010 | 2 | | | NEUTRAL | 0 |
| | 2 | | | | 12 |

Is the measurement value within the specification?

YES >> Replace front power window motor (driver side).

NO >> GO TO 2.

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

- 1. Turn ignition switch OFF.
- 2. Disconnect power window main switch connector.

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

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

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

| Power windo | w main switch | | Continuity |
|-------------|---------------|--------|-------------|
| Connector | Terminal | Ground | Continuity |
| D8 | 8 | Ground | Not existed |
| Do | 11 | | NUL EXISIEU |

Is the inspection result normal?

YES >> Replace power window main switch.

NO >> Repair or replace harness.

| < DTC/CIRCUIT DIAGNOSIS > | [FRONT & REAR WINDOW ANTI-PINCH] |
|---|---|
| PASSENGER SIDE | |
| PASSENGER SIDE : Description | INF0ID:00000006210961 |
| Door glass moves UP/DOWN by receiving the signal power (passenger side). | window main switch or front power window switch |
| PASSENGER SIDE : Component Function Che | eck INFOID:000000006210962 |
| 1. CHECK FRONT POWER WINDOW MOTOR (PASSEN | GER SIDE) OPERATION |
| Check front power window motor (passenger side) operation window switch (passenger side). | on with power window main switch or front power |
| Is the inspection result normal? | |
| YES >> Power window motor (passenger side) is OK. NO >> Refer to <u>PWC-19</u> , " <u>PASSENGER SIDE</u> : Diagno | osis Procedure". |
| PASSENGER SIDE : Diagnosis Procedure | INFOID:000000006210963 |
| 1. CHECK FRONT POWER WINDOW MOTOR (PASSENG | GER SIDE) INPUT SIGNAL |
| Turn ignition switch OFF. Disconnect front power window motor (passenger side) Turn ignition switch ON. | connector. |

3. Check voltage between front power window motor (passenger side) harness connector and ground. 4.

| (+) Front power window motor (passenger side) | | | | | | |
|--|----------|---------------|--|---------|---|--|
| | | (–) Condition | | | Voltage (V) (Approx.) | |
| Connector | Terminal | | | | (,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | |
| | 1 | | Front power window switch (passenger side) | NEUTRAL | 0 | |
| D40 | I | | | UP | 12 | |
| D40 | 2 | Ground | | NEUTRAL | 0 | |
| | 2 | | | DOWN | 12 | |

Is the measurement value within the specification?

YES >> Replace front power window motor (passenger side).

NO >> GO TO 2.

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

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

| Front power window switch (passenger side) | | Front power window r | motor (passenger side) | Continuity | N | |
|--|----------|----------------------|------------------------|------------|---------|--|
| Connector | Terminal | Connector | Terminal | Continuity | 14 | |
| D28 | 8 | D40 2 1 | D40 | 2 | Eviated | |
| D38 | 9 | | 1 | Existed | 0 | |

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

| | Front power window s | witch (passenger side) | | Continuity | Р |
|---|----------------------|------------------------|--------|-------------|---|
| | Connector | Terminal | Ground | Continuity | |
| _ | D38 | 8 | Ground | Not existed | |
| | | 9 | | NOI EXISIED | |

Is the inspection result normal?

YES >> Replace front power window switch (passenger side). А

В

D

Ε

F

PWC

< DTC/CIRCUIT DIAGNOSIS >

NO >> Repair or replace harness. REAR LH

REAR LH : Description

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

REAR LH : Component Function Check

1.CHECK REAR POWER WINDOW MOTOR LH OPERATION

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

Is the inspection result normal?

YES >> Power window motor LH is OK.

NO >> Refer to <u>PWC-20, "REAR LH : Diagnosis Procedure"</u>.

REAR LH : Diagnosis Procedure

1.CHECK REAR POWER WINDOW MOTOR LH INPUT SIGNAL

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

| (+) Rear power window motor LH | | () | Condition | | Voltage (V) (Approx.) |
|-----------------------------------|----------|---------|-----------------------------|---------|--------------------------|
| Connector | Terminal | | | | (|
| | | | | NEUTRAL | 0 |
| D52 | I | Oracial | Rear power window switch LH | UP | 12 |
| 002 | Ground 3 | Giouna | | NEUTRAL | 0 |
| | | | | DOWN | 12 |

Is the measurement value within the specification?

YES >> Replace rear power window motor LH.

NO >> GO TO 2.

2.CHECK REAR POWER WINDOW MOTOR LH CIRCUIT

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

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

| Rear power window switch LH | | Rear power wi | Rear power window motor LH | | |
|-----------------------------|----------|--------------------|----------------------------|------------|--|
| Connector | Terminal | Connector Terminal | | Continuity | |
| D57 | 8 | D52 | 1 | Existed | |
| 100 | 9 | 002 | 3 | LAISIEU | |

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

| Rear power wi | ndow switch LH | | Continuity |
|---------------|----------------|--------|-------------|
| Connector | Terminal | Ground | Continuity |
| D57 | 8 | Ground | Not existed |
| 057 | 9 | | Not existed |

Is the inspection result normal?

INFOID:000000006210966

INFOID-000000006210967

INFOID:000000006210965

| . | TC/CIRCUIT DIAG | | | L | FRONT | & REAR WI | NDOW ANTI-PINCH] |
|------------|---|---|--|--|---|-----------------------|---|
| N | ES >> Replace re D >> Repair or r AR RH | | | ch LH. | | | |
| ٦E | AR RH : Descri | iption | | | | | INFOID:0000000621096 |
| | or glass moves UP/l tch RH. | DOWN by rec | eiving th | ne signal from powe | r window | main switch | or rear power window |
| RE | AR RH : Comp | onent Fund | ction C | heck | | | INFOID:0000000621097 |
| 1. | CHECK REAR POV | | N МОТС | R RH OPERATION | | | |
| | | low motor RH | operatio | on with power windc | w main : | switch or rea | r power window switch |
| RH s tl | he inspection result | normal? | | | | | |
| | ES >> Power wind | dow motor RH | | | | | |
| N | D >> Refer to P | <u> VC-21, "REAI</u> | <u>R RH : D</u> | iagnosis Procedure' | | | |
| ۶E | AR RH : Diagn | osis Proce | dure | | | | INFOID:0000000621097 |
| | CHECK REAR POW | /ER WINDOV | и мото | R RH INPUT SIGNA | L | | |
| | Turn ignition switch | | | | | | |
| | Disconnect rear po | wer window n | notor RH | connector. | | | |
| • | Turn ignition switch Check voltage betw | | ver windo | ow motor RH harnes | s conneo | ctor and grou | nd. |
| - | (+) | • | | | | U | |
| _ | (+) Rear power window | v motor RH | () | -) Condition | Condition | | Voltage (V) |
| _ | - | Terminal | | | | | (Approx.) |
| - | Connector | | | | | | |
| _ | Connector | 4 | | | | NEUTRAL | 0 |
| - | | 1 | Groupe | Rear power window s | witch RH | NEUTRAL UP | 0 12 |
| _ | D72 | 1 | - Ground | Rear power window s | witch RH | | |
| - | D72 | 3 | | | switch RH | UP | 12 |
| | D72 | 3 lue within the | specifica | ation? | switch RH | UP NEUTRAL | 12 0 |
| YE | D72 <u>ne measurement va</u> ES >> Replace re | 3 lue within the | specifica | ation? | switch RH | UP NEUTRAL | 12 0 |
| YE | D72 <u>ne measurement va</u> ES >> Replace re | 3 lue within the ar power wind | specification sp | ation? or RH. | switch RH | UP NEUTRAL | 12 0 |
| | D72 <u>ne measurement va</u> ES >> Replace re D >> GO TO 2. CHECK REAR POW Turn ignition switch | 3 ar power wind /ER WINDOV | specifica dow moto V MOTO | ation? or RH. R RH CIRCUIT | switch RH | UP NEUTRAL | 12 0 |
| | D72 <u>ne measurement va</u> ES >> Replace re D >> GO TO 2. CHECK REAR POW Turn ignition switch Disconnect rear po | 3 lue within the ar power wind /ER WINDOV OFF. wer window s | specifica dow moto V MOTO witch RF | ation? or RH. R RH CIRCUIT I connector. | | UP NEUTRAL DOWN | 12 0 12 |
| | D72 <u>ne measurement va</u> ES >> Replace re D >> GO TO 2. CHECK REAR POW Turn ignition switch Disconnect rear po | 3 ar power wind /ER WINDOV OFF. wer window s etween rear po | specifica dow moto V MOTO witch RF | ation? or RH. R RH CIRCUIT I connector. | | UP NEUTRAL DOWN | 12 0 |
| | D72 <u>he measurement va</u> ES >> Replace re D >> GO TO 2. CHECK REAR POW Turn ignition switch Disconnect rear po Check continuity be RH harness conne | 3 ar power wind /ER WINDOV OFF. wer window s etween rear po ctor. | specifica dow moto V MOTO witch RF | ation? or RH. R RH CIRCUIT I connector. dow switch RH harn | ess conr | UP NEUTRAL DOWN | 12 0 12 |
| YE N(| D72 <u>he measurement va</u> ES >> Replace re D >> GO TO 2. CHECK REAR POW Turn ignition switch Disconnect rear po Check continuity be RH harness conne | 3 ar power wind /ER WINDOV OFF. wer window s etween rear po | specifica dow moto V MOTO witch RH ower win | ation? or RH. R RH CIRCUIT I connector. | ess conr | UP NEUTRAL DOWN | 12 0 12 |
| | D72 The measurement van ES >> Replace re D >> GO TO 2. CHECK REAR POW Turn ignition switch Disconnect rear po Check continuity be RH harness conne Rear power win Connector | 3 lue within the ar power wind /ER WINDOV OFF. wer window s etween rear pe ctor. | specifica dow moto V MOTO witch RH ower win | ation? or RH. R RH CIRCUIT I connector. dow switch RH harn Rear power wi Connector | ess conr | UP NEUTRAL DOWN | 12 0 12 ar power window moto Continuity |
| | D72 <u>he measurement va</u> ES >> Replace re D >> GO TO 2. CHECK REAR POW Turn ignition switch Disconnect rear po Check continuity be RH harness conne Rear power win | 3 lue within the ar power wind /ER WINDOV OFF. wer window s etween rear pe ctor. | specifica dow moto V MOTO witch RH ower win | ation? or RH. R RH CIRCUIT I connector. dow switch RH harn Rear power wi | ess conr | UP NEUTRAL DOWN | 12 0 12 ar power window moto |
| | D72 <u>he measurement va</u> ES >> Replace re D >> GO TO 2. CHECK REAR POW Turn ignition switch Disconnect rear po Check continuity be RH harness conne Rear power win Connector D77 | 3 lue within the ar power wind /ER WINDOV OFF. wer window s etween rear per ctor. ndow switch RH Termina 8 9 | specifica dow moto V MOTO witch RH ower win | ation? or RH. R RH CIRCUIT I connector. dow switch RH harn Rear power wi Connector | ess conr | UP NEUTRAL DOWN | ar power window moto Continuity Existed |
| | D72 <u>he measurement va</u> ES >> Replace re D >> GO TO 2. CHECK REAR POW Turn ignition switch Disconnect rear po Check continuity be RH harness conne Rear power wit Connector D77 Check continuity be | 3 lue within the ar power wind /ER WINDOV OFF. wer window s etween rear per ctor. ndow switch RH Termina 8 9 | specifica dow moto V MOTO witch RH ower win | ation? or RH. R RH CIRCUIT I connector. dow switch RH harn Rear power wi Connector D72 | ess conr | UP NEUTRAL DOWN | ar power window moto Continuity Existed round. |
| YE | D72 <u>he measurement va</u> ES >> Replace re D >> GO TO 2. CHECK REAR POW Turn ignition switch Disconnect rear po Check continuity be RH harness conne Rear power wit Connector D77 Check continuity be | 3 lue within the ar power wind /ER WINDOV DOFF. wer window s etween rear per ctor. ndow switch RH Termina 8 9 etween rear p | specifica dow moto V MOTO witch RH ower win | ation? or RH. R RH CIRCUIT I connector. dow switch RH harn Rear power wi Connector D72 ndow switch RH harr | ess conr ndow moto Tr ness con | UP NEUTRAL DOWN | ar power window moto Continuity Existed |
| | D72 he measurement va ES >> Replace re D >> GO TO 2. CHECK REAR POW Turn ignition switch Disconnect rear po Check continuity be RH harness conne Rear power win Connector D77 Check continuity be Rear power win | 3 lue within the ar power wind /ER WINDOV DOFF. wer window s etween rear per ctor. ndow switch RH Termina 8 9 etween rear p | specifica dow moto V MOTO witch RH | ation? or RH. R RH CIRCUIT I connector. dow switch RH harn Rear power wi Connector D72 ndow switch RH harr | ess conr | UP NEUTRAL DOWN | ar power window moto Continuity Existed round. |

Is the inspection result normal?

< DTC/CIRCUIT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

- YES >> Replace rear power window switch RH.
- NO >> Repair or replace harness.

| | | | ENCODER | | | |
|----------------|---|--|---|-------------------------|---|---------|
| | TC/CIRCUIT DIAG | NOSIS > | | [FRONT & REA | R WINDOW ANTI-PINCH] | |
| | NCODER RIVER SIDE | | | | | А |
| DF | RIVER SIDE : De | escription | | | INFOID:00000006210973 | В |
| | tects condition of the tch as the pulse sign | | motor (driver side) | operation and trar | smits to power window main | |
| DF | RIVER SIDE : Co | mponent Functi | on Check | | INFOID:00000006210974 | С |
| 1. | CHECK ENCODER (| OPERATION | | | | |
| | eck driver side door g he inspection result r | | open/close operati | on normally by po | wer window main switch. | D |
| | ES >> Encoder op | | E : Diagnosis Proc | edure". | | Е |
| DF | RIVER SIDE : Dia | agnosis Procedu | ure | | INFOID:00000006210975 | |
| 1. | CHECK ENCODER \$ | SIGNAL | | | | F |
| 1. 2. | Turn ignition switch Check signal betwe | | ain switch harness | connector and gro | ound using oscilloscope. | G |
| _ | | (+) | | | Signal | |
| _ | | window main switch | | () | Signal (Reference value) | Н |
| _ | Connector | Termina | al | | | |
| _ | D8 | 9 13 | | Ground | Refer to following signal | |
| | Encoder signal 1 Encoder signal 2 Encoder signal 2 (Encoder signal 2 | 10 ms Window UP coder signal 2 starts 1/4 puls | Encoder si Encoder si Encoder si es earlier) | | DOWN | J >W |
| <u>ls t</u> | he inspection result r | ormal? | | | | Μ |
| YI N | | wer window main sw | itch. | | | IVI |
| 2. | CHECK ENCORDER | R SIGNAL CIRCUIT | | | | Ν |
| 1. 2. 3. | | vindow main switch c etween power window | | | otor (driver side) connector. d front power window motor | 0 |
| - | Power window | w main switch | Front power wind | low motor (driver side) |) Continuity | Ρ |
| _ | Connector | Terminal | Connector | Terminal | | 1 |
| _ | D8 | 9 13 | D10 | 3 | Existed | |
| 4. | Check continuity be | tween power windov | v main switch harne | ess connector and | ground. | |

< DTC/CIRCUIT DIAGNOSIS >

| Power windo | w main switch | | Continuity | |
|-------------|---------------|--------|-------------|--|
| Connector | Terminal | Ground | Continuity | |
| D8 | 9 | Ground | Not existed | |
| D8 | 13 | | NOI EXISIED | |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK ENCORDER POWER SUPPLY CIRCUIT 1

1. Connect power window main switch connector.

2. Turn ignition switch ON.

3. Check voltage between front power window motor (driver side) harness connector and ground.

| | (+) Front power window motor (driver side) | | Voltage (V) (Approx.) |
|-----------|---|--------|---|
| Connector | Terminal | | (,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |
| D10 | 4 | Ground | 12 |

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4. CHECK ENCORDER POWER SUPPLY CIRCUIT 2

1. Turn ignition switch OFF.

2. Disconnect power window main switch connector.

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

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

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

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

Is the inspection result normal?

YES >> Replace power window main switch.

NO >> Repair or replace harness.

5. CHECK GROUND CIRCUIT 1

1. Turn ignition switch OFF.

2. Disconnect power window main switch connector.

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

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

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

O.CHECK GROUND CIRCUIT 2

< DTC/CIRCUIT DIAGNOSIS >

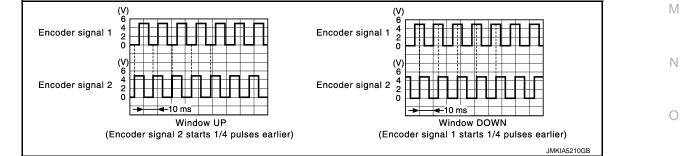
А

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

| Fower window | main switch | | Continuity |
|---|--|----------------------------|------------------------------|
| Connector | Terminal | Ground | Continuity |
| D8 | 2 | | Existed |
| s the inspection result norma | <u> ?</u> | | |
| YES >> Replace front pov NO >> Replace power w PASSENGER SIDE | ver window motor (driver indow main switch. | side). | |
| PASSENGER SIDE : D | escription | | INFOID:0000000621097 |
| Detects condition of the front vindow switch (passenger sic | | assenger side) operation | and transmits to front power |
| PASSENGER SIDE : C | component Function | Check | INFOID:0000000621097 |
| .CHECK ENCODER OPER | ATION | | |
| Check passenger side door gl or front power window switch | | close operation normally l | by power window main switch |
| s the inspection result norma | <u>l?</u> | | |
| YES >> Encoder operatio NO >> Refer to <u>PWC-25</u> | n is OK. , "PASSENGER SIDE : D | iagnosis Procedure". | |
| ASSENGER SIDE . D | iagnosis Procedure | | INFOID:0000000621097 |
| , COLINCER OIDE . D | | | |

 Check signal between front power window switch (passenger side) harness connector and ground using oscilloscope.

| (+ |) | | | PWC |
|-----------------------|------------------------|--------|-----------------------------|-----|
| Front power window sw | vitch (passenger side) | (-) | Signal (Reference value) | |
| Connector | Terminal | | | |
| D38 | 12 | Ground | Defer to following signal | L |
| 030 - | 15 | Ground | Refer to following signal | |



Is the inspection result normal?

- YES >> Replace front power window switch (passenger side).
- NO >> GO TO 2.
- 2. CHECK ENCORDER SIGNAL CIRCUIT
- 1. Turn ignition switch OFF.
- Disconnect front power window switch (passenger side) connector and front power window motor (passenger side) connector.

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< DTC/CIRCUIT DIAGNOSIS >

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

| Front power window s | witch (passenger side) | Front power window r | motor (passenger side) | Continuity |
|----------------------|------------------------|----------------------|------------------------|------------|
| Connector | Terminal | Connector | Terminal | Continuity |
| D38 | 12 | D40 | 5 | Existed |
| 030 | 15 | 040 | 3 | LAISIEU |

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

| Front power window s | witch (passenger side) | | Continuity |
|----------------------|------------------------|--------|-------------|
| Connector | Terminal | Ground | Continuity |
| D38 | 12 | Ground | Not existed |
| | 15 | | NOT EXISTED |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK ENCORDER POWER SUPPLY CIRCUIT 1

1. Connect front power window switch (passenger side) connector.

2. Turn ignition switch ON.

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

| (· Front power window r | +) notor (passenger side) | () | Voltage (V) (Approx.) |
|----------------------------|------------------------------|--------|--------------------------|
| Connector | Terminal | | (+ +) |
| D40 | 4 | Ground | 12 |

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4.CHECK ENCORDER POWER SUPPLY CIRCUIT 2

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

| Front power window s | witch (passenger side) | Front power window r | motor (passenger side) | Continuity |
|----------------------|------------------------|----------------------|------------------------|------------|
| Connector | Terminal | Connector | Terminal | Continuity |
| D38 | 4 | D40 | 4 | Existed |

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

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

Is the inspection result normal?

- YES >> Replace front power window switch (passenger side).
- NO >> Repair or replace harness.

5.CHECK GROUND CIRCUIT 1

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



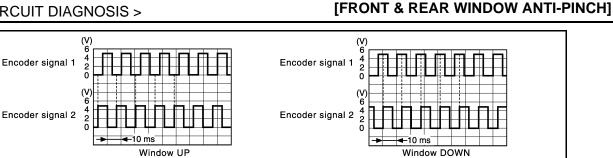
< DTC/CIRCUIT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

| | (passenger side) | | motor (passenger sic | Continuity |
|---|---|---|----------------------|-------------------------------------|
| Connector | Terminal | Connector | Terminal | |
| D38 | 3 | D40 | 6 | Existed |
| the inspection result norn (ES >> GO TO 6. IO >> Repair or replace CHECK GROUND CIRC Connect front power wi | ce harness. CUIT 2 | senger side) conner | stor | |
| | | | | ss connector and ground. |
| Front power window | switch (passenger sid | de) | | Continuity |
| Connector | Termina | l | Ground | Continuity |
| D38 | 3 | | | Existed |
| NO >> Replace front p EAR LH | ower window swi | tor (passenger side) tch (passenger side | | |
| EAR LH : Descriptio | n | | | INFOID:000000062105 |
| etects condition of the rea | r power window n | notor LH operation a | and transmits to re | ear power window switch L |
| EAR LH : Compone | nt Function C | heck | | INFOID:00000006210 |
| CHECK ENCODER OPE | ERATION | | | |
| | erform AUTO ope | en/close operation n | ormally by power | window main switch or rea |
| ower window switch LH. | | | | |
| the inspection result norn | | | | |
| the inspection result norn (ES >> Encoder operat | tion is OK. | iagnosis Procedure | '. | |
| the inspection result norm (ES >> Encoder operation of the second | tion is OK. 27, "REAR LH : D | iagnosis Procedure | <u>.</u> | |
| the inspection result norn (ES >> Encoder operat | tion is OK. 27, "REAR LH : D | iagnosis Procedure | <u>'</u> . | INF01D:000000006210 |
| the inspection result norm (ES >> Encoder operation of the second | tion is OK. 27, "REAR LH : D 3 Procedure | iagnosis Procedure | <u>.</u> | INF0/D:000000062105 |
| the inspection result norm YES >> Encoder operation YO >> Refer to <u>PWC-2</u> EAR LH : Diagnosis .CHECK ENCODER SIG Turn ignition switch ON | tion is OK. 27, "REAR LH : D 5 Procedure NAL 1. | - | _ | INFOID:000000000210 |
| the inspection result norm (ES >> Encoder operation of the second secon | tion is OK. 27, "REAR LH : D 5 Procedure NAL 1. | - | _ | round using oscilloscope. |
| the inspection result norm (ES >> Encoder operation >> Refer to PWC-2 EAR LH : Diagnosis .CHECK ENCODER SIG Turn ignition switch ON Check signal between i | tion is OK. 27, "REAR LH : D Procedure NAL I. rear power windov | - | _ | |
| the inspection result norm (ES >> Encoder operation >> Refer to PWC-2 EAR LH : Diagnosis .CHECK ENCODER SIG Turn ignition switch ON Check signal between i | tion is OK. 27, "REAR LH : D Procedure NAL I. rear power window (+) | w switch LH harnes | s connector and g | round using oscilloscope. Signal |
| the inspection result norm (ES >> Encoder operation >> Refer to <u>PWC-2</u> EAR LH : Diagnosis .CHECK ENCODER SIG Turn ignition switch ON Check signal between to Rear power w | tion is OK. 27, "REAR LH : D Procedure NAL I. rear power windov (+) vindow switch LH | w switch LH harnes | s connector and g | round using oscilloscope. |

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< DTC/CIRCUIT DIAGNOSIS >



(Encoder signal 1 starts 1/4 pulses earlier)

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Is the inspection result normal?

YES >> Replace rear power window switch LH.

(Encoder signal 2 starts 1/4 pulses earlier)

NO >> GO TO 2.

2. CHECK ENCORDER SIGNAL CIRCUIT

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

| Rear power v | vindow switch LH | Rear power window motor LH | | Continuity |
|--------------|------------------|----------------------------|----------|------------|
| Connector | Terminal | Connector | Terminal | Continuity |
| D57 | 12 | D52 | 5 | Existed |
| 007 | 15 | 052 | 6 | |

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

| Rear power wi | Rear power window switch LH | | Continuity |
|---------------|-----------------------------|--------|-------------|
| Connector | Terminal | Ground | Continuity |
| D57 | 12 | Ground | Not existed |
| | 15 | | NOT EXISTED |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

${f 3.}$ CHECK ENCORDER POWER SUPPLY CIRCUIT 1

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

| | (+) Rear power window motor LH | | Voltage (V) (Approx.) |
|-----------|-----------------------------------|--------|--------------------------|
| Connector | Terminal | | (********) |
| D52 | 2 | Ground | 12 |

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4.CHECK ENCORDER POWER SUPPLY CIRCUIT 2

1. Turn ignition switch OFF.

2. Disconnect rear power window switch LH connector.

3. Check continuity between rear power window switch LH harness connector and rear power window motor LH harness connector.

< DTC/CIRCUIT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

| | indow switch LH | | ar power window | | Continuity |
|--|--|----------------------------------|-----------------|---------------|-----------------------|
| Connector | Terminal | Conne | | Terminal | |
| D57 | 4 | D52 | | 2 | Existed |
| Check continuity b | etween rear power wi | indow switch | LH harness | connector and | l ground. |
| Rear po | ower window switch LH | | | | Continuity |
| Connector | Termina | al | Grour | nd | Continuity |
| D57 | 4 | | | | Not existed |
| NO >> Repair or CHECK GROUND Turn ignition switc Disconnect rear po | h OFF. ower window switch Lł etween rear power wi | H harness co | | connector and | rear power window mo |
| | | | | | |
| | indow switch LH | | ar power window | | Continuity |
| Connector D57 | Terminal 3 | Conne D52 | | Terminal 4 | Existed |
| | | | | | |
| YES >> GO TO 6. NO >> Repair or CHECK GROUND Connect rear powe | replace harness. CIRCUIT 2 er window switch LH h | | | | |
| YES >> GO TO 6. NO >> Repair or CHECK GROUND COnnect rear power Check continuity b | replace harness. CIRCUIT 2 | | | connector and | |
| YES >> GO TO 6. NO >> Repair or CHECK GROUND Connect rear power. Check continuity b | replace harness. CIRCUIT 2 er window switch LH h etween rear power wi | ndow switch | | | ground. Continuity |
| YES >> GO TO 6. NO >> Repair or D. CHECK GROUND 1. Connect rear powe 2. Check continuity b Rear po Connector D57 | replace harness. CIRCUIT 2 er window switch LH h etween rear power window switch LH ower window switch LH Termina 3 | ndow switch | 1 LH harness | | |
| NO >> Repair or D.CHECK GROUND 1. Connect rear power 2. Check continuity by Rear pro- Connector D57 s the inspection result YES >> Replace result | replace harness. CIRCUIT 2 er window switch LH h etween rear power window ower window switch LH Termina 3 normal? ear power window mot ear power window swit | al tor LH. | 1 LH harness | | Continuity |
| YES >> GO TO 6. NO >> Repair or D .CHECK GROUND 1. Connect rear powe 2. Check continuity b Rear po Connector D57 s the inspection result YES >> Replace re NO >> Replace re REAR RH REAR RH : Desci | replace harness. CIRCUIT 2 er window switch LH h etween rear power window ower window switch LH wer window switch LH Termina 3 normal? ear power window mot ear power window swit ciption he rear power window | al tor LH. tch LH. | Grour | nd | Continuity Existed |
| YES >> GO TO 6. NO >> Repair or D .CHECK GROUND 1. Connect rear powe 2. Check continuity b Rear po Connector D57 s the inspection result YES >> Replace re NO >> Replace re REAR RH REAR RH Contects condition of the | replace harness. CIRCUIT 2 er window switch LH h etween rear power window ower window switch LH wer window switch LH Termina 3 normal? ear power window mot ear power window swit ciption he rear power window | tor LH. tch LH. | Grour | nd | Continuity Existed |
| YES >> GO TO 6. NO >> Repair or D .CHECK GROUND 1. Connect rear powe 2. Check continuity b Rear po Connector D57 s the inspection result YES >> Replace re NO >> Replace re REAR RH REAR RH Contects condition of the | replace harness. CIRCUIT 2 er window switch LH h etween rear power window ower window switch LH Termina 3 normal? ear power window mot ear power window swit ription he rear power window swit conent Function C | tor LH. tch LH. | Grour | nd | Continuity Existed |
| YES >> GO TO 6. NO >> Repair or D .CHECK GROUND 1. Connect rear powe 2. Check continuity b Rear po Connector D57 s the inspection result YES >> Replace re NO >> Replace re REAR RH REAR RH : Desci Detects condition of th RH as the pulse signal REAR RH : Comp 1. CHECK ENCODER | replace harness. CIRCUIT 2 er window switch LH h etween rear power window ower window switch LH Termina 3 normal? ear power window mote ear power window switch ription he rear power window switch conent Function C COPERATION ass perform AUTO op | tor LH. tch LH. motor RH o | DEPERATION AND | transmits to | Continuity Existed |

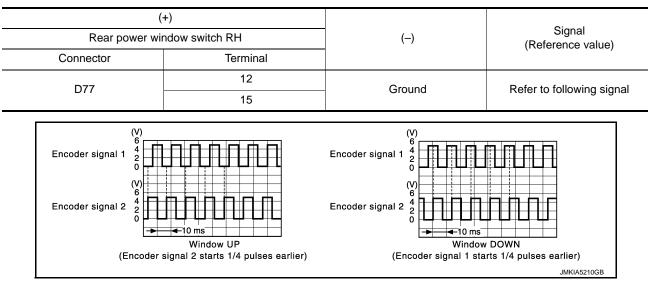
REAR RH : Diagnosis Procedure

INFOID:000000006210984

1.CHECK ENCODER SIGNAL

1. Turn ignition switch ON.

2. Check signal between rear power window switch RH harness connector and ground using oscilloscope.



Is the inspection result normal?

- YES >> Replace rear power window switch RH.
- NO >> GO TO 2.

2. CHECK ENCODER SIGNAL CIRCUIT

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

| Rear power w | indow switch RH | Rear power wi | ndow motor RH | Continuity |
|--------------|-----------------|---------------|---------------|------------|
| Connector | Terminal | Connector | Terminal | Continuity |
| D77 | 12 | D72 | 5 | Existed |
| UTT | 15 | | 6 | |

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

| Rear power wi | ndow switch RH | | Continuity |
|---------------|----------------|-----------------|-------------|
| Connector | Terminal | Terminal Ground | |
| D77 | 12 | Ground | Not existed |
| | 15 | | |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK ENCODER POWER SUPPLY CIRCUIT 1

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

< DTC/CIRCUIT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

| | (+) | | | | |
|---|--|---|--|--|--|
| Rear po | ower window motor RH | | (-) | | Voltage (V) (Approx.) |
| Connector | Termin | nal | | | , , , , |
| D72 | 2 | | Grour | nd | 12 |
| the inspection result YES >> GO TO 5. NO >> GO TO 4. | normal? | IRCUIT 2 | | | |
| | ower window switch R etween rear power wi | | | connector and | d rear power window m |
| Rear power w | indow switch RH | Re | ar power window | motor RH | Continuity |
| Connector | Terminal | Conne | ector | Terminal | Continuity |
| D77 | 4 | D7 | 2 | 2 | Existed |
| Check continuity b | etween rear power w | indow switcl | h RH harness | connector an | d ground. |
| | ower window switch RH | | | | Continuity |
| | | | | | , |
| Connector | Termin | nal | Grour | nd | |
| Connector D77 the inspection result (ES >> Replace re NO >> Repair or r | Termin 4 normal? ear power window swi replace harness. | | Grour | nd | Not existed |
| Connector D77 the inspection result YES >> Replace re NO >> Repair or r O.CHECK GROUND Turn ignition switch Disconnect rear po | Termin 4 <u>normal?</u> ear power window swi replace harness. CIRCUIT 1 h OFF. ower window switch R etween rear power wi | itch RH. | connector. | | |
| Connector D77 the inspection result YES >> Replace re NO >> Repair or r O.CHECK GROUND (. Turn ignition switcl Disconnect rear po . Check continuity b RH harness connect | Termin 4 normal? ear power window swi replace harness. CIRCUIT 1 h OFF. ower window switch R etween rear power wi ector. | itch RH. RH harness o indow switch | connector. | connector and | d rear power window m |
| Connector D77 the inspection result YES >> Replace re NO >> Repair or r CHECK GROUND (. Turn ignition switcl Disconnect rear po Check continuity b RH harness connect | Termin 4 <u>normal?</u> ear power window swi replace harness. CIRCUIT 1 h OFF. ower window switch R etween rear power wi | itch RH. RH harness o indow switch | connector. n RH harness o ar power window | connector and | Not existed |
| Connector D77 the inspection result YES >> Replace re NO >> Repair or r O.CHECK GROUND (. Turn ignition switch . Disconnect rear po . Check continuity b RH harness connect Rear power w | Termin 4 normal? ear power window swi replace harness. CIRCUIT 1 h OFF. ower window switch R etween rear power wi ector. | itch RH. RH harness o indow switch | connector. n RH harness of ar power window ector | connector and | d rear power window m |
| Connector D77 S the inspection result YES >> Replace re NO >> Repair or no D.CHECK GROUND (C) Turn ignition switch Disconnect rear point Check continuity b RH harness conne Rear power w Connector D77 S the inspection result YES >> GO TO 6. | Termin 4 normal? ear power window swi replace harness. CIRCUIT 1 h OFF. ower window switch R etween rear power wi ector. indow switch RH Terminal 3 normal? replace harness. | itch RH. RH harness o indow switch Re Conne | connector. n RH harness of ar power window ector | connector and motor RH Terminal | d rear power window m |
| Connector D77 S the inspection result YES >> Replace re NO >> Repair or re D.CHECK GROUND (Connect rear point) Check continuity b RH harness connect Rear power w Connector D77 S the inspection result YES YES >> GO TO 6. NO >> Repair or re D.CHECK GROUND (Connect rear power) Connect result | Termin 4 normal? ear power window swi replace harness. CIRCUIT 1 h OFF. ower window switch R etween rear power wi ector. indow switch RH Terminal 3 normal? replace harness. | itch RH. RH harness of indow switch Re Conne D7 | connector. n RH harness of ar power window actor 2 nnector. | connector and motor RH Terminal 4 | d rear power window m Continuity Existed |
| Connector D77 S the inspection result YES >> Replace re NO >> Repair or re D.CHECK GROUND (Connect rear point) Check continuity b RH harness connect Rear power w Connector D77 S the inspection result YES YES >> GO TO 6. NO >> Repair or re D.CHECK GROUND (Connect rear power) Connect rear power) CHECK GROUND (Connect rear power) Connect rear power) Check continuity b Repair or re D.CHECK GROUND (Connect rear power) Connect rear power) Check continuity b Rear power) | Termin 4 107 107 107 107 107 107 107 107 | itch RH. RH harness of indow switch Re Conne D7 harness cor indow switch | connector. n RH harness of ar power window ector 2 nnector. h RH harness | connector and motor RH Terminal 4 connector an | d rear power window m Continuity Existed |
| Connector D77 S the inspection result YES >> Replace result YES >> Repair or result NO >> Repair or result D.CHECK GROUND (Connect rear point) Disconnect rear point Disconnect rear power we connector D77 S the inspection result YES YES >> GO TO 6. NO >> Repair or result YES >> GO TO 6. NO >> Repair or result YES >> GO TO 6. NO >> Repair or result YES >> GO TO 6. NO >> Repair or result YES >> GO TO 6. NO >> Repair or result YES >> GO TO 6. NO >> Repair or result YES >> Check continuity b | Termin 4 normal? ear power window swir replace harness. CIRCUIT 1 h OFF. ower window switch R etween rear power wir ector. indow switch RH Terminal 3 normal? replace harness. CIRCUIT 2 er window switch RH between rear power w | itch RH. RH harness of indow switch Re Conne D7 harness cor indow switch | connector. n RH harness of ar power window actor 2 nnector. | connector and motor RH Terminal 4 connector an | d rear power window m Continuity Existed |

DOOR KEY CYLINDER SWITCH

< DTC/CIRCUIT DIAGNOSIS >

DOOR KEY CYLINDER SWITCH

Description

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

Component Function Check

1.CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

Check ("KEY CYL LK-SW", "KEY CYL UN-SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYS-TEM" with CONSULT-III. Refer to <u>DLK-51, "DOOR LOCK : CONSULT-III Function (BCM - DOOR LOCK)"</u>.

| Monitor item | | Condition | |
|---------------|------------------|-----------|--|
| KEY CYL LK-SW | Lock | : ON | |
| RET OTE ER-SW | Neutral / Unlock | : OFF | |
| KEY CYL UN-SW | Unlock | : ON | |
| REF CTL UN-SW | Neutral / Lock | : OFF | |

Is the inspection result normal?

- YES >> Door key cylinder switch is OK.
- NO >> Refer to <u>PWC-32</u>, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:000000006626064

1.CHECK DOOR KEY CYLINDER SWITCH SIGNAL

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

| | (+) | | | |
|-----------|---|--------|--------------------------|--|
| | Front door lock assembly (driver side) (key cylinder switch) | | Voltage (V) (Approx.) | |
| Connector | Terminal | | | |
| D15 | 5 | Ground | 5 | |
| 015 | 6 | Ground | 5 | |

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK DOOR KEY CYLINDER SWITCH CIRCUIT

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

| Power window main switch | | Front door lock assembly (driver side) (key cylinder switch) | | Continuity |
|--------------------------|----------|---|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| D8 | 4 | D15 | 6 | Existed |
| 20 | 6 | | 5 | LXISIEU |

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

INFOID:000000006626062

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DOOR KEY CYLINDER SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

| | low main switch | | Continuity |
|---|--|---|--|
| Connector | Terminal | Ground | Continuity |
| D8 | 4 | Cround | Not existed |
| 20 | 6 | | Not existed |
| the inspection result norm | <u>al?</u> | | |
| | window main switch. | | |
| NO >> Repair or replac | | | |
| CHECK DOOR KEY CYL | INDER SWITCH GROUN | D CIRCUIT | |
| | ont door lock assembly (dr | iver side) (key cylinder swite | ch) harness connector ar |
| round. | | | |
| Eront door lock a | ssembly (driver side) | | |
| | inder switch) | | Continuity |
| Connector | Terminal | Ground | , |
| D15 | 4 | | Existed |
| the inspection result norm | al? | | |
| YES >> GO TO 4. | | | |
| NO >> Repair or replac | e harness. | | |
| CHECK DOOR KEY CYL | INDER SWITCH | | |
| heck front door lock assem | bly (driver side) (key cyling | ter switch) | |
| efer to <u>PWC-33, "Compone</u> | | | |
| the inspection result norm | al? | | |
| YES >> GO TO 5. | | | |
| NO >> Replace front do | oor lock assembly (driver si | de) (key cylinder switch). | |
| | | | |
| CHECK INTERMITTENT | INCIDENT | | |
| CHECK INTERMITTENT | | | |
| | | | |
| CHECK INTERMITTENT | Incident". | | |
| CHECK INTERMITTENT efer to <u>GI-43, "Intermittent</u> >> INSPECTION E | Incident". ND | | |
| CHECK INTERMITTENT | Incident". ND | | INFOID:00000006626 |
| CHECK INTERMITTENT Refer to <u>GI-43, "Intermittent</u> >> INSPECTION E Component Inspectior | Incident". ND | | INFCID:00000006620 |
| CHECK INTERMITTENT efer to <u>GI-43, "Intermittent</u> >> INSPECTION E Component Inspection | Incident". ND N | | INFOID:000000006620 |
| CHECK INTERMITTENT efer to <u>GI-43, "Intermittent</u> >> INSPECTION E Component Inspection COMPONENT INSPECTION CHECK DOOR KEY CYL | Incident". ND N N INDER SWITCH | | INFOID:00000006620 |
| CHECK INTERMITTENT efer to <u>GI-43, "Intermittent</u> >> INSPECTION E Component Inspection COMPONENT INSPECTION CHECK DOOR KEY CYL | Incident". ND N ON INDER SWITCH | | |
| CHECK INTERMITTENT efer to <u>GI-43, "Intermittent</u> >> INSPECTION E Component Inspection CMPONENT INSPECTION CHECK DOOR KEY CYL Turn ignition switch OFF Disconnect front door lo | Incident". ND ON INDER SWITCH : ck assembly (driver side) (I | key cylinder switch) connect | or. |
| CHECK INTERMITTENT efer to <u>GI-43, "Intermittent</u> >> INSPECTION E Component Inspection CMPONENT INSPECTION CHECK DOOR KEY CYL Turn ignition switch OFF Disconnect front door lo | Incident". ND ON INDER SWITCH : ck assembly (driver side) (I | key cylinder switch) connect ylinder switch) terminals und | or. |
| CHECK INTERMITTENT efer to <u>GI-43</u> , "Intermittent >> INSPECTION E Component Inspection COMPONENT INSPECTION CHECK DOOR KEY CYL . Turn ignition switch OFF Disconnect front door lo . Check front door lock as Front door lock as | Incident". ND ON INDER SWITCH ck assembly (driver side) (I sembly (driver side) (key cy | | or. |
| CHECK INTERMITTENT efer to <u>GI-43</u> , "Intermittent >> INSPECTION E Component Inspection COMPONENT INSPECTION CHECK DOOR KEY CYL . Turn ignition switch OFF Disconnect front door lo . Check front door lock as Front door lock as | Incident". ND ON INDER SWITCH ck assembly (driver side) (I sembly (driver side) (key cy | | or. |
| CHECK INTERMITTENT efer to <u>GI-43</u> , <u>"Intermittent</u> >> INSPECTION E Component Inspection COMPONENT INSPECTION CHECK DOOR KEY CYL Turn ignition switch OFF Disconnect front door lo Check front door lock as (key cylin | Incident". ND ON INDER SWITCH ck assembly (driver side) (I sembly (driver side) (key cy | ylinder switch) terminals und | or. er the following conditior |
| CHECK INTERMITTENT efer to GI-43, "Intermittent >> INSPECTION E Component Inspection COMPONENT INSPECTION CHECK DOOR KEY CYL . Turn ignition switch OFF Disconnect front door lo . Check front door lock as (key cylin Term | Incident". ND ON INDER SWITCH ck assembly (driver side) (l sembly (driver side) (key cy sembly (driver side) | ylinder switch) terminals und | or. er the following conditior |
| CHECK INTERMITTENT efer to <u>GI-43</u> , <u>"Intermittent</u> >> INSPECTION E Component Inspection COMPONENT INSPECTION CHECK DOOR KEY CYL Turn ignition switch OFF Disconnect front door lo Check front door lock as (key cylin | Incident". ND ON INDER SWITCH ck assembly (driver side) (l sembly (driver side) (key cy sembly (driver side) der switch) minal | ylinder switch) terminals und Key position | or. er the following conditior Continuity |
| CHECK INTERMITTENT efer to GI-43, "Intermittent >> INSPECTION E Component Inspection COMPONENT INSPECTION CHECK DOOR KEY CYL . Turn ignition switch OFF Disconnect front door lo . Check front door lock as (key cylin Term | Incident". ND ON INDER SWITCH ck assembly (driver side) (l sembly (driver side) (key cy sembly (driver side) | Vlinder switch) terminals und Key position Unlock | or. er the following condition Continuity Existed |

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace front door lock assembly (driver side) (key cylinder switch).

