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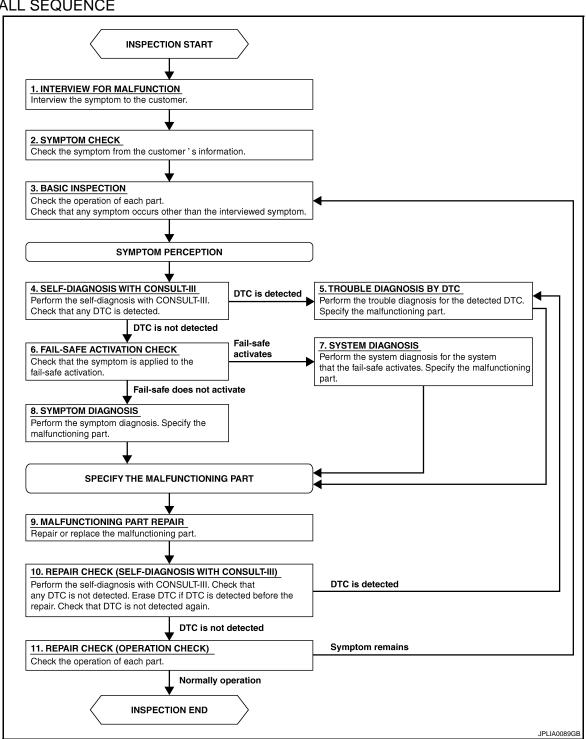
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BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow INFOID:0000000003071128 В

OVERALL SEQUENCE



DIAGNOSIS AND REPAIR WORKFLOW

[LH ONLY WINDOW ANTI-PINCH]

< BASIC INSPECTION >

DETAILED FLOW

1. INTERVIEW FOR MALFUNCTION

Interview the symptom to the customer.

>> GO TO 2

2. SYMPTOM CHECK

Check the symptom from the customer's information.

>> GO TO 3

3. BASIC INSPECTION

Check the operation of each part. Check that any symptom occurs other than the interviewed symptom.

>> GO TO 4

4. SELF-DIAGNOSIS WITH CONSULT-III

Perform the self-diagnosis with CONSULT-III. Check that any DTC is detected.

Is any DTC detected?

YES >> GO TO 5

NO >> GO TO 6

$oldsymbol{5}$. TROUBLE DIAGNOSIS BY DTC

Perform the trouble diagnosis for the detected DTC. Specify the malfunctioning part.

>> GO TO 9

6. FAIL-SAFE ACTIVATION CHECK

Check that the symptom is applied to the fail-safe activation.

Does the fail-safe activate?

YES >> GO TO 7

NO >> GO TO 8

7. SYSTEM DIAGNOSIS

Perform the system diagnosis for the system that the fail-safe activates. Specify the malfunctioning part.

>> GO TO 9

8. SYMPTOM DIAGNOSIS

Perform the symptom diagnosis. Specify the malfunctioning part.

>> GO TO 9

9. MALFUNCTION PART REPAIR

Repair or replace the malfunctioning part.

>> GO TO 10

10. REPAIR CHECK (SELF-DIAGNOSIS WITH CONSULT-III)

Perform the self-diagnosis with CONSULT-III. Check that any DTC is not detected. Erase DTC if DTC is detected before the repair. Check that DTC is not detected again.

Is any DTC detected?

YES >> GO TO 5

| DIAGNOSIS AND REPA | AIR WORKFLOW [LH ONLY WINDOW ANTI-PINCH] |
|--------------------------------------|--|
| < BASIC INSPECTION > NO >> GO TO 11 | [EITORET WIRDOW ARTTHRON] |
| 11. REPAIR CHECK (OPERATION CHECK) | |
| Check the operation of each part. | |
| Does it operate normally? | |
| YES >> Inspection End. NO >> GO TO 3 | |
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INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[LH ONLY WINDOW ANTI-PINCH]

INSPECTION AND ADJUSTMENT BASIC INSPECTION

BASIC INSPECTION: Special Repair Requirement

INFOID:0000000003071129

BASIC INSPECTION

1. INSPECTION START

- 1. Check the service history.
- 2. Check the following parts.
- Fuse/circuit breaker blown.
- Poor connection, open or short circuit of harness connector.
- Battery voltage.

Is the inspection result normal?

YES >> Inspection End.

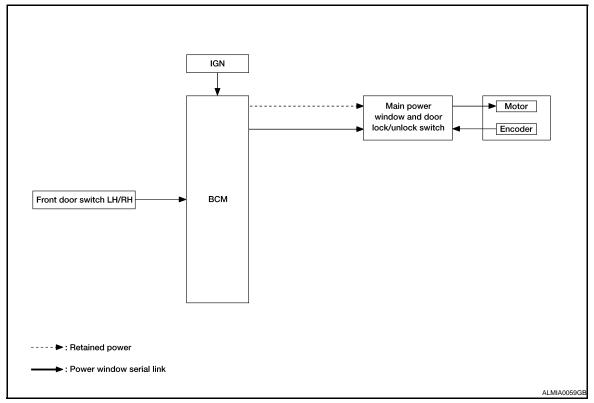
NO >> Repair or replace the malfunctioning parts.

FUNCTION DIAGNOSIS

POWER WINDOW SYSTEM

System Diagram

FRONT POWER WINDOW LH ANTI-PINCH SYSTEM



System Description

INFOID:0000000003071131

MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH INPUT/OUTPUT SIGNAL CHART

| Item | Input signal to main power window and door lock/unlock switch | Main power window and door lock/unlock switch function | Actuator | |
|---|---|--|--------------------------|--|
| Encoder | Encoder pulse signal | | | |
| Main power window and door lock/unlock switch | Front power window motor LH UP/ DOWN signal | | Front power window motor | |
| Power window and door lock/unlock switch RH | Front power window motor RH UP/ DOWN signal | Power window control | Front power window motor | |
| BCM | RAP signal | | | |
| Rear power window switch | Rear power window motor UP/DOWN signal | | Rear power window motor | |

POWER WINDOW OPERATION

- Power window system is operable during the retained power operation timer after turning ignition switch ON and OFF.
- Main power window and door lock/unlock switch can open/close all windows.
- Front & rear power window switches can open/close the corresponding windows.

POWER WINDOW AUTO-OPERATION (FRONT LH)

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POWER WINDOW SYSTEM

< FUNCTION DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

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

RETAINED POWER OPERATION

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

Retained power function cancel conditions

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

POWER WINDOW LOCK

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

ANTI-PINCH OPERATION (FRONT LH)

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

OPERATION CONDITION

 When 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.

Component Parts Location

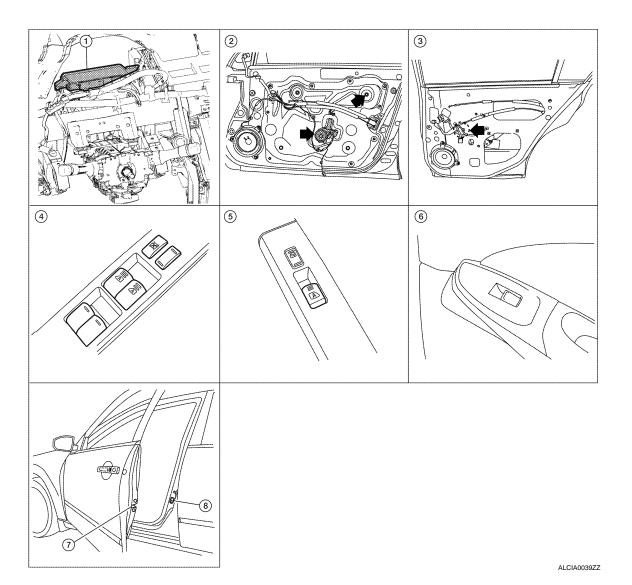
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- BCM M16, M17, M18, M19
- Main power window and door lock/ unlock switch D7, D8
- Front door lock assembly LH
- Front power window motor LH D9, **RH D104**
- Power window and door lock/unlock 6. switch RH D105
- 8. Front door switch LH B8, RH B108
- Rear power window motor LH D204, RH D304
- Rear power window switch LH D203, **RH D303**

Component Description

FRONT POWER WINDOW LH ANTI-PINCH SYSTEM

Function Component • Supplies power supply to power window switch. **BCM** Controls retained power. Main power window and door lock/un-· Directly controls all power window motor of all doors. lock switch · Controls anti-pinch operation of front power window LH. Power window and door lock/unlock · Controls front power window motor RH. switch RH • Controls rear power window motors LH and RH. Rear power window switch

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POWER WINDOW SYSTEM

< FUNCTION DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

| Component | Function |
|-----------------------------|--|
| Front power window motor LH | Integrates the ENCODER POWER and WINDOW MOTOR. Starts operating with signals from main power window and door lock/unlock switch. Transmits power window motor rotation as a pulse signal to main power window and door lock/unlock switch. |
| Front power window motor RH | Starts operating with signals from main power window and door lock/unlock switch & power window and door lock/unlock switch RH. |
| Rear power window motor | Starts operating with signals from main power window and door lock/unlock switch & rear power window switch. |
| Front door switch LH or RH | Detects door open/close condition and transmits to BCM. |

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

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

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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-DIAG RESULTS | Displays the diagnosis results judged by BCM. Refer to BCS-81, "DTC Index". |
| CAN DIAG SUPPORT MNTR | Monitors the reception status of CAN communication viewed from BCM. |
| DATA MONITOR | The BCM input/output signals are displayed. |
| ACTIVE TEST | The signals used to activate each device are forcibly supplied from BCM. |
| ECU IDENTIFICATION | The BCM part number is displayed. |
| CONFIGURATION | 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 | | |
|---------------------------|---------------------------|----------------|--------------|-------------|
| Sub system selection item | | WORK SUPPORT | DATA MONITOR | ACTIVE TEST |
| BCM | BCM | × | | |
| RAP system RETAINED PWR | | | × | |

RETAINED PWR

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

INFOID:000000000307113

Data monitor

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

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COMPONENT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH: Description

INFOID:0000000003071136

- BCM supplies power.
- It operates each power window motor via corresponding power window switch and makes window move up/down when main power window and door lock/unlock switch is operated.

POWER WINDOW MAIN SWITCH: Component Function Check

INFOID:0000000003071137

Main Power Window And Door Lock/unlock Switch

${f 1}$. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH FUNCTION

Does power window motor operate with main power window and door lock/unlock switch operation? <u>Is the inspection result normal?</u>

YES >> Main power window and door lock/unlock switch power supply and ground circuit are OK.

NO >> Refer to PWC-14, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure".

POWER WINDOW MAIN SWITCH: Diagnosis Procedure

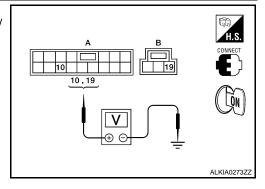
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Main Power Window And Door Lock/unlock Switch Power Supply Circuit Check

1. CHECK POWER SUPPLY CIRCUIT

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

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



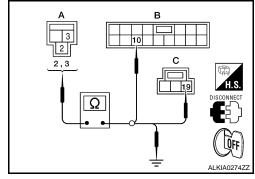
Is the measurement value within the specification?

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

2. CHECK HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM and main power window and door lock/unlock switch.
- 3. Check continuity between BCM connector (A) and main power window and door lock/unlock switch connectors (B and C).

| BCM connector | Terminal | Main power window and door lock/unlock switch connector | Terminal | Continuity |
|------------------|----------|---|----------|------------|
| M16 (A) | 3 | D7 (B) | 10 | Yes |
| WITO (A) | 2 | D8 (C) | 19 | 163 |



4. Check continuity between BCM connector and ground.

< COMPONENT DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

| BCM connector | Terminal | | Continuity |
|---------------|----------|--------|------------|
| M16 (A) | 3 | Ground | No |
| IVITO (A) | 2 | | NO |

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

3. CHECK GROUND CIRCUIT

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

| Main power window and door lock/un- lock switch connector | Terminal | Ground | Continuity |
|--|----------|--------|------------|
| D8 | 17 | | Yes |

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-60, "Removal and Installation".

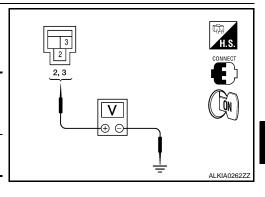
After that, refer to PWC-19, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

NO >> Repair or replace harness.

4. CHECK BCM OUTPUT SIGNAL

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

| Term | V 1. 0.0 | | | |
|------------------------|----------|--------------------------|-----------------|--|
| (+) | (-) | Voltage (V) (Approx.) | | |
| BCM connector Terminal | | (-) | , | |
| M16 | 3 | Ground | Battery voltage | |
| WITO | 2 | Giodila | Battery voltage | |

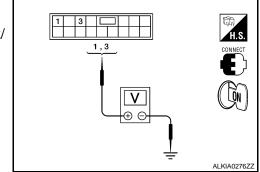


Is the measurement value within the specification?

- YES >> Check main power window and door lock/unlock switch output signal (rear power window switch LH) GO TO 5
- YES >> Check main power window and door lock/unlock switch output signal (rear power window switch RH) GO TO 6
- NO >> Replace BCM. Refer to <u>BCS-85</u>, "Removal and Installation".

5. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL (REAR POWER WINDOW SWITCH LH)

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



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|---|----------|--------|-----------|-----------------|-----------------|-------------|
| (+) | (+) | | (+) | | Window | Voltage (V) |
| Main power window and door lock/unlock switch connector | Terminal | (–) | condition | (Approx.) | | |
| | 1 | 1 | | UP | Battery voltage | |
| D7 | | Ground | DOWN | 0 | | |
| DI . | 3 | Ground | UP | 0 | | |
| | | | DOWN | Battery voltage | | |

Is the measurement value within the specification?