< DTC/CIRCUIT DIAGNOSIS >

POWER WINDOW SERIAL LINK

POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH : Description

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

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

Keyless power window down signal

The signals mentioned below are transmitted from power window main switch to front power window switch (passenger side) and rear power window switch.

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

POWER WINDOW MAIN SWITCH : Component Function Check

INFOID:000000006210986

INFOID-000000006210985

1.CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

With CONSULT-III

Check ("CDL LOCK SW ", "CDL UNLOCK SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYS-TEM" with CONSULT-III. Refer to <u>DLK-51, "DOOR LOCK : CONSULT-III Function (BCM - DOOR LOCK)"</u>.

| Monitor item | | Condition | |
|---------------|--------|-----------|--|
| CDL LOCK SW | LOCK | : ON | |
| CDE LOCK SW | UNLOCK | : OFF | |
| CDL UNLOCK SW | LOCK | : OFF | |
| ODE UNEOCK SW | UNLOCK | : ON | |

Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> Refer to <u>PWC-34</u>, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure".

POWER WINDOW MAIN SWITCH : Diagnosis Procedure

INFOID:000000006210987

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

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

| (+) Power window main switch | | () | Signal (Reference value) | |
|---------------------------------|----------|--------|--|--|
| Connector | Terminal | | | |
| D8 | 14 | Ground | (V) 15 10 0 10 ms JPMIA0013GB | |

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 2.

2. CHECK POWER WINDOW SERIAL LINK SIGNAL

POWER WINDOW SERIAL LINK

< DTC/CIRCUIT DIAGNOSIS >

1. Turn ignition switch OFF.

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

| | (+) | | | Voltage (V) | |
|---|--|--|-------------------|--|--|
| Power window main switch | | | (—) | Voltage (V) (Approx.) | |
| Connector | Terminal | I | | | |
| D8 the measurement value | 14 | | Ground | 12 | |
| ES >> Replace power IO >> GO TO 3. CHECK POWER WIND Turn ignition switch OF Disconnect BCM connect | window main switc OW SERIAL LINK C F. ector. | h. CIRCUIT | | | |
| Check continuity betwe | en BCM connector | | | | |
| BCM | Terminal | | ow main switch | Continuity | |
| Connector M123 | 132 | Connector D8 | Terminal 14 | Existed | |
| - | | - | | | |
| Connector | BCM Terminal | | Ground | Continuity | |
| M123 | 132 | | | Not existed | |
| O >> Repair or repla CHECK INTERMITTEN fer to <u>GI-43, "Intermitten</u> >> INSPECTION | T INCIDENT <u>t Incident"</u> . END | | | | |
| RONT POWER WI | | , | | | |
| RONT POWER WIN | NDOW SWITCH | I (PASSENGE | R SIDE) : Dese | | |
| nsmit and receive the signal mentioned belo itch (passenger side) an Keyless power window do | gnal by power windc ow is transmitted fr d rear power windov own signal | ow serial link. om BCM to powe w switch. | er window main sw | r window switch and BCM ritch, front power window | |
| e signal mentioned belov nger side) and rear powe Front passenger side doc Power window control by Power window lock switcl Retained power operatior | er window switch. or window and rear of key cylinder switch h signal | door window opera | | ower window switch (pas- | |
| | - | | | | |

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

[FRONT & REAR WINDOW ANTI-PINCH]

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POWER WINDOW SERIAL LINK

< DTC/CIRCUIT DIAGNOSIS >

With CONSULT-III

Check ("CDL LOCK SW ", "CDL UNLOCK SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYS-TEM" with CONSULT-III. Refer to <u>DLK-51, "DOOR LOCK : CONSULT-III Function (BCM - DOOR LOCK)"</u>.

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

Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> Refer to <u>PWC-36</u>, "FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure".

FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure

INFOID:000000006210990

1.CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

1. Turn ignition switch ON.

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

| (+) Front power window switch (passenger side) Connector Terminal | | () | Signal (Reference value) | |
|---|----|--------|---|--|
| D38 | 16 | Ground | (V) 15 0 0 10 10 10 10 10 10 10 10 10 10 10 10 | |

Is the inspection result normal?

YES >> Replace front power window switch (passenger side).

NO >> GO TO 2.

2. CHECK POWER WINDOW SERIAL LINK CIRCUIT

1. Turn ignition switch OFF.

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

| Power window main switch | | Front power window switch (passenger side) | | Continuity | |
|--------------------------|----------|--|----------|------------|--|
| Connector | Terminal | Connector | Terminal | Continuity | |
| D8 | 14 | D38 | 16 | Existed | |

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

| Power window main switch | | | Continuity |
|--------------------------|----------|--------|-------------|
| Connector | Terminal | Ground | Continuity |
| D8 | 14 | | Not existed |

Is the inspection result normal?

YES >> Replace power window main switch.

POWER WINDOW SERIAL LINK

REAR LH : Diagnosis Procedure

YES

NO

1.CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

>> Refer to PWC-37, "REAR LH : Diagnosis Procedure".

>> Power window serial link is OK.

1. Turn ignition switch ON.

Is the inspection result normal?

Check signal between rear power window switch LH harness connector and ground. 2.

| (+) | | | |
|-----------------------------|----------|--------|---|
| Rear power window switch LH | | () | Signal (Reference value) |
| Connector | Terminal | _ | |
| D57 | 16 | Ground | (V) 15 0 10 10 10 10 10 10 10 10 10 10 10 10 1 |

Is the inspection result normal?

```
>> Replace rear power window switch LH.
YES
```

NO >> GO TO 2.

2.CHECK POWER WINDOW SERIAL LINK CIRCUIT

[FRONT & REAR WINDOW ANTI-PINCH]

REAR LH : Description Power window main switch, front power window switch (passenger side), rear power window switch and BCM transmit and receive the signal by power window serial link. The signal mentioned below is transmitted from BCM to power window main switch, front power window switch (passenger side) and rear power window switch.

Keyless power window down signal

< DTC/CIRCUIT DIAGNOSIS >

>> Repair or replace harness.

NO

REAR LH

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

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

REAR LH : Component Function Check

1.CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

(P) With CONSULT-III

Check ("CDL LOCK SW ", "CDL UNLOCK SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYS-TEM" with CONSULT-III. Refer to DLK-51, "DOOR LOCK : CONSULT-III Function (BCM - DOOR LOCK)".

| Monitor item | | Condition | Н |
|---------------|--------|-----------|---|
| CDL LOCK SW | LOCK | : ON | |
| CDE LOCK SW | UNLOCK | : OFF | |
| CDL UNLOCK SW | LOCK | : OFF | |
| | UNLOCK | : ON | |

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POWER WINDOW SERIAL LINK

< DTC/CIRCUIT DIAGNOSIS >

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

| Power windo | Power window main switch | | Rear power window switch LH | | |
|-------------|--------------------------|--------------------|-----------------------------|------------|--|
| Connector | Terminal | Connector Terminal | | Continuity | |
| D8 | 14 | D57 | 16 | Existed | |

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

| Power windo | w main switch | | Continuity | |
|-------------|--------------------|--|-------------|--|
| Connector | Connector Terminal | | Continuity | |
| D8 | 14 | | Not existed | |

Is the inspection result normal?

YES >> Replace power window main switch.

NO >> Repair or replace harness.

REAR RH

REAR RH : Description

INFOID:000000006210994

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

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

Keyless power window down signal

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

• Front passenger side door window and rear door window operation signal

- Power window control by key cylinder switch signal
- Power window lock switch signal
- Retained power operation signal

REAR RH : Component Function Check

INFOID:000000006210995

1.CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

(I) With CONSULT-III

Check ("CDL LOCK SW ", "CDL UNLOCK SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYS-TEM" with CONSULT-III. Refer to <u>DLK-51, "DOOR LOCK : CONSULT-III Function (BCM - DOOR LOCK)"</u>.

| Monitor item | | Condition |
|---------------|--------|-----------|
| CDL LOCK SW | LOCK | : ON |
| CDE LOCK SW | UNLOCK | : OFF |
| CDL UNLOCK SW | LOCK | : OFF |
| CDE UNEOCK SW | UNLOCK | : ON |

Is the inspection result normal?

- YES >> Power window serial link is OK.
- NO >> Refer to <u>PWC-38</u>, "REAR RH : Diagnosis Procedure".

REAR RH : Diagnosis Procedure

INFOID:000000006210996

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

1. Turn ignition switch ON.

2. Check signal between rear power window switch RH harness connector and ground.

PWC-38

POWER WINDOW SERIAL LINK

< DTC/CIRCUIT DIAGNOSIS >

IFRONT & REAR WINDOW ANTI-PINCH1

| (1 | -) | | | N 1 |
|--|--|--|--|---|
| Rear power win | dow switch RH | () | | Signal ence value) |
| Connector | Terminal | | | , |
| D77 | 16 | Ground | (V) 15 10 5 0 10 ms | |
| • | ear power window sw | vitch RH. | | |
| >> GO TO 2. HECK POWER W Turn ignition switch Disconnect power | INDOW SERIAL LIN OFF. window main switch etween power windo | IK CIRCUIT | ar power window switcl arness connector and i | |
| S >> Replace re >> GO TO 2. HECK POWER W Turn ignition switch Disconnect power Check continuity b RH harness conne | INDOW SERIAL LIN OFF. window main switch etween power windo ctor. | IK CIRCUIT connector and rea ow main switch ha | arness connector and | rear power window |
| S >> Replace re >> GO TO 2. HECK POWER W Turn ignition switch Disconnect power Check continuity b RH harness conne | INDOW SERIAL LIN OFF. window main switch etween power windo | IK CIRCUIT connector and rea ow main switch ha | | |
| S >> Replace re >> GO TO 2. HECK POWER W Furn ignition switch Disconnect power Check continuity b RH harness conne | INDOW SERIAL LIN n OFF. window main switch etween power windo ctor. | IK CIRCUIT connector and rea ow main switch ha | er window switch RH | rear power window |
| S >> Replace re >> GO TO 2. CHECK POWER W Turn ignition switch Disconnect power Check continuity b RH harness conne Power windo Connector D8 | INDOW SERIAL LIN o OFF. window main switch etween power windo ctor. w main switch Terminal 14 | IK CIRCUIT connector and rea ow main switch ha Rear pow Connector D77 | er window switch RH | Continuity Existed |
| S >> Replace re >> GO TO 2. HECK POWER W Turn ignition switch Disconnect power Check continuity b RH harness conne Power windo Connector D8 Check continuity b | INDOW SERIAL LIN o OFF. window main switch etween power windo ctor. w main switch Terminal 14 | IK CIRCUIT connector and rea ow main switch ha Rear pow Connector D77 | er window switch RH Terminal 16 | Continuity Continuity Existed round. |
| S >> Replace re >> GO TO 2. HECK POWER W Turn ignition switch Disconnect power Check continuity b RH harness conne Power windo Connector D8 Check continuity b | INDOW SERIAL LIN n OFF. window main switch etween power windo ctor. w main switch Terminal 14 etween power windo | IK CIRCUIT connector and rea ow main switch ha Rear pow Connector D77 ow main switch har | er window switch RH Terminal 16 | Continuity Existed |

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[FRONT & REAR WINDOW ANTI-PINCH]

ECU DIAGNOSIS INFORMATION BCM (BODY CONTROL MODULE)

Reference Value

INFOID:000000006847494

VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

| Monitor Item | Condition | Value/Status |
|----------------|---|---------------------------------|
| FR WIPER HI | Other than front wiper switch HI | Off |
| | Front wiper switch HI | On |
| FR WIPER LOW | Other than front wiper switch LO | Off |
| | Front wiper switch LO | On |
| FR WASHER SW | Front washer switch OFF | Off |
| TR WASHER SW | Front washer switch ON | On |
| FR WIPER INT | Other than front wiper switch INT/AUTO | Off |
| | Front wiper switch INT/AUTO | On |
| FR WIPER STOP | Front wiper is not in STOP position | Off |
| FR WIPER STOP | Front wiper is in STOP position | On |
| INT VOLUME | Wiper volume dial is in a dial position 1 - 7 | Wiper volume dial posi- tion |
| | Other than turn signal switch RH | Off |
| TURN SIGNAL R | Turn signal switch RH | On |
| | Other than turn signal switch LH | Off |
| TURN SIGNAL L | Turn signal switch LH | On |
| | Other than lighting switch 1ST and 2ND | Off |
| TAIL LAMP SW | Lighting switch 1ST or 2ND | On |
| | Other than lighting switch HI | Off |
| HI BEAM SW | Lighting switch HI | On |
| | Other than lighting switch 2ND | Off |
| HEAD LAMP SW 1 | Lighting switch 2ND | On |
| | Other than lighting switch 2ND | Off |
| HEAD LAMP SW 2 | Lighting switch 2ND | On |
| | Other than lighting switch PASS | Off |
| PASSING SW | Lighting switch PASS | On |
| | Other than lighting switch AUTO | Off |
| AUTO LIGHT SW | Lighting switch AUTO | On |
| | Front fog lamp switch OFF | Off |
| FR FOG SW | Front fog lamp switch ON | On |
| RR FOG SW | NOTE: The item is indicated, but not monitored. | Off |
| | Driver door closed | Off |
| DOOR SW-DR | Driver door opened | On |
| | Passenger door closed | Off |
| DOOR SW-AS | Passenger door opened | On |
| | Rear RH door closed | Off |
| DOOR SW-RR | Rear LH door opened | On |

< ECU DIAGNOSIS INFORMATION >

| Monitor Item | Condition | Value/Status |
|----------------|---|--------------|
| DOOR SW-RL | Rear LH door closed | Off |
| JOOK JW-KL | Rear LH door opened | On |
| DOOR SW-BK | NOTE: The item is indicated, but not monitored. | Off |
| CDL LOCK SW | Other than power door lock switch LOCK | Off |
| | Power door lock switch LOCK | On |
| CDL UNLOCK SW | Other than power door lock switch UNLOCK | Off |
| ODE ONLOOK OW | Power door lock switch UNLOCK | On |
| KEY CYL LK-SW | Other than driver door key cylinder LOCK | Off |
| NET CTL LK-SW | Driver door key cylinder LOCK | On |
| KEY CYL UN-SW | Other than driver door key cylinder UNLOCK | Off |
| VET CTE UN-SW | Driver door key cylinder LOCK | On |
| KEY CYL SW-TR | NOTE: The item is indicated, but not monitored. | Off |
| HAZARD SW | Hazard switch is OFF | Off |
| | Hazard switch is ON | On |
| REAR DEF SW | NOTE: The item is indicated, but not monitored. | Off |
| H/L WASH SW | NOTE: The item is indicated, but not monitored. | Off |
| FR CANCEL SW | Trunk lid opener cancel switch OFF | Off |
| IN CANCEL SW | Trunk lid opener cancel switch ON | On |
| TR/BD OPEN SW | Trunk lid opener switch OFF | Off |
| IN/BD OPEN 3W | While the trunk lid opener switch is turned ON | On |
| FRNK/HAT MNTR | Trunk lid closed | Off |
| | Trunk lid opened | On |
| RKE-LOCK | LOCK button of the Intelligent Key is not pressed | Off |
| KKE-LUCK | LOCK button of the Intelligent Key is pressed | On |
| RKE-UNLOCK | UNLOCK button of the Intelligent Key is not pressed | Off |
| KE-UNLOCK | UNLOCK button of the Intelligent Key is pressed | On |
| RKE-TR/BD | TRUNK OPEN button of the Intelligent Key is not pressed | Off |
| | TRUNK OPEN button of the Intelligent Key is pressed | On |
| | PANIC button of the Intelligent Key is not pressed | Off |
| RKE-PANIC | PANIC button of the Intelligent Key is pressed | On |
| | UNLOCK button of the Intelligent Key is not pressed | Off |
| RKE-P/W OPEN | UNLOCK button of the Intelligent Key is pressed and held | On |
| RKE-MODE CHG | LOCK/UNLOCK button of the Intelligent Key is not pressed and held simulta- neously | Off |
| | LOCK/UNLOCK button of the Intelligent Key is pressed and held simultaneously | On |
| | Bright outside of the vehicle | Close to 5 V |
| OPTICAL SENSOR | Dark outside of the vehicle | Close to 0 V |
| | Driver door request switch is not pressed | Off |
| REQ SW -DR | Driver door request switch is pressed | On |
| | Passenger door request switch is not pressed | Off |
| REQ SW -AS | Passenger door request switch is pressed | On |

< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]

| Monitor Item | Condition | Value/Status |
|---------------|---|--------------|
| REQ SW -RR | NOTE: The item is indicated, but not monitored. | Off |
| REQ SW -RL | NOTE: The item is indicated, but not monitored. | Off |
| REQ SW -BD/TR | Trunk lid opener request switch is not pressed | Off |
| LEQ 3W -BD/TR | Trunk lid opener request switch is pressed | On |
| PUSH SW | Push-button ignition switch (push switch) is not pressed | Off |
| -038 300 | Push-button ignition switch (push switch) is pressed | On |
| GN RLY2 -F/B | Ignition switch in OFF or ACC position | Off |
| GN RETZ -T/D | Ignition switch in ON position | On |
| ACC RLY -F/B | NOTE: The item is indicated, but not monitored. | Off |
| | The clutch pedal is not depressed | Off |
| CLUCH SW | The clutch pedal is depressed | On |
| | The brake pedal is depressed when No. 7 fuse is blown | Off |
| BRAKE SW 1 | The brake pedal is not depressed when No. 7 fuse is blown, or No. 7 fuse is nor- mal | On |
| | The brake pedal is not depressed | Off |
| BRAKE SW 2 | The brake pedal is depressed | On |
| | Selector lever in P position (Except M/T models) The clutch pedal is depressed (M/T models) | Off |
| DETE/CANCL SW | Selector lever in any position other than P (Except M/T models) The clutch pedal is not depressed (M/T models) | On |
| | Selector lever in any position other than P and N | Off |
| SFT PN/N SW | Selector lever in P or N position | On |
| S/L -LOCK | Steering is unlocked | Off |
| D/L-LUCK | Steering is locked | On |
| S/L -UNLOCK | Steering is locked | Off |
| 5/L-ONEOCK | Steering is unlocked | On |
| S/L RELAY-F/B | Ignition switch in OFF or ACC position | Off |
| D/L RELAT-F/D | Ignition switch in ON position | On |
| JNLK SEN -DR | Driver door is unlocked | Off |
| JNLK SEN -DK | Driver door is locked | On |
| PUSH SW -IPDM | Push-button ignition switch (push-switch) is not pressed | Off |
| | Push-button ignition switch (push-switch) is pressed | On |
| GN RLY1 -F/B | Ignition switch in OFF or ACC position | Off |
| | Ignition switch in ON position | On |
| DETE SW -IPDM | Selector lever in any position other than P | Off |
| | Selector lever in P position | On |
| | Selector lever in any position other than P and N (Except M/T models) The clutch pedal is not depressed (M/T models) | Off |
| SFT PN -IPDM | Selector lever in P or N position (Except M/T models) The clutch pedal is depressed (M/T models) | On |
| | Selector lever in any position other than P | Off |
| SFT P -MET | Selector lever in P position | On |
| | Selector lever in any position other than N | Off |
| SFT N -MET | Selector lever in N position | On |

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< ECU DIAGNOSIS INFORMATION >

| Monitor Item | Condition | Value/Status |
|------------------|---|--|
| | Engine stopped | Stop |
| ENGINE STATE | While the engine stalls | Stall |
| ENGINE STATE | At engine cranking | Crank |
| | Engine running | Run |
| S/L LOCK-IPDM | Steering is unlocked | Off |
| S/L LOCK-IF DIVI | Steering is locked | On |
| S/L UNLK-IPDM | Steering is locked | Off |
| 3/L UNLK-IPDIVI | Steering is unlocked | On |
| | Steering lock system is not the LOCK condition and the changing condition from LOCK to UNLOCK | Off |
| S/L RELAY-REQ | Steering lock system is the LOCK condition or the changing condition from LOCK to UNLOCK | On |
| VEH SPEED 1 | While driving | Equivalent to speed- ometer reading |
| VEH SPEED 2 | While driving | Equivalent to speed- ometer reading |
| | Driver door is locked | LOCK |
| DOOR STAT-DR | Wait with selective UNLOCK operation (60 seconds) | READY |
| | Driver door is unlocked | UNLOCK |
| | Passenger door is locked | LOCK |
| DOOR STAT-AS | Wait with selective UNLOCK operation (60 seconds) | READY |
| | Passenger door is unlocked | UNLOCK |
| ID OK FLAG | Steering is locked | Reset |
| ID OK FLAG | Steering is unlocked | Set |
| PRMT ENG STRT | The engine start is prohibited | Reset |
| | The engine start is permitted | Set |
| PRMT RKE STRT | NOTE: The item is indicated, but not monitored. | Reset |
| KEY SWA SLOT | The Intelligent Key is not inserted into key slot | Off |
| KEY SW -SLOT | The Intelligent Key is inserted into key slot | On |
| RKE OPE COUN1 | During the operation of the Intelligent Key | Operation frequency of the Intelligent Key |
| RKE OPE COUN2 | NOTE: The item is indicated, but not monitored. | _ |
| | The key ID that the key slot receives is not recognized by any key ID registered to BCM. | Yet |
| CONFRM ID ALL | The key ID that the key slot receives is recognized by any key ID registered to BCM. | Done |
| | The key ID that the key slot receives is not recognized by the fourth key ID registered to BCM. | Yet |
| CONFIRM ID4 | The key ID that the key slot receives is recognized by the fourth key ID registered to BCM. | Done |
| | The key ID that the key slot receives is not recognized by the third key ID registered to BCM. | Yet |
| CONFIRM ID3 | The key ID that the key slot receives is recognized by the third key ID registered to BCM. | Done |

< ECU DIAGNOSIS INFORMATION >

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

< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]

А

В

С

Ε

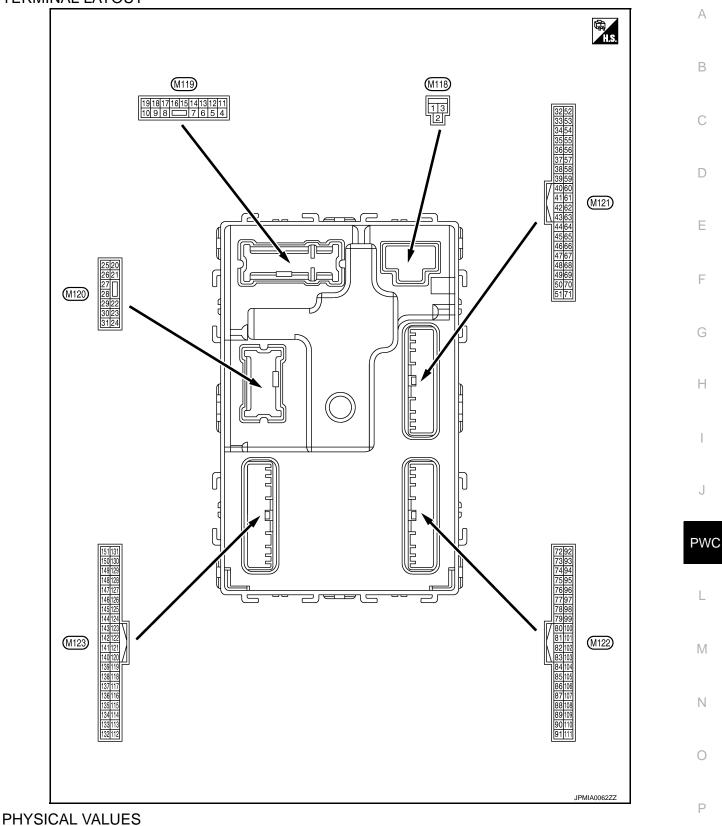
F

J

L

Ρ

TERMINAL LAYOUT



< ECU DIAGNOSIS INFORMATION >

| | nal No. | Description | | | | Value |
|------------|-------------|------------------------------------|------------------|--|---|---|
| (Wire + | color) – | Signal name | Input/ Output | | Condition | (Approx.) |
| 1 (W) | Ground | Battery power supply | Input | Ignition switch (| DFF | Battery voltage |
| 2 (Y) | Ground | P/W power supply (BAT) | Output | Ignition switch (| DFF | 12 V |
| 3 (BG) | Ground | P/W power supply (RAP) | Output | Ignition switch (| NC | 12 V |
| | | | | Interior room lamp battery saver is activated. (Cuts the interior room lamp power supply) | | 0 V |
| 4 (LG) | Ground | Interior room lamp power supply | Output | vated. | mp battery saver is not acti- erior room lamp power sup- | 12 V |
| 5 | Ground | Passenger door UN- | Output | Passenger | UNLOCK (Actuator is activated) | 12 V |
| (P) | Cround | LOCK | Output | door | Other than UNLOCK) Ac- tuator is not activated | 0 V |
| 7 | Ground | Step lamp | Output | Step lamp | ON | 0 V |
| (SB) | Cround | | Output | | OFF | 12 V |
| 8 | Ground | All doors, fuel lid | Output | All doors, fuel | LOCK (Actuator is activated) | 12 V |
| (V) | Cround | LOCK | Other than LOCK | Other than LOCK (Actuator is not activated) | 0 V | |
| 9 | Ground | Driver door, fuel lid | Output Driver do | Driver door, | UNLOCK (Actuator is activated) | 12 V |
| (G) | Cround | UNLOCK | Output | fuel lid | Other than UNLOCK (Actuator is not activated) | 0 V |
| 10 | Ground | Rear RH door and rear LH door UN- | Output | Rear RH door and rear LH | UNLOCK (Actuator is activated) | 12 V |
| (P) | Cround | LOCK | Output | door | Other than UNLOCK (Actuator is not activated) | 0 V |
| 11 (R) | Ground | Battery power supply | Input | Ignition switch (| DFF | Battery voltage |
| 13 (B) | Ground | Ground | _ | Ignition switch (| NC | 0 V |
| | | | | | OFF | 0 V |
| 14 | Crownel | Push-button ignition | Outrait | Toillonn | | NOTE: When the illumination brighten- ing/dimming level is in the neutral position |
| (W) | Ground | switch illumination ground | Output | Tail lamp | ON | 10 0 2 ms JSNIA0010GB |
| 15 (BG) | Ground | ACC indicator lamp | Output | Ignition switch | OFF (LOCK indicator is not illuminated) | Battery voltage |
| (30) | | | | | ACC | 0 V |

< ECU DIAGNOSIS INFORMATION >

| Imput/ (W) Condition Condition (Approx.) 1 - Signal name Input/ Output Turn signal switch OFF 0 V B 17 (W) Ground Turn signal RH (Fort) Output Ignition switch ON Turn signal switch OFF 0 V B 18 (BG) Ground Turn signal LH (Front) Output Ignition switch ON Turn signal switch OFF 0 V E 19 (V) Ground Room Ismp timer Control Output Interior room Iamp OFF 12 V H 20 (V) Ground Turn signal RH (Rear) Output Ignition switch ON OFF 0 V I 20 (V) Ground Turn signal RH (Rear) Output Ignition switch ON Turn signal switch OFF 0 V I 20 (V) Ground Turn signal RH (Rear) Output Turn signal switch OFF 0 V I 20 (V) Ground Turn signal RH (Rear) Output Turn signal switch OFF 0 V I 23 (LG) Ground Turn signal LH (Rear) Output Turn kild OPEN (Trunk kild opener actutator is not activated) 0 V <th></th> <th>nal No.</th> <th colspan="2">Description</th> <th colspan="2"></th> <th colspan="2">Value</th> | | nal No. | Description | | | | Value | |
|---|----|----------|------------------------|---------|---------------|----------------------------|--------------------|-------------|
| 17 (W) Ground Turn signal RH (Frong) Output Ignition switch ON Turn signal switch RH Image: State of the system of th | | | Signal name | | | Condition | Value (Approx.) | A |
| 17 (W) Ground Turn signal RH (Font) Output Ignition switch N Turn signal switch RH Image: Signal Chief Signal Switch Chief Signal Switch Chief Signal Switch Chief Signal Switch Chief Signal Switch Chief Signal Switch Chief Signal Chief | | | | | | Turn signal switch OFF | 0 V | В |
| $ \begin{array}{c c c c c c } \hline \begin{tabular}{ c c c } \hline \begin{tabular}{ c c c c c } \hline \begin{tabular}{ c c c c c c } \hline \begin{tabular}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$ | | Ground | | Output | | Turn signal switch RH | | |
| $ \begin{array}{c c c c c c } 18\\ (BG) \\ $ | | | | | | | PKID0926E | D |
| 18 (BG) Ground Turn signal LH (Front) Output Ignition switch ON Turn signal switch LH Image: Constraint of the synthesis of the synthesyntem synte synthesis of the synthesynthesis of the synt | | | | | | Turn signal switch OFF | 0 V | E |
| 19 (V) Ground Room lamp timer control Output Interior room lamp OFF 12 V H 20 (V) Ground Turn signal RH (Rear) Output Interior room lamp Turn signal switch OFF 0 V H 20 (V) Ground Turn signal RH (Rear) Output Ignition switch ON Turn signal switch OFF 0 V I 23 (LG) Ground Trunk lid open Output Trunk lid OPEN (Trunk lid opener actuator is activated) 12 V L 25 (Y) Ground Turn signal LH (Rear) Output Ignition switch ON Turn signal switch OFF 0 V M 25 (Y) Ground Turn signal LH (Rear) Output Ignition switch ON Turn signal switch OFF 0 V M 25 (Y) Ground Turn signal LH (Rear) Output Ignition switch ON Turn signal switch OFF 0 V N 25 (Y) Ground Turn signal LH (Rear) Output Ignition switch ON ON 0 V N | | Ground | Turn signal LH (Front) | Output | | Turn signal switch LH | | F |
| $ \begin{array}{c c c c c c } \hline 19 \\ (V) \\ \hline (V) \\ (V$ | | | | | | | PKID0926E | G |
| (V) Ground control Output lamp ON 0 V 20 Ground Turn signal RH (Rear) Output Ignition switch ON Turn signal switch OFF 0 V I 20 (V) Ground Turn signal RH (Rear) Output Ignition switch ON Turn signal switch OFF 0 V I 23 (LG) Ground Trunk lid open Output Trunk lid OPEN (Trunk lid opener actuator is activated) 12 V L 23 Ground Turn signal LH (Rear) Output Ignition switch ON OPEN (Trunk lid opener actuator is not activated) 0 V M 25 (Y) Ground Turn signal LH (Rear) Output Ignition switch ON Turn signal switch OFF 0 V M 25 (Y) Ground Turn signal LH (Rear) Output Ignition switch ON Turn signal switch LH Ignition Group N O 30 Ground Turk kroom lamp Output Trunk room ON ON OV N | 19 | Oneveral | Room lamp timer | Outrast | Interior room | OFF | | Н |
| $ \begin{array}{c c c c c c c c c c c c c c c c c c c $ | | Ground | | Output | lamp | ON | | |
| 20 (V) Ground Turn signal RH (Rear) Output Ignition switch ON Turn signal switch RH Ignition switch Image: Solution State Image: Solut | | | | | | Turn signal switch OFF | 0 V | |
| $ \begin{array}{c c c c c c c c c c c c c c c c c c c $ | | Ground | Turn signal RH (Rear) | Output | | Turn signal switch RH | | J |
| (LG) Ground Hunk lid open Output Hunk lid Other than OPEN (Trunk lid opener actuator is not activated) OV M 25 (Y) Ground Turn signal LH (Rear) Output Ignition switch ON Turn signal switch OFF 0 V N 25 (Y) Ground Turn signal LH (Rear) Output Ignition switch ON Turn signal switch LH Image: State of the state | 23 | | — | 0.1.1 | | (Trunk lid opener actuator | 6.5 V | L |
| 25 (Y) Ground Turn signal LH (Rear) Output Ignition switch ON Turn signal switch LH Ignition switch Is Ignit switch Is Ignition switc | | Ground | i runk lid open | Output | i runk lid | (Trunk lid opener actuator | 0 V | M |
| 25 (Y) Ground Turn signal LH (Rear) Output Ignition switch ON Turn signal switch LH Ignition switch Is Ignit switch Is Ignition switc | | | | | | Turn signal switch OFF | 0 V | |
| 30 Ground Trunk room lamp Output Trunk room ON 0 V | | Ground | Turn signal LH (Rear) | Output | | Turn signal switch LH | | N O P |
| Ground Trunk room lamp Output I renk room | | | | | Truck | ON | | - |
| | | Ground | Trunk room lamp | Output | | OFF | 12 V | |

< ECU DIAGNOSIS INFORMATION >

| | nal No. | Description | | | | Value |
|------------|---------|----------------------|------------------|--|--|--|
| (Wire + | color) | Signal name | Input/ Output | | Condition | (Approx.) |
| 34 | Ground | Trunk room antenna | Output | Ignition switch | When Intelligent Key is in the passenger compart- ment | (V) 15 10 5 0 1 s JMKIA0062GB |
| (SB) | | (-) | | ÕFF | When Intelligent Key is not in the passenger compart- ment | (V) 15 10 5 0 1 s 1 JMKIA0063GB |
| 35 | Ground | . Trunk room antenna | | Ignition switch | When Intelligent Key is in the passenger compart- ment | (V) 15 10 5 0 1 s JMKIA0062GB |
| (V) | | (+) | Output | ÕFF | When Intelligent Key is not in the passenger compart- ment | (V) 15 0 0 15 0 15 0 15 0 15 0 15 0 15 0 1 |
| 38 | Ground | Rear bumper anten- | Output | When the trunk lid opener re- quest switch is operated with ignition switch OFF | When Intelligent Key is in the antenna detection area | (V) 15 10 5 0 15 10 5 0 15 15 15 15 15 15 15 15 15 15 15 15 15 |
| (B) | | na (-) | Cuput | | When Intelligent Key is not in the antenna detection area | (V) 15 10 5 0 1 s 1 5 0 1 s 1 5 0 1 s 1 5 0 1 s 10 5 0 15 10 5 0 15 10 10 10 10 10 10 10 10 10 10 10 10 10 |

< ECU DIAGNOSIS INFORMATION >

| Instruction Signal name Unput Curbuicht | | nal No. | Description | | | | Value | 0 |
|---|-----|---------|-----------------------------|--------|---------------------------------|---------------------------|--|-------------|
| 39 (W) Ground Rear bumper anten- na (+) Output When the turn uld opener re- operate witch is operate w | | | Signal name | | | Condition | | A |
| (W) Ground na (+) Output operated with ignition switch OFF When Intelligent Key is not in the antenna detection area (V) Image: State is in the antenna detection area (V) Image: State is in the antenna detection area (V) Image: State is in the antenna detection area (V) | 39 | | Rear humper anten- | | lid opener re- | the antenna detection | | B C D |
| 47 (Y) Ground Ignition relay (IPDM E/R) control Output Ignition switch Or P O ACC 12 V 50 (BG) Ground Trunk room lamp switch Input Trunk room lamp switch OFF (Trunk lid is closed) 15 15 15 10 10 ms (V) 15 15 10 10 ms Input Trunk room lamp switch OFF (Trunk lid is closed) 11 18 V Input Inp | | Ground | | Output | operated with ignition switch | in the antenna detection | | E |
| (Y) Ground E/R) controi Output Ignition switch ON 0 V 50 (BG) Ground Trunk room lamp switch Input Trunk room lamp switch OFF (Trunk lid is closed) 0 V Imput Imput Imput OFF (Trunk lid is closed) 0 V Imput Imput Imput Imput Imput OFF (Trunk lid is closed) 0 V Imput Imput Imput Imput ON (Trunk lid is closed) 0 V Imput Imput Imput Imput Imput Imput Imput ON (Trunk lid is closed) 0 V Imput Imput Imput Imput Imput Imput Imput Imput ON (Trunk lid is closed) 0 V Imput | 47 | | Ignition relay (IPDM | | | OFF or ACC | 12 V | G |
| 50 (BG) Ground Trunk room lamp switch Input Trunk room lamp switch OFF (Trunk lid is closed) Imput for the second secon | | Ground | | Output | Ignition switch | ON | 0 V | |
| 52 (R) Ground Starter relay control Output Ignition switch ON (A/T mod- els) When selector lever is in P or N position 12 V PV 52 (R) Ground Starter relay control Output Ignition switch ON (M/T mod- els) When selector lever is not in P or N position 0 V L 61 (SB) Ground Trunk lid opener re- quest switch Input Trunk lid open- er request switch ON (Pressed) 0 V N 61 (SB) Ground Trunk lid opener re- quest switch Input Trunk lid open- er request switch OFF (Not pressed) 0 V N 64 (G) Ground Intelligent Key warn- ing buzzer (Engine Output Intelligent Key warning buzzer Sounding 0 V N | | Ground | | Input | | OFF (Trunk lid is closed) | 15 10 5 0 10 ms JPMIA0011GB | H I J |
| 52 (R) Ground Starter relay control Output Ignition switch on (A/T mod- els) or N position 0 V 0 V Ignition switch (N) Output Ignition switch on (M/T mod- els) When selector lever is not in P or N position 0 V L Ignition switch (SB) Ground Starter relay control Output When the clutch pedal is depressed Battery voltage N 61 (SB) Ground Trunk lid opener re- quest switch Input Trunk lid open- er request switch ON (Pressed) 0 V N 64 (C) Ground Intelligent Key warn- ing buzzer (Engine Output Intelligent Key warning buzzer Sounding 0 V OV | | | | | | ON (Trunk lid is opened) | 0 V | |
| 52 (R) Ground Starter relay control Output els) When selector lever is not in P or N position 0 V Ignition switch ON (M/T mod- els) Ignition switch ON (M/T mod- els) When the clutch pedal is depressed Battery voltage M 61 (SB) Ground Trunk lid opener re- quest switch Input Trunk lid open- er request switch ON (Pressed) 0 V N 64 (C) Ground Intelligent Key warn- ing buzzer (Engine Output Intelligent Key warning buzzer Intelligent Key warning buzzer Intelligent Key warning buzzer Sounding 0 V | | | | Outrut | ON (A/T mod- | | 12 V | PWC |
| (R) Ignition switch ON (M/T mod- els) When the clutch pedal is depressed Battery voltage When the clutch pedal is not depressed 0 V M 61 (SB) Ground Trunk lid opener re- quest switch Input Trunk lid open- er request switch ON (Pressed) 0 V N 64 (C) Ground Intelligent Key warn- ing buzzer (Engine Output Intelligent Key warningbuzzer Sounding 0 V N | 52 | Ground | Starter relay control | | | | 0 V | L |
| 61 (SB) Ground Trunk lid opener request switch Input Trunk lid opener switch ON (Pressed) 0 V N 64 (C) Ground Intelligent Key warn- ing buzzer (Engine Output Intelligent Key warning buzzer Intelligent Key warning buzzer Output Sounding 0 V N | (R) | Ground | Statter relay control | Output | | | Battery voltage | |
| 61 (SB) Ground Trunk lid opener request switch Input Trunk lid opener request switch OFF (Not pressed) Imput 10 ms Imput 10 ms </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>0 V</td> <td>M</td> | | | | | | | 0 V | M |
| 61 (SB) Ground Trunk lid opener request switch Input Trunk lid opener request switch OFF (Not pressed) Imput 10 ms Imput 10 ms </td <td></td> <td></td> <td></td> <td></td> <td></td> <td>ON (Pressed)</td> <td>0 V</td> <td></td> | | | | | | ON (Pressed) | 0 V | |
| G Ground ing buzzer (Engine Output warning buzzer | | Ground | | Input | er request | OFF (Not pressed) | 15 10 5 10 ms JPMIA0016GB | N O P |
| (C) Ground Ing buzzer (Engine Output warning buzzer | 64 | | | | | Sounding | 0 V | |
| (Engine room) (Chaine room) (Not sourceing) (2 V | (G) | Ground | ing buzzer (Engine room) | Output | warning buzzer (Engine room) | Not sounding | 12 V | |

< ECU DIAGNOSIS INFORMATION >

| | nal No. | Description | | | | Value |
|------------|-------------|----------------------------|------------------|------------------------------|--|--|
| (Wire + | color) – | Signal name | Input/ Output | | Condition | Value (Approx.) |
| | | | | | Pressed | 0 V |
| 67 (GR) | Ground | Trunk lid opener switch | Input | Trunk lid open- er switch | Not pressed | (V) 15 0 0 10 10 10 10 10 10 10 11.8 V |
| 68 (BG) | Ground | Rear RH door switch | Input | Rear RH door switch | OFF (When rear RH door closes) | (V) 15 10 5 0 10 ms JPMIA0011GB 11.8 V |
| | | | | | ON (When rear RH door opens) | 0 V |
| 69 (L) | Ground | Rear LH door switch | Input | Rear LH door switch | OFF (When rear LH door closes) | (V) 15 10 5 0 10 ms JPMIA0011GB 11.8 V |
| | | | | | ON (When rear LH door opens) | 0 V |
| 72 | Ground | Room antenna 2 (-) | Output | Ignition switch | When Intelligent Key is in the passenger compart- ment | (V) 15 10 5 0 1 s JMKIA0062GB |
| (R) | Stound | (Center console) | | OFF | When Intelligent Key is not in the passenger compart- ment | (V) 15 10 5 0 1 s 1 5 0 1 s 1 5 0 1 s 1 5 0 1 s 10 5 0 1 s 10 5 0 1 s 10 5 0 1 s 10 5 0 10 5 0 10 5 0 10 5 0 10 5 0 10 5 0 10 5 0 10 5 0 10 5 0 10 5 0 10 5 0 10 5 0 10 5 0 10 10 5 0 10 10 10 10 10 10 10 10 10 10 10 10 1 |

< ECU DIAGNOSIS INFORMATION >

| | nal No. | Description | | | |) /= l++= | |
|------------|---------|--|------------------|---|--|--|-------------|
| (Wire + | color) | Signal name | Input/ Output | | Condition | Value (Approx.) | A |
| 73 | Ground | Room antenna 2 (+) | Output | Ignition switch | When Intelligent Key is in the passenger compart- ment | (V) 15 10 5 0 1 5 0 1 5 0 1 5 0 1 5 0 1 5 10 5 0 1 5 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 10 15 10 10 10 10 10 10 10 10 10 10 10 10 10 | B C D |
| (G) | | (Center console) | | OFF | When Intelligent Key is not in the passenger compart- ment | (V) 15 0 0 15 0 15 0 15 0 15 15 10 15 15 10 10 10 10 10 10 10 10 10 10 10 10 10 | E |
| 74 | Ground | Passenger door an- | | When the pas- senger door re- quest switch is | When Intelligent Key is in the antenna detection area | (V) 15 10 5 0 15 15 15 15 15 15 15 15 15 15 | G H I |
| (SB) | | tenna (-) | Output | operated with ignition switch OFF | When Intelligent Key is not in the antenna detection area | (V) 15 0 0 15 0 15 0 15 0 15 15 10 15 15 15 10 15 15 15 15 15 15 15 15 15 15 15 15 15 | J PWC |
| 75 | Ground | Bround Passenger door an- tenna (+) | | When the pas- senger door re- quest switch is | When Intelligent Key is in the antenna detection area | (V) 15 0 0 15 0 15 0 15 0 15 0 15 0 15 0 1 | M |
| (BR) | | | Output | operated with ignition switch OFF | When Intelligent Key is not in the antenna detection area | (V) 15 0 0 1 s JMKIA0063GB | O P |

< ECU DIAGNOSIS INFORMATION >

| | nal No. | Description | | | | Value | |
|-------------|---------|--|------------------|--|--|--|--|
| (vvire + | color) | Signal name | Input/ Output | | Condition | (Approx.) | |
| 76 | Ground | Driver door antenna | Output | When the driv- er door request switch is oper- | When Intelligent Key is in the antenna detection area | (V) 15 0 15 0 15 0 15 0 15 0 15 0 15 0 15 | |
| (V) | Giouna | (-) | Cutput | ated with igni- tion switch OFF | When Intelligent Key is not in the antenna detection area | (V) 15 10 5 0 1 s JMKIA0063GB | |
| 77 | Ground | Driver door antenna | | When the driv- er door request | When Intelligent Key is in the antenna detection area | (V) 15 0 0 15 0 15 0 15 0 15 0 15 0 15 15 10 15 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 10 10 10 10 10 10 10 10 10 10 10 10 | |
| (LG) | | (+) | Output | switch is oper- ated with igni- tion switch OFF | When Intelligent Key is not in the antenna detection area | (V) 15 0 0 1 s JMKIA0063GB | |
| 78 | | Room antenna 1 (–) (Instrument panel) | Output | Ignition switch OFF | When Intelligent Key is in the passenger compart- ment | (V) 15 0 5 0 1 s JMKIA0062GB | |
| (Y) | Ground | | | | When Intelligent Key is not in the passenger compart- ment | (V) 15 0 0 1 s JMKIA0063GB | |

< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]

| nal No. | Description | | 2 | | Value | |
|---------|--|------------------|--|---|--|--|
| | Signal name | Input/ Output | | Condition | (Approx.) | |
| 0 | Room antenna 1 (+) | 0.4-14 | Ignition switch | When Intelligent Key is in the passenger compart- ment | (V) 15 0 15 15 15 15 15 15 15 15 15 15 | |
| Ground | (Instrument panel) | Output | ŎFF | When Intelligent Key is not in the passenger compart- ment | (V) 15 10 5 0 1 s JMKIA0063GB | |
| Ground | NATS antenna amp. | Input/ Output | During waiting | Ignition switch is pressed while inserting the Intelli- gent Key into the key slot. | Just after pressing ignition switch. Pointer of tester should move. | |
| Ground | NATS antenna amp. | Input/ Output | During waiting | Ignition switch is pressed while inserting the Intelli- gent Key into the key slot. | Just after pressing ignition switch. Pointer of tester should move. | |
| Ground | Ignition relay [Fuse block (J/B)] control | Output | Ignition switch | OFF or ACC ON | 0 V 12 V | |
| Ground | Remote keyless entry | | During waiting | | (V) 15 10 5 0 1 1 1 ms JMKIA0064GB | |
| Ground | tion | Output | When operating gent Key | either button on the Intelli- | (V) 15 10 5 0 1 1 ms JMKIA0065GB | |
| | color) - Ground Ground Ground | Signal name | Input/ Output-Signal nameInput/ OutputRoom antenna 1 (+) (Instrument panel)OutputGroundRoom antenna 1 (+) (Instrument panel)OutputGroundNATS antenna amp.Input/ OutputGroundNATS antenna amp.Input/ OutputGroundIgnition relay [Fuse block (J/B)] controlOutput | color) Signal name Input/ Output - Signal name Input/ Output Ground Room antenna 1 (+) (Instrument panel) Output Ignition switch OFF Ground NATS antenna amp. Input/ Output During waiting Ground NATS antenna amp. Input/ Output During waiting Ground Ignition relay [Fuse block (J/B)] control Output Ignition switch Ground Ignition relay [Fuse block (J/B)] control Output Ignition switch Ground Ignition relay [Fuse block (J/B)] control Output Ignition switch Ground Ignition relay [Fuse block (J/B)] control Output Ignition switch Marcine Remote keyless entry receiver communica- tion Input/ Output Uring waiting | color) Signal name Input/ Output Condition - Signal name Input/ Output When Intelligent Key is in the passenger compart- ment Ground Room antenna 1 (+) (Instrument panel) Output Ignition switch OFF When Intelligent Key is not in the passenger compart- ment Ground NATS antenna amp. Input/ Output During waiting Ignition switch is pressed while inserting the Intelli- gent Key into the key slot. Ground NATS antenna amp. Input/ Output During waiting Ignition switch is pressed while inserting the Intelli- gent Key into the key slot. Ground Ignition relay [Fuse block (J/B)] control Output Ignition switch OFF or ACC ON Ground Remote keyless entry receiver communica- tion Input/ Output During waiting OFF or ACC When operating either button on the Intelli- Input/ Output When operating either button on the Intelli- | |

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< ECU DIAGNOSIS INFORMATION >

| | nal No. | Description | | | | Value |
|-------------|-------------|-------------------------------|------------------|-----------------------|--|---|
| (vvire + | color) - | Signal name | Input/ Output | | Condition | (Approx.) |
| | | | | | All switches OFF (Wiper volume dial 4) | (V) 15 0 2 ms JPMIA0041GB 1.4 V |
| 87 (Y) | Ground | Combination switch INPUT 5 | Input | Combination switch | Front fog lamp switch ON (Wiper volume dial 4) | (V) 15 10 5 0 2 ms JPMIA0037GB 1.3 V |
| | | | | | Any of the conditions be- low with all switches OFF • Wiper volume dial 1 • Wiper volume dial 2 • Wiper volume dial 6 • Wiper volume dial 7 | (V) 15 10 5 0 2 ms JPMIA0040GB 1.3 V |

< ECU DIAGNOSIS INFORMATION >

| Imput * Signal name Input Output Condition * - Signal name Output * - | Terminal No. (Wire color) | | Description | | | | Value | |
|--|------------------------------|--------|-----------------------|--------|-------------|---|--|---|
| 88 (BC) Ground Combination switch INPUT 3 Input Combination switch Lighting switch HI (Wper volume dial 4) Viewson 1.1 V 88 (BC) Ground Combination switch INPUT 3 Input Combination switch Lighting switch HI (Wper volume dial 4) Viewson 1.3 V Imput Imput< | | - | Signal name | | | Condition | | / |
| $ \begin{array}{ c c c } \hline \\ \hline $ | | | | | | | 10 5 0 2 ms JPMIA0041GB | E |
| (BG) Ground INPUT 3 Input switch Imput switch Imput switch Imput | | | Combination switch | | Combination | | 10 0 2 ms JPMIA0036GB | |
| $ \begin{array}{c c c c c c c c c } \hline & & & & & & & & & & & & & & & & & & $ | | Ground | INPUT 3 | mput | SWITCH | | 10 0 2 ms JPMIA0037GB | ŀ |
| 89 (BR) Ground Push-button ignition switch (Push switch) Input Push-button ignition nition switch (push switch) Pressed 0 V 90 (P) Ground CAN-L Input/ Output 91 (L) Ground CAN-H Input/ Output 91 (L) Ground CAN-H Input/ Output 92 (LG) Ground Key slot illumination Output Key slot illumination OFF 0 V 92 (LG) Ground Key slot illumination Output Key slot illumi- nation Blinking OFF 0 V | | | | | | low with all switches OFFWiper volume dial 1Wiper volume dial 2 | | P |
| (BR)Groundswitch (Push switch)Input (push switch)Not pressedBattery voltage90 (P)GroundCAN-LInput/ Output———91 (L)GroundCAN-HInput/ Output———92 (LG)GroundKey slot illuminationOutputV——92 (LG)GroundKey slot illuminationOutputVInput/ OutputOFFO V92 (LG)GroundKey slot illuminationOutputKey slot illuminationInput/ OutputInput/ OutputInput/ OutputInput/ OUtputInput/ OUtput92 (LG)GroundKey slot illuminationOutputKey slot illuminationInput/ OutputInput/ Key slot illuminationInput/ OutputInput/ Input/ OutputInput/ Input/ OUtputInput/ <br< td=""><td>89</td><td></td><td>Push-button ignition</td><td></td><td></td><td>Pressed</td><td></td><td></td></br<> | 89 | | Push-button ignition | | | Pressed | | |
| (P) Ground CAN-L Output — — 91 (L) Ground CAN-H Input/ Output — — — 91 (L) Ground CAN-H Input/ Output — — — 92 (LG) Ground Key slot illumination Output Key slot illumi- nation Blinking If If 92 (LG) Ground Key slot illumination Output Key slot illumi- nation Blinking If If If | | Ground | switch (Push switch) | Input | | Not pressed | Battery voltage | [|
| (L) Ground CAN-H Output 92 (LG) Ground Key slot illumination Output Key slot illumi- nation OFF 0 V | | Ground | CAN-L | | | _ | _ | |
| 92 (LG) Ground Key slot illumination Output Key slot illumination Blinking Blinking Dutput A Sector 2015 | | Ground | CAN-H | | | _ | _ | |
| 92 (LG) Ground Key slot illumination Output Key slot illumination Blinking Blinking Blinking JPMIA0015GB | | | | | | OFF | 0 V | |
| | 92 (LG) Ground | Ground | Key slot illumination | Output | | Blinking | 15 10 5 0 1 s JPMIA0015GB | |
| | | | | | | ON | | |

< ECU DIAGNOSIS INFORMATION >

| | nal No. | Description | | | | Value |
|---|-------------|--|------------------|-------------------------------------|---|--|
| (Wire + | color) – | Signal name | Input/ Output | | Condition | (Approx.) |
| 93 (GR) | Ground | ON indicator lamp | Output | Ignition switch | OFF (LOCK indicator is not illuminated) | Battery voltage |
| (GR) | | | | | ON | 0 V |
| 95 (BG) | Ground | ACC relay control | Output | Ignition switch | OFF ACC or ON | 0 V 12 V |
| 96 (GR) | Ground | A/T shift selector (De- tention switch) power supply | Output | | _ | 12 V |
| 97 | Ground | Steering lock condi- | Input | Steering lock | LOCK status | 0 V |
| (L) | | tion No. 1 | | g | UNLOCK status | 12 V |
| 98 | Ground | Steering lock condi- | Input | Steering lock | LOCK status | 12 V |
| (P) | | tion No. 2 | | 5 | UNLOCK status | 0 V |
| | | Selector lever P posi- tion switch (A/T mod- | | Selector lever | P position | 0 V |
| | | els) | | Selector level | Any position other than P | 12 V |
| 99 | | ASCD clutch switch | | ASCD clutch | OFF (Clutch pedal is de- pressed) | 0 V |
| (R)* ¹ (BR)* ² | Ground | (M/T models without ICC) | Input | switch | ON (Clutch pedal is not depressed) | 12 V |
| | | ICC clutch switch (M/ | | ICC clutch | OFF (Clutch pedal is de- pressed) | 0 V |
| | | T models with ICC) | | switch | ON (Clutch pedal is not depressed) | 12 V |
| | | | | | ON (Pressed) | 0 V |
| 100 (Y) | Ground | Passenger door re- quest switch | Input | Passenger door request switch | OFF (Not pressed) | (V) 15 0 10 10 ms JPMIA0016GB 1.0 V |
| | | | | | ON (Pressed) | 0 V |
| 101 (P) | Ground | Driver door request switch | Input | Driver door re- quest switch | OFF (Not pressed) | (V) 10 10 10 10 10 1.0 V |
| 102 | Ground | Blower fan motor re- | Output | Ignition owitch | OFF or ACC | 0 V |
| (BG) | Ground | lay control | Output | Ignition switch | ON | 12 V |
| 103 (P) | Ground | Remote keyless entry receiver power sup- ply | Output | Ignition switch C | DFF | 12 V |
| 106 | Ground | Steering lock unit | Output | Ignition switch | OFF or ACC | 12 V |
| (SB) | Ground | power supply | Cuiput | | ON | 0 V |

< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]

| Terminal No. (Wire color) | | Description | | | | Value | |
|------------------------------|--------|-------------------------------|------------------|---|------------------------|---|--|
| (vvire + | | Signal name | Input/ Output | | Condition | (Approx.) | |
| | | | | | All switches OFF | (V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V | |
| | | | | | Turn signal switch LH | (V) 15 10 5 0 2 ms JPMIA0037GB 1.3 V | |
| 107 (LG) | Ground | Combination switch INPUT 1 | Input | Combination switch (Wiper volume dial 4) | Turn signal switch RH | (V) 15 10 5 0 2 ms JPMIA0036GB 1.3 V | |
| | | | | | Front wiper switch LO | (V) 15 10 2 ms JPMIA0038GB 1.3 V | |
| | | | | | Front washer switch ON | (V) 10 5 0 2 ms JPMIA0039GB 1.3 V | |

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< ECU DIAGNOSIS INFORMATION >

| | nal No. | Description | | | | Value | |
|-------------|-------------|-------------------------------|------------------|-------------|---|---|--|
| (vvire + | color) - | Signal name | Input/ Output | | Condition | (Approx.) | |
| | | | | | All switches OFF (Wiper volume dial 4) | (V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V | |
| 108 | Ground | Combination switch INPUT 4 | Input | Combination | Lighting switch AUTO (Wiper volume dial 4) | (V) 15 10 0 2 ms JPMIA0038GB 1.3 V | |
| (R) | | | | | Lighting switch 1ST (Wiper volume dial 4) | (V) 15 0 0 2 ms JPMIA0036GB 1.3 V | |
| | | | | | Any of the conditions be- low with all switches OFF • Wiper volume dial 1 • Wiper volume dial 5 • Wiper volume dial 6 | (V) 15 10 5 2 ms JPMIA0039GB 1.3 V | |

< ECU DIAGNOSIS INFORMATION >

| | nal No. | Description | | | | Value | А |
|-------------|---------|-------------------------------|------------------|---|---------------------------------|--|-------------|
| (vvire + | color) | Signal name | Input/ Output | | Condition | (Approx.) | A |
| | | | | | All switches OFF | (V) 15 10 2 ms JPMIA0041GB 1.4 V | B C D |
| | | | | | Lighting switch PASS | (V) 15 10 5 0 2 ms JPMIA0037GB 1.3 V | E |
| 109 (W) | Ground | Combination switch INPUT 2 | Input | Combination switch (Wiper volume dial 4) | Lighting switch 2ND | (V) 15 0 2 ms JPMIA0036GB 1.3 V | G H I |
| | | | | | Front wiper switch INT/ AUTO | (V) 15 0 2 ms JPMIA0038GB 1.3 V | J PWC |
| | | | | | Front wiper switch HI | (V) 15 0 2 ms JPMIA0040GB 1.3 V | M |
| | | | | | ON | 0 V | 0 |
| 110 (G) | Ground | Hazard switch | Input | Hazard switch | OFF | (V) 15 10 5 10 10 ms JPMIA0012GB 1.1 V | Ρ |

< ECU DIAGNOSIS INFORMATION >

| | nal No. | Description | | | | Value |
|-------------|---------|--|------------------|--|---|---|
| (Wire + | color) | Signal name | Input/ Output | | Condition | (Approx.) |
| | | | | | LOCK status | 12 V |
| 111 (Y) | Ground | Steering lock unit communication | Input/ Output | Steering lock | LOCK or UNLOCK | (V) 15 10 50 50 ms JMKIA0066GB |
| | | | | | For 15 seconds after UN- LOCK | 12 V |
| | | | | | 15 seconds or later after UNLOCK | 0 V |
| 112 (R) | Ground | Light and rain sensor serial link | Input/ Output | Ignition switch C | DN | (V) 15 10 5 0 10 10 10 10 10 10 10 10 10 |
| 113 | Crownd | d Optical sensor | Input | Input Ignition switch ON | When bright outside of the vehicle | Close to 5 V |
| (BG) | Ground | | | | When dark outside of the vehicle | Close to 0 V |
| 114 | Ground | Clutch interlock | Input | Clutchinterlock | OFF (Clutch pedal is not depressed) | 0 V |
| (R) | Ground | ' switch | | switch | ON (Clutch pedal is de- pressed) | Battery voltage |
| 116 (SB) | Ground | Stop lamp switch 1 | Input | | | Battery voltage |
| | | Stop lamp switch 2 (Without ICC) d Stop lamp switch 2 (With ICC) | - Input | Stop lamp | OFF (Brake pedal is not depressed) | 0 V |
| 118 | Ground | | | switch | ON (Brake pedal is de- pressed) | Battery voltage |
| (BR) | Ground | | | Stop lamp switch OFF (Brake pedal is not depressed) and ICC brake hold relay OFF | | 0 V |
| | | | | Stop lamp switch ON (Brake pedal is de- pressed) or ICC brake hold relay ON | | Battery voltage |
| 119 (SB) | Ground | Front door lock as- sembly driver side (Unlock sensor) | Input | Driver door | LOCK status (Unlock sensor switch OFF) UNLOCK status | (V) 15 0 10 ms JPMIA0012GB 1.1 V |
| | | | | | (Unlock switch sensor ON) | 0 V |

< ECU DIAGNOSIS INFORMATION >

| Terminal No. (Wire color) | | Description | | | | Value |
|------------------------------|------------------------|--|------------------|--|-------------------------------|--|
| (VVire + | color) | Signal name | Input/ Output | | Condition | (Approx.) |
| 121 | Ground | Key slot switch | Input | slot | gent Key is inserted into key | 12 V |
| (SB) | Cround Rey slot switch | | | When the Intellig | gent Key is not inserted into | 0 V |
| 123 (V) | Ground | IGN feedback | Input | Ignition switch | OFF or ACC ON | 0 V Battery voltage |
| 124 (R) | Ground | Passenger door switch | Input | Passenger door switch | OFF (Door close) | (V) 15 0 0 10 ms JPMIA0011GB 11.8 V |
| | | | | | ON (Door open) | 0 V |
| 129 (BG) | Ground | Trunk lid opener can- cel switch | Input | Trunk lid open- er cancel switch | CANCEL | (V) 15 0 0 10 ms JPMIA0012GB 1.1 V |
| | | | | | ON | 0 V |
| 132 (V) | Ground | Power window switch communication | Input/ Output | Ignition switch C | DN | (V) 15 10 5 0 10 ms 10 ms 10.2 V |
| | | | | Ignition switch C | OFF or ACC | 12 V |
| | | | | | ON (Tail lamps OFF) | 9.5 V |
| 133 (L) | Ground | Push-button ignition switch illumination | Output | Push-button ig- nition switch il- lumination | ON (Tail lamps ON) | NOTE: The pulse width of this wave is varied by the illumination bright- ening/dimming level. (V) 15 0 JPMIA0159GB 0 V |
| 134 | | | | LOCK indicator | OFF | Battery voltage |
| (LG) | Ground | LOCK indicator lamp | Output | lamp | ON | 0 V |
| 137 (BG) | Ground | Receiver and sensor ground | Input | Ignition switch C | DN | 0 V |

< ECU DIAGNOSIS INFORMATION >

| | nal No. | Description | | | | Value |
|------------|---------|--------------------------------|------------------|--------------------------|---|---|
| (Wire + | color) | Signal name | Input/ Output | Condition | | (Approx.) |
| . <u> </u> | _ | Receiver and sensor | Output | | OFF | 0 V |
| 138 (V) | Ground | power supply | Output | Ignition switch | ACC or ON | 5.0 V |
| 139 | Ground | Tire pressure receiv- | Input/ | Ignition switch | Standby state | (V) 4 2 0 + 0.2s OCC3881D |
| (L) | | er communication | Output | ON | When receiving the signal from the transmitter | (V) 6 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 |
| 140 | Ground | Selector lever P/N | Input | Selector lever | P or N position | 12 V |
| (B) | 0.00.00 | position | | | Except P and N positions | 0 V 0 V |
| 141 (W) | Ground | Security indicator | Output | Security indica- tor | Blinking | (V) 15 0 15 0 15 15 15 15 15 15 15 15 15 15 |
| | | | | | OFF | 12 V |
| | | | | | All switches OFF Lighting switch 1ST | 0 V |
| | | Combination switch | | | Lighting switch HI | (V) 15 |
| 142 | | | | Combination switch | Lighting switch 2ND | |
| (BR) | Ground | OUTPUT 5 | Output | (Wiper volume dial 4) | Turn signal switch RH | 10 5 0 2 ms JPMIA0031GB 10.7 V |
| | | | | | All switches OFF (Wiper volume dial 4) | 0 V |
| 143 (P) | Ground | Combination switch OUTPUT 1 | Output | Combination switch | Front wiper switch HI (Wiper volume dial 4) Any of the conditions be- low with all switches OFF • Wiper volume dial 1 • Wiper volume dial 2 • Wiper volume dial 3 • Wiper volume dial 6 • Wiper volume dial 7 | (V) 15 0 2 ms JPMIA0032GB 10.7 V |

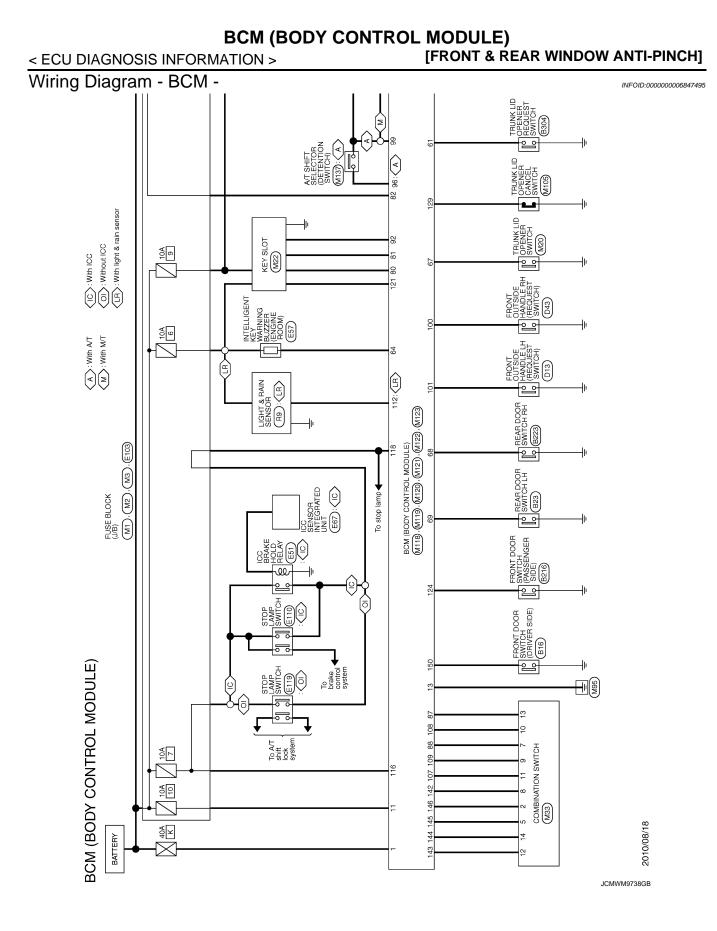
< ECU DIAGNOSIS INFORMATION >

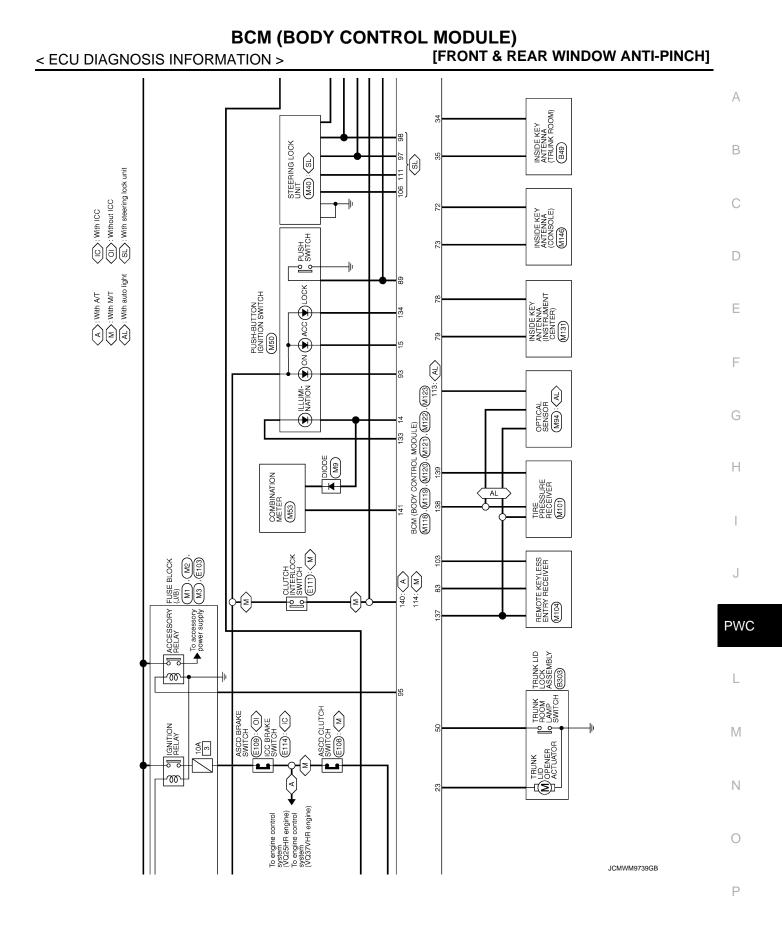
[FRONT & REAR WINDOW ANTI-PINCH]

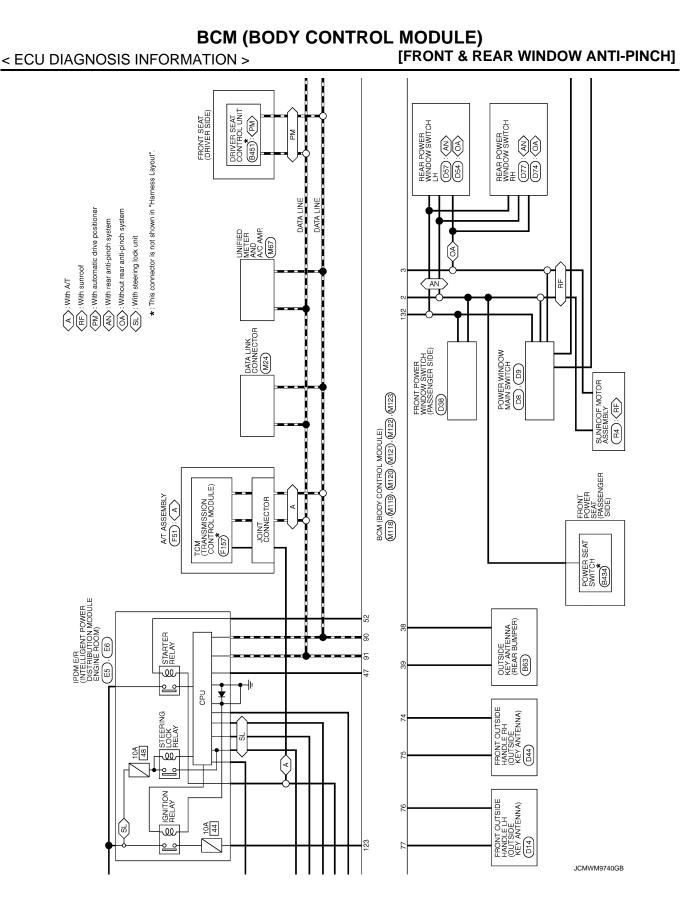
| Terminal No. (Wire color) | | Description | | | | Value | |
|------------------------------|----------|--------------------------------|-----------------------|-------------------------------|--|--------------------------------------|--|
| (vvire + | - color) | Signal name Input/ Output | | Condition | | (Approx.) | |
| | | | | | All switches OFF (Wiper volume dial 4) | 0 V | |
| | | | | Combination switch | Front washer switch ON (Wiper volume dial 4) | (V) 15 | |
| 144 (G) | Ground | Combination switch OUTPUT 2 | | | Any of the conditions be- low with all switches OFF • Wiper volume dial 1 • Wiper volume dial 5 | 10 5 0 | |
| | | | | | Wiper volume dial 6 | JPMIA0033GB 10.7 V | |
| | | | | | All switches OFF | 0 V | |
| | | | | | Front wiper switch INT/ AUTO | (V) | |
| 145 | | Combination switch | | Combination switch | Front wiper switch LO | | |
| (L) | Ground | OUTPUT 3 | Output | (Wiper volume dial 4) | Lighting switch AUTO | 5 2 ms JPMIA0034GB 10.7 V | |
| | | Combination switch OUTPUT 4 | | | All switches OFF | 0 V | |
| | | | | | Front fog lamp switch ON | | |
| | | | | Combination | Lighting switch 2ND | (V) 15 | |
| 146 (SB) | Ground | | Output | switch (Wiper volume | Lighting switch PASS | | |
| | dial 4) | dial 4) | Turn signal switch LH | 2 ms JPMIA0035GB 10.7 V | | | |
| | | | | | | (V) | |
| 150 (GR) | Ground | Driver door switch | Input | Driver door switch | OFF (Door close) | 15 0 0 10 ms JPMIA0011GB | |
| | | | | | ON (Door open) | 11.8 V 0 V | |
| 151 | | Rear window defog- | | Rear window | Active | 0 V | |
| (G) | Ground | ger relay control | Output | defogger | Not activated | Battery voltage | |

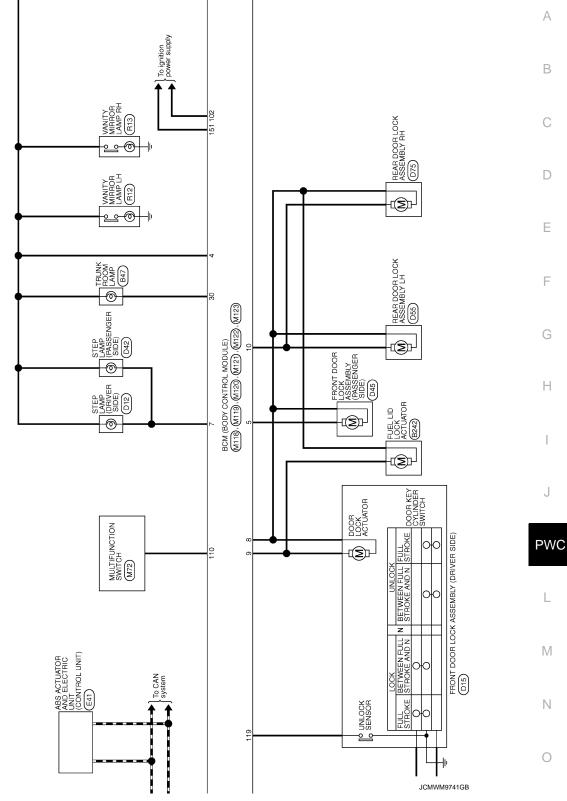
• *2: M/T models

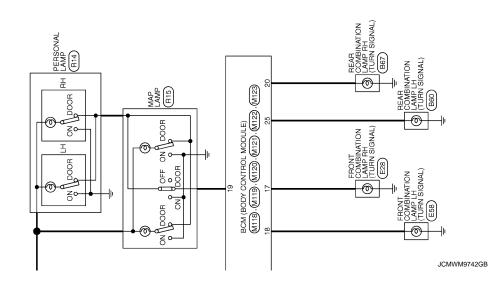
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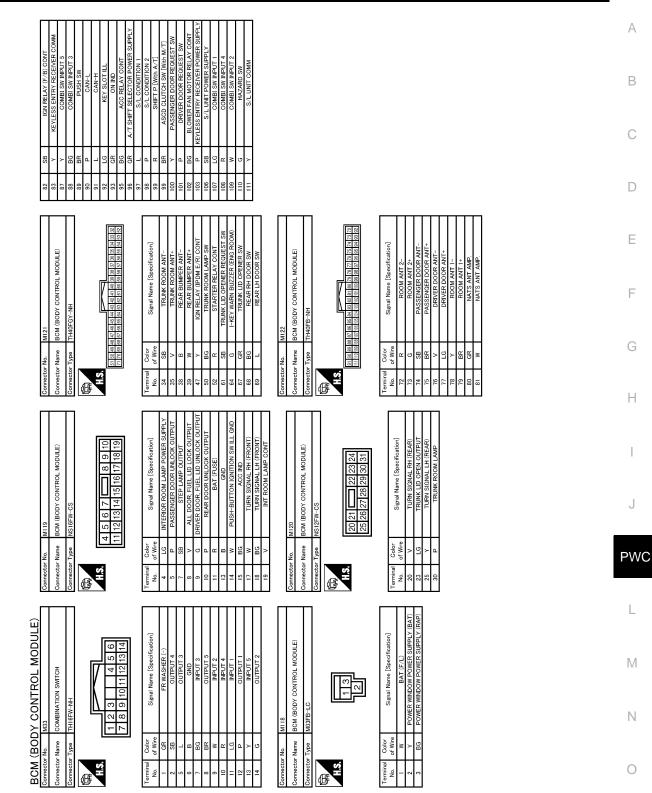






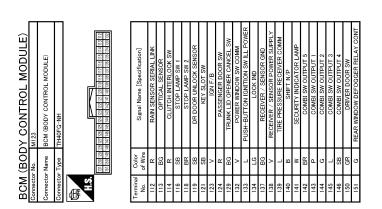
< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]



JCMWM9743GB

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JCMWM9744GB

Fail-safe

FAIL-SAFE CONTROL BY DTC

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

INFOID:000000006847496

< ECU DIAGNOSIS INFORMATION >

| 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 |
| B2191: DIFFERENCE OF KEY | Inhibit engine cranking | Erase DTC |
| B2192: ID DISCORD BCM-ECM | Inhibit engine cranking | Erase DTC |
| B2193: CHAIN OF BCM-ECM | Inhibit engine cranking | Erase DTC |
| B2195: ANTI-SCANNING | Inhibit engine cranking | Ignition switch $ON \rightarrow OFF$ |
| B2557: VEHICLE SPEED | Inhibit steering lock | When normal vehicle speed signals are received from ABS actua- tor and electric unit (control unit) for 500 ms |
| B2560: STARTER CONT RELAY | Inhibit engine cranking | 500 ms after the following CAN signal communication status be- comes consistent Starter control relay signal Starter relay status signal |
| B2601: SHIFT POSITION | Inhibit steering 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 steering 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 (12 V) Vehicle speed: 4 km/h (2.5 MPH) or more |
| B2603: SHIFT POSI STATUS | Inhibit steering 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 (12 V) Selector lever P/N position signal: Except P and N positions (0 V) |
| B2604: PNP/CLUTCH SW | Inhibit steering lock | 500 ms after any of the following BCM recognition conditions are fulfilled Status 1 Ignition switch is in the ON position Selector lever P/N position signal: P and N position (12 V) P range signal or N range signal (CAN): ON Status 2 Ignition switch is in the ON position Selector lever P/N position signal: Except P and N positions (0 V) P range signal and N range signal (CAN): OFF |
| B2605: PNP/CLUTCH SW | Inhibit steering lock | 500 ms after any of the following BCM recognition conditions are fulfilled Status 1 Ignition switch is in the ON position Selector lever P/N position signal: Except P and N positions (0 V) Interlock/PNP switch signal (CAN): OFF Status 2 Ignition switch is in the ON position Selector lever P/N position signal: P or N position (12 V) PNP switch signal (CAN): ON |
| B2606: S/L RELAY | Inhibit engine cranking | 500 ms after the following CAN signal communication status becomes consistent Steering lock relay signal (Request signal) Steering lock relay signal (Condition signal) |
| B2607: S/L RELAY | Inhibit engine cranking | 500 ms after the following CAN signal communication status has becomes consistent Steering lock relay signal (Request signal) Steering lock relay signal (Condition signal) |

< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]

| Display contents of CONSULT | Fail-safe | Cancellation | |
|-----------------------------|--|--|--|
| B2608: STARTER RELAY | Inhibit engine cranking | 500 ms after the following signal communication status becomes consistentStarter motor relay control signalStarter relay status signal (CAN) | |
| B2609: S/L STATUS | Inhibit engine crankingInhibit steering lock | When the following steering lock conditions agree BCM steering lock control status Steering lock condition No. 1 signal status Steering 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 (12 V) Ignition ON signal (CAN to IPDM E/R): OFF (Request signal) Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal) | |
| B260F: ENG STATE SIG LOST | Maintains the power supply position attained at the time of DTC detection | When any of the following conditions are fulfilledPower position changes to ACCReceives engine status signal (CAN) | |
| B2612: S/L STATUS | Inhibit engine cranking Inhibit steering lock | When any of the following conditions are fulfilled Steering lock unit status signal (CAN) is received normally The BCM steering lock control status matches the steering lock status recognized by the steering lock unit status signal (CAN from IPDM E/R) | |
| B2617: BCM | 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 be- comes normal | |
| B2619: BCM | Inhibit engine cranking | 1 second after the steering lock unit power supply output control in- side BCM becomes normal | |
| B261E: VEHICLE TYPE | Inhibit engine cranking | BCM initialization | |
| B26E8: CLUTCH SW | Inhibit engine cranking | When any of the following BCM recognition conditions are fulfilled Status 1 Clutch switch signal (CAN from ECM): ON Clutch interlock switch signal: OFF (0 V) Status 2 Clutch switch signal (CAN from ECM): OFF Clutch interlock switch signal: ON (Battery voltage) | |
| B26E9: S/L STATUS | Inhibit engine cranking Inhibit steering lock | When BCM transmits the LOCK request signal to steering lock unit, and receives LOCK response signal from steering lock unit, the following conditions are fulfilled Steering condition No. 1 signal: LOCK (0 V) Steering condition No. 2 signal: LOCK (12 V) | |

DTC Inspection Priority Chart

INFOID:000000006847497

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

| Priority | DTC |
|----------|---|
| 1 | B2562: LOW VOLTAGE |
| 2 | U1000: CAN COMM U1010: CONTROL UNIT(CAN) |
| 3 | B2190: NATS ANTENNA AMP B2191: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM B2195: ANTI-SCANNING |

BCM (BODY CONTROL MODULE)

IFRONT & REAR WINDOW ANTI-PINCH1

| CU DIAGNOSIS INFORMATION > Priority 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 B2601: SHIFT POSITION B2602: SHIFT POSI STATUS B2603: SHIFT POSI STATUS B2604: PNP/CLUTCH SW B2605: PNP/CLUTCH SW B2606: S/L RELAY B2607: S/L RELAY B2608: STARTER RELAY B2609: S/L STATUS B2609: S/L STATUS B26004: IGNITION RELAY | | [FRONT & REAR WINDOW ANTI-PINCH] |
|--|---|----------------------------------|
| Priority | | DTC |
| 4 | 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: PNP/CLUTCH SW B2605: PNP/CLUTCH SW B2606: S/L RELAY B2607: S/L RELAY B2609: S/L STATUS B2604: IGNITION RELAY | |
| 5 | C1704: LOW PRESSURE FL C1705: LOW PRESSURE FR C1706: LOW PRESSURE RR C1707: LOW PRESSURE RL C1708: [NO DATA] FL C1709: [NO DATA] FR C1710: [NO DATA] RR C1711: [NO DATA] RL C1716: [PRESSDATA ERR] FL C1717: [PRESSDATA ERR] FR C1718: [PRESSDATA ERR] RR C1719: [PRESSDATA ERR] RL C1734: CONTROL UNIT | |
| 6 | B2621: INSIDE ANTENNA B2622: INSIDE ANTENNA B2623: INSIDE ANTENNA | |

DTC Index

NOTE:

The details of time display are as follows.

• CRNT: A malfunction is detected now.

• PAST: A malfunction was detected in the past.

IGN counter is displayed on Freeze Frame Data. For details of Freeze Frame Data, refer to BCS-15, "COM-MON ITEM : CONSULT-III Function (BCM - COMMON ITEM)".