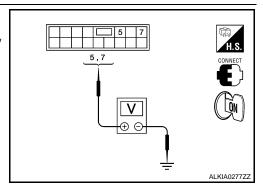
YES >> GO TO 7

NO >> Replace main power window and door lock/unlock switch. Refer to PWC-60, "Removal and Installation". After that, refer to PWC-19, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

6. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL (REAR POWER WINDOW SWITCH RH)

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

| Te | rminal | | | | |
|---|----------|--------------|--------|-----------------|-----------------|
| (+) | | | Window | Voltage (V) | |
| Main power window and door lock/unlock switch connector | Terminal | Terminal (-) | | (Approx.) | |
| | 7 | 7 | | UP | Battery voltage |
| D7 | | Ground | DOWN | 0 | |
| DI | 5 | | UP | 0 | |
| | | | DOWN | Battery voltage | |



Is the measurement value within the specification?

YES >> GO TO 8

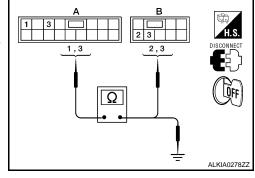
NO

>> Replace main power window and door lock/unlock switch. Refer to PWC-60, "Removal and Installation". After that, refer to PWC-19, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

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

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

| Main power window and door lock/unlock switch connector | Terminal | Rear power window switch LH connector | Terminal | Continuity |
|---|----------|---|----------|------------|
| D7 (A) | 1 | D203 (B) | 2 | Yes |
| DT (A) | 3 | D203 (B) | 3 | 162 |



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

< COMPONENT DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

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

Is the inspection result normal?

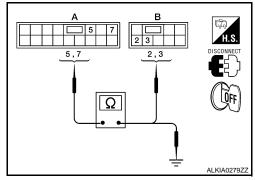
YES >> GO TO 9

NO >> Repair or replace harness.

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

- 1. Turn ignition switch OFF.
- 2. Disconnect main power window and door lock/unlock switch and rear power window switch RH.
- Check continuity between main power window and door lock/ unlock switch connector (A) and rear power window switch RH connector (B).

| Main power window and door lock/unlock switch connector | Terminal | Rear power window switch RH connector | Terminal | Continuity |
|---|----------|---|----------|------------|
| D7 (A) | 5 | D303 (B) | 3 | Yes |
| Dr (A) | 7 | D303 (B) | 2 | 165 |



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

| Main power window and door lock/ unlock switch connector | Terminal | 01 | Continuity |
|---|----------|--------|------------|
| D7 (A) | 5 | Ground | No |
| | ' | | |

Is the inspection result normal?

YES >> GO TO 9

NO >> Repair or replace harness.

9. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

Check main power window and door lock/unlock switch.

Refer to PWC-17, "POWER WINDOW MAIN SWITCH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to <u>GI-42, "Intermittent Incident"</u>. NO >> Replace main power window and door lock/unlock switch. Refer to

>> Replace main power window and door lock/unlock switch. Refer to PWC-60, "Removal and Installation". After that, refer to PWC-19, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

POWER WINDOW MAIN SWITCH: Component Inspection

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

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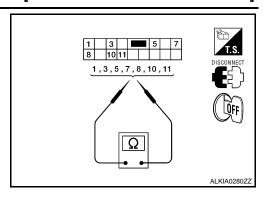
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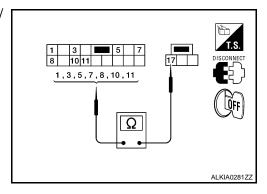
1. Check main power window and door lock/unlock switch.

| Terr | minal | Main power window switch | Continuity | |
|------|-------|--------------------------|------------|-----|
| 10 | 1 | Rear LH | | |
| 10 | 7 | Rear RH | UP | |
| 10 | 8 | Front RH | | |
| 1 | 3 | Rear LH | | |
| 5 | 7 | Rear RH | NEUTRAL | Yes |
| 8 | 11 | Front RH | | |
| 10 | 3 | Rear LH | | |
| 10 | 5 | Rear RH | DOWN | |
| 10 | 11 | Front RH | | |



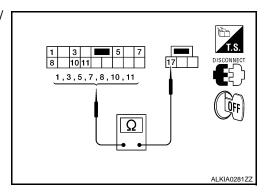
2. Check continuity between main power window and door lock/ unlock switch (power window lock switch) (Lock operation).

| Terr | minal | Main power window switch of | Continuity | |
|------|-------|-----------------------------|------------|-----|
| 3 | | Rear LH | | |
| 5 | | Rear RH | UP | |
| 11 | | Front RH | | |
| 1 | | Rear LH | | |
| 3 | | Real Ln | | |
| 5 | 17 | Rear RH | NEUTRAL | No |
| 7 | 17 | Neal KH | NEOTRAL | INO |
| 8 | | Front RH | | |
| 11 | | FIOILKI | | |
| 1 | | Rear LH | | |
| 7 | | Rear RH | DOWN | |
| 8 | | Front RH | | |



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

| Terr | minal | Main power window and door lock/un- lock switch condition | | Continuity |
|------|-------|--|---------|------------|
| 3 | | Rear LH | | |
| 5 | | Rear RH | UP | |
| 11 | | Front RH | | |
| 1 | | Rear LH | | Yes |
| 3 | | Rear RH | NEUTRAL | |
| 5 | 17 | | | |
| 7 | 17 | ixeai ixii | NEOTRAL | 163 |
| 8 | | Front RH | | |
| 11 | | FIUILKI | | |
| 1 | | Rear LH | | |
| 7 | | Rear RH | DOWN | |
| 8 | | Front RH | | |



< COMPONENT DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

Is the inspection result normal?

YES >> Main power window and door lock/unlock switch is OK.

NO >> Replace main power window and door lock/unlock switch. Refer to <u>PWC-60</u>, "Removal and Installation". After that, refer to <u>PWC-75</u>, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

POWER WINDOW MAIN SWITCH: Special Repair Requirement

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1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-64, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

$2.\,$ CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to <u>PWC-64</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection end.

NO >> Refer to PWC-88, "DRIVER SIDE : Component Function Check".

FRONT POWER WINDOW SWITCH

FRONT POWER WINDOW SWITCH: Description

BCM supplies power.

• Front power window motor RH will be operated if power window and door lock/unlock switch RH is operated.

FRONT POWER WINDOW SWITCH: Component Function Check

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Power Window And Door Lock/unlock Switch RH

1. CHECK FRONT POWER WINDOW MOTOR RH FUNCTION

Does front power window motor RH operate with power window and door lock/unlock switch RH operation? <u>Is the inspection result normal?</u>

YES >> Power window and door lock/unlock switch RH power supply and ground circuit are OK.

NO >> Refer to PWC-19, "FRONT POWER WINDOW SWITCH : Diagnosis Procedure".

FRONT POWER WINDOW SWITCH : Diagnosis Procedure

INFOID:0000000003071143

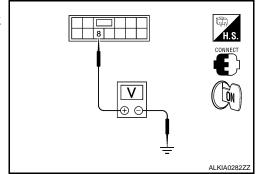
Power Window And Door Lock/Unlock Switch RH Power Supply Circuit Check

1. CHECK POWER SUPPLY CIRCUIT

Turn ignition switch ON.

2. Check voltage between power window and door lock/unlock switch RH connector and ground.

| Te | | | |
|---|----------|-------------|-----------------|
| (+) | | Voltage (V) | |
| Power window and door lock/unlock switch RH connector | Terminal | (–) | (Approx.) |
| D105 | 8 | Ground | Battery voltage |



Is the measurement value within the specification?

YES >> GO TO 3

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< COMPONENT DIAGNOSIS >

NO >> GO TO 2

2. CHECK HARNESS CONTINUITY

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

| BCM connector | Terminal | Power window and door lock/unlock switch RH connector | Terminal | Continuity |
|---------------|----------|---|----------|------------|
| M16 (A) | 3 | D105 (B) | 8 | Yes |

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

| A B B Ω Ω Ω Ω Ω Ω Ω Ω Ω Ω Ω Ω Ω Ω Ω Ω Ω | H.S. DISCONNECT |
|---|-----------------|
| | ALKIA0283ZZ |

| BCM connector | Terminal | Ground | Continuity |
|---------------|----------|--------|------------|
| M16 (A) | 3 | Glound | No |

Is the inspection result normal?

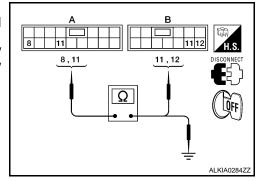
YES >> GO TO 4

NO >> Repair or replace harness.

3. Check harness continuity (power window and door lock/unlock switch RH)

- 1. Turn ignition switch OFF.
- 2. Disconnect main power window and door lock/unlock switch and power window and door lock/unlock switch RH.
- 3. Check continuity between main power window and door lock/ unlock switch connector (A) and power window and door lock/ unlock switch RH connector (B).

| Main power win- dow and door lock/unlock switch connector | Terminal | Power window and door lock/un- lock switch RH connector | Terminal | Continuity |
|--|----------|--|----------|------------|
| D7 (A) | 11 | D105 (B) | 11 | Yes |
| D1 (A) | 8 | D 103 (B) | 12 | 165 |



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

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

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Repair or replace harness.

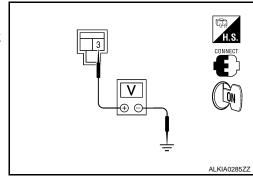
4. CHECK BCM OUTPUT SIGNAL

< COMPONENT DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

- 1. Connect BCM.
- 2. Turn ignition switch ON.
- Check voltage between power window and door lock/unlock switch RH connector and ground.

| 7 | V 14 0 0 | | |
|---------------|----------|--------------------------|-----------------|
| (+) | (-) | Voltage (V) (Approx.) | |
| BCM connector | Terminal | (-) | , |
| D105 | 8 | Ground | Battery voltage |



Is the measurement value within the specification?

YES >> GO TO 5

NO >> Repair or replace harness.

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

Check power window and door lock/unlock switch RH.

Refer to PWC-79, "REAR POWER WINDOW SWITCH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

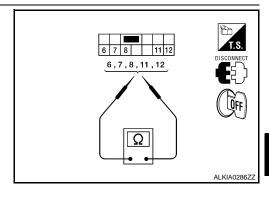
NO >> Replace power window and door lock/unlock switch RH. Refer to PWC-60, "Removal and Installation".

COMPONENT INSPECTION

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

Check power window and door lock/unlock switch RH.

| Terr | ninal | Power window switch condition | Continuity |
|------|-------|-------------------------------|------------|
| 8 | 6 | UP | |
| 12 | 7 | UF | |
| 12 | 7 | NEUTRAL | Yes |
| 6 | 11 | NEOTIVAL | 163 |
| 8 | 7 | DOWN | |
| 6 | 11 | DOWN | |



Is the inspection result normal?

YES >> Power window and door lock/unlock switch RH is OK.

NO >> Replace power window and door lock/unlock switch RH. Refer to PWC-60, "Removal and Installation".

REAR POWER WINDOW SWITCH

REAR POWER WINDOW SWITCH: Description

BCM supplies power.

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

PWC-21

REAR POWER WINDOW SWITCH : Component Function Check

Rear Power Window Switch

1. CHECK REAR POWER WINDOW MOTOR FUNCTION

Does rear power window motor operate with rear power window switch operation? Is the inspection result normal?

YES >> Rear power window switch power supply and ground circuit are OK.

NO >> Refer to PWC-78, "REAR POWER WINDOW SWITCH: Diagnosis Procedure".

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[LH ONLY WINDOW ANTI-PINCH]

REAR POWER WINDOW SWITCH: Diagnosis Procedure

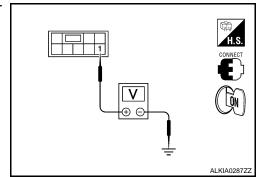
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Rear Power Window Switch Power Supply Circuit Check

1. CHECK POWER SUPPLY CIRCUIT

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

| Terminal | | | | | |
|----------|-------------------------|----------|---------|-----------------|-------------|
| | (+) | | | Condition | Voltage (V) |
| | wer window connector | Terminal | (–) | Condition | (Approx.) |
| LH | D203 | 1 | Ground | Ignition switch | Battery |
| RH | D303 | 1 | Giodila | ON | voltage |



Is the measurement value within the specification?

YES >> GO TO 2 (Rear power window switch LH)

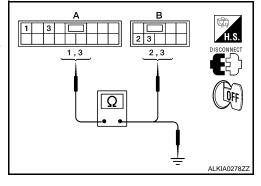
YES >> GO TO 3 (Rear power window switch RH)

NO >> GO TO 4

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

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

| Main power window and door lock/unlock switch connector | Terminal | Rear power win- dow switch LH connector | Terminal | Continuity |
|---|----------|---|----------|------------|
| D7 (A) | 1 | D203 (B) | 2 | Yes |
| Di (A) | 3 | D203 (B) | 3 | 163 |



4. Check continuity between main power window and door lock/unlock switchh connector (A) and ground.

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

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Repair or replace harness.

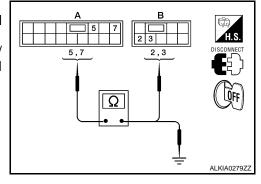
3. check harness continuity (rear power window switch RH)

< COMPONENT DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

- Turn ignition switch OFF.
- Disconnect main power window and door lock/unlock switch and rear power window switch RH.
- 3. Check continuity between main power window and door lock/ unlock switch connector (A) and rear power window switch RH connector (B).

| Main power window and door lock/unlock switch connector | Terminal | Rear power window switch RH connector | Terminal | Continuity |
|---|----------|---|----------|------------|
| D7 (A) | 5 | D303 (B) | 3 | Yes |
| DI (A) | 7 | D303 (B) | 2 | 163 |



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

| Main power window and door lock/unlock switch connector | Terminal | Ground | Continuity |
|---|----------|--------|------------|
| D7 (A) | 5 | | No |
| D7 (A) | 7 | | 110 |

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Repair or replace harness.