INFOID:000000006847498

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]

| CONSULT display | Fail-safe | Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle condition | Intelligent Key warning lamp ON | Tire pressure monitor warning lamp ON | Refer- ence page |
|--|-----------|--|------------------------------------|---|--------------------------------|
| No DTC is detected. further testing may be required. | _ | _ | _ | _ | _ |
| U1000: CAN COMM | — | — | — | _ | BCS-34 |
| U1010: CONTROL UNIT(CAN) | _ | — | — | _ | BCS-35 |
| U0415: VEHICLE SPEED | _ | — | — | _ | BCS-36 |
| B2013: ID DISCORD BCM-S/L | × | × | — | _ | <u>SEC-55</u> |
| B2014: CHAIN OF S/L-BCM | × | × | | _ | <u>SEC-56</u> |
| B2190: NATS ANTENNA AMP | × | — | _ | _ | <u>SEC-47</u> |
| B2191: DIFFERENCE OF KEY | × | | | _ | <u>SEC-50</u> |
| B2192: ID DISCORD BCM-ECM | × | | | _ | SEC-51 |
| B2193: CHAIN OF BCM-ECM | × | _ | | _ | <u>SEC-53</u> |
| B2195: ANTI-SCANNING | × | _ | — | _ | <u>SEC-54</u> |
| B2553: IGNITION RELAY | _ | × | _ | _ | PCS-49 |
| B2555: STOP LAMP | _ | × | _ | _ | <u>SEC-59</u> |
| B2556: PUSH-BTN IGN SW | _ | × | × | _ | <u>SEC-61</u> |
| B2557: VEHICLE SPEED | × | × | × | _ | <u>SEC-63</u> |
| B2560: STARTER CONT RELAY | × | × | × | _ | SEC-64 |
| B2562: LOW VOLTAGE | _ | × | | _ | BCS-37 |
| B2601: SHIFT POSITION | × | × | × | | <u>SEC-65</u> |
| B2602: SHIFT POSITION | × | × | × | | <u>SEC-68</u> |
| B2603: SHIFT POSI STATUS | × | × | × | _ | <u>SEC-70</u> |
| B2604: PNP/CLUTCH SW | × | × | × | | <u>SEC-73</u> |
| B2605: PNP/CLUTCH SW | × | × | × | _ | <u>SEC-75</u> |
| B2606: S/L RELAY | × | × | × | _ | <u>SEC-77</u> |
| B2607: S/L RELAY | × | × | × | | <u>SEC-78</u> |
| B2608: STARTER RELAY | × | × | × | | SEC-80 |
| B2609: S/L STATUS | × | × | × | | <u>SEC-82</u> |
| B260A: IGNITION RELAY | × | × | × | | PCS-51 |
| B260B: STEERING LOCK UNIT | | × | × | | <u>SEC-86</u> |
| B260C: STEERING LOCK UNIT | | × | × | | <u>SEC-87</u> |
| B260D: STEERING LOCK UNIT | | × | × | | <u>SEC-88</u> |
| B260F: ENG STATE SIG LOST | × | × | × | | <u>SEC-89</u> |
| B2612: S/L STATUS | × | × | × | | <u>SEC-94</u> |
| B2614: BCM | _ | × | ~ × | | <u>PCS-53</u> |
| B2615: BCM | | × * | × | _ | PCS-55 |
| B2616: BCM | | × × | × | | <u>PCS-55</u> <u>PCS-57</u> |
| B2617: BCM | ~ | | | | <u>SEC-98</u> |
| B2618: BCM | × | × | × | | |
| | × | × | × | | PCS-59 |
| B2619: BCM | × | × | × | | SEC-100 |
| B261A: PUSH-BTN IGN SW | | × | × | | PCS-60 |
| B261E: VEHICLE TYPE | × | × | imes (Turn ON for 15 seconds) | — | <u>SEC-101</u> |

Revision: 2011 November

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]

| CONSULT display | Fail-safe | Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle condition | Intelligent Key warning lamp ON | Tire pressure monitor warning lamp ON | Refer- ence page | A |
|---------------------------|-----------|--|------------------------------------|---|---------------------|---|
| B2621: INSIDE ANTENNA | — | × | — | — | DLK-59 | В |
| B2622: INSIDE ANTENNA | — | × | — | — | DLK-61 | |
| B2623: INSIDE ANTENNA | — | × | — | — | DLK-63 | |
| B26E8: CLUTCH SW | × | × | × | — | <u>SEC-90</u> | С |
| B26E9: S/L STATUS | × | × | imes (Turn ON for 15 seconds) | _ | <u>SEC-92</u> | |
| B26EA: KEY REGISTRATION | _ | × | × (Turn ON for 15 seconds) | _ | <u>SEC-93</u> | D |
| C1704: LOW PRESSURE FL | — | — | — | × | | Е |
| C1705: LOW PRESSURE FR | — | — | — | × | | |
| C1706: LOW PRESSURE RR | — | — | — | × | <u>WT-24</u> | |
| C1707: LOW PRESSURE RL | — | — | — | × | | F |
| C1708: [NO DATA] FL | — | — | — | × | | |
| C1709: [NO DATA] FR | _ | — | — | × | | |
| C1710: [NO DATA] RR | _ | — | — | × | <u>WT-26</u> | G |
| C1711: [NO DATA] RL | — | — | — | × | | |
| C1716: [PRESSDATA ERR] FL | _ | — | — | × | | Н |
| C1717: [PRESSDATA ERR] FR | — | — | _ | × | WT 00 | |
| C1718: [PRESSDATA ERR] RR | — | _ | — | × | <u>WT-29</u> | |
| C1719: [PRESSDATA ERR] RL | — | — | — | × | | |
| C1729: VHCL SPEED SIG ERR | — | _ | — | × | <u>WT-30</u> | |
| C1734: CONTROL UNIT | — | — | — | × | <u>WT-31</u> | J |

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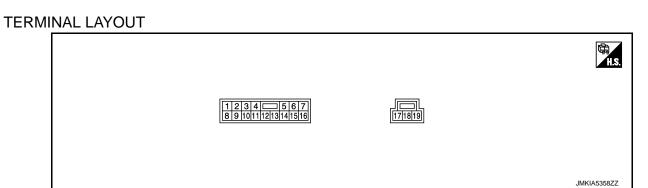
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< ECU DIAGNOSIS INFORMATION >

POWER WINDOW MAIN SWITCH

Reference Value

INFOID:000000006211002



PHYSICAL VALUES

| | nal No. color) | Description | | Condition | Voltage (V) |
|-----------|-------------------|---|------------------|--|---|
| + | _ | Signal name | Input/ Output | Condition | (Approx.) |
| 2 (LG) | Ground | Encoder ground | _ | _ | 0 |
| 4 (V) | Ground | Door key cylinder switch LOCK signal | Input | Key position (Neutral \rightarrow Locked) | $5 \rightarrow 0$ |
| 6 (Y) | Ground | Door key cylinder switch UNLOCK signal | Input | Key position (Neutral \rightarrow Unlocked) | $5 \rightarrow 0$ |
| 8 (L) | Ground | Front driver side power win- dow motor UP signal | Output | When front LH switch in power window main switch is UP at operated. | 12 |
| 9 (BG) | Ground | Encoder pulse signal 2 | Input | When power window mo- tor operates. | (V) 6 4 2 0 10 ms JMKIA0070GB |
| | | | | Ignition switch ON | 12 |
| 10 | Ground | Rap signal | Input | Within 45 second after ig- nition switch is turned to OFF | 12 |
| (SB) | | | | When driver side or pas- senger side door is opened during retained power operation | 0 |
| 11 (G) | Ground | Front driver side power win- dow motor DOWN signal | Output | When front LH switch in power window main switch is DOWN at operated. | 12 |

< ECU DIAGNOSIS INFORMATION >

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[FRONT & REAR WINDOW ANTI-PINCH]

| Terminal No. (wire color) | | Description | | Condition | Voltage (V) | |
|------------------------------|--------|--------------------------|------------------|---|---------------------------------------|--|
| + | _ | Signal name | Input/ Output | Condition | (Approx.) | |
| 13 (P) | Ground | Encoder pulse signal 1 | Input | When power window mo- tor operates. | (V) 6 4 2 0 10 ms | |
| 14 (V) | Ground | Power window serial link | Input/ Output | Ignition switch ON or pow- er window timer operat- ing. | (V) 15 0 10 ms JPMA0013GB | |
| 15 (B) | Ground | Encoder power supply | Output | When ignition switch ON or power window timer operates. | 12 | |
| 17 (B) | Ground | Ground | _ | — | 0 | |
| 19 (Y) | Ground | Battery power supply | Input | _ | 12 | |

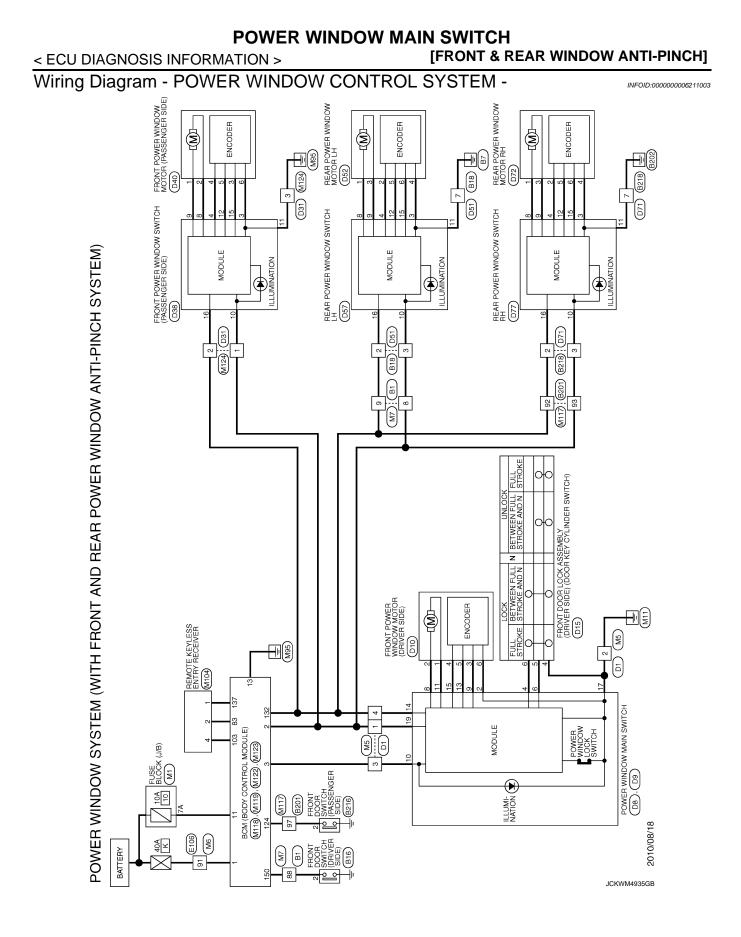
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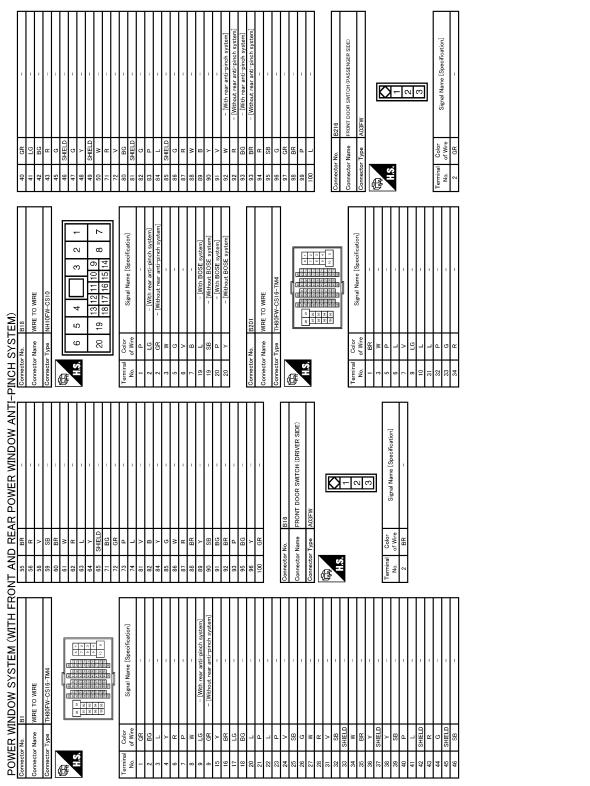
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Revision: 2011 November

< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]



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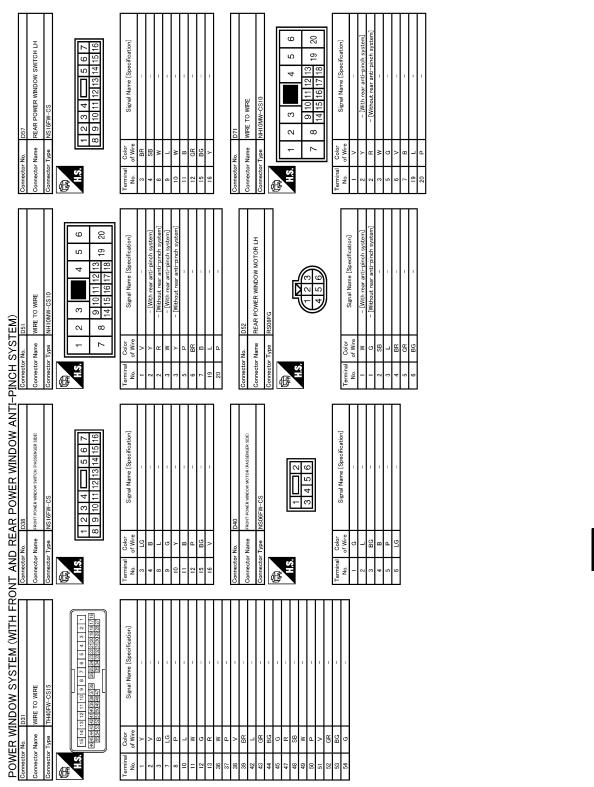
FRONT DOOR LOCK ASSEMBLY (DRIVER SIDE) Signal Name [Specification] 56 1 2 Color of Wire ector Name 9 ª H.S. erminal No. 倨 FRONT POWER WINDOW MOTOR (DRIVER SIDE Signal Name [Specification] Signal Name [Specification] POWER WINDOW MAIN SWITCH 17 18 19 2 6 1 1 3 4 5 AND REAR POWER WINDOW ANTI-PINCH SYSTEM) 28 8 с ч > в Color of Wire ype Connector Type Color of Wire - 8 8 4 5 Connector Name Connector Name nnector No. Connector No. H.S. Terminal No. H.S. Ferminal No. 9 2 G ß đ Signal Name [Specification] 6 1 2 3 4 5 6 8 9 10 11 12 13 14 15 POWER WINDOW MAIN SWITCH Color of Wire W GR GR - H a H a H a a a R nnector Name nnector Type ᆔᇣᇣᇻ œ # ᆂᄧ ≊≥ BG 租 H.S. Š POWER WINDOW SYSTEM (WITH FRONT [15] [14] 13 12 1 (15) [14] 13 [12] 1 (15) [16] [16] [16] [16] [16] (15) [16] [16] [16] [16] [16] [16] [16] (15) [16] [-Signal Name [Specification] Signal Name [Specification] N ω o 14 ო 5 6 WIRE TO WIRE WIRE TO WIRE 4 13 ß 19 Color of Wire Color of Wire SB GR BG BG L L BR 9 20 nnector Name nnector Name 비기미 Tvpe яB ۵ H.S.H erminal No. H.S.H rminal No. ß ß

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Revision: 2011 November

< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]



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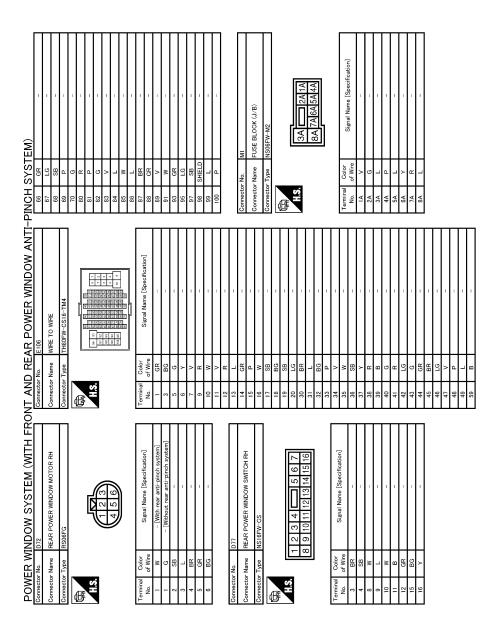
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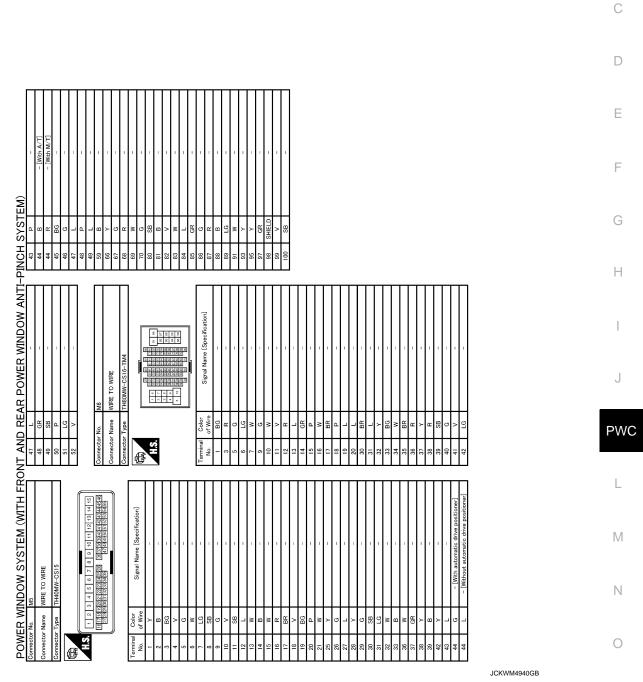
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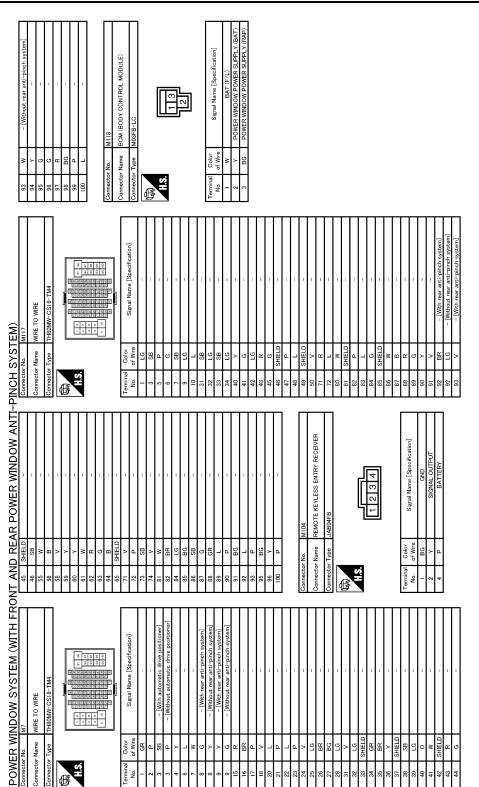
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< ECU DIAGNOSIS INFORMATION >

| < ECU DIAGNOSIS INFORMATION > | [FRONT & REAR WINDOW ANTI-PINCH] | |
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| | Signal Name [Specification] | F |
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| | Terminal No. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | Н |
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| | 0ULE) 13512/42121 13512/421212 14512/421212 14512/421212 14512/42121 14512/42121 14512/421212 14512/4212 1452 | L |
| POWER WINDOW SYSTEM (WITH FRONT Dometer Nu. Dometer Nu. MIIB Dometer Nume BOM (BODY CONTROL MODULE) Dometer Nume Signal Nume (Speedreation) Num Color Signal Nume (Speedreation) Num <td></td> <td>M</td> | | M |
| NINDOW m MI19 m Box (BODY m M119 | MI22 BCM (80 BCM (80 BCM (80 BIG (80 B | Ν |
| POWER W Connector Num Connector Num Connector Type Connector Type Connector Type Connector Type Connector Type Connector Type Connector Num Connector Num Co | Connector No. Connector Name Connector Type Connector Type Connector Type Conc 73 75 74 74 8 7 8 7 8 7 8 7 8 7 8 8 8 8 8 8 8 | 0 |
| | JCKWM4942GB | |

Fail-safe

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FAIL-SAFE CONTROL

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

< ECU DIAGNOSIS INFORMATION >

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

If fail-safe control, the system changes to a non-initialized condition and the following function do not operate.

- Auto-up operation
- Anti-pinch function
- Door key cylinder switch power window function

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

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< ECU DIAGNOSIS INFORMATION >

FRONT POWER WINDOW SWITCH

Reference Value

INFOID:000000006211005



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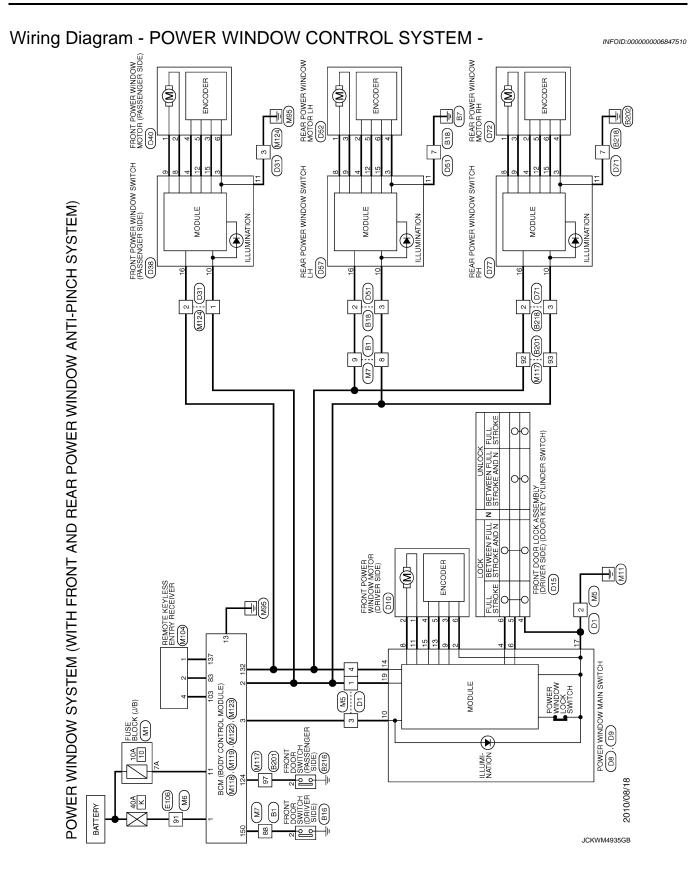
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PHYSICAL VALUES

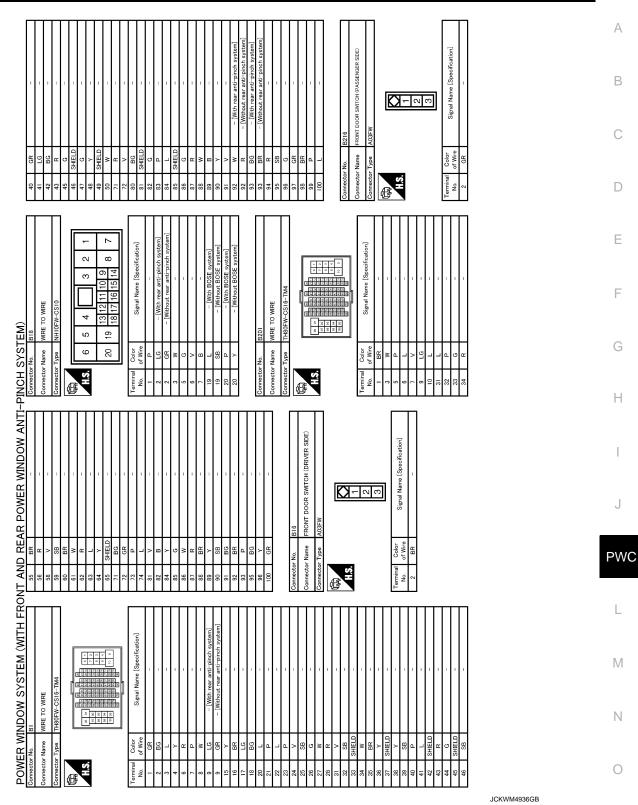
| | inal No. e color) | Description | | Condition | Voltage (V) |
|------------|----------------------|-----------------------------------|------------------|--|---|
| + | _ | Signal name | Input/ Output | Condition | (Approx.) |
| 3 (LG) | Ground | Encoder ground | _ | _ | 0 |
| 4 (B) | Ground | Encoder power supply | Output | When ignition switch ON or power window timer operates | 12 |
| 8 (L) | Ground | Power window motor DOWN signal | Output | When power window motor is DOWN at operated. | 12 |
| 9 (G) | Ground | Power window motor UP signal | Output | When power window motor is UP at operated. | 12 |
| 10 (Y) | Ground | Battery power supply | Input | _ | 12 |
| 11 (B) | Ground | Ground | _ | _ | 0 |
| 12 (P) | Ground | Encoder pulse signal 1 | Input | When power window motor operates. | (V) 64 20 10 ms JMKIA0070GB |
| 15 (BG) | Ground | Encoder pulse signal 2 | Input | When power window motor operates. | (V) 6 4 2 0 10 ms JMKIA0070GB |
| 16 (V) | Ground | Power window serial link | Input/ Output | Ignition switch ON or power window timer operating. | (V) 15 10 5 0 10 ms JPMIA0013GB |

Revision: 2011 November



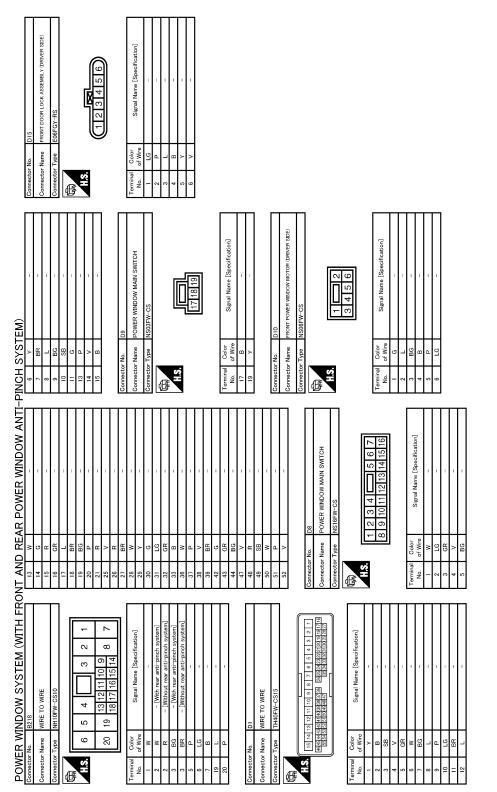
< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]



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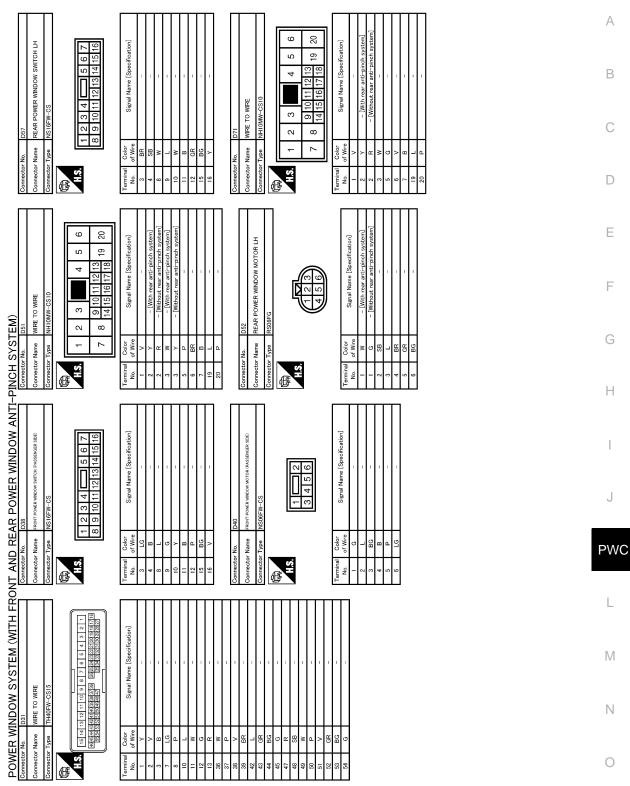
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[FRONT & REAR WINDOW ANTI-PINCH]



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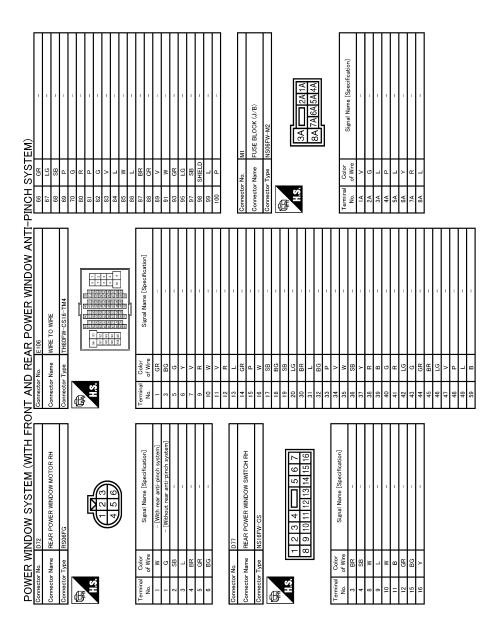
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FRONT POWER WINDOW SWITCH < ECU DIAGNOSIS INFORMATION > [FRONT & REAR WINDOW ANTI-PINCH]

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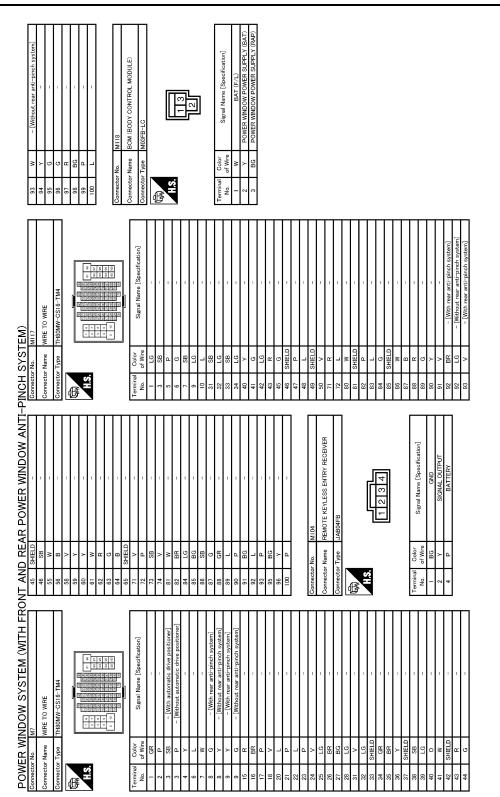
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|---|---|--|--|
| VER_WINDOW_SYSTEM () ter Mame BEW (BODY CONTROL MODUL ter Type MI19 Rev Type NS (6FW-CS Rev Type NS (6FW-CS 14 15 16 17 18 14 15 13 14 15 16 17 18 15 15 13 14 15 16 17 18 16 17 18 18 17 18 1 | BG BG T BG No. M22 No. M22 T Type BCM (BOC) T Type T T | Color Signal Mame (Specification) 76. R ROOM ANT 2- 73 G PASSENGEN DOOR ANT 2- 74 BR PASSENGEN DOOR ANT 2- 75 BR PASSENGEN DOOR ANT 2- 76 V DRIVER DOOR ANT - 76 V DRIVER DOOR ANT - 77 LG DRIVER DOOR ANT - 78 LG PASSENGER DOOR ANT - 79 BR ROOM ANT 1 - 79 BR ROOM ANT 1 - 79 GR NATS ANT AMP. | |

Fail-safe

INFOID:000000006626871

JCKWM4942GB

FAIL-SAFE CONTROL

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

FRONT POWER WINDOW SWITCH

< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]

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Revision: 2011 November

< ECU DIAGNOSIS INFORMATION >

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

If fail-safe control, the system changes to a non-initialized condition and the following function do not operate.

- Auto-up operation
- Anti-pinch function
- Door key cylinder switch power window function

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

< ECU DIAGNOSIS INFORMATION >

REAR POWER WINDOW SWITCH

Reference Value

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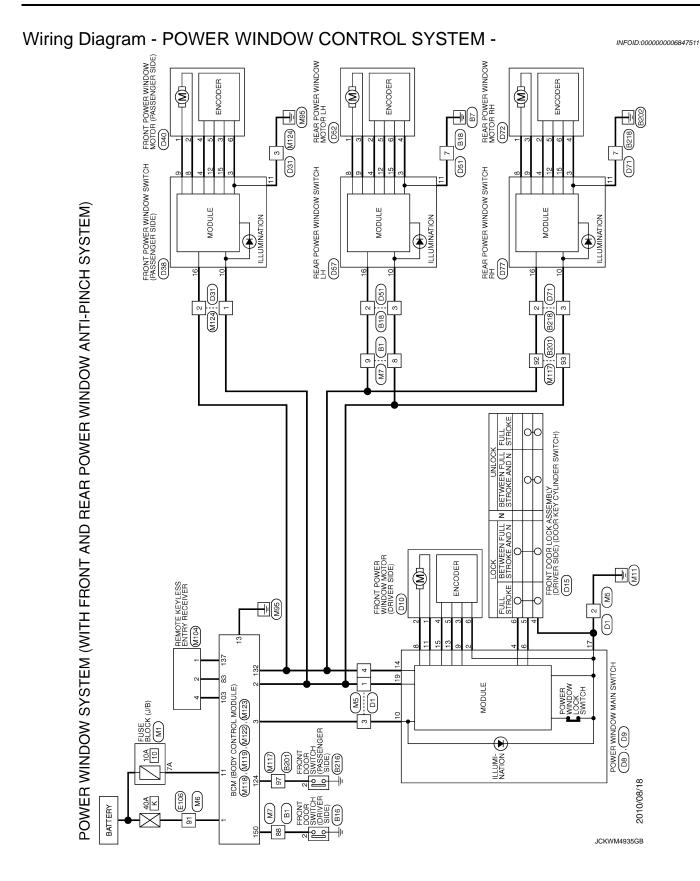
INFOID:000000006211008 **TERMINAL LAYOUT** H.S. 1234 567 8910111213141516

PHYSICAL VALUES

| | iinal No. e color) | Description | | Condition | Voltage (V) |
|------------|-----------------------|-----------------------------------|------------------|---|---|
| + | _ | Signal name | Input/ Output | Condition | (Approx.) |
| 3 (BR) | Ground | Encoder ground | _ | _ | 0 |
| 4 (SB) | Ground | Encoder power supply | Output | When ignition switch ON or pow- er window timer operates | 12 |
| 8 (W) | Ground | Power window motor UP signal | Output | When power window motor is UP at operated. | 12 |
| 9 (L) | Ground | Power window motor DOWN signal | Output | When power window motor is DOWN at operated. | 12 |
| 10 (W) | Ground | Battery power supply | Input | _ | 12 |
| 11 (B) | Ground | Ground | _ | _ | 0 |
| 12 (GR) | Ground | Encoder pulse signal 1 | Input | When power window motor oper- ates. | (V) 6 4 2 0 10 ms JMKIA0070GB |
| 15 (BG) | Ground | Encoder pulse signal 2 | Input | When power window motor oper- ates. | (V) 6 2 0 10 ms JMKIA0070GB |
| 16 (Y) | Ground | Power window serial link | Input/ Output | Ignition switch ON or power win- dow timer operating. | (V) 15 10 5 0 10 ms JPMIA0013GB |

Revision: 2011 November

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< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]

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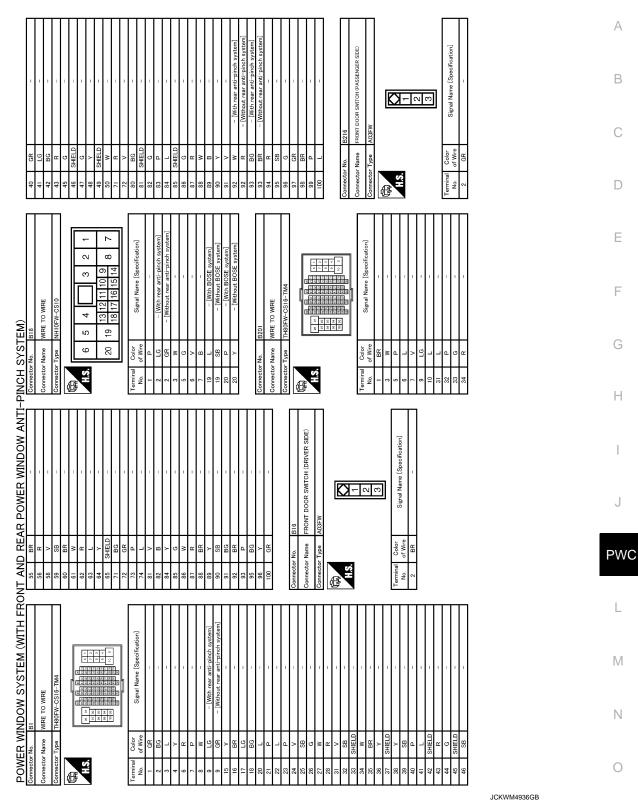
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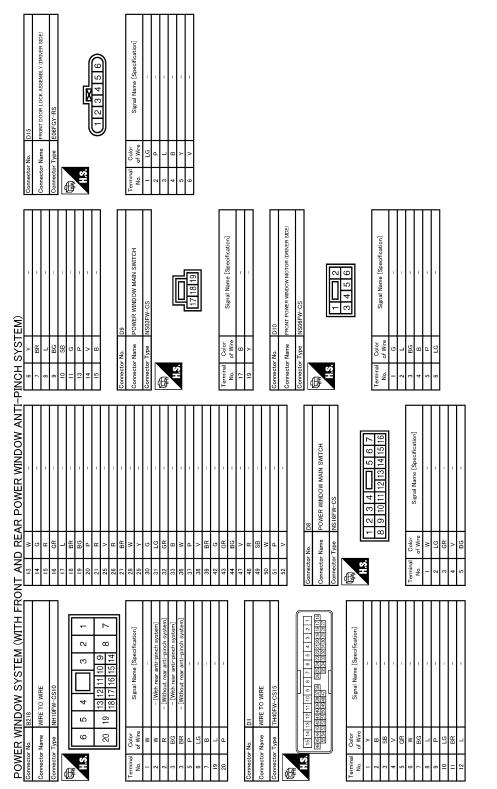
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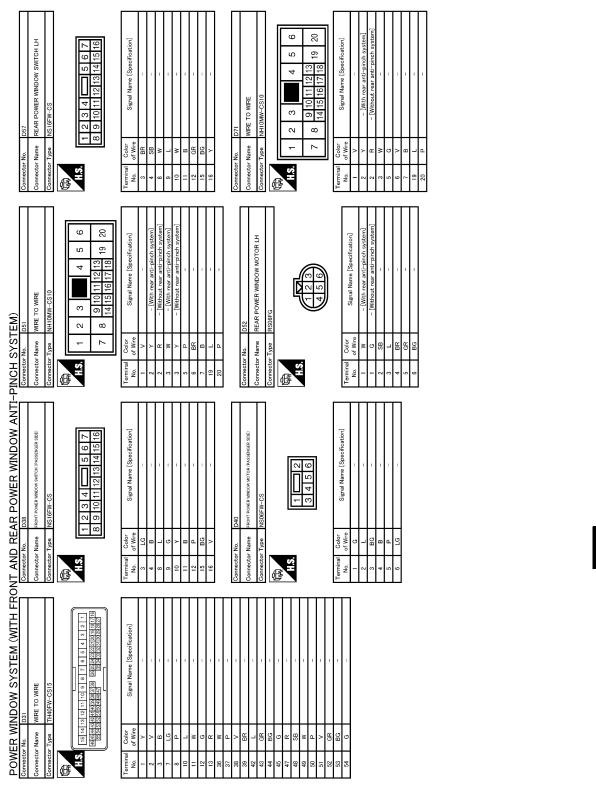
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[FRONT & REAR WINDOW ANTI-PINCH]



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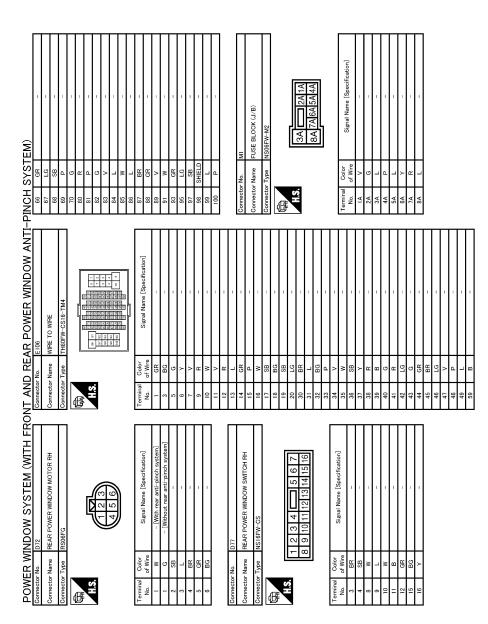
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REAR POWER WINDOW SWITCH < ECU DIAGNOSIS INFORMATION > [FRONT & REAR WINDOW ANTI-PINCH]

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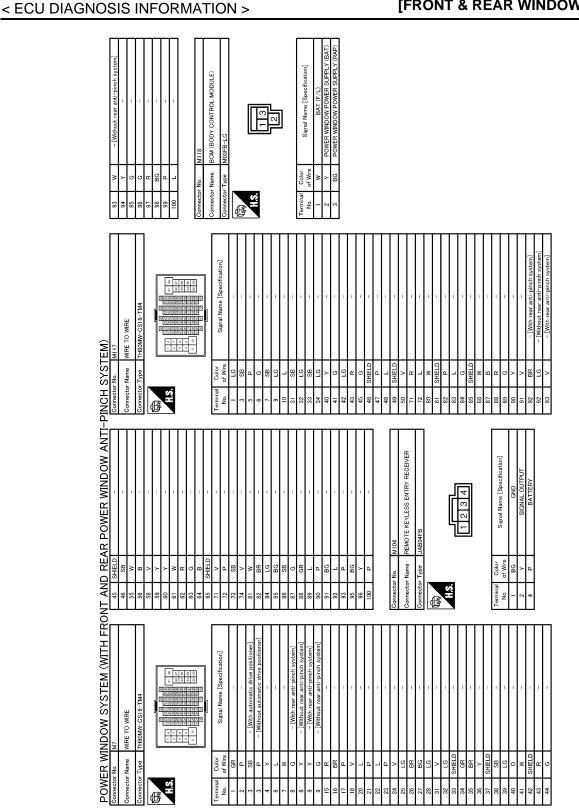
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Fail-safe

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FAIL-SAFE CONTROL

< ECU DIAGNOSIS INFORMATION >

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

Revision: 2011 November

REAR POWER WINDOW SWITCH

[FRONT & REAR WINDOW ANTI-PINCH]

< ECU DIAGNOSIS INFORMATION >

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

If fail-safe control, the system changes to a non-initialized condition and the following function do not operate.