4. CHECK HARNESS CONTINUITY

- Disconnect BCM and rear power window switch.
- Check continuity between BCM connector (A) and rear power window switch connector (B).

| BCM connector | Terminal | Rear power window switch connector | | Terminal | Continuity |
|------------------|-----------|------------------------------------|----------|----------|------------|
| Μ16 (Δ) | 2 | LH | D203 (B) | 1 | Yes |
| WITO (A) | M16 (A) 3 | RH | D303 (B) | ı | 165 |

Check continuity between BCM connector and ground.

| A 3 | Δ | H.S. DISCONNECT FF |
|------------|---|---------------------|
| | | ALKIA0288ZZ |

| BCM connector | Terminal | Ground | Continuity | |
|---------------|----------|--------|------------|--|
| M16 | 3 | Ground | No | |

Is the inspection result normal?

YES >> GO TO 5

NO >> Repair or replace harness.

5. CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.

Refer to PWC-79, "REAR POWER WINDOW SWITCH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

>> Replace rear power window switch. Refer to PWC-60, "Removal and Installation". NO

REAR POWER WINDOW SWITCH: Component Inspection

COMPONENT INSPECTION

. CHECK REAR POWER WINDOW SWITCH

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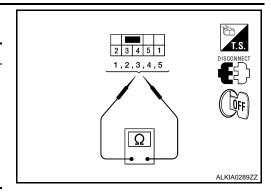
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< COMPONENT DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

Check rear power window switch.

| Terr | ninal | Power window switch condition | Continuity |
|------|-------|-------------------------------|------------|
| 1 | 5 | UP | |
| 3 | 4 | 01 | |
| 3 | 4 | NEUTRAL | Yes |
| 2 | 5 | NESTICLE | 103 |
| 1 | 4 | DOWN | |
| 2 | 5 | DOWN | |



Is the inspection result normal?

YES >> Rear power window switch is OK.

NO >> Replace rear power window switch. Refer to PWC-60, "Removal and Installation".

POWER WINDOW MOTOR

DRIVER SIDE

DRIVER SIDE: Description

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

DRIVER SIDE: Component Function Check

INFOID:0000000003071149

CHECK FRONT POWER WINDOW MOTOR LH CIRCUIT

Does front power window motor LH operate with the main power window and door lock/unlock switch? Is the inspection result normal?

YES >> Front power window motor LH is OK.

>> Refer to PWC-25, "DRIVER SIDE: Diagnosis Procedure". NO

DRIVER SIDE : Diagnosis Procedure

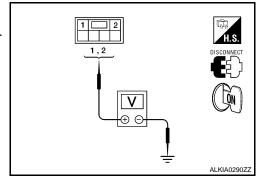
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Front Power Window Motor LH Circuit Check

${f 1}$. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL

- Disconnect front power window motor LH.
- Turn ignition switch ON. 2.
- Check voltage between front power window motor LH connector and ground.

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



Is the measurement value within the specification?

YES >> GO TO 2

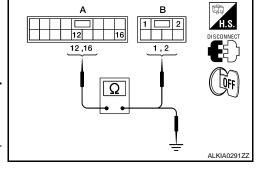
NO

>> Replace main power window and door lock/unlock switch. Refer to PWC-60, "Removal and Installation". After that, refer to PWC-19, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

2. CHECK HARNESS CONTINUITY

- Turn ignition switch OFF.
- Disconnect main power window and door lock/unlock switch. 2.
- Check continuity between main power window and door lock/ unlock switch connector (A) and front power window motor LH connector (B).

| Main power window and door lock/unlock switch connector | Terminal | Front power window motor LH connector | Terminal | Continuity |
|--|----------|---------------------------------------|----------|------------|
| D7 (A) | 16 | D9 (B) | 2 | Yes |
| DI (A) | 12 | D9 (B) | 1 | 163 |



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

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< COMPONENT DIAGNOSIS >

| Main power window and door lock/unlock switch connector | Terminal | Ground | Continuity |
|---|----------|--------|------------|
| D7 (A) | 16 | | No |
| D7 (A) | 12 | | No |

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

${f 3.}$ CHECK FRONT POWER WINDOW MOTOR LH

Check front power window motor LH.

Refer to PWC-82, "DRIVER SIDE: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace front power window motor LH. Refer to <u>GW-18</u>, "<u>Removal and Installation</u>". After that, refer to <u>PWC-26</u>, "<u>DRIVER SIDE</u>: <u>Special Repair Requirement</u>".

DRIVER SIDE : Component Inspection

INFOID:0000000003071151

COMPONENT INSPECTION

1. CHECK FRONT POWER WINDOW MOTOR LH

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

| Terminal | | Motor condition |
|----------|-----|-----------------|
| (+) | (–) | Wotor condition |
| 1 | 2 | DOWN |
| 2 | 1 | UP |

Is the inspection result normal?

YES >> Front power window motor LH is OK.

NO >> Replace front power window motor LH. Refer to <u>GW-18</u>, "<u>Removal and Installation</u>". After that, refer to <u>PWC-26</u>, "<u>DRIVER SIDE</u>: <u>Special Repair Requirement</u>".

DRIVER SIDE: Special Repair Requirement

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1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-64</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to PWC-64, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.

NO >> Refer to PWC-32, "DRIVER SIDE : Component Function Check".

PASSENGER SIDE

PASSENGER SIDE: Description

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

PASSENGER SIDE : Component Function Check

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1. CHECK FRONT POWER WINDOW MOTOR RH CIRCIUT

Does front power window motor RH operate with main power window and door lock/unlock switch or power window and door lock/unlock switch?

Is the inspection result normal?

YES >> Front power window motor RH is OK.

NO >> Refer to PWC-27, "PASSENGER SIDE : Diagnosis Procedure".

PASSENGER SIDE : Diagnosis Procedure

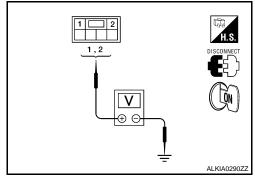
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Front Power Window Motor RH Circuit Check

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

- 1. Disconnect front power window motor RH.
- Turn ignition switch ON.
- 3. Check voltage between front power window motor RH connector and ground.

| Te | rminal | | Voltage (V) (Approx.) | | |
|---------------------------------------|----------|------------------|--------------------------|-----------------|-----------------------------|
| (+) | | | | | Front power window motor |
| Front power window motor RH connector | Terminal | (-) RH condition | | | |
| | 1 | | UP | Battery voltage | |
| D104 | ' | Ground | DOWN | 0 | |
| D104 | 2 | Giouna | UP | 0 | |
| | | | DOWN | Battery voltage | |



Is the measurement value within the specification?

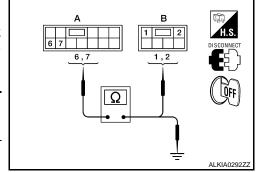
YES >> GO TO 2

NO >> Replace power window and door lock/unlock switch RH. Refer to PWC-60, "Removal and Installation".

2. CHECK HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect power window and door lock/unlock switch RH.
- Check continuity between power window and door lock/unlock switch RH connector (A) and front power window motor RH connector (B).

| Power window and door lock/unlock-switch RH connector | Terminal | Front power window motor RH connector | Terminal | Continuity |
|---|----------|---------------------------------------|----------|------------|
| D105 (A) | 6 | D104 (B) | 1 | Yes |
| D103 (A) | 7 | D 104 (B) | 2 | 163 |



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

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| Power window and door lock/ unlock switch RH connector | Terminal | 0 | Continuity |
|---|----------|--------|------------|
| D105 (A) | 6 | Ground | No |
| D 103 (A) | 7 | | INO |

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK FRONT POWER WINDOW MOTOR RH

Check front power window motor RH.

Refer to PWC-28, "PASSENGER SIDE: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace front power window motor RH. Refer to PWC-60, "Removal and Installation".

PASSENGER SIDE: Component Inspection

INFOID:0000000003071156

COMPONENT INSPECTION

COMPONENT INSPECTION

1. CHECK FRONT POWER WINDOW MOTOR RH

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

| Terminal | | Motor condition |
|----------|-----|-----------------|
| (+) | (–) | Wotor condition |
| 1 | 2 | DOWN |
| 2 | 1 | UP |

Is the inspection result normal?

YES >> Power window motor is OK.

NO >> Replace front power window motor RH. Refer to <u>GW-18</u>, "<u>Removal and Installation</u>".

REAR LH

REAR LH: Description

INFOID:0000000003071157

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

REAR LH: Component Function Check

INFOID:0000000003071158

${f 1}$. CHECK REAR POWER WINDOW MOTOR LH CIRCUIT

Does rear power window motor LH operate with main power window and door lock/unlock switch or rear power window switch LH?

Is the inspection result normal?

YES >> Rear power window motor LH is OK.

NO >> Refer to PWC-28, "REAR LH: Diagnosis Procedure".

REAR LH: Diagnosis Procedure

INFOID:0000000003071159

Rear Power Window Motor LH Circuit Check

1. CHECK REAR POWER WINDOW SWITCH LH OUTPUT SIGNAL

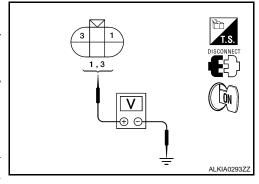
POWER WINDOW MOTOR

< COMPONENT DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

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

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



Is the measurement value within the specification?

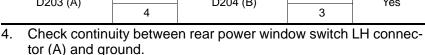
YES >> GO TO 2

NO >> Check rear power window switch LH. Refer to PWC-78, "REAR POWER WINDOW SWITCH: Component Function Check".

$2.\,$ CHECK HARNESS CONTINUITY

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

| Rear power window switch LH connector | Terminal | Rear power window motor LH connector | Terminal | Continuity |
|---------------------------------------|----------|--------------------------------------|----------|------------|
| D203 (A) | 5 | D204 (B) | 1 | Yes |
| D203 (A) | 4 | D204 (B) | 3 | 165 |



| A B 3 1 1 3 1 3 1 1 3 1 3 1 1 3 1 1 3 1 1 3 1 1 3 1 | H.S. T.S. DISCONNECT OFF |
|---|-----------------------------|
|---|-----------------------------|

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

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

 $3.\,$ CHECK REAR POWER WINDOW MOTOR LH

Check rear power window motor LH.

Refer to PWC-29, "REAR LH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace rear power window motor LH. Refer to GW-24, "Removal and Installation".

REAR LH: Component Inspection

COMPONENT INSPECTION

1. CHECK REAR POWER WINDOW MOTOR LH

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

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INFOID:0000000003071160

| Terr | minal | - Motor condition | |
|------|-------|-------------------|--|
| (+) | (-) | Wotor condition | |
| 3 | 1 | DOWN | |
| 1 | 3 | UP | |

Is the inspection result normal?

YES >> Rear power window motor LH is OK.

NO >> Replace rear power window motor LH. Refer to <u>GW-24, "Removal and Installation"</u>.

REAR RH

REAR RH: Description

INFOID:0000000003071161

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

REAR RH: Component Function Check

INFOID:0000000003071162

1. CHECK POWER WINDOW MOTOR CIRCUIT

Does rear power window motor RH operate with operating main power window and door lock/unlock switch or rear power window switch RH?

Is the inspection result normal?

YES >> Power window motor is OK.

NO >> Refer to PWC-30, "REAR RH: Diagnosis Procedure".

REAR RH: Diagnosis Procedure

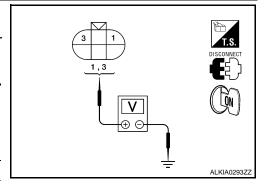
INFOID:0000000003071163

Rear Power Window Motor RH Circuit Check

1. CHECK REAR POWER WINDOW SWITCH RH OUTPUT SIGNAL

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

| | | Door nowor | |
|---------|--------|-------------------------|--------------------------|
| (+) | | Rear power windowswitch | Voltage (V) |
| erminal | (–) | RH condition | (Approx.) |
| 1 | | UP | Battery voltage |
| | Ground | DOWN | 0 |
| 2 | Ground | UP | 0 |
| 3 | | DOWN | Battery voltage |
| | 1 3 | 1 Ground | Condition RH condition |



Is the measurement value within the specification?

YES >> GO TO 2

NO >> Check rear power window switch RH. Refer to PWC-78, "REAR POWER WINDOW SWITCH: Component Function Check".

2. CHECK HARNESS CONTINUITY

POWER WINDOW MOTOR

< COMPONENT DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

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

| Rear power window switch RH connector | Terminal | Rear power window motor RH connector | Terminal | Continuity |
|---------------------------------------|----------|--------------------------------------|----------|------------|
| D303 (A) | 5 | D304 (B) | 1 | Yes |
| D303 (A) | 4 | D304 (B) | 3 | 163 |

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

|--|

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

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK REAR POWER WINDOW MOTOR RH

Check rear power window motor RH.

Refer to PWC-31, "REAR RH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace rear power window motor RH. Refer to <u>GW-24, "Removal and Installation"</u>.

REAR RH: Component Inspection

INFOID:0000000003071164

COMPONENT INSPECTION

1. CHECK REAR POWER WINDOW MOTOR RH

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

| Terminal | | Motor condition | |
|----------|-----|-----------------|--|
| (+) | (-) | Wotor condition | |
| 3 | 1 | DOWN | |
| 1 | 3 | UP | |

Is the inspection result normal?

YES >> Power window motor is OK.

NO >> Replace rear power window motor RH. Refer to <u>GW-24, "Removal and Installation"</u>.

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ENCODER

DRIVER SIDE

DRIVER SIDE : Description

INFOID:0000000003071165

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

DRIVER SIDE: Component Function Check

INFOID:0000000003071166

1. CHECK ENCODER OPERATION

Does front door glass LH perform AUTO open/close operation normally with main power window and door lock/unlock switch?

Is the inspection result normal?

YES >> Encoder operation is OK.

NO >> Refer to PWC-88, "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE: Diagnosis Procedure

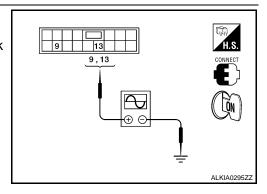
INFOID:0000000003071167

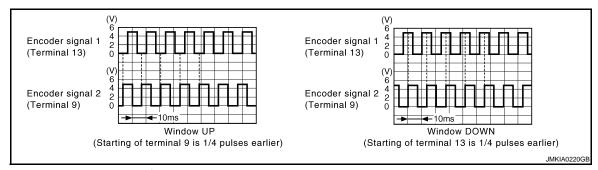
Encoder Circuit Check

1. CHECK ENCODER OPERATION

- Connect front power window motor LH.
- 2. Turn ignition switch ON.
- 3. Check signal between main power window and door lock/unlock switch connector and ground with oscilloscope.

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





Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

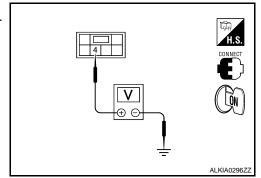
NO >> GO TO 2

2. CHECK FRONT POWER WINDOW MOTOR LH POWER SUPPLY

[LH ONLY WINDOW ANTI-PINCH]

- 1. Turn ignition switch ON.
- Check voltage between front power window motor LH connector and ground.

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



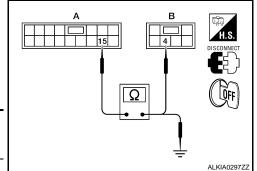
Is the measurement value within the specification?

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

3. CHECK HARNESS CONTINUITY 1

- 1. Turn ignition switch OFF.
- 2. Disconnect main power window and door lock/unlock switch and front power window motor LH.
- Check continuity between main power window and door lock/ unlock switch connector (A) and front power window motor connector (B).

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



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

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

Is the inspection result normal?

- YES >> Replace main power window and door lock/unlock switch. Refer to PWC-60, "Removal and Installation". After that, refer to PWC-34, "DRIVER SIDE: Special Repair Requirement".
- NO >> Repair or replace harness.

4. CHECK GROUND CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect front power window motor LH.
- 3. Check continuity between front power window motor LH connector and ground.

| | | _ | Ground | |
|----------|----|---|--------|-----|
| D9 6 Yes | D9 | 6 | | Yes |

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Is the inspection result normal?

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

5. CHECK HARNESS CONTINUITY 2

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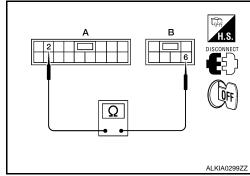
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[LH ONLY WINDOW ANTI-PINCH]

- 1. Disconnect main power window and door lock/unlock switch.
- Check continuity between main power window and door lock/ unlock switch connector (A) and front power window motor LH connector (B).

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



Is the inspection result normal?

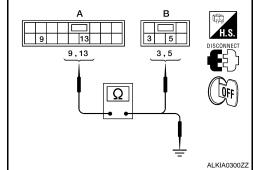
YES >> Replace main power window and door lock/unlock switch. Refer to PWC-60, "Removal and Installation". After that, refer to PWC-34, "DRIVER SIDE : Special Repair Requirement".

NO >> Repair or replace harness.

6. CHECK HARNESS CONTINUITY 3

- 1. Disconnect main power window and door lock/unlock switch.
- Check continuity between main power window and door lock/ unlock switch connector (A) and front power window motor LH connector (B).

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



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

| Main power window and door lock/unlock switch connector | Terminal | Ground | Continuity |
|---|----------|--------|------------|
| D7 (A) | 9 | | No |
| | 13 | | 140 |

Is the inspection result normal?

YES >> Replace front power window motor LH. Refer to <u>GW-18</u>, "<u>Removal and Installation</u>". After that, refer to <u>PWC-26</u>, "<u>DRIVER SIDE</u>: <u>Special Repair Requirement</u>".

NO >> Repair or replace harness.

DRIVER SIDE : Special Repair Requirement

INFOID:0000000003071168

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-8, "BASIC INSPECTION: Special Repair Requirement"

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

DOOR SWITCH

Description

Detects door open/close condition and transmits the signal to BCM.

Component Function Check

1. CHECK FRONT DOOR SWITCH INPUT SIGNAL

Check ("DOOR SW-DR" and "DOOR SW-AS") in "DATA MONITOR" mode with CONSULT-III. Refer to PWC-13, "RETAINED PWR: CONSULT-III Function (BCM - RETAINED PWR)".

| Monitor item | | Condition | |
|--------------|-------|-----------|--|
| DOOR SW-DR | OPEN | : ON | |
| DOOK SW-DK | CLOSE | : OFF | |
| DOOR SW AS | OPEN | : ON | |
| DOOR SW-AS | CLOSE | : OFF | |

Is the inspection result normal?

YES >> Front door switch circuit is OK.

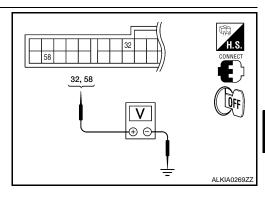
NO >> Refer to PWC-35, "Diagnosis Procedure".

Diagnosis Procedure

1. CHECK HARNESS CONTINUITY

Check voltage between BCM connector and ground.

| | Terminals | | | | |
|---------------|-----------|--------|------------|----------|-----------------|
| (+ | -) | | Door o | ondition | Voltage (V) |
| BCM connector | Terminal | (-) | | (-) | (Approx.) |
| | 32 | | Front door | OPEN | 0 |
| M18 | 02 | Ground | RH | CLOSE | Battery voltage |
| IVITO | 58 | | Front door | OPEN | 0 |
| | 50 | | LH | | Battery voltage |



Is the measurement value within the specification?

YES >> Replace BCM. Refer to BCS-85, "Removal and Installation".

NO >> GO TO 2

2. CHECK HARNESS CONTINUITY

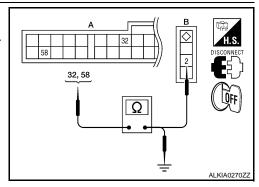
1. Turn ignition switch OFF.

Disconnect BCM and front door switch.

3. Check continuity between BCM connector (A) and front door switch connector (B).

| BCM connector | Terminal | Front door switch connector | Terminal | Continuity |
|---------------|----------|-----------------------------|----------|------------|
| M18 (A) | 32 | RH: B108 (B) | 2 | Yes |
| WTO (A) | 58 | LH: B8 (B) | 2 | 163 |

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



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| BCM connector | Terminal | | Continuity |
|---------------|----------|--------|------------|
| M18 | 32 | Ground | No |
| IVI I O | 58 | 1 | INO |

Is the inspection result normal?

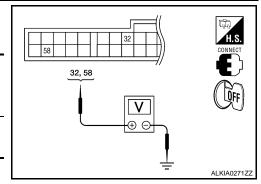
YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK BCM OUTPUT SIGNAL

- 1. Connect BCM connector.
- 2. Check voltage between BCM connector and ground.

| Terminal | | | V(-16 () () |
|---------------|----------|--------|--------------------------|
| (+) | | (–) | Voltage (V) (Approx.) |
| BCM connector | Terminal | (-) | , , , |
| M18 | 32 | Ground | Battery voltage |
| | 58 | | |



Is the measurement value within the specification?

YES >> GO TO 4

NO >> Replace BCM. Refer to BCS-85, "Removal and Installation".

4. CHECK FRONT DOOR SWITCH

Check front door switch.

Refer to PWC-36, "Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace front door switch.

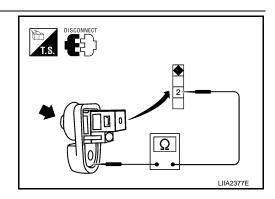
Component Inspection

INFOID:0000000003071172

1. CHECK FRONT DOOR SWITCH

Check front door switches.

| Terminal | | Door switch | Continuity |
|---------------|----------------------------|-------------|------------|
| Door switches | | Door Switch | |
| 2 | Ground part of door switch | Pressed | No |
| | | Released | Yes |



Is the inspection result normal?

YES >> Front door switch is OK.

NO >> Replace front door switch.

POWER WINDOW LOCK SWITCH

< COMPONENT DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

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POWER WINDOW LOCK SWITCH Α Description INFOID:0000000003071173 Ground circuit of main power window and door lock/unlock switch shuts off if power window lock switch of main power window and door lock/unlock switch is operated. This inhibits all operation, except for the main switch. Component Function Check INFOID:00000000003071174 1. CHECK POWER WINDOW LOCK SIGNAL D Exchanges for a normal main power window and door lock/unlock switch, and operation is checked. Does power window lock operate? >> Replace main power window and door lock/unlock switch. Refer to PWC-60, "Removal and Instal-Е lation". After that, PWC-8, "BASIC INSPECTION: Special Repair Requirement". NO >> Check condition of harness and connector. Special Repair Requirement INFOID:0000000003071175 1. PERFORM INITIALIZATION PROCEDURE Perform initialization procedure. Refer to PWC-8, "BASIC INSPECTION: Special Repair Requirement". Is the inspection result normal? YES >> Inspection end. Н NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident". **PWC**

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

| Monitor Item | Condition | Value/Status | |
|--------------|----------------------|--------------|--|
| DOOR SW-DR | Front door LH closed | OFF | |
| | Front door LH opened | ON | |
| DOOR SW-AS | Front door RH closed | OFF | |
| | Front door RH opened | ON | |

TERMINAL LAYOUT

Refer to BCS-50, "Terminal Layout".

PHYSICAL VALUES

Refer to BCS-51, "Physical Values".

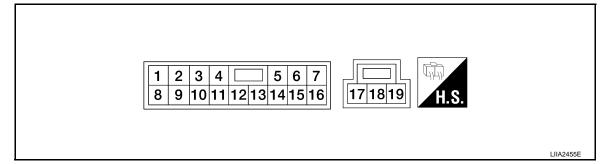
POWER WINDOW MAIN SWITCH

[LH ONLY WINDOW ANTI-PINCH]

POWER WINDOW MAIN SWITCH

Reference Value

TERMINAL LAYOUT



PHYSICAL VALUES

MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

| | nal No. color) | Description | | Condition | Voltage [V] | |
|-------------|-------------------|---|------------------|---|----------------------------------|--|
| + | _ | Signal name | Input/ Output | Condition | (Approx.) | |
| 1 (G/B) | Ground | Rear power window motor LH UP signal | Output | When rear LH switch in power window main switch is operated UP. | Battery voltage | |
| 2 (W/B) | Ground | Encoder ground | _ | _ | 0 | |
| 3 (G/O) | Ground | Rear power window motor LH DOWN signal | Output | When rear LH switch in power window main switch is operated DOWN. | Battery voltage | |
| 5 (G/R) | Ground | Rear power window motor RH DOWN signal | Output | When rear RH switch in power window main switch is operated DOWN. | Battery voltage | |
| 6 (GR/R) | Ground | Door key cylinder switch UNLOCK signal | Input | Key position (Neutral → Unlocked) | 5 → 0 | |
| 7 (G/W) | Ground | Rear power window motor RH UP signal | Output | When rear RH switch in power window main switch is operated UP. | Battery voltage | |
| 8 (R/B) | 11 | Front power window motor RH UP signal | Output | When front RH switch in power window main switch is operated UP. | Battery voltage | |
| 9 (G/W) | 2 | Encoder pulse signal 2 | Input | When power window motor operates. | (V) 6 4 2 0 10 ms | |

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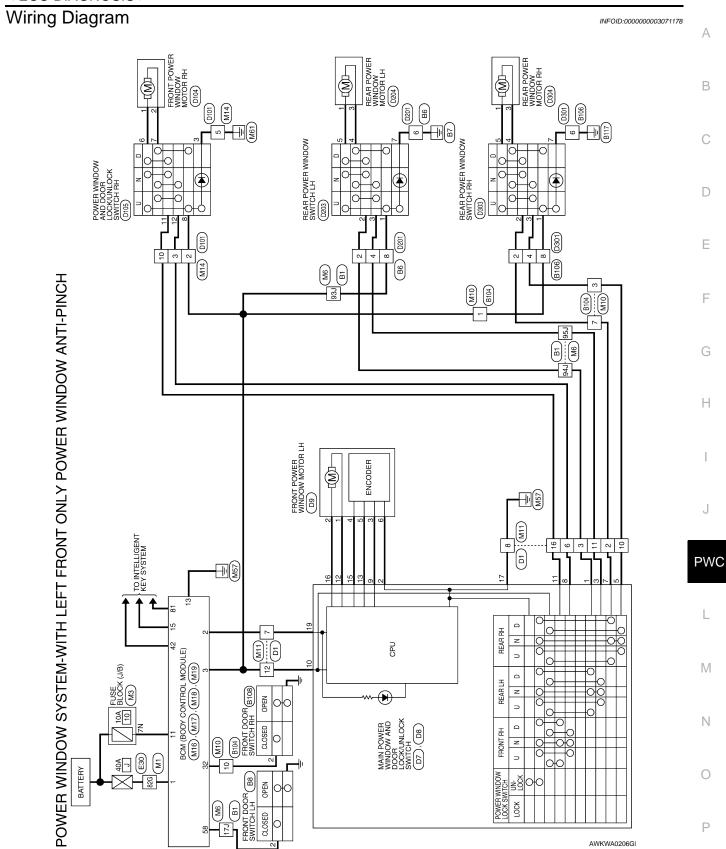
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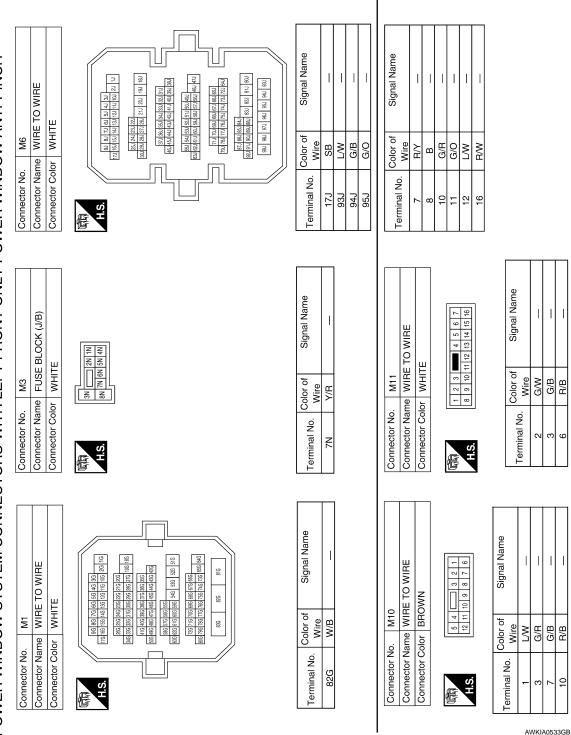
POWER WINDOW MAIN SWITCH