- Auto-up operation
- Anti-pinch function
- Door key cylinder switch power window function

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

POWER WINDOWS DO NOT OPERATE WITH ANY POWER WINDOW SWITCH-

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|--|---|
| < SYMPTOM DIAGNOSIS > [FRONT & REAR WINDOW ANTI-PINCH] | |
| SYMPTOM DIAGNOSIS | 0 |
| POWER WINDOWS DO NOT OPERATE WITH ANY POWER WINDOW SWITCHES | A |
| Diagnosis Procedure | D |
| 1. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT | С |
| Check BCM power supply and ground circuit. BCS-38, "Diagnosis Procedure". | |
| Is the inspection result normal? | D |
| YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts. | Е |
| 2.CHECK POWER WINDOW MAIN SWITCH SERIAL LINK CIRCUIT | |
| Check power window serial link circuit. Refer to <u>PWC-34, "POWER WINDOW MAIN SWITCH : Component Function Check"</u> . | F |
| Is the inspection result normal? | |
| YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts. | G |
| 3.CONFIRM THE OPERATION | |
| Confirm the operation again. | Н |
| Is the result normal? | |
| YES >> Check intermittent incident. Refer to <u>GI-43. "Intermittent Incident"</u> . NO >> GO TO 1. | I |

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DRIVER SIDE POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

DRIVER SIDE POWER WINDOW DOES NOT OPERATE

Diagnosis Procedure

INFOID:000000006211012

[FRONT & REAR WINDOW ANTI-PINCH]

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

Check power window switch power supply and ground circuit. Refer to <u>PWC-15</u>, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CHECK DRIVER SIDE POWER WINDOW MOTOR

Check driver side power window motor. Refer to <u>PWC-18, "DRIVER SIDE : Component Function Check"</u>.

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u>.

NO >> GO TO 1.

| FRONT PASSENGER SIDE POWER WINDOW DOES NOT OPERATE SYMPTOM DIAGNOSIS > [FRONT & REAR WINDOW ANTI-PINCH] | | | | |
|---|--|--|--|--|
| FRONT PASSENGER SIDE POWER W | INDOW DOES NOT OPERATE | | | |
| WHEN POWER WINDOW MAIN SWITCH | | | | |
| WHEN POWER WINDOW MAIN SWITCH IS | SOPERATED : Diagnosis Procedure | | | |
| 1.CHECK FRONT POWER WINDOW SWITCH (PASSE | | | | |
| Check front power window switch (passenger side) serial Refer to <u>PWC-35. "FRONT POWER WINDOW SWITCH (</u> <u>Is the inspection result normal?</u> YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts. 2. CONFIRM THE OPERATION | | | | |
| Confirm the operation again. | | | | |
| Is the result normal? YES >> Check intermittent incident. Refer to GI-43, "In | ntermittent Incident". | | | |
| NO >> GO TO 1. | | | | |
| WHEN FRONT POWER WINDOW SWITC | H (PASSENGER SIDE) IS OPERATED | | | |
| WHEN FRONT POWER WINDOW SWITCH Diagnosis Procedure | (PASSENGER SIDE) IS OPERATED : INFOID:000000006211014 | | | |
| 1.REPLACE FRONT POWER WINDOW SWITCH (PASS | SENGER SIDE) | | | |
| Replace front power window switch (passenger side). Refer to <u>PWC-120, "Removal and Installation"</u> | | | | |
| >> INSPECTION END WHEN BOTH POWER WINDOW MAIN SW SWITCH ARE OPERATED | /ITCH AND FRONT POWER WINDOW | | | |
| WHEN BOTH POWER WINDOW MAIN SWI SWITCH ARE OPERATED : Diagnosis Proce | | | | |
| 1.CHECK FRONT POWER WINDOW SWITCH (PASSEN | NGER SIDE) POWER SUPPLY AND GROUND CIR- | | | |
| Check front power window switch (passenger side) power Refer to <u>PWC-16. "FRONT POWER WINDOW SWITCH (</u> <u>Is the inspection result normal?</u> YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts. | (PASSENGER SIDE) : Diagnosis Procedure". | | | |
| 2.CHECK PASSENGER SIDE POWER WINDOW MOTO | OR CIRCUIT | | | |
| Check passenger side power window motor circuit. Refer to <u>PWC-19. "PASSENGER SIDE : Component Func</u> | ction Check". | | | |
| Is the inspection result normal? | | | | |
| YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts. | | | | |
| 3.CONFIRM THE OPERATION | | | | |
| Confirm the operation again. | | | | |
| Is the result normal? YES >> Check intermittent incident. Refer to <u>GI-43, "In</u> | ntermittent Incident" | | | |
| NO $>>$ GO TO 1. | | | | |

REAR LH SIDE POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

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

WHEN POWER WINDOW MAIN SWITCH IS OPERATED : Diagnosis Procedure

INFOID:000000006211016

1.CHECK REAR POWER WINDOW SWITCH LH SERIAL LINK CIRCUIT

Check rear power window switch LH serial link circuit. Refer to <u>PWC-37, "REAR LH : Component Function Check"</u>.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-43. "Intermittent Incident".

NO >> GO TO 1.

WHEN REAR POWER WINDOW SWITCH LH IS OPERATED

WHEN REAR POWER WINDOW SWITCH LH IS OPERATED : Diagnosis Procedure

INFOID:000000006211017

1.REPLACE REAR POWER WINDOW SWITCH LH

Replace rear power window switch LH. Refer to <u>PWC-120</u>, "Removal and Installation"

>> INSPECTION END WHEN BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW SWITCH LH ARE OPERATED

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

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

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CHECK REAR POWER WINDOW MOTOR LH

Check rear power window motor LH. Refer to <u>PWC-20, "REAR LH : Component Function Check"</u>.

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u>.

NO >> GO TO 1.

| REAR LH SIDE POWER WINDOW DOES NOT OPERATE | |
|--|-----|
| < SYMPTOM DIAGNOSIS > [FRONT & REAR WINDOW ANTI-PINCH] | |
| REAR LH SIDE POWER WINDOW DOES NOT OPERATE | Δ |
| WHEN POWER WINDOW MAIN SWITCH IS OPERATED | A |
| WHEN POWER WINDOW MAIN SWITCH IS OPERATED : Diagnosis Procedure | В |
| 1. CHECK REAR POWER WINDOW SWITCH RH SERIAL LINK CIRCUIT | |
| Check rear power window switch RH serial link circuit. Refer to <u>PWC-38, "REAR RH : Component Function Check"</u> . | С |
| <u>Is the inspection result normal?</u> YES >> GO TO 2. | D |
| NO >> Repair or replace the malfunctioning parts. | |
| 2.CONFIRM THE OPERATION | E |
| Confirm the operation again. Is the result normal? | L |
| YES >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u> . | F |
| NO >> GO TO 1. WHEN REAR POWER WINDOW SWITCH RH IS OPERATED | |
| WHEN REAR POWER WINDOW SWITCH RH IS OPERATED : Diagnosis Procedure | G |
| 1. REPLACE REAR POWER WINDOW SWITCH RH | Н |
| Replace rear power window switch RH. Refer to <u>PWC-120, "Removal and Installation"</u> | I |
| >> INSPECTION END WHEN BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW SWITCH RH ARE OPERATED | J |
| WHEN BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW SWITCH RH ARE OPERATED : Diagnosis Procedure | PWC |
| 1. CHECK REAR POWER WINDOW SWITCH POWER SUPPLY AND GROUND CIRCUIT | L |
| Check rear power window switch power supply and ground circuit. | |
| Refer to <u>PWC-16, "REAR POWER WINDOW SWITCH : Diagnosis Procedure"</u> . <u>Is the inspection result normal?</u> | Μ |
| YES >> GO TO 2. | |
| NO >> Repair or replace the malfunctioning parts. | |
| 2. CHECK REAR POWER WINDOW MOTOR RH | Ν |
| Check rear power window motor RH. Refer to <u>PWC-21, "REAR RH : Component Function Check"</u> . | 0 |
| Is the inspection result normal? | |
| YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts. | F |
| 3. CONFIRM THE OPERATION | Ρ |
| Confirm the operation again. | |
| Is the result normal? | |
| YES >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u> . NO >> GO TO 1. | |

ANTI-PINCH FUNCTION DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

ANTI-PINCH FUNCTION DOES NOT OPERATE

Diagnosis Procedure

INFOID:000000006211022

1.CHECK POWER WINDOW AUTO OPERATION

Check AUTO operation when anti-pinch function does not operate.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Refer to <u>PWC-113</u>, "Diagnosis Procedure".

2. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u>.

NO >> GO TO 1.

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATES NORMAL-

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|---|---|
| < SYMPTOM DIAGNOSIS > [FRONT & REAR WINDOW ANTI-PINCH] | |
| AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATES | |
| NORMALLY | А |
| Diagnosis Procedure | В |
| 1.PERFORM INITIALIZATION PROCEDURE | |
| Initialization procedure is executed and operation is confirmed. Refer to <u>PWC-7</u> , "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement". | С |
| Is the inspection result normal? YES >> INSPECTION END NO >> GO TO 2. | D |
| 2.CHECK ENCODER CIRCUIT | Е |
| Check encoder circuit. Refer to the following. Driver side: Refer to <u>PWC-23</u>, "DRIVER SIDE : Component Function Check". Passenger side: Refer to <u>PWC-25</u>, "<u>PASSENGER SIDE</u> : Component Function Check". Rear LH side: Refer to <u>PWC-27</u>, "<u>REAR LH</u> : Component Function Check". Rear RH side: Refer to <u>PWC-29</u>, "<u>REAR RH</u> : Component Function Check". | F |
| Is the inspection result normal? | G |
| YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts. | |
| 3. CONFIRM THE OPERATION | Н |
| Confirm the operation again. | |
| <u>Is the result normal?</u> YES >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u> . NO >> GO TO 1. | I |
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POWER WINDOW RETAINED POWER FUNCTION DOES NOT OPERATE NOR-MALLY

< SYMPTOM DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

POWER WINDOW RETAINED POWER FUNCTION DOES NOT OPERATE NORMALLY

Diagnosis Procedure

INFOID:000000006211030

1. CHECK DOOR SWITCH

Check door switch. Refer to <u>DLK-66, "Component Function Check"</u>.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-43. "Intermittent Incident".

NO >> GO TO 1.

DOOR KEY CYLINDER SWITCH DOES NOT OPERATE POWER WINDOWS

| < SYMPTOM DIAGNOSIS > [FRONT & REAR WINDOW ANTI-PINCH] | |
|--|---|
| DOOR KEY CYLINDER SWITCH DOES NOT OPERATE POWER WIN- | |
| DOWS | А |
| Diagnosis Procedure | В |
| 1.PERFORM INITIALIZATION PROCEDURE | _ |
| Initialization procedure is executed and operation is confirmed. Refer to <u>PWC-7</u> , "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement". | С |
| Is the inspection result normal? YES >> INSPECTION END NO >> GO TO 2. | D |
| 2. CHECK DRIVER SIDE DOOR LOCK ASSEMBLY (DOOR KEY CYLINDER SWITCH) | Е |
| Check driver side door lock assembly (door key cylinder switch). Refer to <u>PWC-32, "Component Function Check"</u> . | |
| Is the inspection result normal? | F |
| YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts. | |
| 3. CONFIRM THE OPERATION | G |
| Confirm the operation again. | |
| Is the result normal? | Н |
| YES >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u> . NO >> GO TO 1. | |

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KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

Description

Power window down does not operate when pressing unlock button on Intelligent Key.

Diagnosis Procedure

1.CHECK REMOTE KEYLESS ENTRY FUNCTION

Check remote keyless entry function.

Does door lock/unlock with Intelligent Key button?

YES >> GO TO 2.

NO >> Refer to <u>DLK-187, "Description"</u>.

2. CHECK POWER WINDOW OPERATION

Check power window operation.

Does power window operate up/down using power window main switch?

YES >> GO TO 3.

NO >> Refer to <u>PWC-108</u>, "Diagnosis Procedure".

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

Check "PW DOWN SET" setting in "WORK SUPPORT". Refer to DLK-52, "INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY)".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Set "PW DOWN SET" setting in "WORK SUPPORT".

4.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u>.

NO >> GO TO 1.

INFOID:000000006211032

[FRONT & REAR WINDOW ANTI-PINCH]

INFOID:000000006211033

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION < SYMPTOM DIAGNOSIS > [FRONT & REAR WINDOW ANTI-PINCH] POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

| | | А |
|--|------------------------|---|
| Diagnosis Procedure | INFOID:000000006211034 | |
| 1.REPLACE POWER WINDOW MAIN SWITCH | | В |
| Replace power window main switch. | | |
| >> Refer to PWC-120, "Removal and Installation". | | С |
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POWER WINDOW SWITCH ILLUMINATION DOES NOT ILLUMINATE < SYMPTOM DIAGNOSIS > [FRONT & REAR WINDOW ANTI-PINCH]

POWER WINDOW SWITCH ILLUMINATION DOES NOT ILLUMINATE

Diagnosis Procedure

INFOID:000000006211035

1.REPLACE POWER WINDOW SWITCH

Replace power window switch. Refer to <u>PWC-120</u>, "Removal and Installation".

>> INSPECTION END

< PRECAUTION > PRECAUTION PRECAUTIONS

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PRECAUTIONS

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

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

WARNING:

Always observe the following items for preventing accidental activation.

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

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

WARNING:

Always observe the following items for preventing accidental activation.

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

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[FRONT & REAR WINDOW ANTI-PINCH]

INFOID:000000006211040

REMOVAL AND INSTALLATION POWER WINDOW MAIN SWITCH

Removal and Installation

REMOVAL

- Remove the power window main switch finisher (2). Refer to <u>INT-12, "Removal and Installation"</u>.
- 2. Power window main switch (1) is removed from power window main switch finisher (2) using flat-head screw driver (A) etc.



CAUTION:

Do not fold the pawl of power window main switch finisher. NOTE:

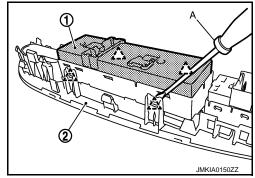
The same procedure is also performed for front power window switch (passenger side) and rear power window switch (LH & RH).

INSTALLATION

Install in the reverse order of removal.

NOTE:

Power window main switch is exchanged or is detached it is necessary to do the initialization procedure. Refer to <u>PWC-8</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".



| BASIC INSPECTION | |
|---|---|
| DIAGNOSIS AND REPAIR WORKFLOW | |
| Work Flow | |
| DETAILED FLOW | |
| 1. OBTAIN INFORMATION ABOUT SYMPTOM | |
| Interview the customer to obtain as much malfunction information (conditions and environment when the mal- function occurred) as possible when the customer brings the vehicle in. | |
| >> GO TO 2. | |
| 2. REPRODUCE THE MALFUNCTION INFORMATION | |
| Check the malfunction on the vehicle that the customer describes. Inspect the relation of the symptoms and the condition when the symptoms occur. | |
| >> GO TO 3. | |
| 3. IDENTIFY THE MALFUNCTIONING SYSTEM WITH "SYMPTOM DIAGNOSIS" | |
| Use "Symptom diagnosis" from the symptom inspection result in step 2. Then identify where to start the diagnosis based on possible causes and symptoms. | |
| >> GO TO 4. | |
| 4. IDENTIFY MALFUNCTIONING PARTS WITH "COMPONENT DIAGNOSIS" | |
| Perform the diagnosis with "Component diagnosis" of the applicable system. | |
| >> GO TO 5. | |
| 5. REPAIR OR REPLACE THE MALFUNCTIONING PARTS | |
| Repair or replace the specified malfunctioning parts. | ł |
| >> GO TO 6. | |
| 6.FINAL CHECK | |
| Check that malfunctions are not reproduced when obtaining the malfunction information from the customer, referring to the symptom inspection result in step 2. | |
| Is the malfunctioning part repaired or replaced? | |
| YES >> Trouble diagnosis is completed. NO >> GO TO 3. | |
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INSPECTION AND ADJUSTMENT

INSPECTION AND ADJUSTMENT ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description INFOID:000000006603369

When the battery negative terminal is disconnected, the initialization is necessary.

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

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

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

- Auto-up operation
- Anti-pinch function

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement INFOID:000000006603370

INITIALIZATION PROCEDURE

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

CHECK ANTI-PINCH FUNCTION

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

CAUTION:

- Perform initial setting when auto-up operation or anti-pinch function does not operate normally.
- Check that AUTO-UP operates before inspection when system initialization is performed.
- Never check with hands or other body parts because they may be pinched. Never get pinched.
- Finish initial setting. Otherwise, next operation cannot be done.
- 1. Auto-up operation
- 2. Anti-pinch function

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description

INFOID:000000006603371

When the control unit replaced, the initialization in necessary.

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

- Power supply to the power window main switch or power window motor is cut off by the removal of battery terminal or if the battery fuse is blown.
- Disconnection and connection of power window main switch harness connector.
- · Removal and installation of motor from regulator assembly.

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| < BASIC INSPECTION > [FRONT WINDOW ANTI-PINCH] | |
|---|----|
| Disconnection and connection of battery negative terminal. Removal and installation of glass. Removal and installation of door glass run. The following specified operations can not be performed under the non-initialized condition. Auto-up operation Anti-pinch function | A |
| ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Re- | |
| quirement | С |
| INITIALIZATION PROCEDURE 1. Disconnect the battery negative terminal or power window main switch connector. Reconnect it after a minute or more. 2. Turn ignition switch ON. | D |
| 3. Operate power window switch to fully open the window. (This operation is unnecessary if the window is | Е |
| already fully open) Continue pulling the power window switch UP (AUTO-UP operation). Even after glass stops at the fully closed position, keep pulling the switch for 3 seconds or more. Initializing procedure is completed. Inspect anti-pinch function. | F |
| CHECK ANTI-PINCH FUNCTION Fully open the door window. Place a piece of wood near fully closed position. | G |
| Close door glass completely with AUTO-UP. Check that glass lowers for approximately 150 mm (5.9 in) or for 2 seconds without pinching piece of wood and stops. | Н |
| Check that glass does not rise when operating the power window main switch while lowering. | |
| CAUTION: • Perform initial setting when auto-up operation or anti-pinch function does not operate normally. • Check that AUTO-UP operates before inspection when system initialization is performed. | I |
| Never check with hands or other body parts because they may be pinched. Never get pinched. Finish initial setting. Otherwise, next operation cannot be done. Auto-up operation | J |
| 2. Anti-pinch function | PW |
| | L |
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INSPECTION AND ADJUSTMENT

Revision: 2011 November

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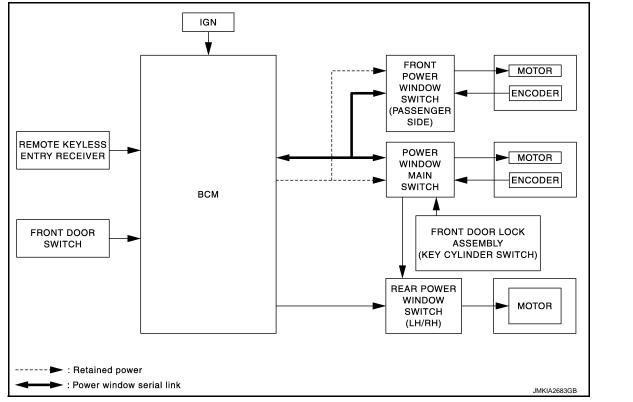
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INFOID:00000006603373

SYSTEM DESCRIPTION POWER WINDOW SYSTEM

System Diagram



System Description

INFOID:000000006603374

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

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

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

RETAINED POWER OPERATION (FRONT DRIVER SIDE & PASSENGER SIDE)

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

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POWER WINDOW SYSTEM

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Retained Power Cancel Conditions

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

POWER WINDOW LOCK FUNCTION

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

POWER WINDOW SERIAL LINK (FRONT DRIVER SIDE & PASSENGER SIDE)

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

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

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

Operation Condition

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

NOTE:

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

DOOR KEY CYLINDER SWITCH OPERATION

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

OPERATION CONDITION

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

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

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

- The power window opening stops when the following operations are performed:
- When the unlock button is kept pressed more than 15 seconds.
- When the ignition switch is turned ON while the power window opening is operated.
- When the unlock button is released.

While retained power operation activate, keyless power window down function cannot be operated. Keyless power window down operation mode can be changed by "PW DOWN SET" mode in "WORK SUP-PORT". Refer to DLK-52, "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)

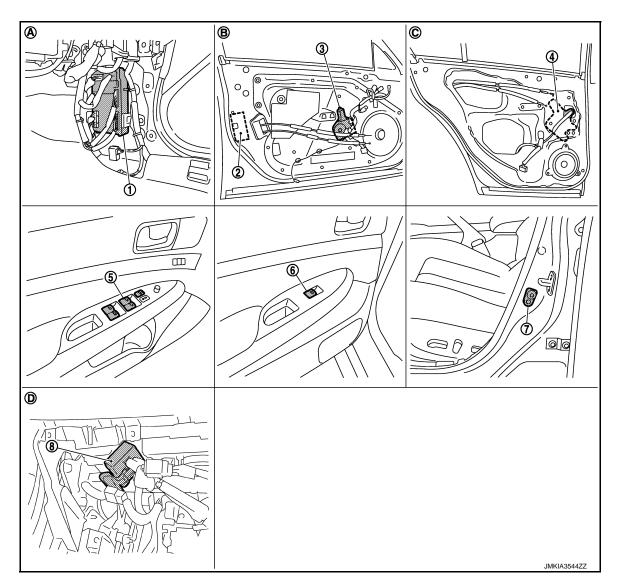
POWER WINDOW SYSTEM

< SYSTEM DESCRIPTION >

Component Parts Location

INFOID:000000006604484

[FRONT WINDOW ANTI-PINCH]



1. BCM

- 4. Rear power window motor LH
- 7. Front door switch (driver side)
- A. View with dash side lower (passenger side)
- D. View with instrument lower panel (passenger side) removed

Component Description

- 2. Front door lock assembly (driver side) (door key cylinder switch)
- 5. Power window main switch
- 8. Remote keyless entry receiver
- B. View with front door finisher removed C.
- 3. Front power window motor (driver side)
- 6. Rear power window switch LH
 - View with rear door finisher removed

INFOID:000000006603376

| Component | Function |
|--|---|
| BCM | Supplies power supply to power window switch.Controls retained power. |
| Power window main switch | Directly controls all power window motor of all doors.Controls anti-pinch operation of power window. |
| Front power window switch (passenger side) | Controls power window motor of passenger door.Controls anti-pinch operation of power window. |

POWER WINDOW SYSTEM

< SYSTEM DESCRIPTION >

[FRONT WINDOW ANTI-PINCH]

| Component | Function | |
|---|--|--|
| 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 and 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 and 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 (driver side/passenger side) | Front door open/close condition and transmits to BCM. | |
| Remote keyless entry receiver | Receives lock/unlock signal from the intelligent key, and then transmits to BCM. | |

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DIAGNOSIS SYSTEM (BCM) COMMON ITEM

COMMON ITEM : CONSULT-III Function (BCM - COMMON ITEM)

INFOID:000000006603377

APPLICATION ITEM

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 Monitor | Monitors the reception status of CAN communication viewed from BCM. Refer to CONSULT-III opera- tion manual. | |
| 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 | This function is not used even though it is displayed. | |

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 | HEAD LAMP | × | × | × |
| Wiper and washer | WIPER | × | × | × |
| Turn signal and hazard warning lamps | FLASHER | × | × | × |
| | AIR CONDITONER* | | × | |
| Intelligent Key system | INTELLIGENT KEY | × | × | × |
| Combination switch | COMB SW | | × | |
| Body control system | BCM | × | | |
| IVIS - NATS | 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 | TPMS (AIR PRESSURE MONITOR) | × | × | × |

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

FREEZE FRAME DATA (FFD) AND IGN COUNTER

Freeze Frame Data

The BCM records the following condition at the moment a particular DTC is detected.

- Vehicle Speed
- Odo/Trip Meter

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[FRONT WINDOW ANTI-PINCH]

• Vehicle Condition (BCM detected condition)

| CONSULT screen terms | Description | |
|----------------------|--|--|
| SLEEP>LOCK | While turning BCM status from low power consumption mode to normal mode (Power sup position is "LOCK") | |
| SLEEP>OFF | While turning BCM status from low power consumption mode to normal mode (Power supply position is "OFF".) | |
| LOCK>ACC | While turning power supply position from "LOCK" to "ACC" | |
| ACC>ON | While turning power supply position from "ACC" to "IGN" | |
| RUN>ACC | While turning power supply position from "RUN" to "ACC" (Vehicle is stopping and selector lever is except P position.) | |
| CRANK>RUN | While turning power supply position from "CRANKING" to "RUN" (From cranking up the en- gine to run it) | |
| RUN>URGENT | While turning power supply position from "RUN" to "ACC" (Emergency stop operation) | |
| ACC>OFF | While turning power supply position from "ACC" to "OFF" | |
| OFF>LOCK | While turning power supply position from "OFF" to "LOCK" | |
| OFF>ACC | While turning power supply position from "OFF" to "ACC" | |
| ON>CRANK | While turning power supply position from "IGN" to "CRANKING" | |
| OFF>SLEEP | While turning BCM status from normal mode (Power supply position is "OFF".) to low powe consumption mode | |
| LOCK>SLEEP | While turning BCM status from normal mode (Power supply position is "LOCK".) to low pow- er consumption mode | |
| LOCK | Power supply position is "LOCK" (Ignition switch OFF with steering is locked.) | |
| OFF | Power supply position is "OFF" (Ignition switch OFF with steering is unlocked.) | |
| ACC | Power supply position is "ACC" (Ignition switch ACC) | |
| ON | Power supply position is "IGN" (Ignition switch ON with engine stopped) | |
| ENGINE RUN | Power supply position is "RUN" (Ignition switch ON with engine running) | |
| CRANKING | Power supply position is "CRANKING" (At engine cranking) | |

IGN Counter

IGN counter indicates the number of times that ignition switch is turned ON after DTC is detected.

- The number is 0 when a malfunction is detected now.
- The number increases like 1 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON.
- The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.
 RETAIND PWR

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

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Data monitor

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

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH : Diagnosis Procedure

INFOID:000000006603380

1.CHECK POWER SUPPLY CIRCUIT 1

1. Turn ignition switch OFF.

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

| | (+) Power window main switch | | Voltage (V) (Approx.) |
|-----------|---------------------------------|--------|---|
| Connector | Terminal | | (,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |
| D8 | 10 | Ground | 12 |
| D9 | 19 | Ground | 12 |

Is the inspection result normal?

YES >> GO TO 2.

NO >> GO TO 3.

2. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.

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

| Power windo | w main switch | | Continuity |
|-------------|---------------|--------|------------|
| Connector | Terminal | Ground | Continuity |
| D9 | 17 | | Existed |

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

3.CHECK POWER SUPPLY CIRCUIT 2

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM connector.

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

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

4. Check continuity between BCM harness connector and ground.

| - | BCM | | | Continuity | |
|---|--------------------|---|--------|-------------|--|
| | Connector Terminal | | Ground | Continuity | |
| | M118 | 2 | Ground | Not existed | |
| | 10 | 3 | | NUL EXISIEU | |

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-82, "Exploded View"</u>.

NO >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

Refer to GI-43. "Intermittent Incident"

>> INSPECTION END FRONT POWER WINDOW SWITCH (PASSENGER SIDE) FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure

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[FRONT WINDOW ANTI-PINCH]

1. CHECK POWER SUPPLY CIRCUIT 1

1. Turn ignition switch OFF.

2. Disconnect front power window switch (passenger side) connector.

3. Turn ignition switch ON.

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

| | (+) | | | |
|---|--|---|--|---------------------------|
| | power window switch (passenger side) | | () | Voltage (V) (Approx.) |
| Connector | Termin | al | | |
| D38 | 10 | | Ground | 12 |
| he inspection resul | t normal? | | | |
| TES >> GO TO 2. IO >> GO TO 3. | | | | |
| CHECK GROUND | CIRCUIT | | | |
| eck continuity betw | een front power windo | ow switch (passe | enger side) harness | connector and ground. |
| | | 1 | | |
| | power window switch (passenger side) | | | Continuity |
| Connector | · · · · · | | Ground | Continuity |
| D38 11 | | | | Eviete d |
| the inspection resul ES >> GO TO 4. | t normal? | | | Existed |
| the inspection resul (ES >> GO TO 4. IO >> Repair or CHECK POWER S Disconnect BCM | t normal? replace harness. UPPLY CIRCUIT 2 connector. | s connector and | I front power windov | existed |
| the inspection resul (ES >> GO TO 4. IO >> Repair or CHECK POWER S Disconnect BCM Check continuity ness connector. | t normal? replace harness. UPPLY CIRCUIT 2 connector. | Front | power window switch | v switch (passenger side) |
| the inspection resul (ES >> GO TO 4. IO >> Repair or CHECK POWER S Disconnect BCM Check continuity I ness connector. | t normal? replace harness. UPPLY CIRCUIT 2 connector. between BCM harness | Front (| power window switch passenger side) | w switch (passenger side) |
| the inspection resul (ES >> GO TO 4. IO >> Repair or CHECK POWER S Disconnect BCM Check continuity ness connector. | t normal? replace harness. UPPLY CIRCUIT 2 connector. petween BCM harness | Front | power window switch passenger side) | w switch (passenger side) |
| the inspection resul (ES >> GO TO 4. IO >> Repair or CHECK POWER S Disconnect BCM Check continuity I ness connector. | t normal? replace harness. UPPLY CIRCUIT 2 connector. between BCM harnes: BCM | Front (Connector D38 | power window switch passenger side) Terminal 10 | v switch (passenger side) |
| the inspection resul (ES >> GO TO 4. IO >> Repair or CHECK POWER S Disconnect BCM Check continuity I ness connector. Connector M118 | t normal? replace harness. UPPLY CIRCUIT 2 connector. between BCM harness BCM Terminal 2 | Front (Connector D38 | power window switch passenger side) Terminal 10 | v switch (passenger side) |
| the inspection resul (ES >> GO TO 4. IO >> Repair or CHECK POWER S Disconnect BCM Check continuity I ness connector. | t normal? replace harness. UPPLY CIRCUIT 2 connector. between BCM harness BCM Terminal 2 between BCM harness | Front (Connector D38 s connector and | power window switch passenger side) Terminal 10 | v switch (passenger side) |

YES >> Replace BCM. Refer to <u>BCS-82, "Exploded View"</u>.

NO >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-43, "Intermittent Incident"

< DTC/CIRCUIT DIAGNOSIS >

>> INSPECTION END REAR POWER WINDOW SWITCH

REAR POWER WINDOW SWITCH : Diagnosis Procedure

INFOID:000000006603382

1.CHECK POWER SUPPLY CIRCUIT 1

1. Turn ignition switch OFF.

2. Disconnect rear power window switch connectors.

3. Turn ignition switch ON.

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

| | (+) Rear power window switch | 1 | () | Voltage (V) (Approx.) | |
|-----|---------------------------------|---|--------|---|--|
| Con | Connector Terminal | | | (,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | |
| LH | D54 | 1 | Ground | 10 | |
| RH | D74 | Ι | Ground | 12 | |

Is the inspection result normal?

YES >> GO TO 2.

NO >> GO TO 3.

2. CHECK GROUND CIRCUIT

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

| | Rear power window switc | h | | Continuity |
|------|-------------------------|----------|--------|------------|
| Conr | nector | Terminal | | Continuity |
| LH | D54 | 7 | Ground | Existed |
| RH | D74 | 1 | | EXISTED |

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

3.CHECK POWER SUPPLY CIRCUIT 2

1. Turn ignition switch OFF.

2. Disconnect BCM connector.

3. Check continuity between BCM harness connector and rear power window switch harness connector.

| B | СМ | Rear power window switch | | | Continuity |
|-----------|----------|--------------------------|--------|----------|------------|
| Connector | Terminal | Conr | nector | Terminal | Continuity |
| M118 | 3 | LH | D54 | 1 | Existed |
| WITO | 5 | RH | D74 | I | Existed |

4. Check continuity between BCM harness connector and ground.

| BC | CM | | Continuity |
|-----------|----------|--------|-------------|
| Connector | Terminal | Ground | Continuity |
| M118 | 3 | | Not existed |

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-82, "Exploded View"</u>.

NO >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-43, "Intermittent Incident"

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

>> INSPECTION END

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< DTC/CIRCUIT DIAGNOSIS >

REAR POWER WINDOW SWITCH

Description

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

Component Function Check

1. CHECK REAR POWER WINDOW FUNCTION

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

Is the inspection result normal?

- YES >> Rear power window switch is OK.
- NO >> Refer to <u>PWC-134, "Diagnosis Procedure"</u>.

Diagnosis Procedure

INFOID:000000006603385

1.CHECK REAR POWER WINDOW MOTOR INPUT SIGNAL

1. Turn ignition switch ON.

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

| Rear | (+) power window | / switch | () | Condition | | Voltage (V) (Approx.) | | |
|------|---------------------|----------------------------|--------|--------------------------|-----------|--------------------------|---------|----|
| Conn | ector | Terminal | | | | | | |
| | | 2 | | | NEUTRAL | 0 | | |
| LH | D54 | 2 | | | | Power window main switch | UP | 12 |
| LU | D04 | 3 | | | | (rear LH) | NEUTRAL | 0 |
| | | 3 | Cround | | | 12 | | |
| | | 2 Power window main switch | - | | | NEUTRAL | 0 | |
| RH | D74 | | | Power window main switch | UP | 12 | | |
| КП | D74 | 2 | | - | (rear RH) | NEUTRAL | 0 | |
| | | 3 | | | DOWN | 12 | | |

Is the inspection result normal?

YES >> GO TO 2.

NO >> GO TO 3.

2. CHECK REAR POWER WINDOW SWITCH

Check rear power window switch. Refer to PWC-135, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace rear power window switch.

3.CHECK HARNESS CONTINUITY

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

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REAR POWER WINDOW SWITCH

< DTC/CIRCUIT DIAGNOSIS >

| Power window m | ain switch | F | Rear power window swite | ch | Continuitu | |
|---|--|-------------------------------------|-------------------------|----------|-----------------------|--|
| Connector | Terminal | Cor | nector | Terminal | Continuity | |
| | 1 | LH | D54 | 2 | | |
| D8 | 3 | LN | D34 | 3 | Existed | |
| D8 | 5 | RH | D74 | 3 | Existed | |
| | 7 | | 014 | 2 | | |
| Check continuity b | etween power | window main sw | itch connector and | ground. | | |
| Power | window main swit | | | | | |
| Connector | | Terminal | _ | | Continuity | |
| | | 1 | _ | | | |
| Do | | 3 | – Ground | | | |
| D8 | | 5 | - | | Not existed | |
| | | 7 | 1 | | | |
| efer to <u>GI-43, "Interm</u> >> INSPECTI | ON END | | | | INFOID:00000000660338 | |
| component Inspe | | | | | | |
| OMPONENT INSPI | | ou//=o/- | | | | |
| OMPONENT INSPI | VER WINDOW | SWITCH | | | | |
| OMPONENT INSP CHECK REAR POV Turn ignition switch Disconnect rear po | VER WINDOW n OFF. ower window sv | vitch connector. | the following condit | tions. | | |
| OMPONENT INSP CHECK REAR POV Turn ignition switch Disconnect rear po Check rear power | VER WINDOW n OFF. ower window sv | vitch connector. terminals under | | tions. | Continuity | |
| OMPONENT INSP CHECK REAR POV Turn ignition switch Disconnect rear po Check rear power | VER WINDOW OFF. wer window sw window switch | vitch connector. terminals under | the following condit | tions. | Continuity | |
| OMPONENT INSP CHECK REAR POV Turn ignition switch Disconnect rear po Check rear power | VER WINDOW OFF. wer window sw window switch | vitch connector. terminals under | | tions. | Continuity | |

NEUTRAL

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5 Is the inspection result normal?

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YES >> Rear power window switch is OK.

NO >> Replace rear power window switch.

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Existed

< DTC/CIRCUIT DIAGNOSIS >

POWER WINDOW MOTOR DRIVER SIDE

DRIVER SIDE : Description

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

DRIVER SIDE : Component Function Check

1.CHECK FRONT POWER WINDOW MOTOR (DRIVER SIEDE) CIRCUIT

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

Is the inspection result normal?

YES >> Front power window motor (driver side) is OK.

NO >> Refer to <u>PWC-136. "DRIVER SIDE : Diagnosis Procedure"</u>.

DRIVER SIDE : Diagnosis Procedure

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INFOID:000000006603388

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

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

| (+) Front power window motor (driver side) | | (-) | Condition | | Voltage (V) (Approx.) |
|---|----------|---------|--------------------------|---------|---|
| Connector | Terminal | | | | (,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |
| D10 | 4 | Orecord | Power window main switch | NEUTRAL | 0 |
| | I | | | DOWN | 12 |
| | 2 | Ground | | NEUTRAL | 0 |
| | 2 | | | UP | 12 |

Is the inspection result normal?

YES >> Replace front power window motor (driver side).

NO >> GO TO 2.

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

1. Turn ignition switch OFF.

2. Disconnect power window main switch connector.

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

| Power wind | ow main switch | Front power window | ont power window motor (driver side) | | |
|------------|----------------|--------------------|--------------------------------------|------------|--|
| Connector | Terminal | Connector | Terminal | Continuity | |
| D8 | 8 | D10 | 2 | Existed | |
| Do | 11 | | 1 | Existed | |

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

| Power windo | w main switch | | Continuity | |
|-------------|---------------|--------|-------------|--|
| Connector | Terminal | Ground | Continuity | |
| D8 | 8 | Ground | Not existed | |
| D8 | 11 | | NUL EXISTED | |

Is the inspection result normal?

YES >> Replace power window main switch.

NO >> Repair or replace harness.

Revision: 2011 November

Is the inspection result normal?

>> Replace front power window switch (passenger side). YES

POWER WINDOW MOTOR [FRONT WINDOW ANTI-PINCH] < DTC/CIRCUIT DIAGNOSIS > PASSENGER SIDE PASSENGER SIDE : Description INEOID:00000000660339 Door glass moves UP/DOWN by receiving the signal power window main switch or front power window switch (passenger side). PASSENGER SIDE : Component Function Check INFOID:000000006603392 1. CHECK FRONT POWER WINDOW MOTOR (PASSENGER SIDE) CIRCUIT Check front power window motor (passenger side) operation with power window main switch or front power window switch (passenger side). Is the inspection result normal? YES >> Front power window motor (passenger side) is OK. >> Refer to PWC-137, "PASSENGER SIDE : Diagnosis Procedure". NO PASSENGER SIDE : Diagnosis Procedure INFOID:000000006603393 1.CHECK FRONT POWER WINDOW MOTOR (PASSENGER SIDE) INPUT SIGNAL 1. Turn ignition switch OFF. Disconnect front power window motor (passenger side) connector. 2. 3. Turn ignition switch ON. 4. Check voltage between front power window motor (passenger side) harness connector and ground. (+) Voltage (V) Front power window motor (passenger side) (-) Condition (Approx.) Connector Terminal NEUTRAL 0 1 UP 12 Front power window switch D40 Ground (passenger side) 0 NEUTRAL 2 DOWN 12 Is the inspection result normal? PWC YES >> Replace front power window motor (passenger side). NO >> GO TO 2. ${f 2.}$ CHECK FRONT POWER WINDOW MOTOR (PASSENGER SIDE) CIRCUIT 1. Turn ignition switch OFF. 2. Disconnect front power window switch (passenger side) connector. 3. Check continuity between front power window switch (passenger side) harness connector and front power window motor (passenger side) harness connector. Front power window switch (passenger side) Front power window motor (passenger side) Continuity Connector Terminal Connector Terminal 8 2 D38 D40 Existed 9 1 Check continuity between front power window switch (passenger side) connector and ground. 4 Front power window switch (passenger side) Continuity Connector Terminal Ground 8 D38 Not existed 9

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< DTC/CIRCUIT DIAGNOSIS >

NO >> Repair or replace harness. REAR LH

REAR LH : Description

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

REAR LH : Component Function Check

1.CHECK REAR POWER WINDOW MOTOR LH CURCUIT

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

Is the inspection result normal?

YES >> Rear power window motor LH is OK.

NO >> Refer to <u>PWC-138, "REAR LH : Diagnosis Procedure"</u>

REAR LH : Diagnosis Procedure

1.CHECK REAR POWER WINDOW MOTOR LH INPUT SIGNAL

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

| (+) | | | | Voltage (V) (Approx.) | |
|---------------|----------------------------|--------|-----------------------------|--------------------------|----|
| Rear power wi | Rear power window motor LH | | Condition | | |
| Connector | Terminal | | | | |
| | 1 | Ground | Rear power window switch LH | NEUTRAL | 0 |
| D52 | I | | | UP | 12 |
| D52 | 2 | | | NEUTRAL | 0 |
| | 3 | | | DOWN | 12 |

Is the inspection result normal?

YES >> Replace rear power window motor LH.

NO >> GO TO 2.

2. CHECK REAR POWER WINDOW MOTOR LH CIRCUIT

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

| Rear power w | indow switch LH | Rear power wi | ndow motor LH | Continuity | |
|--------------|-----------------|---------------|---------------|------------|--|
| Connector | Terminal | Connector | Terminal | Continuity | |
| D54 | 5 | | 1 | Existed | |
| D34 | 4 | D52 | 3 | EXISIEU | |

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

| Rear power wi | ndow switch LH | | Continuity |
|---------------|----------------|--------|-------------|
| Connector | Terminal | Ground | Continuity |
| D54 | 5 | Ground | Not existed |
| | 4 | | |

Is the inspection result normal?

[FRONT WINDOW ANTI-PINCH]

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INFOID:00000006603395

^{1.} Turn ignition switch OFF.

| < DTC/CIRCUIT | DIAGNOS | SIS > | ••••• | | | [FR | | NDOW ANTI-PINC | H] | | | | |
|--|--|--------------------|-----------------|-----------|---------------|---------------|--------------------------|--------------------|----------------|--|-----|-------------|---|
| | ice rear po r or replac | | | tch LH. | | | | | | | | | |
| REAR RH : De | escriptio | n | | | | | | INFOID:0000000066 | 503 399 | | | | |
| Door glass moves switch RH. | s UP/DOW | 'N by rec | eiving t | he signal | from powe | r window ma | in switch | or rear power wind | ow | | | | |
| REAR RH : Co | ompone | nt Fund | ction C | Check | | | | INFOID:0000000066 | 603400 | | | | |
| 1. CHECK REAF | | WINDOV | | OR RH CI | RCUIT | | | | | | | | |
| Check rear power | | | | | | w main swit | ch or rear | power window swi | tch | | | | |
| RH. Is the inspection r | esult norm | al? | | | | | | | | | | | |
| YES >> Rear | power win | dow moto | | | | | | | | | | | |
| | | | | Diagnosis | s Procedure | <u>ə"</u> . | | | | | | | |
| REAR RH : Di | - | | | | | | | INFOID:0000000066 | 03401 | | | | |
| 1. CHECK REAR | | | / МОТС | or RH INF | PUT SIGNA | AL. | | | (| | | | |
| Turn ignition s Disconnect re Turn ignition s Check voltage | ar power v switch ON. | vindow m | | | | s connector | and grour | nd. | | | | | |
| | (+) | | | | | | | | — | | | | |
| Rear power w | indow motor | RH | (-) |) | Condition | | Voltage (V) (Approx.) | | | | | | |
| Connector | Term | inal | | | | | NEUTRAL | 0 | | | | | |
| | 1 | | _ | | | | UP | 12 | | | | | |
| D72 | 3 | | Grou | ind Re | ar power wind | low switch RH | NEUTRAL | . 0 | _ [| | | | |
| | | | | | | | DOWN | 12 | F | | | | |
| NO >> GOT 2.CHECK REAR 1. Turn ignition s 2. Disconnect re | Ce rear po O 2. POWER \ switch OFF ar power \ uity betwee | wer wind WINDOW | / MOTC | DR RH CIF | tor. | ess connect | or and rea | ır power window mo | otor | | | | |
| Rear po | wer window s | switch RH | | F | Rear power wi | ndow motor RH | | Continuity | - | | | | |
| Connector | | Termina | al Connector Te | | | | | | | | nal | - Sintinuty | _ |
| D74 | | 5 | | Γ | 072 | 1 | | Existed | | | | | |
| 4. Check continu | uity betwee | en rear po | ower wi | ndow swit | ch RH harr | ness connect | or and gro | ound. | - | | | | |
| R | ear power wi | ndow switc | h RH Termina | | _ | | | Continuity | - | | | | |
| D74 | | | 5 | aı | - | Ground | | Not existed | - | | | | |
| | | | 4 | | | | | | _ | | | | |

Is the inspection result normal?