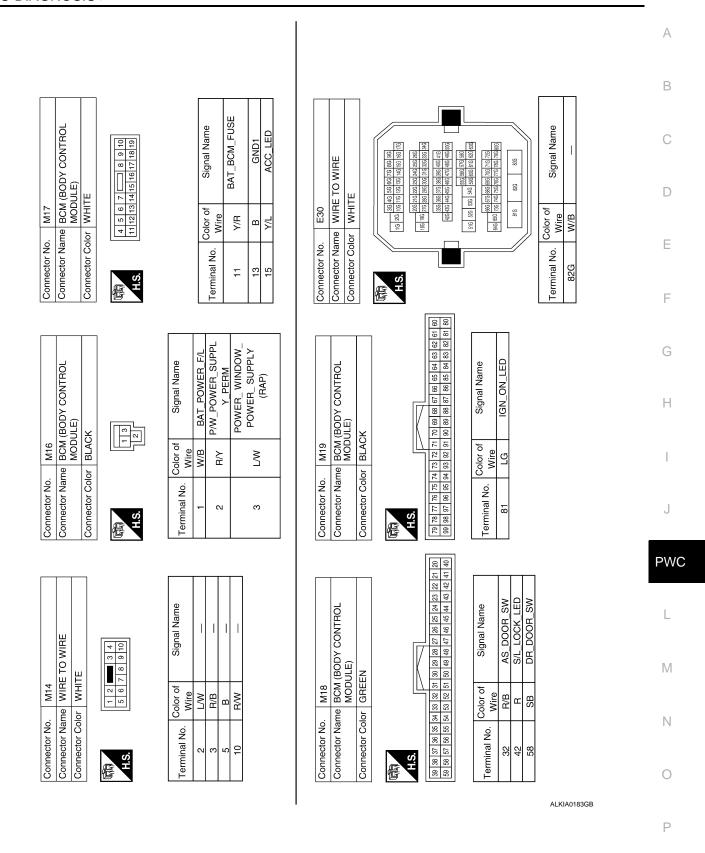
[LH ONLY WINDOW ANTI-PINCH]

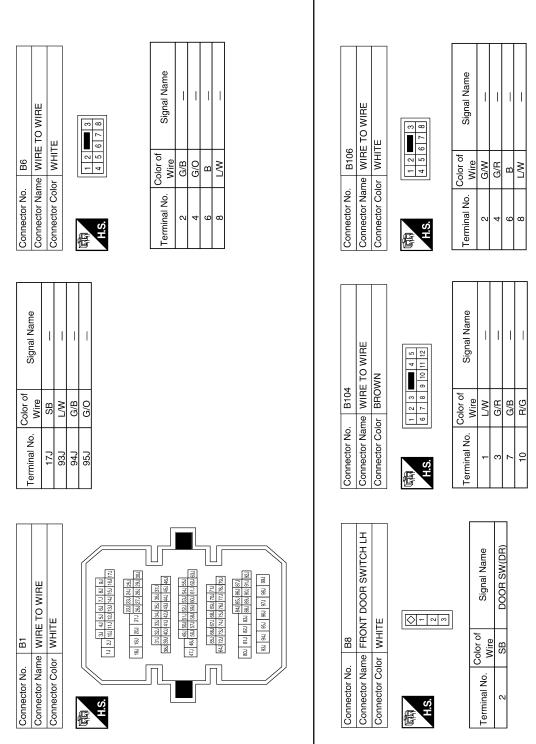
| | nal No. color) | Description | Condition | | Voltage [V] | |
|-------------|-------------------|--|------------------|--|----------------------------------|--|
| + | _ | Signal name | Input/ Output | Condition | (Approx.) | |
| | | | | IGN SW ON | Battery voltage | |
| 10 | Ground | RAP signal | Input | Within 45 second after ignition switch is turned to OFF. | Battery voltage | |
| (L/W) | | 3 | 1.55 | When driver side or passenger side door is opened during retained power operation. | 0 | |
| 11 (R/W) | 8 | Front power window motor RH DOWN signal | Output | When front RH switch in power window main switch is operated DOWN. | Battery voltage | |
| 12 (L/B) | 16 | Front power window motor LH DOWN signal | Output | When front LH switch in power window main switch is operated DOWN. | Battery voltage | |
| 13 (G/Y) | 2 | Encoder pulse signal 1 | Input | When power window motor operates. | (V) 6 4 2 0 10 ms | |
| 15 (G/R) | Ground | Encoder power supply | Output | When ignition switch ON or power window timer operates. | 10 | |
| 16 (L/R) | 12 | Front power window motor LH UP signal | Output | When front LH switch in power window main switch is operated UP. | Battery voltage | |
| 17 (B) | Ground | Ground | _ | _ | 0 | |
| 19 (R/Y) | Ground | Battery power supply | Input | _ | Battery voltage | |



POWER WINDOW SYSTEM CONNECTORS-WITH LEFT FRONT ONLY POWER WINDOW ANTI-PINCH

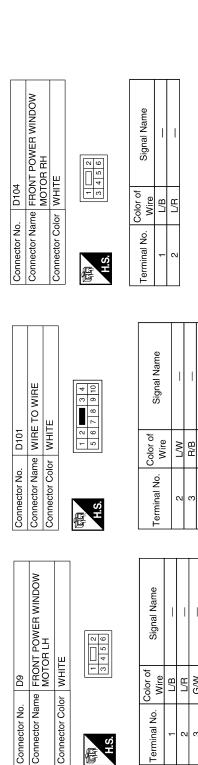






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| | PV | WC |
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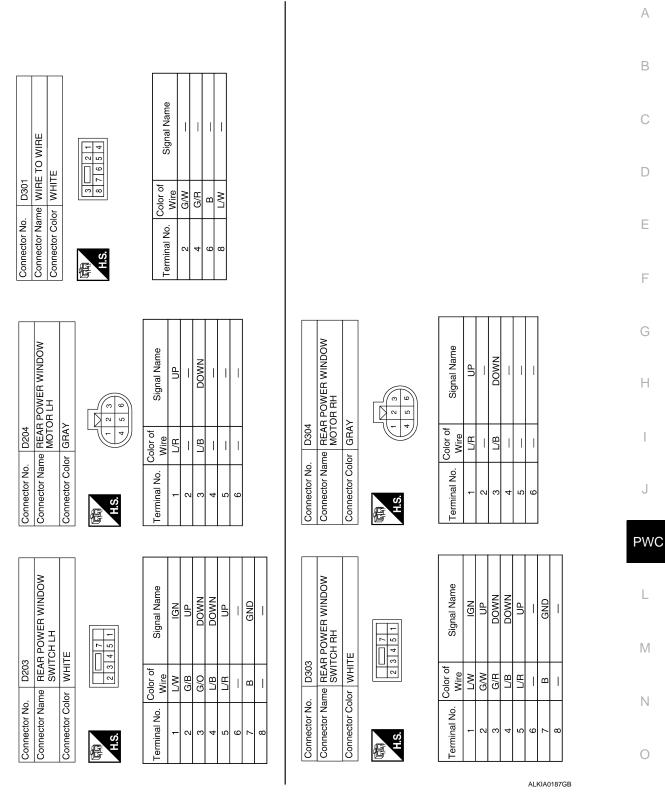
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| Signal Name | GND | DOWN | UP | NÐI | DOWN | UP |
|------------------|-----|------|-----|-----|------|-----|
| Color of Wire | В | L/B | L/R | T/W | R/W | R/B |
| Terminal No. | 3 | 9 | 7 | 8 | 11 | 12 |





AWKIA0536GB



Fail Safe

FAIL-SAFE CONTROL

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

POWER WINDOW MAIN SWITCH

[LH ONLY WINDOW ANTI-PINCH]

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

It changes to condition before initialization and the following functions do not operate when switched to fail-safe control.

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

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

NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH SYMPTOM DIAGNOSIS > [LH ONLY WINDOW ANTI-PINCH]

< SYMPTOM DIAGNOSIS > SYMPTOM DIAGNOSIS Α NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY **SWITCH** В **Diagnosis Procedure** INFOID:0000000003071180 1. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT C Check BCM power supply and ground circuit. Refer to BCS-41, "Diagnosis Procedure". D Is the inspection result normal? YES >> GO TO 2 NO >> Repair or replace the malfunctioning parts. Е 2. check main power window and door lock/unlock switch power supply and **GROUND CIRCUIT** Check main power window and door lock/unlock switch power supply and ground circuit. F Refer to PWC-14, "POWER WINDOW MAIN SWITCH: Component Function Check". Is the inspection result normal? YES >> GO TO 3 NO >> Repair or replace the malfunctioning parts. 3. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH Check main power window and door lock/unlock switch. Refer to PWC-14, "POWER WINDOW MAIN SWITCH: Component Function Check". Is the inspection result normal? YES >> Inspection End. NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

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DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000003071181

1. CHECK FRONT POWER WINDOW MOTOR LH

Check front power window motor LH.

Refer to PWC-25, "DRIVER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42. "Intermittent Incident".

FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPERATE [LH ONLY WINDOW ANTI-PINCH]

< SYMPTOM DIAGNOSIS >

FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPER-**ATE**

Diagnosis Procedure INFOID:0000000003071182

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

Check power window and door lock/unlock switch RH.

Refer to PWC-19, "FRONT POWER WINDOW SWITCH: Component Function Check".

Is the inspection result normal? YES >> GO TO 2

NO >> Repair or replace the malfunctioning parts.

2. CHECK FRONT POWER WINDOW MOTOR RH CIRCUIT

Check front power window motor RH circuit.

Refer to PWC-27, "PASSENGER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

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REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000003071183

1. CHECK REAR POWER WINDOW SWITCH LH

Check rear power window switch LH.

Refer to PWC-21, "REAR POWER WINDOW SWITCH: Component Function Check".

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace the malfunctioning parts.

2. CHECK REAR POWER WINDOW MOTOR LH

Check rear power window motor LH.

Refer to PWC-28, "REAR LH: Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

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REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE Α Diagnosis Procedure INFOID:0000000003071184 1. CHECK REAR POWER WINDOW SWITCH RH В Check rear power winodw switch RH. Refer to PWC-21, "REAR POWER WINDOW SWITCH: Component Function Check". C Is the inspection result normal? YES >> GO TO 2 NO >> Repair or replace the malfunctioning parts. D 2. CHECK REAR POWER WINDOW MOTOR RH Check rear power window motor RH. Refer to PWC-30, "REAR RH: Component Function Check". Е Is the inspection result normal? YES >> Inspection End. >> Check intermittent incident. Refer to GI-42, "Intermittent Incident". NO F Н J **PWC** L M Ν

ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (DRIVER SIDE) [LH ONLY WINDOW ANTI-PINCH]

< SYMPTOM DIAGNOSIS >

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

Diagnosis Procedure

INFOID:0000000003071185

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-19, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace the malfunctioning parts.

2. CHECK DOOR WINDOW SLIDING PART

- · A foreign material adheres to window glass or glass run rubber.
- · Glass run rubber wear or deformation.
- Sash is tilted too much or not enough.

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace the malfunctioning parts.

3. CHECK ENCODER CIRCUIT

Check encoder circuit.

Refer to PWC-14, "POWER WINDOW MAIN SWITCH: Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NORMAL-LY (DRIVER SIDE)

< SYMPTOM DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NOR-MALLY (DRIVER SIDE)

Diagnosis Procedure

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1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-19, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace the malfunctioning parts.

2. CHECK ENCODER

Check encoder.

Refer to PWC-14, "POWER WINDOW MAIN SWITCH: Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

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POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

< SYMPTOM DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPER-ATE PROPERLY

Diagnosis Procedure

INFOID:0000000003071187

1. CHECK FRONT DOOR SWITCH

Check front door switch.

Refer to PWC-35, "Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

< SYMPTOM DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

Diagnosis Procedure

INFOID:0000000003071188

1. REPLACE MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

Replace main power window and door lock/unlock switch.

Refer to <u>PWC-60</u>, "Removal and Installation". After that, <u>PWC-19</u>, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

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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 SR and SB section of this Service Manual.

WARNING:

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

PRE-INSPECTION FOR DIAGNOSTIC

< ON-VEHICLE MAINTENANCE >

[LH ONLY WINDOW ANTI-PINCH]

ON-VEHICLE MAINTENANCE

PRE-INSPECTION FOR DIAGNOSTIC

Basic Inspection

BASIC INSPECTION

1.INSPECTION START

- 1. Check the service history.
- 2. Check the following parts.
- Fuse/circuit breaker blown.
- Poor connection, open or short circuit of harness connector.
- · Battery voltage.

Is the inspection result normal?

YES >> Inspection end.

NO >> Repair or replace the malfunctioning parts.

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INFOID:0000000003071191

ON-VEHICLE REPAIR

POWER WINDOW MAIN SWITCH

Removal and Installation

REMOVAL

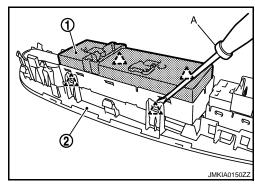
- 1. Remove the power window main switch finisher (2). Refer to INT-11, "Removal and Installation".
- 2. Power window main switch (1) is removed from power window main switch finisher (2) using flat-head screw driver (A) etc.



CAUTION:

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

The same procedure is also performed for front power window and door lock/unlock switch RH and rear power window switch (LH & RH).



INSTALLATION

Install in the reverse order of removal.

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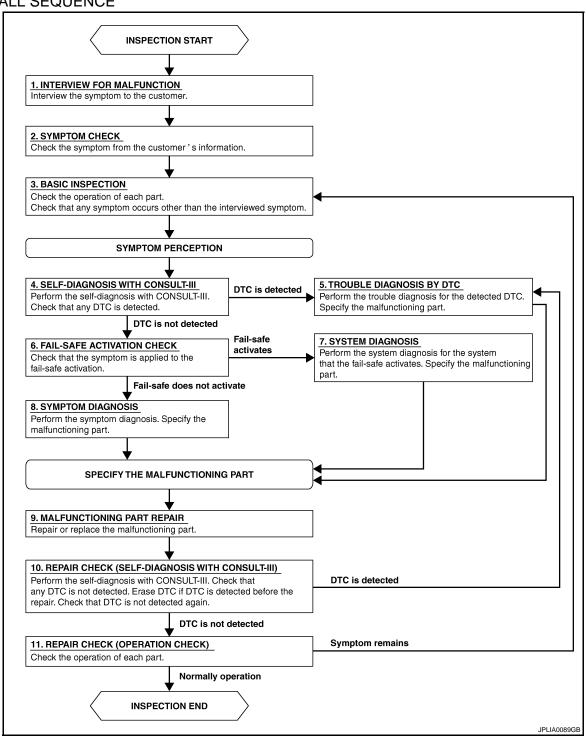
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BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

OVERALL SEQUENCE



DIAGNOSIS AND REPAIR WORKFLOW

[LH&RH FRONT WINDOW ANTI-PINCH]

< BASIC INSPECTION >

DETAILED FLOW

1. INTERVIEW FOR MALFUNCTION

Interview the symptom to the customer.

>> GO TO 2

2. SYMPTOM CHECK

Check the symptom from the customer's information.

>> GO TO 3

3. BASIC INSPECTION

Check the operation of each part. Check that any symptom occurs other than the interviewed symptom.

>> GO TO 4

4. SELF-DIAGNOSIS WITH CONSULT-III

Perform the self-diagnosis with CONSULT-III. Check that any DTC is detected.

Is any DTC detected?

YES >> GO TO 5

NO >> GO TO 6

$oldsymbol{5}$. TROUBLE DIAGNOSIS BY DTC

Perform the trouble diagnosis for the detected DTC. Specify the malfunctioning part.

>> GO TO 9

6. FAIL-SAFE ACTIVATION CHECK

Check that the symptom is applied to the fail-safe activation.

Does the fail-safe activate?

YES >> GO TO 7

NO >> GO TO 8

7. SYSTEM DIAGNOSIS

Perform the system diagnosis for the system that the fail-safe activates. Specify the malfunctioning part.

>> GO TO 9

8. SYMPTOM DIAGNOSIS

Perform the symptom diagnosis. Specify the malfunctioning part.

>> GO TO 9

9. MALFUNCTION PART REPAIR

Repair or replace the malfunctioning part.

>> GO TO 10

10. REPAIR CHECK (SELF-DIAGNOSIS WITH CONSULT-III)

Perform the self-diagnosis with CONSULT-III. Check that any DTC is not detected. Erase DTC if DTC is detected before the repair. Check that DTC is not detected again.

Is any DTC detected?

YES >> GO TO 5

| DIAGNOSIS AND REPAIR WORKFLOW | NOUI |
|--|------|
| < BASIC INSPECTION > [LH&RH FRONT WINDOW ANTI-PI | NCHJ |
| NO >> GO TO 11 | Λ |
| 11. REPAIR CHECK (OPERATION CHECK) | Α |
| Check the operation of each part. | |
| Does it operate normally? | В |
| YES >> Inspection End. NO >> GO TO 3 | |
| NO >> GO 10 3 | |
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[LH&RH FRONT WINDOW ANTI-PINCH]

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Description INFOID:0000000003071193

Initial setting is necessary when battery terminal is diconnected.

CAUTION:

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

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

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement INFOID:00000000003071194

INITIALIZATION PROCEDURE

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

CHECK ANTI-PINCH FUNCTION

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

CAUTION:

- Do not check with hands and other part of body because they may be pinched. Do not get pinched.
- Check that AUTO-UP operates before inspection when system initialization is performed.
- It may switch to fail-safe mode if open/close operation is performed continuously. Perform initial setting in that situation. Refer to PWC-113, "Fail Safe".
- Perform initial setting when auto-up operation or anti-pinch function does not operate normally.
- Finish initial setting. Otherwise, next operation cannot be done.
- 1. Auto-up operation
- Anti-pinch function
- 3. Retained power operation when ignition switch is OFF.

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Description

INFOID:0000000003071195

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

CAUTION:

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

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

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement INFOID:0000000003071196

INITIALIZATION PROCEDURE

1. Disconnect battery negative terminal or main power window and door lock/unlock switch. Reconnect it after a minute or more.

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[LH&RH FRONT WINDOW ANTI-PINCH]

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

CHECK ANTI-PINCH FUNCTION

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

CAUTION:

- Do not check with hands and other part of body because they may be pinched. Do not get pinched.
- Check that AUTO-UP operates before inspection when system initialization is performed.
- It may switch to fail-safe mode if open/close operation is performed continuously. Perform initial setting in that situation. Refer to PWC-113, "Fail Safe".
- Perform initial setting when auto-up operation or anti-pinch function does not operate normally.
- Finish initial setting. Otherwise, next operation cannot be done.
- 1. Auto-up operation
- 2. Anti-pinch function
- 3. Retained power operation when ignition switch is OFF.

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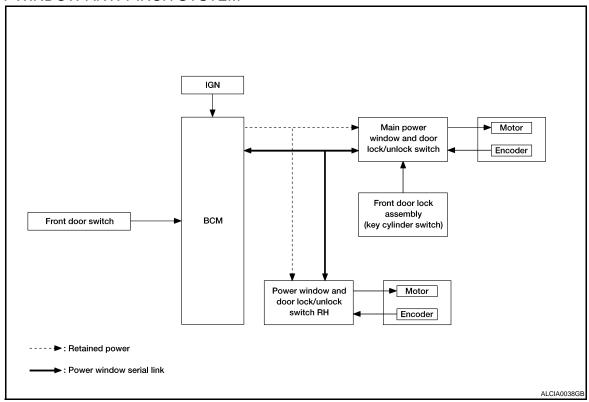
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FUNCTION DIAGNOSIS

POWER WINDOW SYSTEM

System Diagram

FRONT WINDOW ANTI-PINCH SYSTEM



System Description

INFOID:0000000003071198

POWER WINDOW MAIN SWITCH INPUT/OUTPUT SIGNAL CHART

| Item | Input signal to main power window and door lock/unlock switch | Main power window and door lock/unlock switch function | Actuator |
|---|---|--|--------------------------|
| Key cylinder switch | LOCK/UNLOCK signal (more than 1.5 seconds over) | | Front power window motor |
| Encoder | Encoder pulse signal | Power window control | |
| Main power window and door lock/unlock switch | Front power window motor LH UP/ DOWN signal | | |
| Power window and door lock/unlock switch RH | Front power window motor RH UP/ DOWN signal | | |
| BCM | RAP signal | | |
| Rear power window switch | Rear power window motor UP/DOWN signal | | Rear power window motor |

POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH INPUT/OUTPUT SIGNAL CHART

[LH&RH FRONT WINDOW ANTI-PINCH]

| Item | Input signal to front power window switch | Front power window switch function | Actuator |
|---|--|------------------------------------|-----------------------------|
| Power window and door lock/unlock switch RH | Front power window motor RH UP/ DOWN signal | Power window control | Front power window motor RH |
| Encoder | Encoder pulse signal | Tower window control | |
| BCM | RAP signal | | |

POWER WINDOW OPERATION

- Power window system is operable during the retained power operation timer after turning ignition switch ON and OFF.
- Main power window and door lock/unlock switch can open/close all windows.
- Power window and door lock unlock switch RH & rear power window switches LH and RH can open/close the corresponding windows.

POWER WINDOW AUTO-OPERATION (FRONT LH & RH)

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

RETAINED POWER OPERATION

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

Retained power function cancel conditions

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

POWER WINDOW LOCK

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

ANTI-PINCH OPERATION (FRONT LH & RH)

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

OPERATION CONDITION

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

NOTE:

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

KEY CYLINDER SWITCH OPERATION

Hold the door key cylinder to the LOCK or UNLOCK direction for more than 1 second to OPEN or CLOSE front power windows when ignition switch is OFF. In addition, it stops when key position is moved to NEUTRAL when operating.

OPERATION CONDITION

Ignition switch OFF

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POWER WINDOW SYSTEM

< FUNCTION DIAGNOSIS >

- [LH&RH FRONT WINDOW ANTI-PINCH]
- Hold door key cylinder to LOCK position for more than 1 second to perform CLOSE operation of the door glass.
- Hold door key cylinder to UNLOCK position for more than 1 second to perform OPEN operation of the door glass.

KEYLESS POWER WINDOW DOWN OPERATION (FRONT LH & RH)

Front power windows open when the unlock button on Intelligent Key is activated and kept pressed for more than 3(NOTE) 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.

NOTE:

Keyless power window down operation mode can be changed by "PW DOWN SET" mode in "WORK SUP-PORT". Refer to SEC-21, "INTELLIGENT KEY: CONSULT-III Function (BCM - INTELLIGENT KEY)".

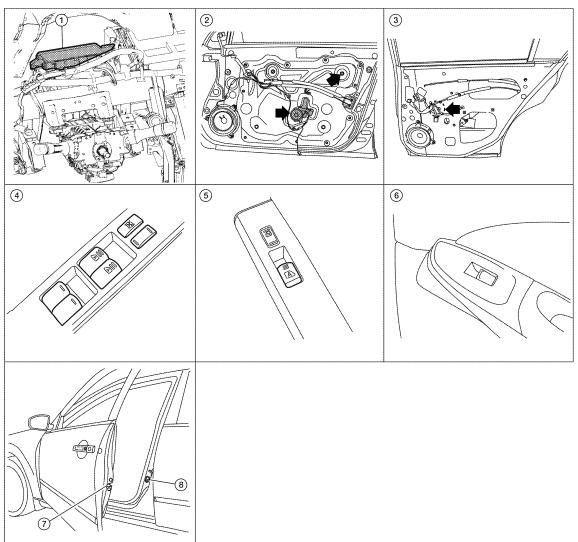
NOTE:

Use CONSULT-III to change settings.

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

Component Parts Location

INFOID:0000000003071199



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POWER WINDOW SYSTEM

< FUNCTION DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

- 1. BCM M16, M17, M18, M19 (view with instrument panel removed)
- Main power window and door lock/ unlock switch D7, D8
- 7. Front door lock assembly LH (key cylinder switch) D10
- 2. Front power window motor LH D9, RH D104
- Power window and door lock/unlock 6. switch RH D105
- 8. Front door switch LH B8, RH B108
- Rear power window motor LH D204, RH D304
- Rear power window switch LH D203, RH D303

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Component Description

FRONT WINDOW ANTI-PINCH SYSTEM

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

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DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

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

INFOID:0000000003071201

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-DIAG RESULTS | Displays the diagnosis results judged by BCM. Refer to BCS-81, "DTC Index". |
| CAN DIAG SUPPORT MNTR | Monitors the reception status of CAN communication viewed from BCM. |
| DATA MONITOR | The BCM input/output signals are displayed. |
| ACTIVE TEST | The signals used to activate each device are forcibly supplied from BCM. |
| ECU IDENTIFICATION | The BCM part number is displayed. |
| CONFIGURATION | 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 | |
|------------|---------------------------|----------------------------------|----------------|--|
| | Sub system selection item | WORK SUPPORT DATA MONITOR ACTIVE | | |
| BCM | BCM | × | | |
| RAP system | RETAINED PWR | | × | |

RETAINED PWR

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

INFOID:0000000003071202

Data monitor

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

COMPONENT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH: Description

- BCM supplies power.
- It operates each power window motor via corresponding power window switch and makes window move up/down when main power window and door lock/unlock switch is operated.

POWER WINDOW MAIN SWITCH: Component Function Check

Main Power Window And Door Lock/Unlock Switch

1. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH FUNCTION

Does power window motor operate with main power window and door lock/unlock switch operation? <u>Is the inspection result normal?</u>

YES >> Main power window and door lock/unlock switch power supply and ground circuit are OK.

NO >> Refer to PWC-71, "POWER WINDOW MAIN SWITCH: Diagnosis Procedure".

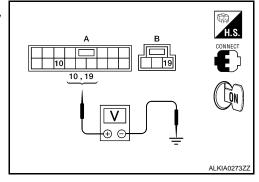
POWER WINDOW MAIN SWITCH: Diagnosis Procedure

Main Power Window And Door Lock/Unlock Switch Power Supply Circuit Check

1. CHECK POWER SUPPLY CIRCUIT

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

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



Is the measurement value within the specification?

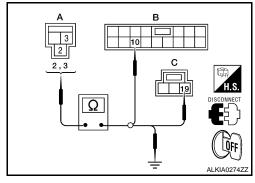
YES >> GO TO 3 NO >> GO TO 2

2. CHECK HARNESS CONTINUITY

- Turn ignition switch OFF.
- Disconnect BCM and main power window and door lock/unlock switch.
- 3. Check continuity between BCM connector (A) and main power window and door lock/unlock switch connectors (B and C).

| BCM connector | Terminal | Main power window and door lock/unlock switch connector | Terminal | Continuity |
|---------------|----------|---|----------|------------|
| M16 (A) | 3 | D7 (B) | 10 | Yes |
| WTO (A) | 2 | D8 (C) | 19 | 162 |

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



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| BCM connector | Terminal | | Continuity |
|---------------|----------|--------|------------|
| M16 | 3 | Ground | No |
| | 2 | | NO |

Is the inspection result normal?