< DTC/CIRCUIT DIAGNOSIS >

- YES >> Replace rear power window switch RH.
- NO >> Repair or replace harness.

[FRONT WINDOW ANTI-PINCH]

| < DTC/(| CIRCUIT DIAGN | IOSIS > | | | [FRON | IT WINDOW ANTI-PINCH] |
|------------------|---|--|-------------|--------------------------|--------------------------|--|
| | ODER | | | | | |
| DRIVE | ER SIDE | | | | | |
| DRIVE | ER SIDE : De | scription | | | | INFOID:00000006603407 |
| | s condition of the f as the pulse signa | | motor (driv | /er side) op | peration and trar | nsmits to power window main |
| DRIVE | ER SIDE : Co | mponent Functi | ion Cheo | ck | | INFOID:00000006603408 |
| .CHE | CK ENCODER | | | | | |
| heck t witch. | that driver side o | loor glass performs | s AUTO o | pen/close | operation norm | ally by power window main |
| | nspection result no | | | | | |
| YES NO | >> Encoder is C >> Refer to PW | 0K. C-141, "DRIVER SI | DE : Diagr | nosis Proce | edure". | |
| DRIVE | | gnosis Procedu | | | | INFOID:00000006603409 |
| _ | CK ENCODER S | - | - | | | |
| - | | - | | | | |
| | n ignition switch (eck signal betwee | | ain switch | harness co | onnector and gro | ound with oscilloscope. |
| | | (+) | | - | | Signal |
| | Power w Connector | indow main switch Termina | al | | () | (Reference value) |
| | | 9 | ai | | | |
| | D8 | 13 | | | Ground | Refer to following signal |
| s the in | (V) 6 Encoder signal 1 4 0 (V) 6 Encoder signal 2 4 0 (Enco | window UP oder signal 2 starts 1/4 puls | | Encoder signa | | |
| YES | >> Replace pow | ver window main sw | ritch. | | | |
| NO NO | >> GO TO 2. | | | | | |
| . Tur | rn ignition switch (sconnect power wi | ndow main switch o ween power windo | | | | otor (driver side) connector. Id front power window motor |
| 3. Che | | Power window main switch | | Front power window motor | | |
| 3. Che | , | main switch | | | window motor er side) | Continuity |
| . Che | , | main switch Terminal | | | | Continuity |
| 3. Che | Power window | | Conr | (drive | er side) | Continuity Existed |

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

< DTC/CIRCUIT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

| Power windo | w main switch | | Continuity | |
|-------------|---------------|--------|-------------|--|
| Connector | Terminal | Ground | Continuity | |
| D8 | 9 | Ground | Not existed | |
| | 13 | | NOT EXISTED | |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK ENCORDER POWER SUPPLY CIRCUIT 1

1. Connect power window main switch connector.

2. Turn ignition switch ON.

3. Check voltage between front power window motor (driver side) harness connector and ground.

| (Front power window | +) v motor (driver side) | () | Voltage (V) (Approx.) | |
|-------------------------|-----------------------------|--------|--------------------------|--|
| Connector | Terminal | | | |
| D10 | 4 | Ground | 12 | |

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4. CHECK ENCORDER POWER SUPPLY CIRCUIT 2

1. Turn ignition switch OFF.

2. Disconnect power window main switch connector.

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

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

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

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

Is the inspection result normal?

YES >> Replace power window main switch.

NO >> Repair or replace harness.

5. CHECK GROUND CIRCUIT 1

1. Turn ignition switch OFF.

2. Disconnect power window main switch connector.

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

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

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

O.CHECK GROUND CIRCUIT 2

< DTC/CIRCUIT DIAGNOSIS >

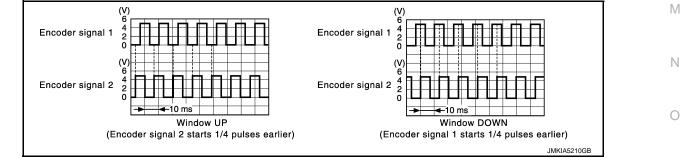
1. Turn ignition switch OFF.

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

| | <i>i</i> motor (driver side) | | Continuity |
|---|---|---------------------------|------------------------------|
| Connector | Terminal | Ground | Continuity |
| D10 | 6 | _ | Existed |
| the inspection result norma | <u>al?</u> | | |
| YES >> Replace front po NO >> Replace power w ASSENGER SIDE | wer window motor (driver vindow main switch. | r side). | |
| ASSENGER SIDE : D | Description | | INFOID:00000006603410 |
| etects condition of the fron ndow switch (passenger sid | | passenger side) operatior | and transmits to front power |
| ASSENGER SIDE : C | Component Functior | n Check | INFOID:00000006603411 |
| CHECK ENCODER | | | |
| vitch or front power window | switch (passenger side). | | ormally by power window main |
| the inspection result norma | <u>al?</u> | | |
| <pre>/ES >> Encoder is OK. NO >> Refer to <u>PWC-14</u></pre> | 13, "PASSENGER SIDE : | : Diagnosis Procedure". | |
| ASSENGER SIDE : D | Diagnosis Procedure | е | INFOID:00000006603412 |
| .CHECK ENCODER SIGN | ΔΙ | | |

 Check signal between front power window switch (passenger side) harness connector and ground with oscilloscope.

| (+) | | | Signal (Reference value) | PWC |
|--|----------|----------------------------------|-----------------------------|--------|
| Front power window switch (passenger side) | | (-) | | 1 11 0 |
| Connector | Terminal | | | |
| D38 | 12 | Ground Refer to following signal | L | |
| 036 | 15 | Ground | Refer to following signal | |



Is the inspection result normal?

- YES >> Replace front power window switch (passenger side).
- NO >> GO TO 2.
- 2. CHECK ENCORDER SIGNAL CIRCUIT
- 1. Turn ignition switch OFF.
- Disconnect front power window switch (passenger side) connector and front power window motor (passenger side) connector.

PWC-143

Ρ

А

< DTC/CIRCUIT DIAGNOSIS >

- [FRONT WINDOW ANTI-PINCH]
- Check continuity between front power window switch (passenger side) harness connector and front power window motor (passenger side) harness connector.

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

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

| Front power window switch (passenger side) | | | Continuity |
|--|----------|-----------------|-------------|
| Connector | Terminal | Terminal Ground | |
| D38 | 12 | Ground | Not existed |
| | 15 | _ | NOT EXISTED |

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK ENCORDER POWER SUPPLY CIRCUIT 1

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

| (+) Front power window motor (passenger side) | | (-) | Voltage (V) (Approx.) |
|--|---|--------|--------------------------|
| Connector Terminal | | | (|
| D40 | 4 | Ground | 12 |

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4.CHECK ENCORDER POWER SUPPLY CIRCUIT 2

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

| Front power window s | witch (passenger side) | Front power window motor (passenger side) | | Continuity | |
|----------------------|------------------------|---|---|------------|--|
| Connector | Terminal | Connector Terminal | | Continuity | |
| D38 | 4 | D40 | 4 | Existed | |

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

| Front power window s | witch (passenger side) | | Continuity | |
|----------------------|------------------------|--|-------------|--|
| Connector | Connector Terminal | | Continuity | |
| D38 | 4 | | Not existed | |

Is the inspection result normal?

- YES >> Replace front power window switch (passenger side).
- NO >> Repair or replace harness.

5.CHECK GROUND CIRCUIT 1

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

PWC-144

ENCODER

< DTC/CIRCUIT DIAGNOSIS >

| Front power window swit | | | | |
|---|---------------------------------|----------------------|------------------------|--------------------|
| | ch (passenger side) | Front power window n | notor (passenger side) | |
| Connector | Terminal | Connector | Terminal | Continuity |
| D38 | 3 | D40 | 6 | Existed |
| e inspection result no S >> GO TO 6. >> Repair or rep HECK GROUND CIR Turn ignition switch C Check continuity betw | lace harness. CUIT 2 PFF. | indow motor (passen | ger side) harness cor | onector and ground |
| - | ow motor (passenger sid | | | - |
| Connector | Termina | al | Ground | Continuity |
| D40 | 6 | | | Existed |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

< DTC/CIRCUIT DIAGNOSIS >

DOOR KEY CYLINDER SWITCH

Description

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

Component Function Check

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

Check ("KEY CYL LK-SW", "KEY CYL UN-SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYS-TEM" with CONSULT-III. Refer to <u>DLK-51, "DOOR LOCK : CONSULT-III Function (BCM - DOOR LOCK)"</u>.

| Monitor item | Condition | | |
|---------------|------------------|-------|--|
| KEY CYL LK-SW | Lock | : ON | |
| REFORE LN-SW | Neutral / Unlock | : OFF | |
| KEY CYL UN-SW | Unlock | : ON | |
| KET CTE ON-SW | Neutral / Lock | : OFF | |

Is the inspection result normal?

- YES >> Door key cylinder switch is OK.
- NO >> Refer to <u>PWC-146, "Diagnosis Procedure"</u>.

Diagnosis Procedure

INFOID:000000006603415

INFOID:000000006603413

INEOID:000000006603414

1.CHECK DOOR KEY CYLINDER SWITCH SIGNAL

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

| (| (+) | | |
|-----------|---|--------|--------------------------|
| | Front door lock assembly (driver side) (key cylinder switch) | | Voltage (V) (Approx.) |
| Connector | Terminal | | |
| D15 | 5 | Ground | 5 |
| 015 | 6 | Ground | 5 |

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK DOOR KEY CYLINDER SWITCH CIRCUIT

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

| Power window main switch | | Front door lock assembly (driver side) (key cylinder switch) | | Continuity |
|--------------------------|----------|---|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| D8 | 4 | D15 | 6 | Existed |
| 20 | 6 | 013 | 5 | LXISIEU |

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

DOOR KEY CYLINDER SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

| | ow main switch | | Continuit |
|--|--|---|---|
| Connector | Terminal | Ground | Continuity |
| | 4 | Ground | Net suists d |
| D8 | 6 | | Not existed |
| s the inspection result norma | <u>al?</u> | | |
| | vindow main switch. | | |
| NO >> Repair or replace | | | |
| $B. CHECK DOOR KEY CYL$ | INDER SWITCH GROUN | D CIRCUIT | |
| Check continuity between fro pround. | ont door lock assembly (d | river side) (key cylinder sw | itch) harness connector an |
| | sembly (driver side) der switch) | | Continuity |
| Connector | Terminal | Ground | |
| D15 | 4 | | Existed |
| Check front door lock assem Refer to <u>PWC-147, "Compor</u> <u>s the inspection result norma</u> YES >> GO TO 5. NO >> Replace front do | nent Inspection". al? or lock assembly (driver s | | |
| Refer to <u>GI-43, "Intermittent</u> | | | |
| Refer to <u>GI-43, "Intermittent</u> >> INSPECTION EI | Incident". ND | | INFOID-0000000000 |
| Refer to <u>GI-43, "Intermittent</u> >> INSPECTION EI Component Inspection | Incident". ND | | INF01D:000000006603- |
| Refer to <u>GI-43, "Intermittent</u> >> INSPECTION EI Component Inspection | Incident". ND NN | | INFOID:000000066034 |
| Refer to <u>GI-43, "Intermittent</u> >> INSPECTION EI | Incident". ND NN | | INF01D:0000000066034 |
| Refer to <u>GI-43, "Intermittent</u> >> INSPECTION EI Component Inspection COMPONENT INSPECTIO .CHECK DOOR KEY CYL . Turn ignition switch OFF 2. Disconnect front door loo | Incident". ND ON INDER SWITCH ck assembly (driver side) (| (key cylinder switch) connec cylinder switch) terminals un | ctor. |
| Refer to <u>GI-43</u> , "Intermittent >> INSPECTION EI Component Inspection COMPONENT INSPECTIO .CHECK DOOR KEY CYL . Turn ignition switch OFF Disconnect front door lock as Check front door lock as (key cylind | Incident". ND ON INDER SWITCH ck assembly (driver side) (sembly (driver side) (key c sembly (driver side) | | ctor. |
| Refer to <u>GI-43</u> , "Intermittent >> INSPECTION EI Component Inspection COMPONENT INSPECTIO .CHECK DOOR KEY CYL . Turn ignition switch OFF Disconnect front door lock as Check front door lock as (key cylind | Incident". ND ON INDER SWITCH ck assembly (driver side) (sembly (driver side) (key c | Key position | ctor. Ider the following condition: Continuity |
| Refer to <u>GI-43</u> , "Intermittent >> INSPECTION EI Component Inspection COMPONENT INSPECTIO .CHECK DOOR KEY CYL . Turn ignition switch OFF Disconnect front door lock as Check front door lock as (key cylind | Incident". ND ON INDER SWITCH ck assembly (driver side) (sembly (driver side) (key c sembly (driver side) | Key position | ctor. Inder the following condition Continuity Existed |
| Refer to GI-43, "Intermittent >> INSPECTION EI Component Inspection COMPONENT INSPECTIO . CHECK DOOR KEY CYL . Turn ignition switch OFF Disconnect front door lock as Check front door lock as (key cylind Terr | Incident". ND ON INDER SWITCH ck assembly (driver side) (sembly (driver side) (key c sembly (driver side) | Key position | ctor. Inder the following condition Continuity |

Is the inspection result normal?

6

>> INSPECTION END YES

>> Replace front door lock assembly (driver side) (key cylinder switch). NO

Neutral / Unlock

Not existed

< DTC/CIRCUIT DIAGNOSIS >

POWER WINDOW SERIAL LINK

POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH : Description

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

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

Keyless power window down signal

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

• Front passenger side door window operation signal

- · Power window control by key cylinder switch signal
- Power window lock switch signal
- Retained power operation signal

POWER WINDOW MAIN SWITCH : Component Function Check

INFOID:000000006603418

INFOID:000000006603417

1.CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

With CONSULT-III

Check ("CDL LOCK SW ", "CDL UNLOCK SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYS-TEM" with CONSULT-III. Refer to <u>DLK-51, "DOOR LOCK : CONSULT-III Function (BCM - DOOR LOCK)"</u>.

| Monitor item | Condition | | |
|---------------|-----------|-------|--|
| CDL LOCK SW | LOCK | : ON | |
| CDE LOOK SW | UNLOCK | : OFF | |
| CDL UNLOCK SW | LOCK | : OFF | |
| | UNLOCK | : ON | |

Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> Refer to <u>PWC-148</u>, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure".

POWER WINDOW MAIN SWITCH : Diagnosis Procedure

INFOID:000000006603419

1.CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

1. Turn ignition switch ON.

2. Check signal between power window main switch harness connector and ground.

| (+) Power window | main switch | () | Signal (Reference value) |
|---------------------|-------------|--------|---|
| Connector | Terminal | | |
| D8 | 14 | Ground | (V) 15 10 5 0 10 ms JPMIA0013GB |

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 2.

2. CHECK POWER WINDOW SERIAL LINK SIGNAL

POWER WINDOW SERIAL LINK

< DTC/CIRCUIT DIAGNOSIS >

1. Turn ignition switch OFF.

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

| - | (+) | | | | В |
|---|-------------|---------------|--------|--------------------------|---|
| _ | Power windo | w main switch | () | Voltage (V) (Approx.) | |
| _ | Connector | Terminal | | | С |
| _ | D8 | 14 | Ground | 12 | |

Is the inspection result normal?

YES >> Replace power window main switch.

NO >> GO TO 3.

3.CHECK POWER WINDOW SERIAL LINK CIRCUIT

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

| | BCM | | Power window main switch | | F |
|-----------|----------|-----------|--------------------------|--------------|---|
| Connector | Terminal | Connector | Terminal | - Continuity | |
| M123 | 132 | D8 | 14 | Existed | G |

3. Check continuity between BCM harness connector and ground.

| BC | Μ | | Continuity | |
|-----------|----------|--------|-------------|---|
| Connector | Terminal | Ground | Continuity | |
| M123 | 132 | | Not existed | I |

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-82, "Exploded View"</u>.

NO >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-43. "Intermittent Incident".

>> INSPECTION END FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Description

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

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

Keyless power window down signal

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

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

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

1.CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

With CONSULT-III

PWC-149

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POWER WINDOW SERIAL LINK

< DTC/CIRCUIT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

Check ("CDL LOCK SW ", "CDL UNLOCK SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYS-TEM" with CONSULT-III. Refer to <u>DLK-51, "DOOR LOCK : CONSULT-III Function (BCM - DOOR LOCK)"</u>.

| Monitor item | Condition | | |
|---------------|-----------|-------|--|
| CDL LOCK SW | LOCK | : ON | |
| CDE LOCK SW | UNLOCK | : OFF | |
| CDL UNLOCK SW | LOCK | : OFF | |
| CDE ONEOGR SW | UNLOCK | : ON | |

Is the inspection result normal?

- YES >> Power window serial link is OK.
- NO >> Refer to <u>PWC-150</u>, "FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure".

FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure

INFOID:000000006603422

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

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

| (+) Front power window swi Connector | itch (passenger side) Terminal | () | Signal (Reference value) |
|--|-----------------------------------|--------|---|
| D38 | 16 | Ground | (V) 15 10 5 0 10 ms JPMIA0013GB |

Is the inspection result normal?

YES >> Replace front power window switch (passenger side).

NO >> GO TO 2.

2. CHECK POWER WINDOW SERIAL LINK CIRCUIT

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

| Power window main switch | | Front power window s | Continuity | |
|--------------------------|----------|----------------------|------------|------------|
| Connector | Terminal | Connector | Terminal | Continuity |
| D8 | 14 | D38 | 16 | Existed |

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

| Power windo | w main switch | | Continuity | |
|-------------|---------------|--------|-------------|--|
| Connector | Terminal | Ground | Continuity | |
| D8 | 14 | | Not existed | |

Is the inspection result normal?

YES >> Replace power window main switch.

NO >> Repair or replace harness.

ECU DIAGNOSIS INFORMATION BCM (BODY CONTROL MODULE)

Reference Value

VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

| Monitor Item | Condition | Value/Status | |
|----------------|--|---------------------------------|----|
| FR WIPER HI | Other than front wiper switch HI | Off | |
| | Front wiper switch HI | On | D |
| | Other than front wiper switch LO | Off | |
| FR WIPER LOW | Front wiper switch LO | On | Е |
| FR WASHER SW | Front washer switch OFF | Off | |
| FR WASHER SW | Front washer switch ON | On | |
| FR WIPER INT | Other than front wiper switch INT/AUTO | Off | F |
| | Front wiper switch INT/AUTO | On | |
| FR WIPER STOP | Front wiper is not in STOP position | Off | G |
| FR WIPER STOP | Front wiper is in STOP position | On | G |
| INT VOLUME | Wiper volume dial is in a dial position 1 - 7 | Wiper volume dial posi- tion | Н |
| TURN SIGNAL R | Other than turn signal switch RH | Off | |
| TORN SIGNAL R | Turn signal switch RH | On | |
| TURN SIGNAL L | Other than turn signal switch LH | Off | |
| TURN SIGNAL L | Turn signal switch LH | On | |
| TAIL LAMP SW | Other than lighting switch 1ST and 2ND | Off | .1 |
| | Lighting switch 1ST or 2ND | On | 0 |
| HI BEAM SW | Other than lighting switch HI | Off | |
| | Lighting switch HI | On | P٧ |
| HI BEAM SW | Other than lighting switch 2ND | Off | |
| HEAD LAWF SW T | Lighting switch 2ND | On | 1 |
| HEAD LAMP SW 2 | Other than lighting switch 2ND | Off | |
| HEAD LAWF SW 2 | Lighting switch 2ND | On | |
| PASSING SW | Other than lighting switch PASS | Off | M |
| FASSING SW | Lighting switch PASS | On | |
| | Other than lighting switch AUTO | Off | |
| AUTO LIGHT SW | Lighting switch AUTO | On | Ν |
| | Front fog lamp switch OFF | Off | |
| FR FOG SW | Front fog lamp switch ON | On | 0 |
| RR FOG SW | NOTE: The item is indicated, but not monitored. | Off | |
| | Driver door closed | Off | Ρ |
| DOOR SW-DR | Driver door opened | On | |
| | Passenger door closed | Off | |
| DOOR SW-AS | Passenger door opened | On | |
| | Rear RH door closed | Off | |
| DOOR SW-RR | Rear LH door opened | On | |

А

В

INFOID:000000006847499

< ECU DIAGNOSIS INFORMATION >

| Monitor Item | Condition | Value/Status |
|----------------|---|--------------|
| DOOR SW-RL | Rear LH door closed | Off |
| DOOR SW-RE | Rear LH door opened | On |
| DOOR SW-BK | NOTE: The item is indicated, but not monitored. | Off |
| CDL LOCK SW | Other than power door lock switch LOCK | Off |
| | Power door lock switch LOCK | On |
| CDL UNLOCK SW | Other than power door lock switch UNLOCK | Off |
| SDE UNLOCK SW | Power door lock switch UNLOCK | On |
| KEY CYL LK-SW | Other than driver door key cylinder LOCK | Off |
| KET CTE EK-SW | Driver door key cylinder LOCK | On |
| KEY CYL UN-SW | Other than driver door key cylinder UNLOCK | Off |
| CEFCTE UN-SW | Driver door key cylinder LOCK | On |
| KEY CYL SW-TR | NOTE: The item is indicated, but not monitored. | Off |
| | Hazard switch is OFF | Off |
| HAZARD SW | Hazard switch is ON | On |
| REAR DEF SW | NOTE: The item is indicated, but not monitored. | Off |
| H/L WASH SW | NOTE: The item is indicated, but not monitored. | Off |
| R CANCEL SW | Trunk lid opener cancel switch OFF | Off |
| IN CANCEL SW | Trunk lid opener cancel switch ON | On |
| | Trunk lid opener switch OFF | Off |
| TR/BD OPEN SW | While the trunk lid opener switch is turned ON | On |
| | Trunk lid closed | Off |
| | /HAT MNTR Trunk lid opened Trunk lid opened | |
| RKE-LOCK | LOCK button of the Intelligent Key is not pressed | Off |
| | LOCK button of the Intelligent Key is pressed | On |
| RKE-UNLOCK | UNLOCK button of the Intelligent Key is not pressed | Off |
| | UNLOCK button of the Intelligent Key is pressed | On |
| RKE-TR/BD | TRUNK OPEN button of the Intelligent Key is not pressed | Off |
| KE-IK/DU | TRUNK OPEN button of the Intelligent Key is pressed | On |
| | PANIC button of the Intelligent Key is not pressed | Off |
| RKE-PANIC | PANIC button of the Intelligent Key is pressed | On |
| | UNLOCK button of the Intelligent Key is not pressed | Off |
| RKE-P/W OPEN | UNLOCK button of the Intelligent Key is pressed and held | On |
| RKE-MODE CHG | LOCK/UNLOCK button of the Intelligent Key is not pressed and held simulta- neously | Off |
| | LOCK/UNLOCK button of the Intelligent Key is pressed and held simultaneously | On |
| | Bright outside of the vehicle | Close to 5 V |
| OPTICAL SENSOR | Dark outside of the vehicle | Close to 0 V |
| | Driver door request switch is not pressed | Off |
| REQ SW -DR | Driver door request switch is pressed | On |
| | Passenger door request switch is not pressed | Off |
| REQ SW -AS | Passenger door request switch is pressed | On |

< ECU DIAGNOSIS INFORMATION >

[FRONT WINDOW ANTI-PINCH]

| Monitor Item | Condition | Value/Status | |
|---------------------------|---|--------------|---|
| REQ SW -RR | NOTE: The item is indicated, but not monitored. | Off | - |
| REQ SW -RL | NOTE: The item is indicated, but not monitored. | Off | - |
| EQ SW -BD/TR | Trunk lid opener request switch is not pressed | Off | - |
| EQ SW -BD/TR | Trunk lid opener request switch is pressed | On | - |
| USH SW | Push-button ignition switch (push switch) is not pressed | Off | - |
| 030 300 | Push-button ignition switch (push switch) is pressed | On | - |
| GN RLY2 -F/B | Ignition switch in OFF or ACC position | Off | - |
| | Ignition switch in ON position | On | - |
| CC RLY -F/B | NOTE: The item is indicated, but not monitored. | Off | - |
| LUCH SW | The clutch pedal is not depressed | Off | - |
| | The clutch pedal is depressed | On | - |
| | The brake pedal is depressed when No. 7 fuse is blown | Off | - |
| RAKE SW 1 | The brake pedal is not depressed when No. 7 fuse is blown, or No. 7 fuse is nor- mal | On | - |
| | The brake pedal is not depressed | Off | - |
| RAKE SW 2 | The brake pedal is depressed | On | - |
| DETE/CANCL SW | Selector lever in P position (Except M/T models) The clutch pedal is depressed (M/T models) | Off | - |
| | Selector lever in any position other than P (Except M/T models) The clutch pedal is not depressed (M/T models) | On | - |
| SFT PN/N SW | Selector lever in any position other than P and N | Off | - |
| | Selector lever in P or N position | On | - |
| // LOOK | Steering is unlocked | Off | - |
| /L -LOCK | Steering is locked | On | - |
| | Steering is locked | Off | - |
| /L -UNLOCK | Steering is unlocked | On | |
| /L RELAY-F/B | Ignition switch in OFF or ACC position | Off | - |
| /L RELAT-F/D | Ignition switch in ON position | On | - |
| INLK SEN -DR | Driver door is unlocked | Off | - |
| | Driver door is locked | On | |
| USH SW -IPDM | Push-button ignition switch (push-switch) is not pressed | Off | |
| | Push-button ignition switch (push-switch) is pressed | On | |
| GN RLY1 -F/B | Ignition switch in OFF or ACC position | Off | _ |
| | Ignition switch in ON position | On | _ |
| DETE SW -IPDM | Selector lever in any position other than P | Off | _ |
| | Selector lever in P position | On | _ |
| FT PN -IPDM | Selector lever in any position other than P and N (Except M/T models) The clutch pedal is not depressed (M/T models) | Off | |
| יי י רוא יו ר טואו | Selector lever in P or N position (Except M/T models) The clutch pedal is depressed (M/T models) | On | - |
| | Selector lever in any position other than P | Off | - |
| FT P -MET | Selector lever in P position | On | - |
| | Selector lever in any position other than N | Off | - |
| FT N -MET | Selector lever in N position | On | - |

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< ECU DIAGNOSIS INFORMATION >

| Monitor Item | Condition | Value/Status |
|------------------|---|--|
| | Engine stopped | Stop |
| ENGINE STATE | While the engine stalls | Stall |
| LINGINE STATE | At engine cranking | Crank |
| | Engine running | Run |
| S/L LOCK-IPDM | Steering is unlocked | Off |
| 3/L LOCK-IPDIVI | Steering is locked | On |
| S/L UNLK-IPDM | Steering is locked | Off |
| 3/L UNER-IF DIVI | Steering is unlocked | On |
| S/L RELAY-REQ | Steering lock system is not the LOCK condition and the changing condition from LOCK to UNLOCK | Off |
| S/L RELAT-REQ | Steering lock system is the LOCK condition or the changing condition from LOCK to UNLOCK | On |
| VEH SPEED 1 | While driving | Equivalent to speed- ometer reading |
| VEH SPEED 2 | While driving | Equivalent to speed- ometer reading |
| | Driver door is locked | LOCK |
| DOOR STAT-DR | Wait with selective UNLOCK operation (60 seconds) | READY |
| | Driver door is unlocked | UNLOCK |
| | Passenger door is locked | LOCK |
| DOOR STAT-AS | Wait with selective UNLOCK operation (60 seconds) | READY |
| | Passenger door is unlocked | UNLOCK |
| ID OK FLAG | Steering is locked | Reset |
| | Steering is unlocked | Set |
| PRMT ENG STRT | The engine start is prohibited | Reset |
| | The engine start is permitted | Set |
| PRMT RKE STRT | NOTE: The item is indicated, but not monitored. | Reset |
| KEY SW -SLOT | The Intelligent Key is not inserted into key slot | Off |
| RET 5W-5E01 | The Intelligent Key is inserted into key slot | On |
| RKE OPE COUN1 | During the operation of the Intelligent Key | Operation frequency of the Intelligent Key |
| RKE OPE COUN2 | NOTE: The item is indicated, but not monitored. | _ |
| CONFRM ID ALL | The key ID that the key slot receives is not recognized by any key ID registered to BCM. | Yet |
| | The key ID that the key slot receives is recognized by any key ID registered to BCM. | Done |
| CONFIRM ID4 | The key ID that the key slot receives is not recognized by the fourth key ID registered to BCM. | Yet |
| | The key ID that the key slot receives is recognized by the fourth key ID registered to BCM. | Done |
| CONFIRM ID3 | The key ID that the key slot receives is not recognized by the third key ID registered to BCM. | Yet |
| | The key ID that the key slot receives is recognized by the third key ID registered to BCM. | Done |

< ECU DIAGNOSIS INFORMATION >

[FRONT WINDOW ANTI-PINCH]

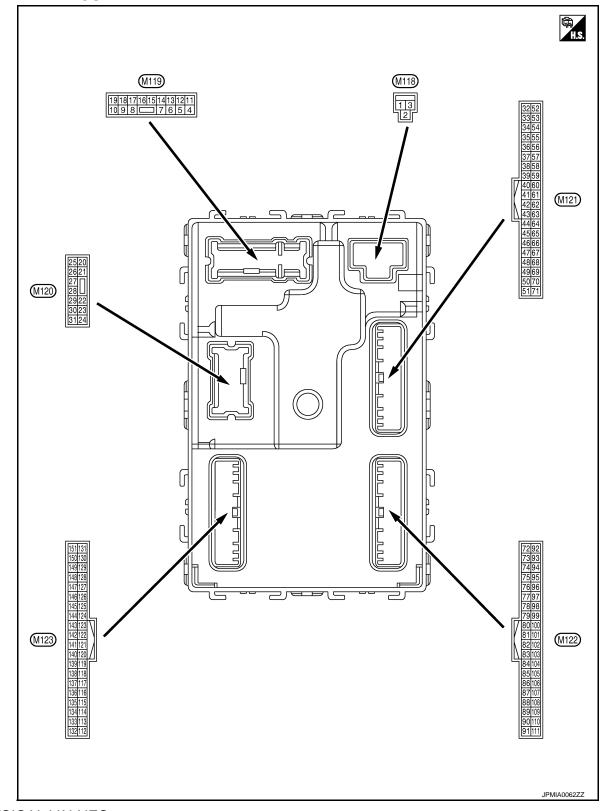
| Monitor Item | Condition | Value/Status |
|--------------|--|----------------------------------|
| CONFIRM ID2 | The key ID that the key slot receives is not recognized by the second key ID reg- istered to BCM. | Yet |
| | The key ID that the key slot receives is recognized by the second key ID registered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

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[FRONT WINDOW ANTI-PINCH]

TERMINAL LAYOUT



PHYSICAL VALUES

< ECU DIAGNOSIS INFORMATION >

| | nal No. color) | Description | 1 | | | Value | | | | | | | | | | | | | | |
|-----------------|-------------------------|---|------------------|--|--|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|------|--|
| (wire + | _ | Signal name | Input/ Output | | Condition | (Approx.) | | | | | | | | | | | | | | |
| 1 (W) | Ground | Battery power supply | Input | Ignition switch (| OFF | Battery voltage | | | | | | | | | | | | | | |
| 2 (Y) | Ground | P/W power supply (BAT) | Output | Ignition switch (| OFF | 12 V | | | | | | | | | | | | | | |
| 3 (BG) | Ground | P/W power supply (RAP) | Output | Ignition switch (| ИС | 12 V | | | | | | | | | | | | | | |
| | | | | | mp battery saver is activated. or room lamp power supply) | 0 V | | | | | | | | | | | | | | |
| 4 (LG) | Ground | Interior room lamp power supply | Output | vated. | mp battery saver is not acti- | 12 V | | | | | | | | | | | | | | |
| 5 | Ground | Passenger door UN- | Output | Passenger | UNLOCK (Actuator is activated) | 12 V | | | | | | | | | | | | | | |
| (P) | Ground | LOCK | Output | door | Other than UNLOCK) Ac- tuator is not activated | 0 V | | | | | | | | | | | | | | |
| 7 | Ground | Stop Jamp | Output | Stop Jamp | ON | 0 V | | | | | | | | | | | | | | |
| (SB) | Ground | Step lamp | Output | Step lamp | OFF | 12 V | | | | | | | | | | | | | | |
| 8 | Ground | All doors, fuel lid | Output | All doors, fuel | LOCK (Actuator is activated) | 12 V | | | | | | | | | | | | | | |
| (V) Glound LOCK | LOCK | Output | lid | Other than LOCK (Actuator is not activated) | 0 V | | | | | | | | | | | | | | | |
| 9 | 9 Driver door, fuel lid | Driver door, fuel lid | Output | Driver door, | UNLOCK (Actuator is activated) | 12 V | | | | | | | | | | | | | | |
| (G) | Ground | UNLOCK | Output | fuel lid | Other than | Other than UNLOCK (Actuator is not activated) | 0 V | | | | | | | | | | | | | |
| 10 | Ground | Rear RH door and rear LH door UN- | Output ar | Output | Rear RH door and rear LH | UNLOCK (Actuator is activated) | 12 V | | | | | | | | | | | | | |
| (P) | Ground | LOCK | | | Output | Output | Output | Output | Output | Output | Output | Output | Output | Juiput | Output | Output | Output | | door | |
| 11 (R) | Ground | Battery power supply | Input | Ignition switch (| OFF | Battery voltage | | | | | | | | | | | | | | |
| 13 (B) | Ground | Ground | | Ignition switch (| NC | 0 V | | | | | | | | | | | | | | |
| | | | | | OFF | 0 V | | | | | | | | | | | | | | |
| 14 (W) | Ground | Push-button ignition switch illumination ground | Output | Tail lamp | ON | NOTE: When the illumination brighten- ing/dimming level is in the neutral position | | | | | | | | | | | | | | |
| 15 (BG) | Ground | ACC indicator lamp | Output | Ignition switch | OFF (LOCK indicator is not illuminated) | JSNIA0010GB Battery voltage | | | | | | | | | | | | | | |
| | | | | | ACC | 0 V | | | | | | | | | | | | | | |

< ECU DIAGNOSIS INFORMATION >

| Terminal No. (Wire color) | | Description | | | | Value | |
|------------------------------|--------|---------------------------|------------------|-----------------------|--|---|--|
| (vvire + | color) | Signal name | Input/ Output | | Condition | (Approx.) | |
| | | | | | Turn signal switch OFF | 0 V | |
| 17 (W) | Ground | Turn signal RH (Front) | Output | lgnition switch ON | Turn signal switch RH | (V) 15 10 5 0 1 s PKID0926E 6.5 V | |
| | | | | | Turn signal switch OFF | 0 V | |
| 18 (BG) | Ground | Turn signal LH (Front) | Output | lgnition switch ON | Turn signal switch LH | (V) 15 10 5 0 1 s PKID0926E 6.5 V | |
| 19 | Ground | Room lamp timer | Output | Interior room | OFF | 12 V | |
| (V) | Ciouna | control | Output | lamp | ON | 0 V | |
| | | | | | Turn signal switch OFF | 0 V | |
| 20 (V) | Ground | Turn signal RH (Rear) | Output | Ignition switch ON | Turn signal switch RH | (V) 15 0 5 0 1 1 5 1 1 5 1 1 5 1 1 5 1 1 5 1 1 5 1 1 1 1 | |
| | | | | | | 6.5 V | |
| 23 | Ground | Trunk lid open | Output | Trunk lid | OPEN (Trunk lid opener actuator is activated) | 12 V | |
| (LG) | Ground | | Output | | Other than OPEN (Trunk lid opener actuator is not activated) | 0 V | |
| | | | | | Turn signal switch OFF | 0 V | |
| 25 (Y) | Ground | Turn signal LH (Rear) | Output | lgnition switch ON | Turn signal switch LH | (V) 15 10 5 0 1 s 1 s 1 s 1 s 1 s 1 s 1 s 1 s | |
| 30 | Ground | Trunk room lamp | Output | Trunk room | ON | 0 V | |
| (P) | e.sund | | - sup at | lamp | OFF | 12 V | |

< ECU DIAGNOSIS INFORMATION >

| | nal No. | Description | | | | Value | |
|-------|-------------|--|----------------------------------|---|--|---|-------------|
| (Wire | color) | Signal name | Input/ Output | | Condition | value (Approx.) | A |
| 34 | Ground | Trunk room antenna | Output | Ignition switch | When Intelligent Key is in the passenger compart- ment | (V) 15 0 1 1 1 1 1 1 1 1 1 1 1 1 1 | B C D |
| (SB) | (SB) Ground | (-) | Output | ŎFF | When Intelligent Key is not in the passenger compart- ment | (V) 15 10 5 0 1 s JMKIA0063GB | F |
| 35 | Ground | Trunk room antenna | Output | Ignition switch OFF | When Intelligent Key is in the passenger compart- ment | (V) 15 0 5 0 1 s JMKIA0062GB | G H I |
| (V) | Giouna | (+) | | | When Intelligent Key is not in the passenger compart- ment | (V) 15 0 10 10 10 10 10 10 10 10 10 | J PWC |
| 38 | | Rear bumper anten- na (-) Output lid opener re- quest switch is operated with | | When the trunk lid opener re- | When Intelligent Key is in the antenna detection area | (V) 15 0 1 1 1 1 1 1 1 1 1 1 1 1 1 | M |
| (B) | Ground | | operated with ignition switch | When Intelligent Key is not in the antenna detection area | (V) 15 10 5 0 1 s JMKIA0063GB | P | |

< ECU DIAGNOSIS INFORMATION >

| Termin | | Description | | | | Value | |
|------------|-------------|--------------------------------------|------------------|---|---|---|--|
| (Wire + | color) – | Signal name | Input/ Output | | Condition | (Approx.) | |
| 39 | Crowned | Rear bumper anten- | Output | When the trunk lid opener re- | When Intelligent Key is in the antenna detection area | (V) 15 10 5 0 1 s JMKIA0062GB | |
| (W) | Ground | na (+) | Output | quest switch is operated with ignition switch OFF | When Intelligent Key is not in the antenna detection area | (V) 15 10 5 0 1 s JMKIA0063GB | |
| 47 | | Ignition relay (IPDM | | | OFF or ACC | 12 V | |
| (Y) | Ground | E/R) control | Output | Ignition switch | ON | 0 V | |
| 50 (BG) | Ground | Trunk room lamp switch | Input | Trunk room lamp switch | OFF (Trunk lid is closed) | (V) 15 10 5 0 10 ms JPMIA0011GB 11.8 V | |
| | | | | | ON (Trunk lid is opened) | 0 V | |
| | | | | Ignition switch ON (A/T mod- | When selector lever is in P or N position | 12 V | |
| 52 | Ground | Starter relay control | Output | els) | When selector lever is not in P or N position | 0 V | |
| (R) | Croana | Carlor roldy control | ouput | Ignition switch ON (M/T mod- | When the clutch pedal is depressed | Battery voltage | |
| | | | | els) | When the clutch pedal is not depressed | 0 V | |
| | | | | | ON (Pressed) | 0 V | |
| 61 (SB) | Ground | Trunk lid opener re- quest switch | Input | Trunk lid open- er request switch | OFF (Not pressed) | (V) 15 10 10 ms JPMIA0016GB 1.0 V | |
| 64 | | Intelligent Key warn- | | Intelligent Key | Sounding | 0 V | |
| 64 (G) | Ground | ing buzzer (Engine room) | Output | warning buzzer (Engine room) | Not sounding | 12 V | |

< ECU DIAGNOSIS INFORMATION >

| Termir | | | | | Value | Δ | |
|------------|--------|--|------------------|------------------------------|--|--|-------------|
| (Wire + | color) | Signal name | Input/ Output | | Condition | (Approx.) | A |
| | | | | | Pressed | 0 V | В |
| 67 (GR) | Ground | Trunk lid opener switch | Input | Trunk lid open- er switch | Not pressed | (V) 15 10 50 10 ms JPMIA0011GB 11.8 V | C |
| 68 (BG) | Ground | Rear RH door switch | Input | Rear RH door switch | OFF (When rear RH door closes) | (V) 15 10 10 10 ms JPMIA0011GB 11.8 V | E F G |
| | | | | | ON (When rear RH door opens) | 0 V | Н |
| 69 (L) | Ground | Rear LH door switch | Input | Rear LH door switch | OFF (When rear LH door closes) | (V) 15 0 10 10 ms JPMIA0011GB 11.8 V | I J |
| | | | | | ON (When rear LH door opens) | 0 V | PWC |
| | | | | | When Intelligent Key is in the passenger compart- ment | (V) 15 10 5 0 1 s | L |
| 72 (R) | Ground | Room antenna 2 (–) (Center console) | Output | Ignition switch OFF | | JMKIA0062GB | Ν |
| 、 / | | | | | When Intelligent Key is not in the passenger compart- ment | (V) 15 10 5 0 1 s | O |
| | | | | | | JMKIA0063GB | |