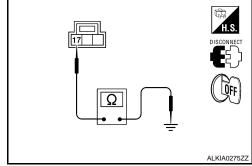
YES >> GO TO 4

NO >> Repair or replace harness.

3. CHECK GROUND CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect main power window and door lock/unlock switch.
- Check continuity between main power window and door lock/ unlock switch connector and ground.

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



Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-140, "Removal and Installation".

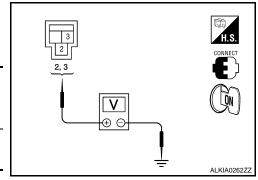
After that, refer to <u>PWC-64</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : <u>Special Repair Requirement"</u>.

NO >> Repair or replace harness.

4. CHECK BCM OUTPUT SIGNAL

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

| Terminals | | | V 1 00 | |
|---------------|----------|--------|--------------------------|--|
| (+) | | (_) | Voltage (V) (Approx.) | |
| BCM connector | Terminal | - (-) | (11 - 7 | |
| M16 | 3 | Ground | Battery voltage | |
| | 2 | Giouna | Battery voltage | |

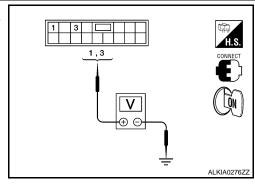


Is the measurement value within the specification?

- YES >> Check main power window and door lock/unlock switch output signal (rear power window switch LH) GO TO 5
- YES >> Check main power window and door lock/unlock switch output signal (rear power window switch RH) GO TO 6
- NO >> Replace BCM. Refer to BCS-85, "Removal and Installation".

5. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL (REAR POWER WINDOW SWITCH LH)

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



< COMPONENT DIAGNOSIS >

| Terminal | | | | | |
|---|----------|----------|-----------|-----------------|--|
| (+) | | | Window | Voltage (V) | |
| Main power window and door lock/unlock switch connector | Terminal | (–) | condition | (Approx.) | |
| | 1 | - Ground | UP | Battery voltage | |
| D7 | | | DOWN | 0 | |
| | 3 | | UP | 0 | |
| | | | DOWN | Battery voltage | |

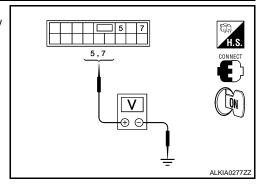
Is the measurement value within the specification?

YES >> GO TO 7

NO >> Replace main power window and door lock/unlock switch. Refer to PWC-140, "Removal and Installation". After that, refer to PWC-64, "ADDITIONAL SERVICE WHEN REPLACING CON-TROL UNIT: Special Repair Requirement".

- 6. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL (REAR POW-ER WINDOW SWITCH RH)
- Turn ignition switch ON.
- Check voltage between main power window and door lock/ unlock switch connector and ground.

| - | Terminal | | _ | |
|--|----------|--------|---------------------|--------------------------|
| (+) | | | | |
| Main power win- dow and door lock/unlock switch connector | Terminal | (–) | Window condition | Voltage (V) (Approx.) |
| | 7 | Ground | UP | Battery voltage |
| D7 | · | | DOWN | 0 |
| DI . | 5 | | UP | 0 |
| 5 | | | DOWN | Battery voltage |



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Is the measurement value within the specification?

YES >> GO TO 8

NO >> Replace main power window and door lock/unlock switch. Refer to PWC-140, "Removal and Installation". After that, refer to PWC-64, "ADDITIONAL SERVICE WHEN REPLACING CON-TROL UNIT: Special Repair Requirement".

- 7. CHECK HARNESS CONTINUITY (REAR POWER WINDOW SWITCH LH)
- Turn ignition switch OFF.
- Disconnect rear power window switch LH.
- Check continuity between main power window and door lock/ unlock switch connector and rear power window switch LH connector.

| Main power window and door lock/unlock switch connector | Terminal | Rear power window switch LH connector | Terminal | Continuity |
|---|----------|---------------------------------------|----------|------------|
| D7 (A) | 1 | D203 (B) | 2 | Yes |
| DT (A) | 3 | D203 (B) | 3 | 162 |

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

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| Main power window and door lock/unlock switch connector | Terminal | 0 | Continuity |
|---|----------|--------|------------|
| D7 (A) | 1 | Ground | No |
| DI (A) | 3 | | INO |

Is the inspection result normal?

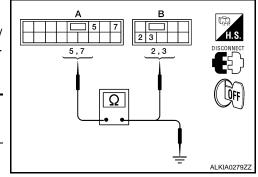
YES >> GO TO 9

NO >> Repair or replace harness.

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

- 1. Turn ignition switch OFF.
- 2. Disconnect rear power window switch RH.
- Check continuity between main power window and door lock/ unlock switch connector and rear power window switch RH connector.

| Main power window and door lock/unlock switch connector | Terminal | Rear power window switch RH connector | Terminal | Continuity |
|---|----------|---------------------------------------|----------|------------|
| D7 (A) | 5 | D303 (B) | 3 | Yes |
| DI (A) | 7 | Б303 (В) | 2 | 165 |



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

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

Is the inspection result normal?

YES >> GO TO 9

NO >> Repair or replace harness.

9. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

Check main power window and door lock/unlock switch.

Refer to PWC-74, "POWER WINDOW MAIN SWITCH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace main power window and door lock/unlock switch. After that, refer to PWC-64, "ADDI-TIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

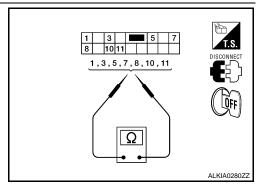
POWER WINDOW MAIN SWITCH: Component Inspection

INFOID:0000000003071206

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

1. Check main power window and door lock/unlock switch.

| Terr | minal | Main power window and door lock/un- lock switch condition | | Continuity |
|------|-------|--|--------------|------------|
| 10 | 1 | Rear LH UP | | |
| 10 | 7 | Rear RH | OF . | |
| 1 | 3 | Rear LH NEUTRAL | | Yes |
| 5 | 7 | Rear RH | NEOTRAL | 165 |
| 10 | 3 | Rear LH | DOWN | |
| 10 | 5 | Rear RH | Rear RH DOWN | |



< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

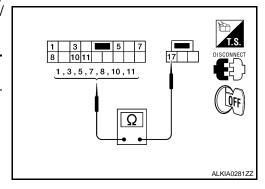
Check continuity between main power window and door lock/ unlock switch (power window lock switch). (Lock operation).

| Tern | ninal | Main power window and door lock/unlock switch condition | | 1 | | Continuity |
|------|-------|---|----------|----|--|------------|
| 3 | | Rear LH | UP | No | | |
| 5 | | Rear RH | OI . | | | |
| 1 | | Rear LH | | | | |
| 3 | 17 | | NEUTRAL | | | |
| 5 | 17 | | NEOTIVAL | | | |
| 7 | | ixeai ixii | | | | |
| 1 | | Rear LH | DOWN | | | |
| 7 | | Rear RH | DOWN | | | |

1 3 5 7 8 10 11 1 17 DISCONNECT Ω

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

| Terr | ninal | Main power window and door lock/unlock switch condition | | - | | Continuity |
|------|-------|---|----------|-----|--|------------|
| 3 | | Rear LH UP | | | | |
| 5 | | Rear RH | UP | | | |
| 1 | | Rear LH | | | | |
| 3 | 17 | Rear RH | NEUTRAL | Yes | | |
| 5 | 17 | | NEOTIVAL | | | |
| 7 | | | | | | |
| 1 | | Rear LH | DOWN | | | |
| 7 | | Rear RH | DOWN | | | |



Is the inspection result normal?

YES >> Main power window and door lock/unlock switch is OK.

NO >> Replace main power window and door lock/unlock switch. Refer to PWC-60, "Removal and Installation". After that, refer to PWC-75, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

POWER WINDOW MAIN SWITCH: Special Repair Requirement

OVER WINDOW MAIN SWITCH. Special Repair Requirement

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-64</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to <u>PWC-64</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection end.

NO >> Refer to PWC-88, "DRIVER SIDE : Component Function Check".

FRONT POWER WINDOW SWITCH

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< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

FRONT POWER WINDOW SWITCH: Description

INFOID:0000000003071208

- BCM supplies power.
- Front power window motor RH will be operated if power window and door lock/unlock switch RH is operated.

FRONT POWER WINDOW SWITCH: Component Function Check

INFOID:0000000003071209

Power Window And Door Lock/Unlock Switch RH

1. CHECK FRONT POWER WINDOW MOTOR RH FUNCTION

Does front power window motor RH operate with power window and door lock/unlock switch RH operation? <u>Is the inspection result normal?</u>

YES >> Power window and door lock/unlock switch RH power supply and ground circuit are OK.

NO >> Refer to PWC-76, "FRONT POWER WINDOW SWITCH: Diagnosis Procedure".

FRONT POWER WINDOW SWITCH: Diagnosis Procedure

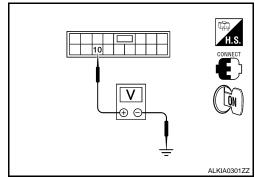
INFOID:0000000003071210

Power Window And Door Lock/Unlock Switch RH Power Supply Circuit Check

1. CHECK POWER SUPPLY CIRCUIT

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

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



Is the measurement value within the specification?

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

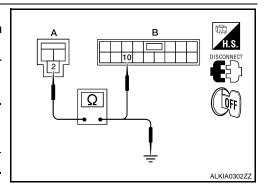
2. CHECK HARNESS CONTINUITY

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

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

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

| BCM connector | Terminal | Ground | Continuity |
|---------------|----------|---------|------------|
| M16 (A) | 2 | Giodila | No |



Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

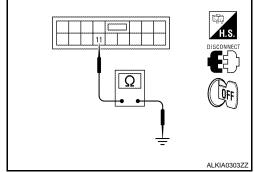
 $3.\,$ CHECK GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

- Turn ignition switch OFF.
- Disconnect power window and door lock/unlock switch RH.
- Check continuity between power window and door lock/unlock switch RH connector and ground.

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



Is the inspection result normal?

YES >> Replace power window and door lock/unlock switch RH. Refer to PWC-60, "Removal and Installation". After that,

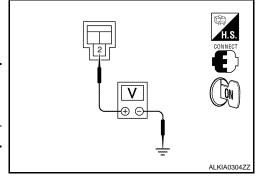
refer to PWC-77, "FRONT POWER WINDOW SWITCH: Special Repair Requirement".

NO >> Repair or replace harness.

4. CHECK BCM OUTPUT SIGNAL

- Connect BCM.
- Turn ignition switch ON. 2.
- Check voltage between BCM connector and ground.

| | V 16 00 | | | |
|---------------|----------|--------|--------------------------|--|
| (+) | | (-) | Voltage (V) (Approx.) | |
| BCM connector | Terminal | (-) | (11 - 7 | |
| M16 2 | | Ground | Battery voltage | |



Is the measurement value within the specification?

YES >> Replace power window and door lock/unlock switch RH.

Refer to PWC-60, "Removal and Installation". After that, refer to PWC-77, "FRONT POWER WIN-DOW SWITCH: Special Repair Requirement".

NO >> Replace BCM. Refer to BCS-85, "Removal and Installation".

FRONT POWER WINDOW SWITCH: Special Repair Requirement

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-64, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YFS >> GO TO 2

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to PWC-64, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.

>> Refer to PWC-90, "PASSENGER SIDE: Component Function Check".

REAR POWER WINDOW SWITCH

REAR POWER WINDOW SWITCH: Description

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

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REAR POWER WINDOW SWITCH: Component Function Check

INFOID:0000000003071213

Rear Power Window Switch

1. CHECK REAR POWER WINDOW MOTOR FUNCTION

Does rear power window motor operate with rear power window switch operation? Is the inspection result normal?

YES >> Rear power window switch power supply and ground circuit are OK.

NO >> Refer to PWC-78, "REAR POWER WINDOW SWITCH: Diagnosis Procedure".

REAR POWER WINDOW SWITCH: Diagnosis Procedure

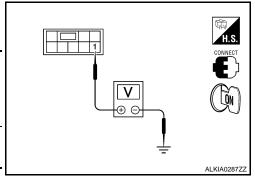
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Rear Power Window Switch Power Supply Circuit Check

1. CHECK POWER SUPPLY CIRCUIT

Check voltage between rear power window switch connector and ground.

| | Terminal | | | | |
|------------------------------------|----------|----------|-----------|-----------------|-----------------|
| (+) | | | Condition | Voltage (V) | |
| Rear power window switch connector | | Terminal | (-) | | (Approx.) |
| LH | D203 | 1 | Ground | Ignition switch | Battery voltage |
| RH | D303 | ' | Giodila | ON | Ballery Vollage |



Is the measurement value within the specification?

YES >> GO TO 2 (Rear power window switch LH)

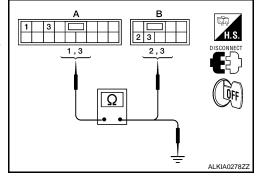
YES >> GO TO 3 (Rear power window switch RH)

NO >> GO TO 4

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

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

| Main power window and door lock/unlock switch connector | Terminal | Rear power window switch LH connector | Terminal | Continuity |
|---|----------|---------------------------------------|----------|------------|
| D7 (A) | 1 | D203 (B) | 2 | Yes |
| DI (A) | 3 | D203 (B) | 3 | 163 |



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

| Main power window and door lock/un- lock switch connector | Terminal | | Continuity |
|--|----------|--------|------------|
| D7 (A) | 1 | Ground | No |
| Dr (A) | 3 | | INO |

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Repair or replace harness.