< ECU DIAGNOSIS INFORMATION >

| | nal No. | Description | | | | Value |
|------------|---------|--------------------------------------|------------------|--|--|--|
| (Wire + | color) | Signal name | Input/ Output | | Condition | (Approx.) |
| 73 | Ground | Room antenna 2 (+) | Output | Ignition switch | When Intelligent Key is in the passenger compart- ment | (V) 15 10 5 0 1 s JMKIA0062GB |
| (G) | | (Center console) | | OFF | When Intelligent Key is not in the passenger compart- ment | (V) 15 0 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 10 10 10 10 10 10 10 10 10 10 10 10 |
| 74 | Ground | nd Passenger door an- tenna (–) | Output | When the pas- senger door re- quest switch is operated with ignition switch OFF | When Intelligent Key is in the antenna detection area | (V) 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 15 10 5 0 15 15 10 15 15 10 15 15 10 15 15 10 15 15 15 15 15 15 15 15 15 15 15 15 15 |
| (SB) | | | | | When Intelligent Key is not in the antenna detection area | (V) 15 0 0 1 s JMKIA0063GB |
| 75 | Ground | H Passenger door an- tenna (+) Οι | | When the pas- senger door re- quest switch is operated with ignition switch OFF | When Intelligent Key is in the antenna detection area | (V) 15 10 5 0 1 s JMKIA0062GB |
| (BR) | Cround | | Output | | When Intelligent Key is not in the antenna detection area | (V) 15 0 5 0 1 s JMKIA0063GB |

< ECU DIAGNOSIS INFORMATION >

| | Terminal No. Description (Wire color) | | | | Value | | |
|------------|--|---------------------|------------------|--|--|---|-------------|
| (Wire + | color) | Signal name | Input/ Output | | Condition | (Approx.) | A |
| 76 | | Driver door antenna | | When the driv- er door request | When Intelligent Key is in the antenna detection area | (V) 15 10 5 0 1 s JMKIA0062GB | B C D |
| (V) | Ground | (-) | Output | switch is oper- ated with igni- tion switch OFF | When Intelligent Key is not in the antenna detection area | (V) 15 0 10 1 1 1 1 1 1 JMKIA0063GB | E |
| 77 | Ground | Driver door antenna | Output | When the driv- er door request switch is oper- | When Intelligent Key is in the antenna detection area | (V) 15 10 5 0 1 s JMKIA0062GB | G H I |
| (LG) | | (+) | | ated with igni- tion switch OFF | When Intelligent Key is not in the antenna detection area | (V) 15 0 10 10 10 10 10 10 10 10 10 | J PWC |
| 78 | Ground | Room antenna 1 (-) | Output | Ignition switch | When Intelligent Key is in the passenger compart- ment | (V) 15 10 5 0 1 s JMKIA0062GB | M |
| (Y) | | (Instrument panel) | Guiput | OFF | When Intelligent Key is not in the passenger compart- ment | (V) 15 0 0 15 0 15 0 15 0 15 15 0 15 15 15 10 15 15 10 15 10 15 10 15 10 15 10 15 10 15 10 10 10 10 10 10 10 10 10 10 10 10 10 | P |

< ECU DIAGNOSIS INFORMATION >

| | nal No. | Description | | | | Value |
|------------|---------|--|------------------|--|---|---|
| (Wire | color) | Signal name | Input/ Output | | Condition | (Approx.) |
| 79 | Ground | Room antenna 1 (+) | | Ignition switch | When Intelligent Key is in the passenger compart- ment | (V) 15 10 5 0 1 s JMKIA0062GB |
| (BR) | Glouina | (Instrument panel) | Output | OFF | When Intelligent Key is not in the passenger compart- ment | (V) 15 10 5 0 1 s JMKIA0063GB |
| 80 (GR) | Ground | NATS antenna amp. | Input/ Output | During waiting | Ignition switch is pressed while inserting the Intelli- gent Key into the key slot. | Just after pressing ignition switch. Pointer of tester should move. |
| 81 (W) | Ground | NATS antenna amp. | Input/ Output | During waiting | Ignition switch is pressed while inserting the Intelli- gent Key into the key slot. | Just after pressing ignition switch. Pointer of tester should move. |
| 82 (SB) | Ground | Ignition relay [Fuse block (J/B)] control | Output | Ignition switch | OFF or ACC ON | 0 V 12 V |
| 83 | Ground | Remote keyless entry receiver communica- | Input/ | During waiting | | (V) 15 10 5 0 1 ms JMKIA0064GB |
| (Y) | Ground | tion | Output | When operating either button on the Intelli- gent Key | | (V) 15 10 5 0 <i>1</i> <i>1</i> <i>1</i> <i>1</i> <i>1</i> <i>1</i> <i>1</i> <i>1</i> <i>1</i> <i>1</i> |

< ECU DIAGNOSIS INFORMATION >

[FRONT WINDOW ANTI-PINCH]

| | nal No. | Description | | | | Value | А |
|-----------|---------|-------------------------------|------------------|-----------------------|--|--|-------------|
| + | color) | Signal name | Input/ Output | | Condition | (Approx.) | |
| | | | | | All switches OFF (Wiper volume dial 4) | (V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V | B C D |
| 87 (Y) | Ground | Combination switch INPUT 5 | Input | Combination switch | Front fog lamp switch ON (Wiper volume dial 4) | (V) 15 0 2 ms 10 2 ms JPMIA0037GB 1.3 V | E |
| | | | | | Any of the conditions be- low with all switches OFF • Wiper volume dial 1 • Wiper volume dial 2 • Wiper volume dial 6 • Wiper volume dial 7 | (V) 15 0 2 ms JPMIA0040GB 1.3 V | G H |

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< ECU DIAGNOSIS INFORMATION >

| Termir | | Description | | | | Value |
|------------|-------------|---|------------------|----------------------------------|---|---|
| (Wire + | color) – | Signal name | Input/ Output | | Condition | (Approx.) |
| | | | | | All switches OFF (Wiper volume dial 4) | (V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V |
| 88 | Ground | Combination switch | Input | Combination | Lighting switch HI (Wiper volume dial 4) | (V) 15 10 0 2 ms JPMIA0036GB 1.3 V |
| (BG) | | INPUT 3 | | | Lighting switch 2ND (Wiper volume dial 4) | (V) 15 10 5 0 2 ms JPMIA0037GB 1.3 V |
| | | | | | Any of the conditions be- low with all switches OFF • Wiper volume dial 1 • Wiper volume dial 2 • Wiper volume dial 3 | (V) 15 10 2 ms JPMIA0040GB 1.3 V |
| 89 (BR) | Ground | Push-button ignition switch (Push switch) | Input | Push-button ig- nition switch | Pressed | 0 V |
| 90 | Ground | CAN-L | Input/ | (push switch) | Not pressed | Battery voltage |
| (P) 91 | | | Output Input/ | | | |
| (L) | Ground | CAN-H | Output | | | - |
| 92 (LG) | Ground | Key slot illumination | Output | Key slot illumi- nation | OFF | 0 V |
| | | | | | ON | 12 V |

< ECU DIAGNOSIS INFORMATION >

| | nal No. color) | Description | | | O and it is a | Value |
|---|---|--|------------------|--------------------------------------|---|--|
| + | - | Signal name | Input/ Output | | Condition | (Approx.) |
| 93 | Ground | ON indicator lamp | Output | Ignition switch | OFF (LOCK indicator is not illuminated) | Battery voltage |
| (GR) | | | | - | ON | 0 V |
| 95 | Cround | ACC relay control | Quitout | Ignition owitch | OFF | 0 V |
| (BG) | Ground | ACC relay control | Output | Ignition switch | ACC or ON | 12 V |
| 96 (GR) | Ground | A/T shift selector (De- tention switch) power supply | Output | | _ | 12 V |
| 97 | Ground | Steering lock condi- | Input | Steering lock | LOCK status | 0 V |
| (L) | Cround | tion No. 1 | mpar | oleening look | UNLOCK status | 12 V |
| 98 | Ground | Steering lock condi- | Input | Steering lock | LOCK status | 12 V |
| (P) | Croana | tion No. 2 | mput | electing leck | UNLOCK status | 0 V |
| | | Selector lever P posi- tion switch (A/T mod- | | Selector lever | P position | 0 V |
| | | els) | | Selector lever | Any position other than P | 12 V |
| 99 | ASCD clutch switch (M/T models without | | ASCD clutch | OFF (Clutch pedal is de- pressed) | 0 V | |
| (R)* ¹ (BR)* ² | Ground | ICC) | Input | switch | ON (Clutch pedal is not depressed) | 12 V |
| | | ICC clutch switch (M/ | | ICC clutch | OFF (Clutch pedal is de- pressed) | 0 V |
| | T models with ICC) | | switch | ON (Clutch pedal is not depressed) | 12 V | |
| | | | | | ON (Pressed) | 0 V |
| 100 (Y) | Ground | Passenger door re- quest switch | Input | Passenger door request switch | OFF (Not pressed) | (V) 15 10 10 ms JPMIA016GB |
| | | | | | ON (Pressed) | 1.0 V 0 V |
| 101 (P) | Ground | Driver door request switch | Input | Driver door re- quest switch | OFF (Not pressed) | (V) 15 0 10 ms 10 ms JPMIA0016GB 1.0 V |
| 102 | Ground | Blower fan motor re- | Output | Ignition switch | OFF or ACC | 0 V |
| (BG) | Ground | lay control | Juiput | Ignition Switch | ON | 12 V |
| 103 (P) | Ground | Remote keyless entry receiver power sup- ply | Output | Ignition switch C | DFF | 12 V |
| 106 | Ground | Steering lock unit | Output | Ignition owitch | OFF or ACC | 12 V |
| (SB) | Ground | power supply | Output | Ignition switch | ON | 0 V |

BCM (BODY CONTROL MODULE) < ECU DIAGNOSIS INFORMATION > [FRON]

[FRONT WINDOW ANTI-PINCH]

| | nal No. | Description | | | | Value | |
|-------------|-------------|-------------------------------|------------------|---|------------------------|---|--|
| (Wire + | color) – | Signal name | Input/ Output | Condition | | (Approx.) | |
| | | | | | All switches OFF | (V) 15 10 2 ms JPMIA0041GB 1.4 V | |
| | | | | | Turn signal switch LH | (V) 15 0 2 ms JPMIA0037GB 1.3 V | |
| 107 (LG) | Ground | Combination switch INPUT 1 | Input | Combination switch (Wiper volume dial 4) | Turn signal switch RH | (V) 15 10 5 0 2 ms JPMIA0036GB 1.3 V | |
| | | | | | Front wiper switch LO | (V) 15 0 2 ms JPMIA0038GB 1.3 V | |
| | | | | | Front washer switch ON | (V) 15 10 5 0 2 ms JPMIA0039GB | |

1.3 V

< ECU DIAGNOSIS INFORMATION >

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[FRONT WINDOW ANTI-PINCH]

| | nal No. | Description | | | | Value | ^ |
|------------|-------------|----------------------------|------------------|--------------------|---|---------------------------------------|--------|
| (Wire | color) - | Signal name | Input/ Output | | Condition | (Approx.) | A |
| | | | | | All switches OFF (Wiper volume dial 4) | (V) 15 0 2 ms JPMIA0041GB | B C |
| | | | | | | 1.4 V | D |
| | | | | | Lighting switch AUTO (Wiper volume dial 4) | 0 +> 2 ms JPMIA0038GB | F |
| 108 (R) | Ground | Combination switch INPUT 4 | Input | Combination switch | | 1.3 V | G |
| | | | | | Lighting switch 1ST (Wiper volume dial 4) | | Н |
| | | | | | | 2 ms | |
| | | | | | Any of the conditions be- low with all switches OFF | (V) 15 10 5 | J |
| | | | | | Wiper volume dial 1 Wiper volume dial 5 Wiper volume dial 6 | 0 +> -2 ms JPMIA0039GB | PWC |
| | | | | | | 1.3 V | L |

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ECU DIAGNOSIS INFORMATION > [FRON]

[FRONT WINDOW ANTI-PINCH]

Terminal No. Description Value (Wire color) Condition Input/ (Approx.) Signal name + _ Output (V) 15 10 5 Õ All switches OFF 2 ms JPMIA0041GB 1.4 V (V 15 10 5 0 Lighting switch PASS 2 ms JPMIA0037GB 1.3 V (V 15 10 Combination 109 Combination switch switch Ō Ground Input Lighting switch 2ND INPUT 2 (W) (Wiper volume dial 4) 2 ms JPMIA0036GB 1.3 V (V 15 10 Front wiper switch INT/ n AUTO 2 ms JPMIA0038GB 1.3 V 15 10 5 0 Front wiper switch HI 2 ms JPMIA0040GB 1.3 V ON 0 V 110 Ground Hazard switch Input Hazard switch (G) Ō OFF 10 ms JPMIA0012GB 1.1 V

< ECU DIAGNOSIS INFORMATION >

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| | nal No. | Description | | | | Value | |
|-------------|---------|--|------------------|---------------------|---|--|--------|
| (Wire + | color) | Signal name | Input/ Output | | Condition | Value (Approx.) | А |
| | | | | | LOCK status | 12 V | В |
| 111 (Y) | | Steering lock unit communication | Input/ Output | | LOCK or UNLOCK | (V) 15 0 50 ms JMKIA0066GB | C |
| | | | | | For 15 seconds after UN- LOCK | 12 V | Е |
| | | | | | 15 seconds or later after UNLOCK | 0 V | F |
| 112 (R) | Ground | Light and rain sensor serial link | Input/ Output | Ignition switch ON | | (V) 10 0 0 0 0 0 0 0 0 0 0 0 0 0 | G H |
| 113 | Ground | Optical sensor | | Ignition switch | When bright outside of the vehicle | Close to 5 V | I |
| (BG) | | Optical sensor | input | ON | When dark outside of the vehicle | Close to 0 V | 1 |
| 114 | Ground | Clutch interlock | Input | Clutchinterlock | OFF (Clutch pedal is not depressed) | 0 V | J |
| (R) | | switch | | switch | ON (Clutch pedal is de- pressed) | Battery voltage | PWC |
| 116 (SB) | Ground | Stop lamp switch 1 | Input | | _ | Battery voltage | |
| | | Stop lamp switch 2 (Without ICC) | | Stop lamp switch | OFF (Brake pedal is not depressed) ON (Brake pedal is de- | 0 V Battery voltage | L |
| 118 (BR) | Ground | Stop lamp switch 2 | Input | | pressed) h OFF (Brake pedal is not ICC brake hold relay OFF | 0 V | IVI |
| | | (With ICC) | | Stop lamp switc | h ON (Brake pedal is de- brake hold relay ON | Battery voltage | Ν |
| 119 (SB) | Ground | Front door lock as- sembly driver side (Unlock sensor) | Input | Driver door | LOCK status (Unlock sensor switch OFF) | (V) 15 0 10 ms JPMIA0012GB 1.1 V | O |
| | | | | | UNLOCK status (Unlock switch sensor ON) | 0 V | |

< ECU DIAGNOSIS INFORMATION >

| | nal No. | Description | | | | Velue |
|-------------|-------------|---|------------------|--|-------------------------------|---|
| (Wire + | color) – | Signal name | Input/ Output | | Condition | Value (Approx.) |
| 121 | Ground | Key slot switch | Input | When the Intellig | gent Key is inserted into key | 12 V |
| (SB) | Ground | Ney Slot Switch | mput | When the Intellig key slot | gent Key is not inserted into | 0 V |
| 123 | Ground | IGN feedback | Input | Ignition switch | OFF or ACC | 0 V |
| (V) | | | | 5 | ON | Battery voltage |
| 124 (R) | Ground | Passenger door switch | Input | Passenger door switch | OFF (Door close) | (V) 15 10 5 0 10 ms JPMIA0011GB 11.8 V |
| | | | | | ON (Door open) | 0 V |
| 129 (BG) | Ground | Trunk lid opener can- cel switch | Input | Trunk lid open- er cancel switch | CANCEL | (V) 15 10 5 0 10 ms JPMIA0012GB 1.1 V |
| | | | | | ON | 0 V |
| 132 (V) | Ground | Power window switch communication | Input/ Output | Ignition switch C | DN | (V) 15 0 5 0 10 ms JPMIA0013GB 10.2 V |
| | | | | Ignition switch C | OFF or ACC | 12 V |
| | | | | - | ON (Tail lamps OFF) | 9.5 V |
| 133 (L) | Ground | Push-button ignition switch illumination | Output | Push-button ig- nition switch il- lumination | ON (Tail lamps ON) OFF | NOTE: The pulse width of this wave is varied by the illumination bright- ening/dimming level. (V) 15 10 5 0 JPMIA0159GB 0 V |
| 134 | | | Q () | LOCK indicator | OFF | Battery voltage |
| (LG) | Ground | LOCK indicator lamp | Output | lamp | ON | 0 V |
| 137 (BG) | Ground | Receiver and sensor ground | Input | Ignition switch C | DN | 0 V |

< ECU DIAGNOSIS INFORMATION >

| | nal No. | Description | | | | Value | |
|-------------|---------|--------------------------------|------------------|--|---|--|-----|
| (Wire + | color) | Signal name | Input/ Output | | Condition | Value (Approx.) | A |
| 138 | | Receiver and sensor | | | OFF | 0 V | |
| (V) | Ground | power supply | Output | Ignition switch | ACC or ON | 5.0 V | В |
| 139 | Ground | Tire pressure receiv- | Input/ | Ignition switch | Standby state | (V) 4 2 0 • • 0.2s OCC3881D | C |
| (L) | Cround | er communication | Output | ON | When receiving the signal from the transmitter | | E |
| | | Selector lever P/N | | t Selector lever | P or N position | + + 0.2s | G |
| (B) | Ground | position | Input | Selector lever | Except P and N positions | 0 V | |
| | | | | | ON | 0 V | Н |
| 141 (W) | Ground | Security indicator | Output | Security indica- tor | Blinking | (V) 15 0 5 0 1 s JPMIA0014GB 11.3 V | l |
| | | | | | OFF | 11.5 V | PWC |
| | | | | | All switches OFF | 0 V | |
| 142 (BR) | Ground | Combination switch OUTPUT 5 | Output | Combination switch (Wiper volume | Lighting switch 1ST Lighting switch HI Lighting switch 2ND | (V) 15 10 5 | L |
| | | | | dial 4) | Turn signal switch RH | 2 ms JPMIA0031GB 10.7 V | Ν |
| | | | | | All switches OFF (Wiper volume dial 4) | 0 V | 0 |
| 143 (P) | Ground | Combination switch OUTPUT 1 | Output | Combination switch | Front wiper switch HI (Wiper volume dial 4) Any of the conditions be- low with all switches OFF • Wiper volume dial 1 • Wiper volume dial 2 • Wiper volume dial 3 • Wiper volume dial 6 • Wiper volume dial 7 | (V) 15 0 2 ms 10 2 ms 10 10 10 10 10 10 10 10 10 10 10 10 10 | Ρ |

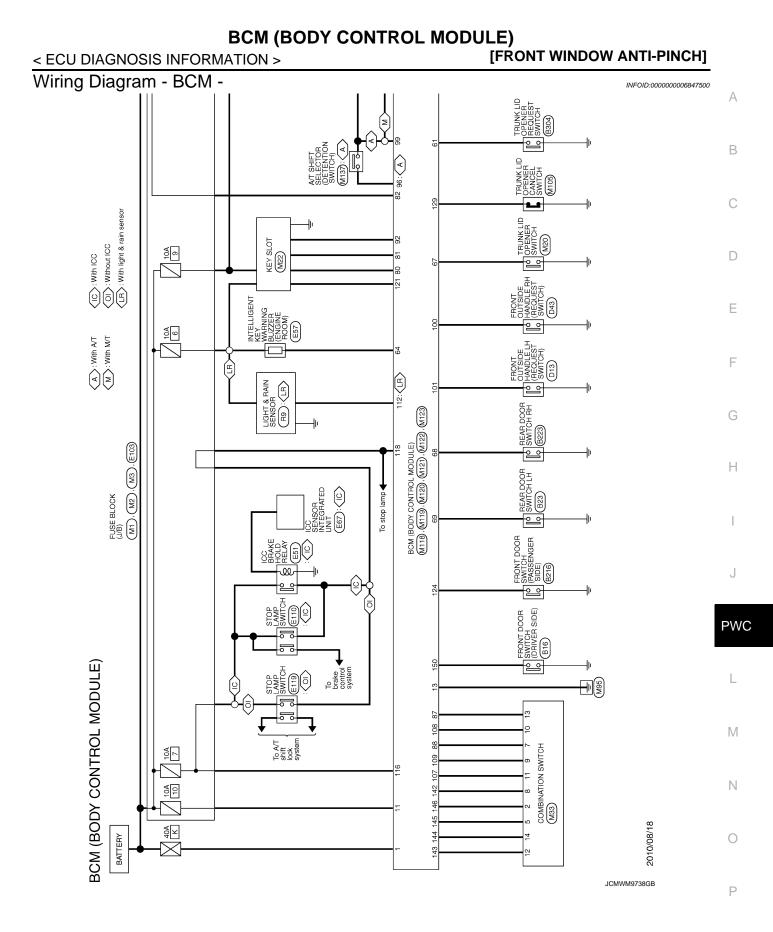
< ECU DIAGNOSIS INFORMATION >

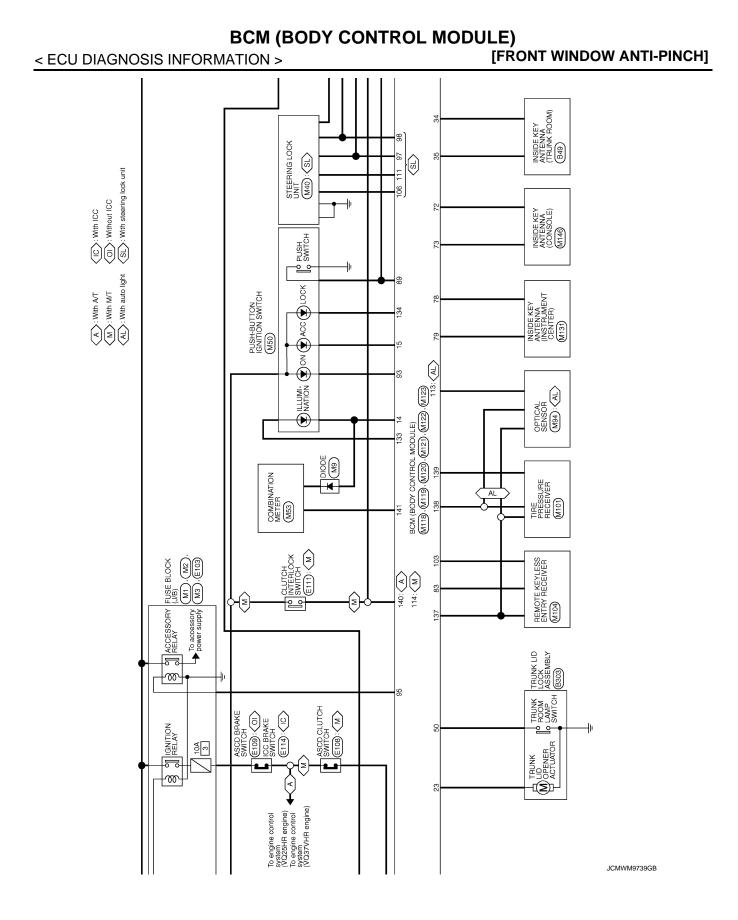
[FRONT WINDOW ANTI-PINCH]

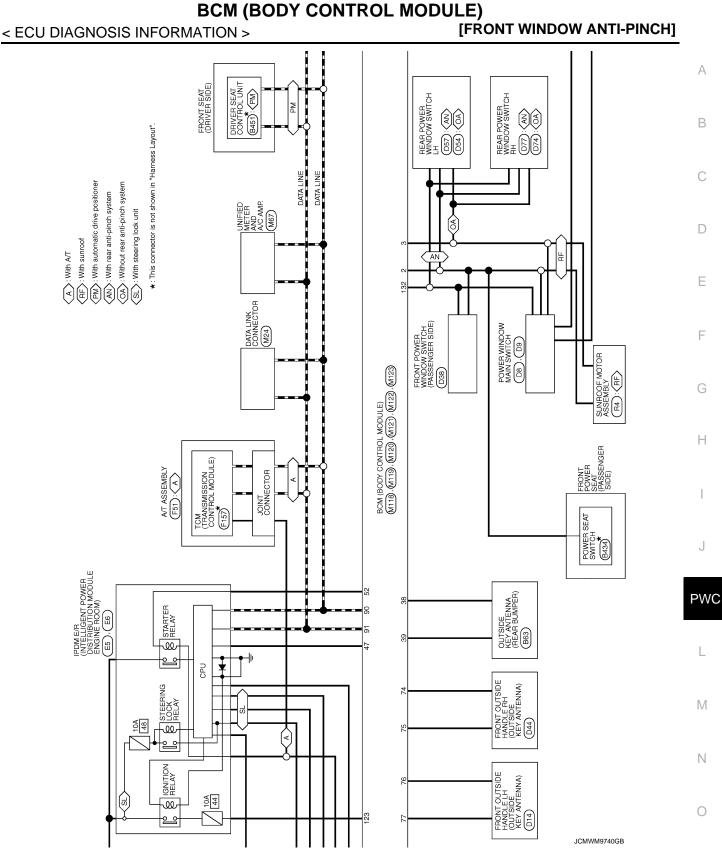
| | nal No. | Description | | | | Value | |
|-------------|-------------|--------------------------------|------------------|---|--|---|--|
| (Wire + | color) – | Signal name | Input/ Output | | Condition | (Approx.) | |
| | | | | | All switches OFF (Wiper volume dial 4) | 0 V | |
| | | | | | Front washer switch ON (Wiper volume dial 4) | (V) 15 | |
| 144 (G) | Ground | Combination switch OUTPUT 2 | | Any of the conditions be- low with all switches OFF • Wiper volume dial 1 • Wiper volume dial 5 • Wiper volume dial 6 | JPMIA0033GB 10.7 V | | |
| | | | | | All switches OFF | 0 V | |
| | | | | | Front wiper switch INT/ AUTO | (V) | |
| 145 | | Combination switch | | Combination switch | Front wiper switch LO | | |
| (L) | Ground | OUTPUT 3 | Output | (Wiper volume dial 4) | Lighting switch AUTO | 50 2 ms 10.7 V | |
| | | | | | All switches OFF | 0 V | |
| | | Combination switch | Output | Combination switch (Wiper volume dial 4) | Front fog lamp switch ON | | |
| | | | | | Lighting switch 2ND | (V) 15 | |
| 146 | Ground | | | | Lighting switch PASS | | |
| (SB) | Ground | OUTPUT 4 | Output | | Turn signal switch LH | 0 2.ms JPMIA0035GB 10.7 V | |
| 150 (GR) | Ground | Driver door switch | Input | Driver door switch | OFF (Door close) | (V) 15 10 5 0 10 ms JPMIA0011GB 11.8 V | |
| | | | | | ON (Door open) | 0 V | |
| 151 | Ground | Rear window defog- | Output | Rear window | Active | 0 V | |
| (G) | | ger relay control | - | defogger | Not activated | Battery voltage | |

• *1: A/T models

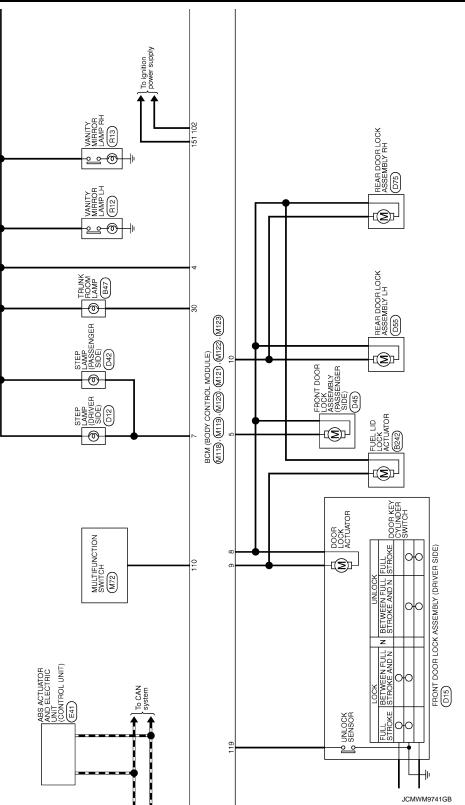
• *2: M/T models

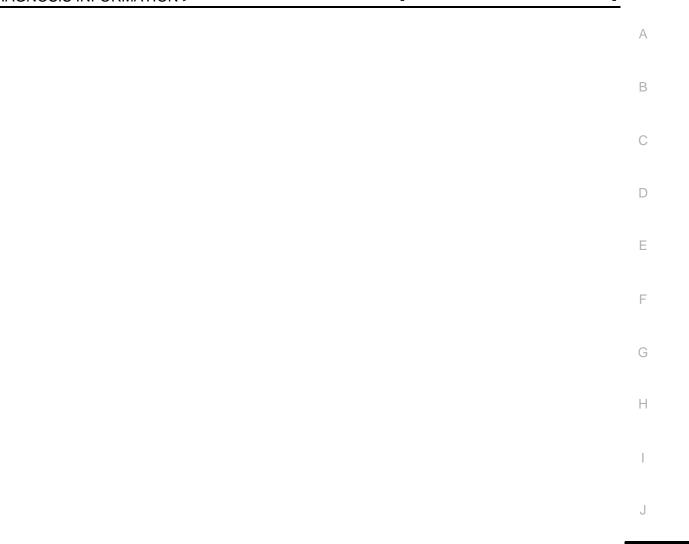


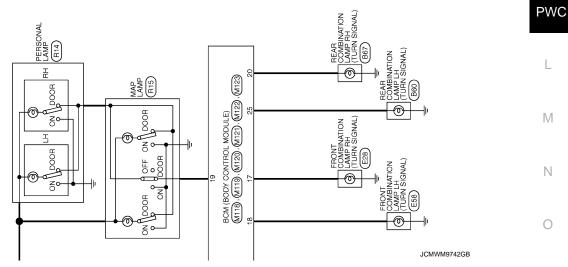




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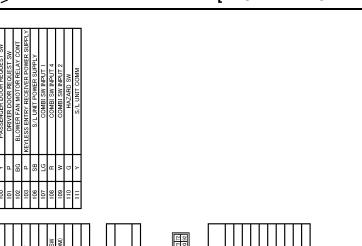


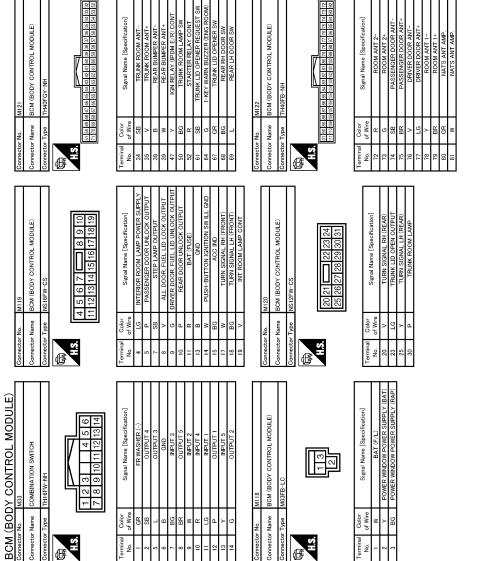


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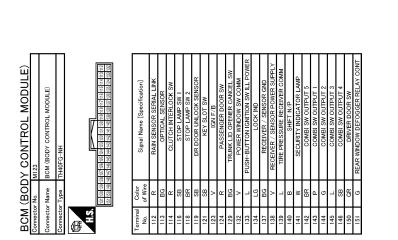
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JCMWM9743GB

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Fail-safe

FAIL-SAFE CONTROL BY DTC

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

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< ECU DIAGNOSIS INFORMATION >

| 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 |
| B2191: DIFFERENCE OF KEY | Inhibit engine cranking | Erase DTC |
| B2192: ID DISCORD BCM-ECM | Inhibit engine cranking | Erase DTC |
| B2193: CHAIN OF BCM-ECM | Inhibit engine cranking | Erase DTC |
| B2195: ANTI-SCANNING | Inhibit engine cranking | Ignition switch $ON \rightarrow OFF$ |
| B2557: VEHICLE SPEED | Inhibit steering lock | When normal vehicle speed signals are 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 be- comes consistentStarter control relay signalStarter relay status signal |
| B2601: SHIFT POSITION | Inhibit steering 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 steering 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 (12 V) Vehicle speed: 4 km/h (2.5 MPH) or more |
| B2603: SHIFT POSI STATUS | Inhibit steering 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 (12 V) Selector lever P/N position signal: Except P and N positions (0 V) |
| B2604: PNP/CLUTCH SW | Inhibit steering lock | 500 ms after any of the following BCM recognition conditions are fulfilled Status 1 Ignition switch is in the ON position Selector lever P/N position signal: P and N position (12 V) P range signal or N range signal (CAN): ON Status 2 Ignition switch is in the ON position Selector lever P/N position signal: Except P and N positions (0 V) P range signal and N range signal (CAN): OFF |
| B2605: PNP/CLUTCH SW | Inhibit steering lock | 500 ms after any of the following BCM recognition conditions are fulfilled Status 1 Ignition switch is in the ON position Selector lever P/N position signal: Except P and N positions (0 V) Interlock/PNP switch signal (CAN): OFF Status 2 Ignition switch is in the ON position Selector lever P/N position signal: P or N position (12 V) PNP switch signal (CAN): ON |
| B2606: S/L RELAY | Inhibit engine cranking | 500 ms after the following CAN signal communication status becomes consistent Steering lock relay signal (Request signal) Steering lock relay signal (Condition signal) |
| B2607: S/L RELAY | Inhibit engine cranking | 500 ms after the following CAN signal communication status has becomes consistent Steering lock relay signal (Request signal) Steering lock relay signal (Condition signal) |

< ECU DIAGNOSIS INFORMATION >

[FRONT WINDOW ANTI-PINCH]

| Display contents of CONSULT | Fail-safe | Cancellation |
|-----------------------------|---|--|
| 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 crankingInhibit steering lock | When the following steering lock conditions agree BCM steering lock control status Steering lock condition No. 1 signal status Steering 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 (12 V) Ignition ON signal (CAN to IPDM E/R): OFF (Request signal) Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal) |
| B260F: ENG STATE SIG LOST | Maintains the power supply position attained at the time of DTC detection | When any of the following conditions are fulfilledPower position changes to ACCReceives engine status signal (CAN) |
| B2612: S/L STATUS | Inhibit engine cranking Inhibit steering lock | When any of the following conditions are fulfilled Steering lock unit status signal (CAN) is received normally The BCM steering lock control status matches the steering lock status recognized by the steering lock unit status signal (CAN from IPDM E/R) |
| B2617: BCM | 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 be- comes normal |
| B2619: BCM | Inhibit engine cranking | 1 second after the steering lock unit power supply output control in- side BCM becomes normal |
| B261E: VEHICLE TYPE | Inhibit engine cranking | BCM initialization |
| B26E8: CLUTCH SW | Inhibit engine cranking | When any of the following BCM recognition conditions are fulfilled Status 1 Clutch switch signal (CAN from ECM): ON Clutch interlock switch signal: OFF (0 V) Status 2 Clutch switch signal (CAN from ECM): OFF Clutch interlock switch signal: ON (Battery voltage) |
| B26E9: S/L STATUS | Inhibit engine cranking Inhibit steering lock | When BCM transmits the LOCK request signal to steering lock unit, and receives LOCK response signal from steering lock unit, the following conditions are fulfilled Steering condition No. 1 signal: LOCK (0 V) Steering condition No. 2 signal: LOCK (12 V) |

DTC Inspection Priority Chart

INFOID:00000006847502

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

| Priority | DTC | |
|----------|---|--|
| 1 | B2562: LOW VOLTAGE | |
| 2 | U1000: CAN COMM U1010: CONTROL UNIT(CAN) | |
| 3 | B2190: NATS ANTENNA AMP B2191: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM B2195: ANTI-SCANNING | |

< ECU DIAGNOSIS INFORMATION >

| < ECU DIAGN | IOSIS INFORMATION > | | [FRONT WINDOW ANTI-PINCH] |
|-------------|---|-----|---------------------------|
| 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 POSI STATUS B2603: SHIFT POSI STATUS B2604: PNP/CLUTCH SW B2605: PNP/CLUTCH SW B2606: S/L RELAY B2607: S/L RELAY B2608: STARTER RELAY B2609: S/L STATUS B2609: S/L STATUS B2608: STARTER RELAY B2609: S/L STATUS B2608: STEERING LOCK UNIT B2609: STEERING LOCK UNIT B2600: STEERING LOCK UNIT B2601: STEERING LOCK UNIT B2601: STEERING LOCK UNIT B2601: SL STATUS B2614: BCM B2615: BCM B2616: BCM B2617: BCM B2618: BCM B2618: BCM B2618: BCM B2618: CLUTCH SW B2618: VEHICLE TYPE B26E8: CLUTCH SW B26E9: S/L STATUS B26E4: KEY REGISTRATION C1729: VHCL SPEED SIG ERR U0415: VEHICLE SPEED | | |
| 5 | C1704: LOW PRESSURE FL C1705: LOW PRESSURE FR C1706: LOW PRESSURE RR C1707: LOW PRESSURE RL C1708: [NO DATA] FL C1709: [NO DATA] FR C1710: [NO DATA] RR C1711: [NO DATA] RL C1716: [PRESSDATA ERR] FL C1717: [PRESSDATA ERR] FR C1718: [PRESSDATA ERR] RR C1719: [PRESSDATA ERR] RL C1734: CONTROL UNIT | | |
| 6 | B2621: INSIDE ANTENNA B2622: INSIDE ANTENNA B2623: INSIDE ANTENNA | | |

DTC Index

NOTE:

The details of time display are as follows.

- CRNT: A malfunction is detected now.
- PAST: A malfunction was detected in the past.

IGN counter is displayed on Freeze Frame Data. For details of Freeze Frame Data, refer to <u>BCS-15, "COM-MON ITEM : CONSULT-III Function (BCM - COMMON ITEM)"</u>.

INFOID:000000006847503

< ECU DIAGNOSIS INFORMATION >

[FRONT WINDOW ANTI-PINCH]

| CONSULT display | Fail-safe | Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle condition | Intelligent Key warning lamp ON | Tire pressure monitor warning lamp ON | Refer- ence page |
|--|-----------|--|------------------------------------|---|---------------------|
| No DTC is detected. further testing may be required. | _ | - | _ | _ | _ |
| U1000: CAN COMM | _ | _ | _ | — | BCS-34 |
| U1010: CONTROL UNIT(CAN) | _ | _ | _ | _ | BCS-35 |
| U0415: VEHICLE SPEED | _ | _ | _ | — | BCS-36 |
| B2013: ID DISCORD BCM-S/L | × | × | _ | — | <u>SEC-55</u> |
| B2014: CHAIN OF S/L-BCM | × | × | _ | _ | <u>SEC-56</u> |
| B2190: NATS ANTENNA AMP | × | _ | _ | _ | <u>SEC-47</u> |
| B2191: DIFFERENCE OF KEY | × | _ | _ | _ | <u>SEC-50</u> |
| B2192: ID DISCORD BCM-ECM | × | _ | _ | _ | <u>SEC-51</u> |
| B2193: CHAIN OF BCM-ECM | × | | | _ | <u>SEC-53</u> |
| B2195: ANTI-SCANNING | × | _ | _ | _ | <u>SEC-54</u> |
| B2553: IGNITION RELAY | _ | × | _ | _ | PCS-49 |
| B2555: STOP LAMP | _ | × | _ | _ | <u>SEC-59</u> |
| B2556: PUSH-BTN IGN SW | _ | × | × | _ | <u>SEC-61</u> |
| B2557: VEHICLE SPEED | × | × | × | _ | <u>SEC-63</u> |
| B2560: STARTER CONT RELAY | × | × | × | | <u>SEC-64</u> |
| B2562: LOW VOLTAGE | | × | | | BCS-37 |
| B2601: SHIFT POSITION | × | × | × | | <u>SEC-65</u> |
| B2602: SHIFT POSITION | × | × | × | | SEC-68 |
| B2603: SHIFT POSI STATUS | × | × | × | _ | <u>SEC-70</u> |
| B2604: PNP/CLUTCH SW | × | × | × | | <u>SEC-73</u> |
| B2605: PNP/CLUTCH SW | × | × | × | | <u>SEC-75</u> |
| B2606: S/L RELAY | × | × | × | | <u>SEC-77</u> |
| B2607: S/L RELAY | × | × | × | | <u>SEC-78</u> |
| B2608: STARTER RELAY | × | × | × | | <u>SEC-80</u> |
| B2609: S/L STATUS | × | × | × | | <u>SEC-82</u> |
| B260A: IGNITION RELAY | × | × | × | | PCS-51 |
| B260B: STEERING LOCK UNIT | | × | × | _ | <u>SEC-86</u> |
| B260C: STEERING LOCK UNIT | | × | × | _ | <u>SEC-87</u> |
| B260D: STEERING LOCK UNIT | | × | × | _ | <u>SEC-88</u> |
| B260F: ENG STATE SIG LOST | × | × | × | _ | <u>SEC-89</u> |
| B2612: S/L STATUS | × | × | × | | <u>SEC-94</u> |
| B2614: BCM | | × | × | _ | PCS-53 |
| B2615: BCM | _ | × | × | | PCS-55 |
| B2616: BCM | _ | × | × | | PCS-57 |
| B2617: BCM | × | × | × | | <u>SEC-98</u> |
| B2618: BCM | × | × | × | | PCS-59 |
| B2619: BCM | × | × | × | | <u>SEC-100</u> |
| B261A: PUSH-BTN IGN SW | _ | × | × | | <u>PCS-60</u> |
| B261E: VEHICLE TYPE | × | × × | <pre>^</pre> | | <u>SEC-101</u> |

Revision: 2011 November

< ECU DIAGNOSIS INFORMATION >

[FRONT WINDOW ANTI-PINCH]

| CONSULT display | Fail-safe | Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle condition | Intelligent Key warning lamp ON | Tire pressure monitor warning lamp ON | Refer- ence page |
|---------------------------|-----------|--|------------------------------------|---|---------------------|
| B2621: INSIDE ANTENNA | — | × | — | — | DLK-59 |
| B2622: INSIDE ANTENNA | — | × | _ | — | DLK-61 |
| B2623: INSIDE ANTENNA | — | × | _ | _ | DLK-63 |
| B26E8: CLUTCH SW | × | × | × | _ | <u>SEC-90</u> |
| B26E9: S/L STATUS | × | × | imes (Turn ON for 15 seconds) | _ | <u>SEC-92</u> |
| B26EA: KEY REGISTRATION | _ | × | imes (Turn ON for 15 seconds) | _ | <u>SEC-93</u> |
| C1704: LOW PRESSURE FL | — | — | _ | × | |
| C1705: LOW PRESSURE FR | — | — | _ | × | |
| C1706: LOW PRESSURE RR | — | — | _ | × | <u>WT-24</u> |
| C1707: LOW PRESSURE RL | — | — | _ | × | |
| C1708: [NO DATA] FL | — | — | _ | × | |
| C1709: [NO DATA] FR | — | — | _ | × | |
| C1710: [NO DATA] RR | — | — | _ | × | <u>WT-26</u> |
| C1711: [NO DATA] RL | — | — | _ | × | |
| C1716: [PRESSDATA ERR] FL | — | — | _ | × | |
| C1717: [PRESSDATA ERR] FR | — | — | _ | × | WT-29 |
| C1718: [PRESSDATA ERR] RR | — | - | — | × | <u>vv 1-29</u> |
| C1719: [PRESSDATA ERR] RL | — | — | — | × | |
| C1729: VHCL SPEED SIG ERR | — | — | — | × | <u>WT-30</u> |
| C1734: CONTROL UNIT | — | — | | × | <u>WT-31</u> |

< ECU DIAGNOSIS INFORMATION >

POWER WINDOW MAIN SWITCH

Reference Value

INFOID:000000006603428

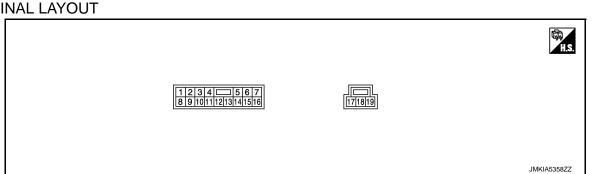
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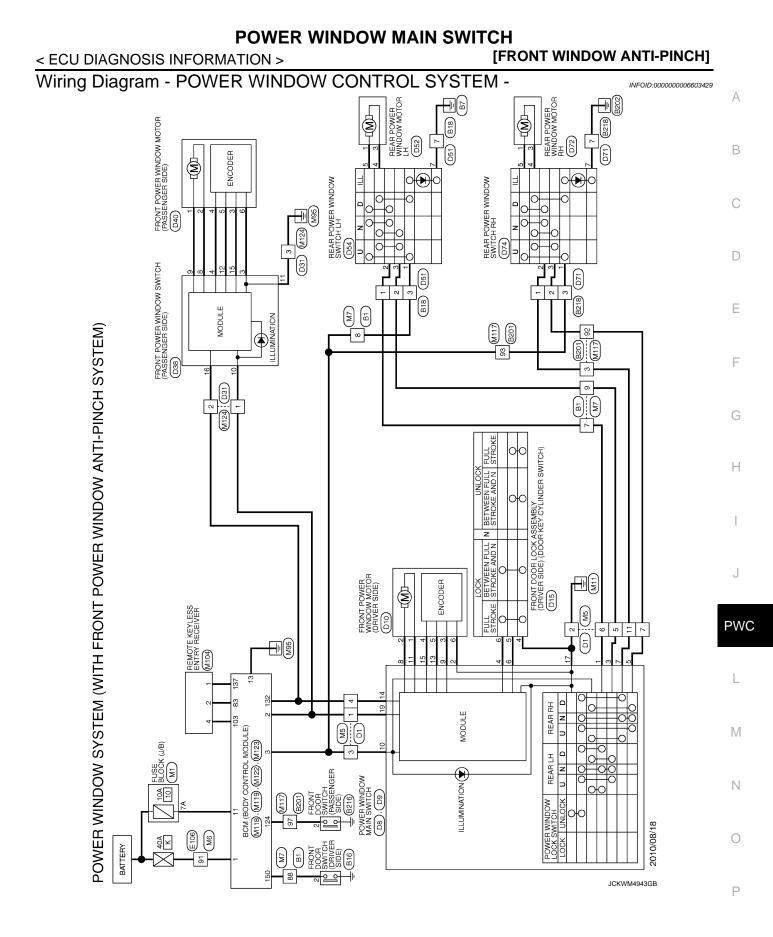
PHYSICAL VALUES

| Terminal No. (wire color) | | Description | | Condition | Voltage [V] |
|------------------------------|--------|--|------------------|--|---|
| + | - | Signal name | Input/ Output | Condition | (Approx.) |
| 1 (W) | Ground | Rear power window motor LH UP signal | Output | When rear LH switch in pow- er window main switch is UP at operated. | 12 |
| 2 (LG) | Ground | Encoder ground | _ | _ | 0 |
| 3 (GR) | Ground | Rear power window motor LH DOWN signal | Output | When rear LH switch in pow- er window main switch is DOWN at operated. | 12 |
| 4 (V) | Ground | Door key cylinder switch LOCK signal | Input | Key position (Neutral \rightarrow Locked) | $5 \rightarrow 0$ |
| 5 (BG) | Ground | Rear power window motor RH DOWN signal | Output | When rear RH switch in power window main switch is DOWN at operated. | 12 |
| 6 (Y) | Ground | Door key cylinder switch UNLOCK signal | Input | Key position (Neutral \rightarrow Unlocked) | $5 \rightarrow 0$ |
| 7 (BR) | Ground | Rear power window motor RH UP signal | Output | When rear RH switch in power window main switch is UP at operated. | 12 |
| 8 (L) | Ground | Front driver side power window motor UP signal | Output | When front LH switch in power window main switch is UP at operated. | 12 |
| 9 (BG) | Ground | Encoder pulse signal 2 | Input | When power window motor operates. | (V) 6 4 2 0 10 ms JMKIA0070GB |

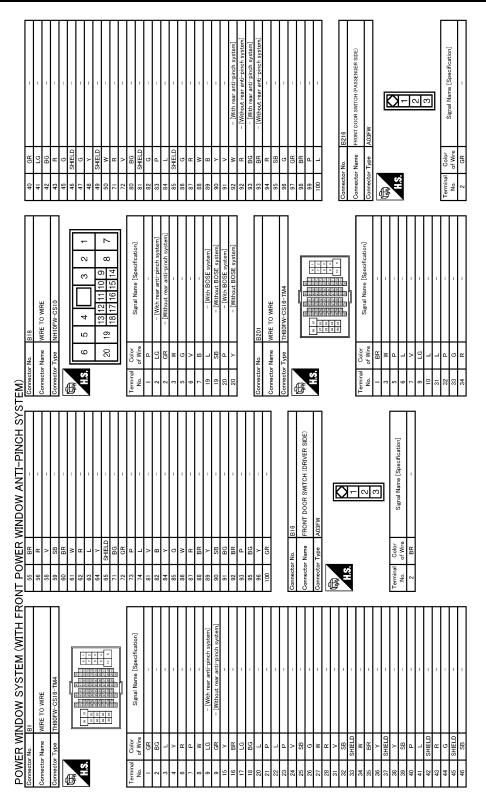
< ECU DIAGNOSIS INFORMATION >

[FRONT WINDOW ANTI-PINCH]

| | iinal No. e color) | Description | | Condition | Voltage [V] | |
|-----------|-----------------------|--|------------------|--|---|--|
| + | - | Signal name | Input/ Output | Condition | (Approx.) | |
| | | | | IGN SW ON | 12 | |
| 10 | | | | Within 45 second after igni- tion switch is turned to OFF | 12 | |
| (SB) | Ground | Rap signal | Input | When driver side or passen- ger side door is opened dur- ing retained power operation | 0 | |
| 11 (G) | Ground | Front driver side power window motor DOWN signal | Output | When front LH switch in power window main switch is DOWN at operated. | 12 | |
| 13 (P) | Ground | Encoder pulse signal 1 | Input | When power window motor operates. | (V) 6 2 0 10 10 ms JMKIA0070GB | |
| 14 (V) | Ground | Power window serial link | Input/ Output | IGN SW ON or power win- dow timer operating. | (V) 15 0 0 10 ms JPMIA0013GB | |
| 15 (B) | Ground | Encoder power supply | Output | When ignition switch ON or power window timer oper- ates. | 12 | |
| 17 (B) | Ground | Ground | | _ | 0 | |
| 19 (Y) | Ground | Battery power supply | Input | _ | 12 | |



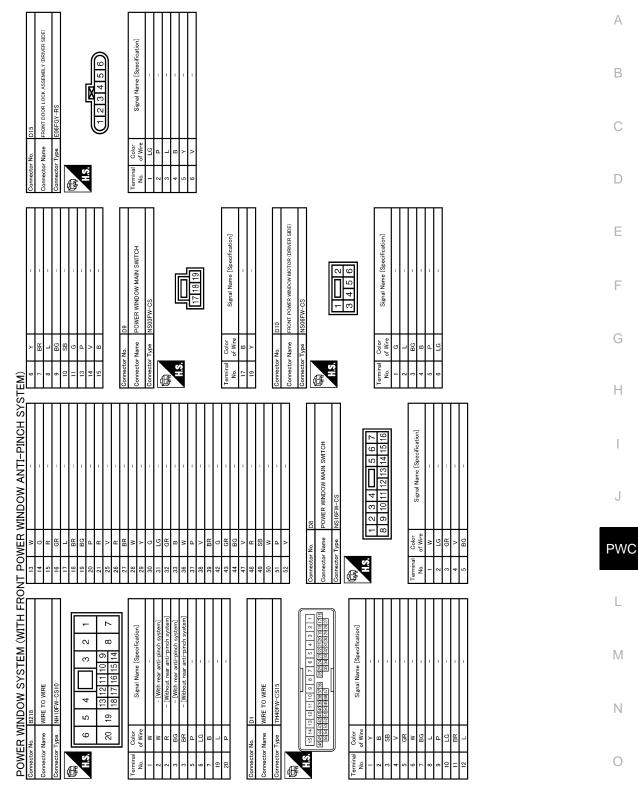
< ECU DIAGNOSIS INFORMATION >



JCKWM4944GB

< ECU DIAGNOSIS INFORMATION >

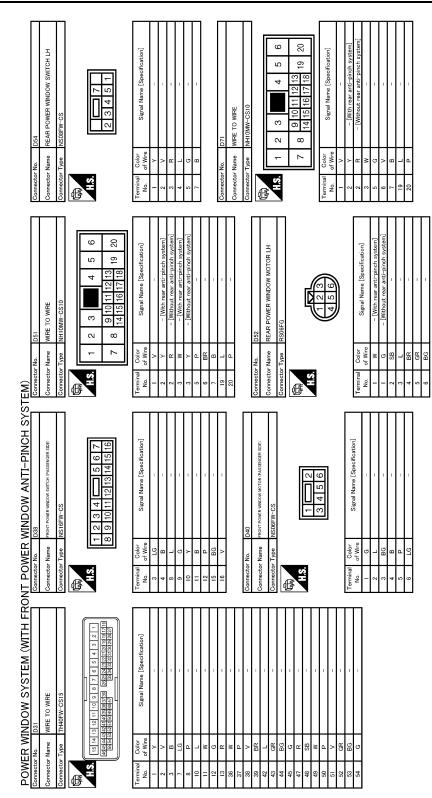
[FRONT WINDOW ANTI-PINCH]



JCKWM4945GB

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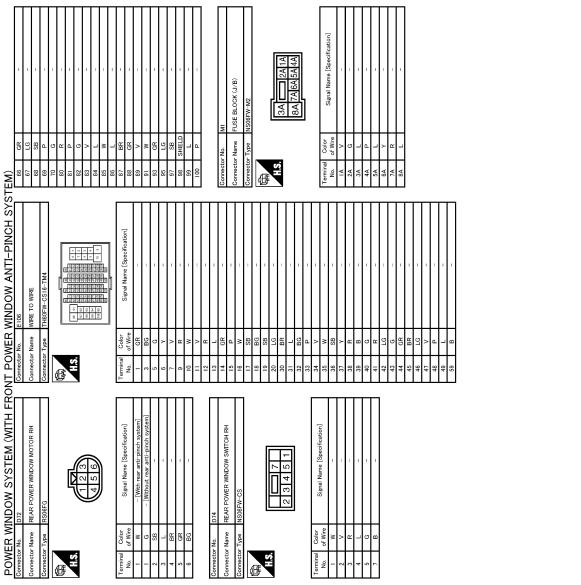
[FRONT WINDOW ANTI-PINCH]



JCKWM4946GB



< ECU DIAGNOSIS INFORMATION > [FRONT WINDOW ANTI-PINCH]



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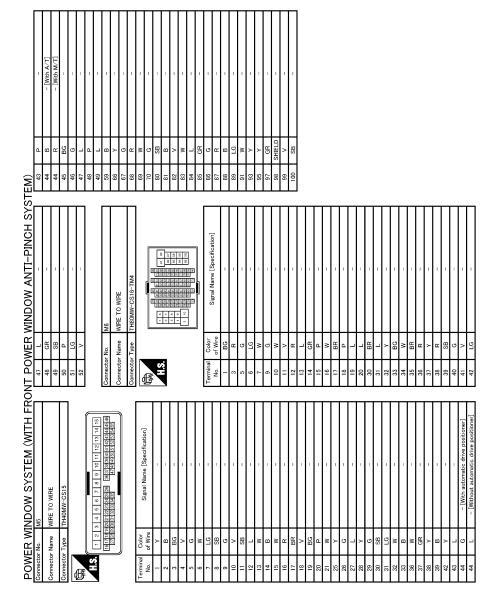
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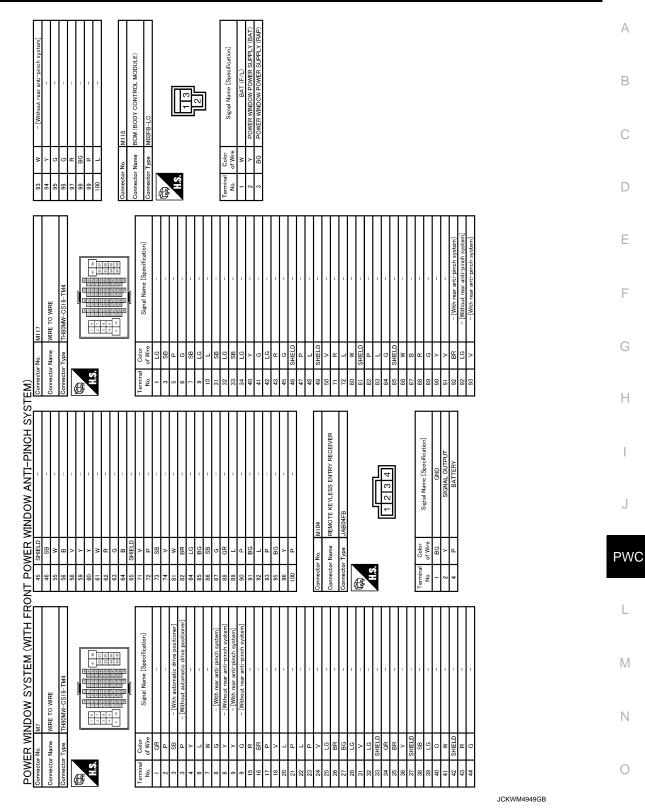
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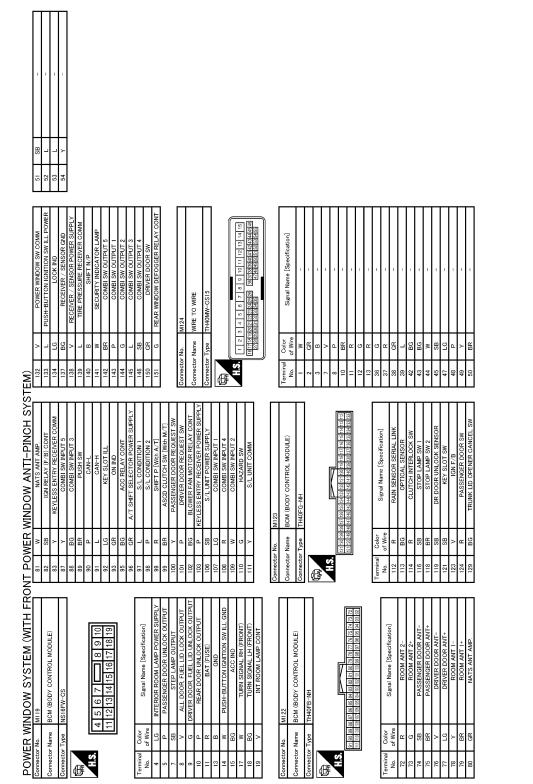


JCKWM4948GB

< ECU DIAGNOSIS INFORMATION >

[FRONT WINDOW ANTI-PINCH]





JCKWM4950GB

INFOID:000000006603430

FAIL-SAFE CONTROL

Fail-safe

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

POWER WINDOW MAIN SWITCH

< ECU DIAGNOSIS INFORMATION >

< ECU DIAGNOSIS INFORMATION >

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

If fail-safe control, the system changes to a non-initialized condition and the following function do not operate.

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

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

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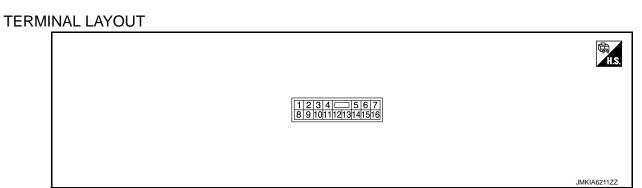
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Reference Value

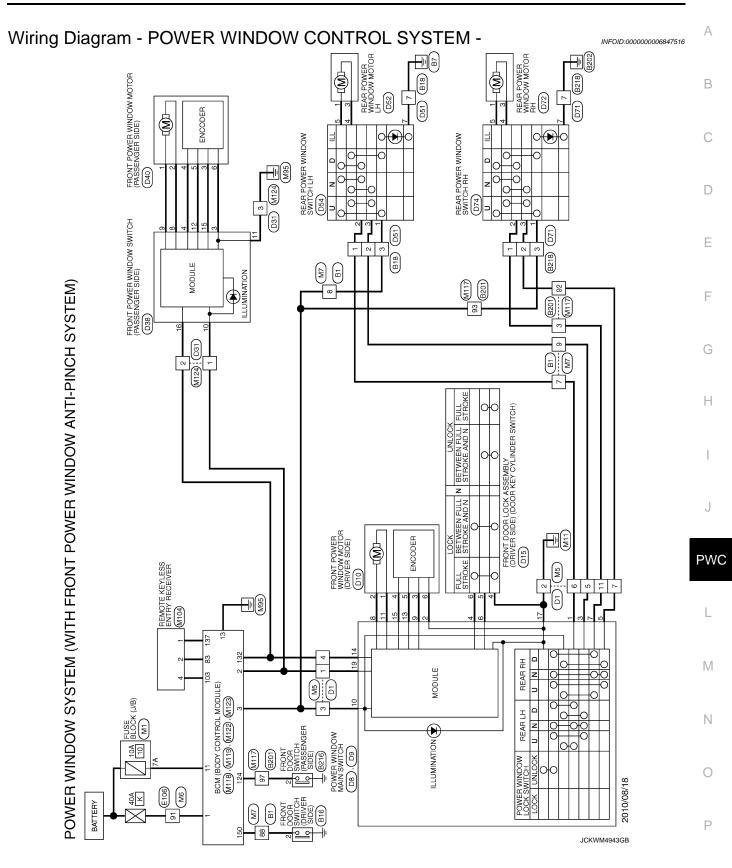
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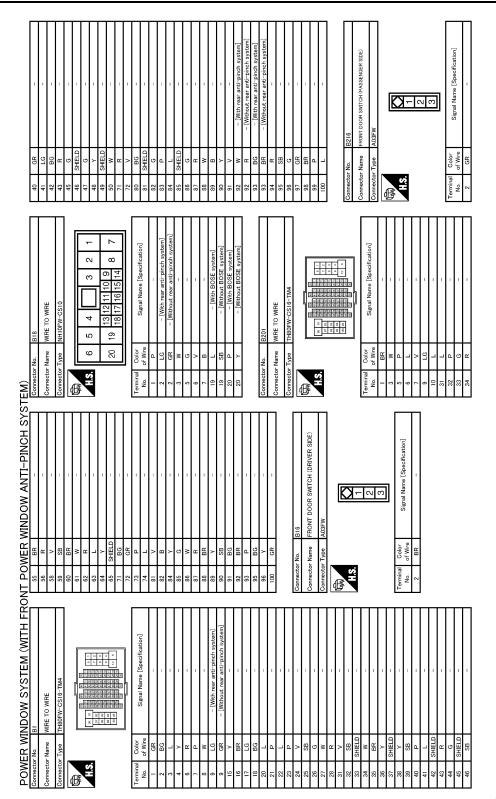
PHYSICAL VALUES

| | nal No. color) | Description | | Condition | Voltage (V) | |
|------------|-------------------|-----------------------------------|------------------|--|---|--|
| + | - | Signal name | Input/ Output | Condition | (Approx.) | |
| 3 (LG) | Ground | Encoder ground | _ | _ | 0 | |
| 4 (B) | Ground | Encoder power supply | Output | When ignition switch ON or power window timer operates | 12 | |
| 8 (L) | Ground | Power window motor DOWN signal | Output | When power window motor is DOWN at operated. | 12 | |
| 9 (G) | Ground | Power window motor UP signal | Output | When power window motor is UP at operated. | 12 | |
| 10 (Y) | Ground | Battery power supply | Input | — | 12 | |
| 11 (B) | Ground | Ground | _ | _ | 0 | |
| 12 (P) | Ground | Encoder pulse signal 1 | Input | When power window motor operates. | (V) 6 2 0 10 ms JMKIA0070GB | |
| 15 (BG) | Ground | Encoder pulse signal 2 | Input | When power window motor operates. | (V) 6 2 0 10 ms JMKIA0070GB | |
| 16 (V) | Ground | Power window serial link | Input/ Output | Ignition switch ON or power window timer operating. | (V) 15 10 5 0 10 ms JPMIA0013GB | |

Revision: 2011 November



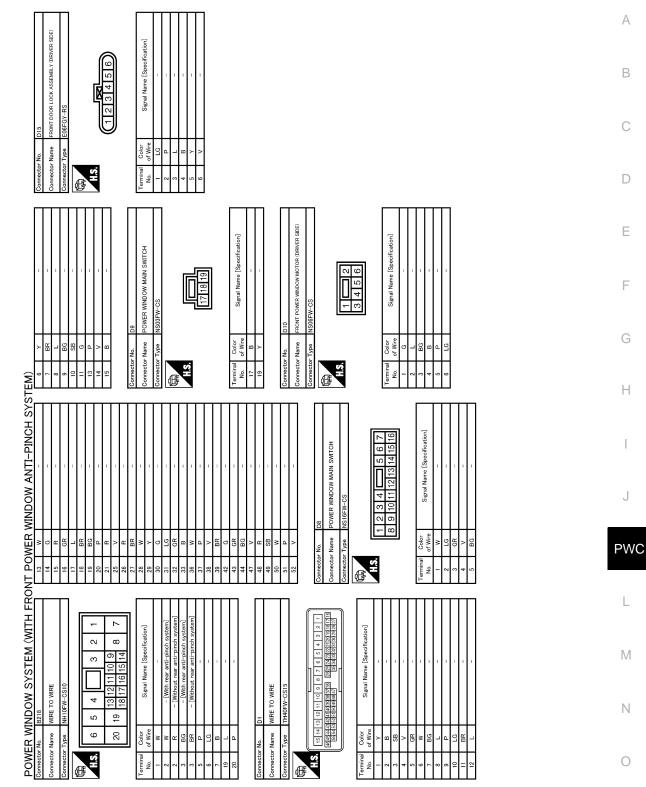
< ECU DIAGNOSIS INFORMATION >



JCKWM4944GB

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[FRONT WINDOW ANTI-PINCH]

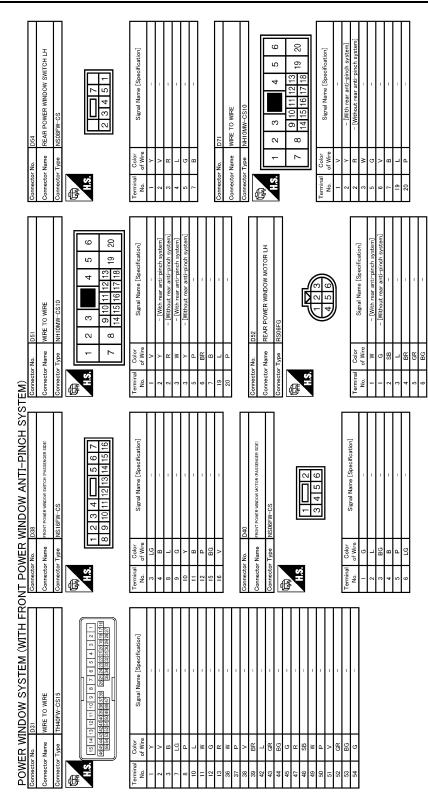


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< ECU DIAGNOSIS INFORMATION >

[FRONT WINDOW ANTI-PINCH]



JCKWM4946GB

FRONT POWER WINDOW SWITCH [FRONT WINDOW ANTI-PINCH] < ECU DIAGNOSIS INFORMATION >

Signal Name [Specification] FUSE BLOCK (J/B) 3A 8 8A 7A 6A NS06FW-M i≥ E LG SB SHIELD ٩ Color of Wire ≤ SR ⊢ ≤ Connector Name nnector Type 100 H.S. 47 8A 88 88 ₹ 83 è POWER WINDOW SYSTEM (WITH FRONT POWER WINDOW ANTI-PINCH SYSTEM) ſ Signal Name [Specification] 0 1 0 0 0 0 1 0 0 0 WIRE TO WIRE 90 01 91 02 92 92 93 92 94 93 l≥[8]; Color of Wire nector Name r Br SB BG BB a R R a > 2 90, ۵ B PWC 服 HS. Signal Name [Specification] REAR POWER WINDOW MOTOR RH REAR POWER WINDOW SWITCH RH Signal Name [Specification] 5 6 4 Color of Wire Color of Wire - # # # 8 ctor Name Connector Name nector No. H.S. rminal No. H.S. rminal No.

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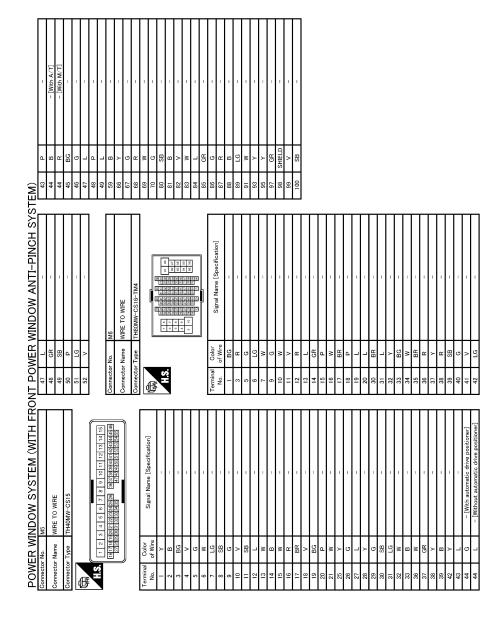
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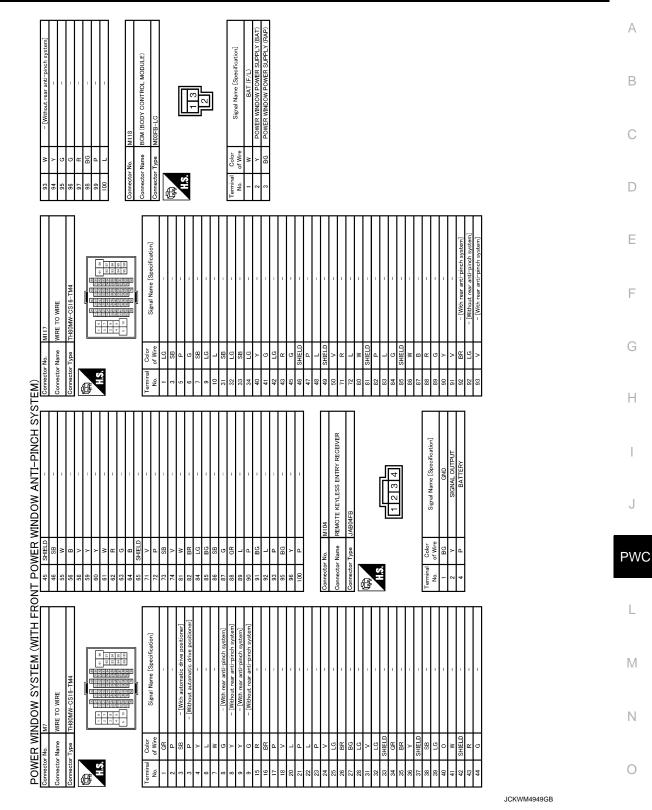
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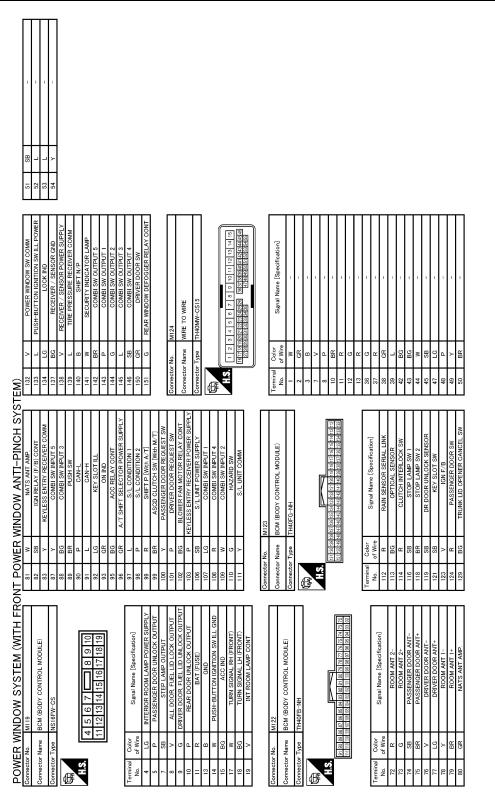
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< ECU DIAGNOSIS INFORMATION >

[FRONT WINDOW ANTI-PINCH]







JCKWM4950GB

INFOID:000000006626874

FAIL-SAFE CONTROL

Fail-safe

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

PWC-206

< ECU DIAGNOSIS INFORMATION >

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

If fail-safe control, the system changes to a non-initialized condition and the following function do not operate.

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

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

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POWER WINDOWS DO NOT OPERATE WITH ANY POWER WINDOW SWITCH-

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< SYMPTOM DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

SYMPTOM DIAGNOSIS

POWER WINDOWS DO NOT OPERATE WITH ANY POWER WINDOW SWITCHES

Diagnosis Procedure

INFOID:000000006603434

1. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT

Check BCM power supply and ground circuit. Refer to <u>BCS-38, "Diagnosis Procedure"</u>.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

- YES >> Check intermittent incident. Refer to GI-43, "Intermittent Incident".
- NO >> GO TO 1.

| DRIVER SIDE POWER WINDOW DOES NOT OPERATE < SYMPTOM DIAGNOSIS > [FRONT WINDOW ANTI-PINCH] | |
|---|---|
| DRIVER SIDE POWER WINDOW DOES NOT OPERATE | ^ |
| Diagnosis Procedure | A |
| 1. CHECK POWER WINDOW MAIN SWITCH POWER SUPPLY AND GROUND CIRCUIT | В |
| Check power window switch power supply and ground circuit. Refer to <u>PWC-130, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure"</u> . | |
| Is the inspection result normal? | С |
| YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts. | _ |
| 2. CHECK DRIVER SIDE POWER WINDOW MOTOR | D |
| Check driver side power window motor. Refer to <u>PWC-136, "DRIVER SIDE : Component Function Check"</u> . | E |
| Is the measurement value within the specification? | |
| YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts. | F |
| 3.CONFIRM THE OPERATION | |
| Confirm the operation again. | G |
| <u>Is the result normal?</u> YES >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u> . | 0 |
| NO $>>$ GO TO 1. | |
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FRONT PASSENGER SIDE POWER WINDOW DOES NOT OPERATE [FRONT WINDOW ANTI-PINCH] < SYMPTOM DIAGNOSIS >

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

WHEN POWER WINDOW MAIN SWITCH IS OPERATED : Diagnosis Procedure

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

Check front power window switch (passenger side) serial link circuit. Refer to PWC-149, "FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Component Function Check".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.confirm the operation

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-43, "Intermittent Incident". NO >> GO TO 1.

WHEN FRONT POWER WINDOW SWITCH (PASSENGER SIDE) IS OPERATED

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

INFOID:000000006603437

1.REPLACE FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Replace front power window switch (passenger side). Refer to PWC-222, "Removal and Installation"

>> INSPECTION END WHEN BOTH POWER WINDOW MAIN SWITCH AND FRONT POWER WINDOW SWITCH ARE OPERATED

WHEN BOTH POWER WINDOW MAIN SWITCH AND FRONT POWER WINDOW SWITCH ARE OPERATED : Diagnosis Procedure INFOID:000000006603438

1. CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE) POWER SUPPLY AND GROUND CIR-CUIT

Check front power window switch (passenger side) power supply and ground circuit. Refer to PWC-131, "FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.CHECK PASSENGER SIDE POWER WINDOW MOTOR CIRCUIT

Check passenger side power window motor circuit.

Refer to PWC-137, "PASSENGER SIDE : Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

 ${f 3.}$ CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

>> Check intermittent incident. Refer to GI-43, "Intermittent Incident". YES

FRONT PASSENGER SIDE POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

NO >> GO TO 1.

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REAR LH SIDE POWER WINDOW DOES NOT OPERATE DIAGNOSIS > [FRONT WINDOW ANTI-PINCH]

< SYMPTOM DIAGNOSIS >

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

WHEN POWER WINDOW MAIN SWITCH IS OPERATED : Diagnosis Procedure

INFOID:000000006603439

1.CHECK REAR POWER WINDOW SWITCH

Check rear power window switch . Refer to <u>PWC-134, "Component Function Check"</u>.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-43, "Intermittent Incident".

NO >> GO TO 1.

WHEN REAR POWER WINDOW SWITCH LH IS OPERATED

WHEN REAR POWER WINDOW SWITCH LH IS OPERATED : Diagnosis Procedure

INFOID:000000006603440

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

Check rear power window switch power supply and ground circuit. Refer to <u>PWC-132, "REAR POWER WINDOW SWITCH : Diagnosis Procedure"</u>.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.REPLACE REAR POWER WINDOW SWITCH LH

Replace rear power window switch LH. Refer to <u>PWC-222, "Removal and Installation"</u>.

>> INSPECTION END WHEN BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW SWITCH LH ARE OPERATED

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

1.CHECK REAR POWER WINDOW MOTOR LH

Check rear power window motor LH. Refer to <u>PWC-138, "REAR LH : Component Function Check"</u>.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u>.

NO >> GO TO 1.

| REAR RH SIDE POWER WINDOW DOES NOT OPERATE | |
|--|---|
| < SYMPTOM DIAGNOSIS > [FRONT WINDOW ANTI-PINCH] | |
| REAR RH SIDE POWER WINDOW DOES NOT OPERATE | ^ |
| WHEN POWER WINDOW MAIN SWITCH IS OPERATED | A |
| WHEN POWER WINDOW MAIN SWITCH IS OPERATED : Diagnosis Procedure | В |
| 1.CHECK REAR POWER WINDOW SWITCH | |
| Check rear power window switch . Refer to PWC-134, "Component Function Check". | 0 |
| Is the inspection result normal? | |
| YES >> GO TO 2. | D |
| NO >> Repair or replace the malfunctioning parts. | |
| | E |
| Confirm the operation again. | |
| <u>Is the result normal?</u> YES >> Check intermittent incident. Refer to GI-43, "Intermittent Incident". | F |
| NO >> GO TO 1. | |
| WHEN REAR POWER WINDOW SWITCH RH IS OPERATED | |
| WHEN REAR POWER WINDOW SWITCH RH IS OPERATED : Diagnosis Procedure | G |
| 1. CHECK REAR POWER WINDOW SWITCH POWER SUPPLY AND GROUND CIRCUIT | Η |
| Check rear power window switch power supply and ground circuit. Refer to <u>PWC-132, "REAR POWER WINDOW SWITCH : Diagnosis Procedure"</u> . | 1 |
| Is the inspection result normal? | |
| YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts. | |
| 2.REPLACE REAR POWER WINDOW SWITCH RH | J |
| Replace rear power window switch RH. Refer to PWC-222, "Removal and Installation". | W |
| >> INSPECTION END WHEN BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW | L |
| WHEN BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW SWITCH RH ARE OPERATED : Diagnosis Procedure | M |
| 1.CHECK REAR POWER WINDOW MOTOR RH | Ν |
| Check rear power window motor RH. Refer to <u>PWC-139, "REAR RH : Component Function Check"</u> . | 0 |
| Is the inspection result normal? | |
| YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts. | |
| 2.CONFIRM THE OPERATION | Ρ |
| Confirm the operation again. | |
| Is the result normal? | |
| YES >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u> . NO >> GO TO 1. | |
| | |

ANTI-PINCH FUNCTION DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

ANTI-PINCH FUNCTION DOES NOT OPERATE

Diagnosis Procedure

INFOID:000000006603445

1. CHECK POWER WINDOW AUTO OPERATION

Check AUTO operation when anti-pinch function does not operate.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Refer to <u>PWC-215, "Diagnosis Procedure"</u>.

2. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u>.

NO >> GO TO 1.

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NORMAL-

| LY | | |
|--|---|--|
| < SYMPTOM DIAGNOSIS > [FRONT WINDOW ANTI-PINCH] | | |
| AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NOR- | | |
| MALLY | А | |
| Diagnosis Procedure | В | |
| 1.PERFORM INITIALIZATION PROCEDURE | | |
| Initialization procedure is executed and operation is confirmed. Refer to <u>PWC-122</u> , "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement". | С | |
| Is the inspection result normal? YES >> INSPECTION END NO >> GO TO 2. | D | |
| 2. CHECK ENCODER CIRCUIT | Е | |
| Check encoder circuit. Refer to the following. Driver side: Refer to <u>PWC-141, "DRIVER SIDE : Component Function Check"</u>. Passenger side: Refer to <u>PWC-143, "PASSENGER SIDE : Component Function Check"</u>. | F | |
| <u>Is the inspection result normal?</u> YES >> GO TO 3. | | |
| NO | G | |
| 3. CONFIRM THE OPERATION | | |
| Confirm the operation again. | Н | |
| Is the result normal? | | |
| YES >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u>. NO >> GO TO 1. | | |

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POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

< SYMPTOM DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPER-ATE PROPERLY

Diagnosis Procedure

INFOID:000000006603449

1. CHECK DOOR SWITCH

Check door switch. Refer to <u>DLK-66, "Component Function Check"</u>.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-43. "Intermittent Incident".

NO >> GO TO 1.

DOOR KEY CYLINDER SWITCH DOES NOT OPERATE POWER WINDOWS

| <pre>< SYMPTOM DIAGNOSIS > [FRONT WINDOWS</pre> | |
|--|---|
| DOOR KEY CYLINDER SWITCH DOES NOT OPERATE POWER WIN- DOWS | A |
| Diagnosis Procedure | В |
| 1.PERFORM INITIALIZATION PROCEDURE | D |
| Initialization procedure is executed and operation is confirmed. Refer to <u>PWC-122, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special</u> <u>Repair Requirement"</u> . | С |
| Is the inspection result normal? YES >> INSPECTION END NO >> GO TO 2. | D |
| 2. CHECK DRIVER SIDE DOOR LOCK ASSEMBLY (KEY CYLINDER SWITCH) | Е |
| Check driver side door lock assembly (key cylinder switch). Refer to <u>PWC-146, "Component Function Check"</u> . | |
| Is the inspection result normal? YES >> GO TO 3. | F |
| NO >> Repair or replace the malfunctioning parts. | |
| 3.CONFIRM THE OPERATION | G |
| Confirm the operation again. <u>Is the result normal?</u> YES >> Check intermittent incident. Refer to <u>GI-43. "Intermittent Incident"</u> . NO >> GO TO 1. | Н |
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KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

[FRONT WINDOW ANTI-PINCH]

INFOID:000000006603451

INFOID:000000006603452

< SYMPTOM DIAGNOSIS >

KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

Description

Power window down does not operate when pressing unlock button on Intelligent Key.

Diagnosis Procedure

1.CHECK REMOTE KEYLESS ENTRY FUNCTION

Check remote keyless entry function.

Does door lock/unlock with Intelligent key button?

YES >> GO TO 2.

NO >> Refer to <u>DLK-187, "Description"</u>.

2.CHECK POWER WINDOW OPERATION

Check power window operation.

Does power window up/down with power window main switch?

YES >> GO TO 3.

NO >> Refer to <u>PWC-209</u>, "Diagnosis Procedure".

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

Check "PW DOWN SET" setting in "WORK SUPPORT". Refer to DLK-51, "DOOR LOCK : CONSULT-III Function (BCM - DOOR LOCK)".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Set "PW DOWN SET" setting in "WORK SUPPORT".

4.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u>.

NO >> GO TO 1.

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION < SYMPTOM DIAGNOSIS > [FRONT WINDOW ANTI-PINCH]

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

| | | \wedge |
|---|------------------------|----------|
| Diagnosis Procedure | INFOID:000000006603453 | ~ |
| 1.REPLACE POWER WINDOW MAIN SWITCH | | В |
| Replace power window main switch. Refer to PWC-222, "Removal and Installation". | | |
| >> INSPECTION END | | С |

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POWER WINDOW SWITCH ILLUMINATION DOES NOT ILLUMINATE < SYMPTOM DIAGNOSIS > [FRONT WINDOW ANTI-PINCH]

POWER WINDOW SWITCH ILLUMINATION DOES NOT ILLUMINATE

Diagnosis Procedure

INFOID:000000006603454

1.REPLACE POWER WINDOW SWITCH

Replace power window switch. Refer to <u>PWC-222</u>, "Removal and Installation".

>> INSPECTION END

< PRECAUTION > PRECAUTION PRECAUTIONS

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

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

WARNING:

Always observe the following items for preventing accidental activation.

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

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

WARNING:

Always observe the following items for preventing accidental activation.

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

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INFOID:000000006603459

REMOVAL AND INSTALLATION POWER WINDOW MAIN SWITCH

Removal and Installation

REMOVAL

- 1. Remove the power window main switch finisher (2). Refer to <u>INT-12</u>, "Removal and Installation".
- 2. Power window main switch (1) is removed from power window main switch finisher (2) using flat-head screw driver (A) etc.



CAUTION:

Do not fold the pawl of power window main switch finisher. NOTE:

The same procedure is also performed for front power window switch (passenger side) and rear power window switch (LH & RH).



Install in the reverse order of removal.

NOTE:

Power window main switch is exchanged or is detached it is necessary to do the initialization procedure. Refer to <u>PWC-123</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