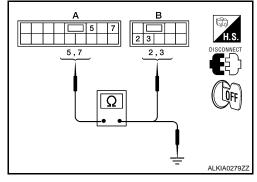
3. CHECK HARNESS CONTINUITY (REAR POWER WINDOW SWITCH RH)

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

- Turn ignition switch OFF.
- Disconnect main power window and door lock/unlock switch and 2. rear power window switch RH.
- Check continuity between main power window and door lock/ unlock switch connector (A) and rear power window switch RH connector (B).

| Main power window and door lock/unlock switch connector | Terminal | Rear power window switch RH connector | Terminal | Continuity |
|---|----------|---------------------------------------|----------|------------|
| D7 (A) | 5 | D303 (B) | 3 | Yes |
| Dr (A) | 7 | D303 (B) | 2 | 163 |



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

| Main power window and door lock/unlock switch connector | Terminal | 01 | Continuity |
|---|----------|--------|------------|
| D7 (A) | 5 | Ground | No |
| Dr (A) | 7 | | NO |

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Repair or replace harness.

4. CHECK HARNESS CONTINUITY

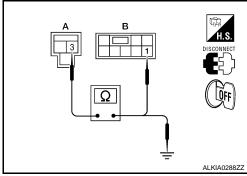
Disconnect BCM and rear power window switch.

2. Check continuity between BCM connector (A) and rear power window switch connector (B).

| BCM connector | Terminal | Rear power window switch connector | | Terminal | Continuity |
|---------------|----------|------------------------------------|----------|----------|------------|
| M16 (A) | 3 | LH | D203 (B) | 1 | Yes |
| WTO (A) | 3 | RH | D303 (B) | ' | 163 |

Check continuity between BCM connector (A) and ground.

| BCM connector | Terminal | Ground | Continuity | |
|---------------|----------|--------|------------|--|
| M16 (A) | 3 | Ground | No | |



Is the inspection result normal?

YES >> GO TO 5

NO >> Repair or replace harness.

5. CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.

Refer to PWC-79, "REAR POWER WINDOW SWITCH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

>> Replace rear power window switch. Refer to PWC-60, "Removal and Installation". NO

REAR POWER WINDOW SWITCH: Component Inspection

COMPONENT INSPECTION

1. CHECK REAR POWER WINDOW SWITCH

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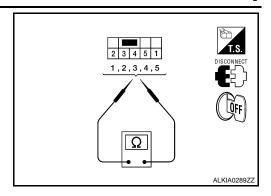
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< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

Check rear power window switch.

| Terr | Terminal Power window switch condition | | Continuity |
|------|--|----------|------------|
| 1 | 5 | UP | |
| 3 | 4 | UF | |
| 3 | 4 | NEUTRAL | Yes |
| 5 | 2 | NEOTIVAL | 163 |
| 1 | 4 | DOWN | |
| 5 | 2 | DOWN | |



Is the inspection result normal?

YES >> Rear power window switch is OK.

NO >> Replace rear power window switch. Refer to PWC-60, "Removal and Installation".

POWER WINDOW MOTOR

DRIVER SIDE

DRIVER SIDE : Description

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

DRIVER SIDE: Component Function Check

INFOID:0000000003071217

1. CHECK POWER WINDOW MOTOR CIRCUIT

Does front power window motor LH operate with operating main power window and door lock/unlock switch? Is the inspection result normal?

YES >> Front power window motor LH is OK.

NO >> Refer to PWC-81, "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE: Diagnosis Procedure

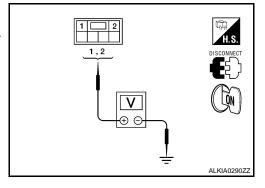
INFOID:0000000003071218

Front Power Window Motor LH Circuit Check

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

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

| 7 | erminal | | NA | | |
|---|----------|---------|---------------------------------------|-----------------|-----------------|
| (+) | (+) | | Main power win- dow and door lock/ | Voltage (V) | |
| Power window motor LH con- nector | Terminal | (–) | unlock switch con- dition | (Approx.) | |
| | D9 | 2 | 2 | UP | Battery voltage |
| Do | | Ground | DOWN | 0 | |
| D9 | | Giodila | UP | 0 | |
| | ' | | DOWN | Battery voltage | |



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Is the measurement value within the specification?

YES >> GO TO 2

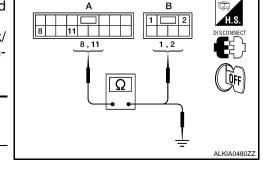
NO

>> Replace main power window and door lock/unlock switch. Refer to PWC-60, "Removal and Installation". After that, refer to PWC-75, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

2. CHECK HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect main power window and door lock/unlock switch and front power window motor LH.
- Check continuity between main power window and door lock/ unlock switch connector (A) and front power window motor connector LH (B).

| Main power window and door lock/unlock switch connector | Terminal | Front power win- dow motor LH con- nector | Terminal | Continuity |
|---|----------|---|----------|------------|
| D7 (A) | 8 | D9 (B) | 2 | Yes |
| DI (A) | 11 | D3 (B) | 1 | 165 |



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

< COMPONENT DIAGNOSIS >

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

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK POWER WINDOW MOTOR

Check front power window motor LH.

Refer to PWC-82, "DRIVER SIDE: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace power window motor LH. Refer to <u>GW-18, "Removal and Installation"</u>. After that, refer to <u>PWC-82, "DRIVER SIDE: Special Repair Requirement"</u>.

DRIVER SIDE: Component Inspection

INFOID:0000000003071219

COMPONENT INSPECTION

1. CHECK FRONT POWER WINDOW MOTOR LH

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

| Terminal | | Motor condition | |
|----------|-----|-------------------|--|
| (+) | (–) | - Wotor Condition | |
| 1 | 2 | DOWN | |
| 2 | 1 | UP | |

Is the inspection result normal?

YES >> Front power window motor LH is OK.

NO >> Replace front power window motor LH. Refer to <u>GW-18</u>, "Removal and Installation". After that, refer to PWC-82, "DRIVER SIDE: Special Repair Requirement".

DRIVER SIDE : Special Repair Requirement

INFOID:0000000003071220

INFOID:00000000003071221

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-64</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT</u>: <u>Special Repair Requirement"</u>.

Is the inspection result normal?

YES >> GO TO 2

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

$2.\,$ CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to <u>PWC-64</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.

NO >> Refer to PWC-88, "DRIVER SIDE : Component Function Check".

PASSENGER SIDE

PASSENGER SIDE : Description

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

PASSENGER SIDE: Component Function Check

INFOID:0000000003071222

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1. CHECK POWER WINDOW MOTOR CIRCIUT

Does power window motor operate with operating main power window and door lock/unlock switch or power window and door lock/unlock switch RH?

Is the inspection result normal?

YES >> Front power window motor RH is OK.

NO >> Refer to PWC-83, "PASSENGER SIDE : Diagnosis Procedure".

PASSENGER SIDE : Diagnosis Procedure

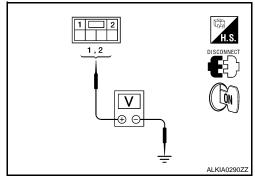
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Front Power Window Motor RH Circuit Check

1. CHECK FRONT POWER WINDOW SWITCH RH OUTPUT SIGNAL

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

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



Is the measurement value within the specification?

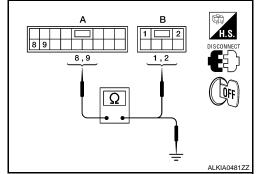
YES >> GO TO 2

NO >> Replace power window and door lock/unlock switch RH. Refer to PWC-60, "Removal and Installation". After that, refer to PWC-77, "FRONT POWER WINDOW SWITCH: Special Repair Requirement".

2. CHECK HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect power window and door lock/unlock switch RH.
- Check continuity between power window and door lock/unlock switch RH connector (A) and front power window motor RH connector (B).

| Power window and door lock/unlock switch RH connector | Terminal | Front power window motor RH connector | Terminal | Continuity |
|---|----------|---------------------------------------|----------|------------|
| D105 (A) | 8 | D104 (B) | 2 | Yes |
| D105 (A) | 9 | D104 (B) | 1 | 163 |



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

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

Is the inspection result normal?

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POWER WINDOW MOTOR

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK FRONT POWER WINDOW MOTOR RH

Check front power window motor RH.

Refer to PWC-84, "PASSENGER SIDE: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace front power window motor RH. Refer to PWC-60, "Removal and Installation". After that, refer to PWC-84, "PASSENGER SIDE: Special Repair Requirement".

PASSENGER SIDE: Component Inspection

INFOID:0000000003071224

COMPONENT INSPECTION

1. CHECK FRONT POWER WINDOW MOTOR RH

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

| Terminal | | Motor condition |
|----------|-----|-----------------|
| (+) | (-) | Wotor condition |
| 1 | 2 | DOWN |
| 2 | 1 | UP |

Is the inspection result normal?

YES >> Front power window motor RH is OK.

NO >> Replace front power window motor RH. Refer to <u>GW-18</u>, "<u>Removal and Installation</u>". After that, refer to <u>PWC-84</u>, "<u>PASSENGER SIDE</u>: <u>Special Repair Requirement</u>".

PASSENGER SIDE: Special Repair Requirement

INFOID:0000000003071225

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-64, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to PWC-64, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.

NO >> Refer to PWC-90, "PASSENGER SIDE : Component Function Check".

REAR LH

REAR LH: Description

INFOID:0000000003071226

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

REAR LH: Component Function Check

INFOID:0000000003071227

1. CHECK REAR POWER WINDOW MOTOR LH CIRCUIT

Does rear power window motor LH operate with main power window and door lock/unlock switch or rear power window switch LH?

Is the inspection result normal?

POWER WINDOW MOTOR

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

YES >> Rear power window motor LH is OK.

NO >> Refer to PWC-85, "REAR LH: Diagnosis Procedure".

REAR LH: Diagnosis Procedure

INFOID:0000000003071228

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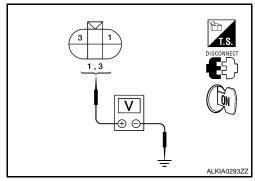
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Power Window Motor Circuit Check

1. CHECK REAR POWER WINDOW SWITCH OUTPUT SIGNAL

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

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



Is the measurement value within the specification?

YES >> GO TO 2

NO >> Check rear power window switch LH. Refer to PWC-78, "REAR POWER WINDOW SWITCH: Component Function Check".

2. CHECK HARNESS CONTINUITY

- Turn ignition switch OFF.
- Disconnect rear power window switch LH.
- 3. Check continuity between rear power window switch LH connector (A) and rear power window motor LH connector (B).

| Rear power window switch LH connector | Terminal | Rear power window motor LH connector | Terminal | Continuity |
|---------------------------------------|----------|--------------------------------------|----------|------------|
| D203 (A) 5 | | D204 (B) | 1 | Yes |
| | | D204 (B) | 3 | 163 |

Check continuity between rear power window switch LH connector (A) and ground.

| A B 3 1 1 1 3 1 3 1 1 1 3 1 3 1 1 1 1 3 1 | H.S. DISCONNECT COFF |
|---|------------------------|
|---|------------------------|

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

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

${f 3.}$ CHECK REAR POWER WINDOW MOTOR LH

Check rear power window motor LH.

Refer to PWC-86, "REAR LH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace rear power window motor LH. Refer to GW-24, "Removal and Installation".

. "REAR POWER WINDOW SWITCH

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REAR LH: Component Inspection

INFOID:0000000003071229

INFOID:0000000003071230

INFOID:00000000003071231

INFOID:0000000003071232

COMPONENT INSPECTION

${f 1}$. CHECK REAR POWER WINDOW MOTOR LH

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

| Terminal | | Motor condition | |
|----------|-----|---------------------|--|
| (+) | (-) | - Wiotor Corruition | |
| 3 | 1 | DOWN | |
| 1 | 3 | UP | |

Is the inspection result normal?

YES >> Rear power window motor LH is OK.

NO >> Replace rear power window motor LH. Refer to <u>GW-24, "Removal and Installation"</u>.

REAR RH

REAR RH: Description

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

REAR RH: Component Function Check

1. CHECK REAR POWER WINDOW MOTOR RH CIRCUIT

Does rear power window motor RH operate with operating main power window and door lock/unlock switch or rear power window switch RH?

Is the inspection result normal?

YES >> Rear power window motor RH is OK.

NO >> Refer to PWC-86, "REAR RH: Diagnosis Procedure".

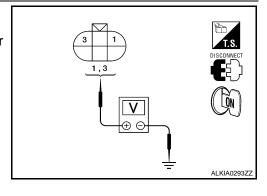
REAR RH: Diagnosis Procedure

Rear Power Window Motor RH Circuit Check

1. CHECK REAR POWER WINDOW SWITCH RH OUTPUT SIGNAL

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

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



Is the measurement value within the specification?

YES >> GO TO 2

NO

>> Check rear power window switch RH. Refer to PWC-78, "REAR POWER WINDOW SWITCH: Component Function Check".

2. CHECK HARNESS CONTINUITY

POWER WINDOW MOTOR

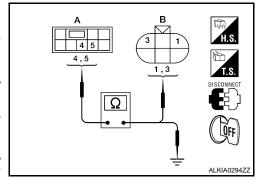
< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

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

| Rear power window switch RH connector | Terminal | Rear power window motor RH connector | Terminal | Continuity |
|---------------------------------------|----------|--------------------------------------|----------|------------|
| D303 (A) | 5 | D304 (B) | 1 | Yes |
| D303 (A) | 4 | D304 (B) | 3 | 163 |

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



| Rear power window switch RH connector | Terminal | 01 | Continuity |
|---------------------------------------|----------|--------|------------|
| D303 (A) | 5 | Ground | No |
| D303 (A) | 4 | | INO |

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK REAR POWER WINDOW MOTOR RH

Check rear power window motor RH.

Refer to PWC-87, "REAR RH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace rear power window motor RH. Refer to <u>GW-24</u>, "<u>Removal and Installation</u>".

REAR RH: Component Inspection

INFOID:0000000003071233

COMPONENT INSPECTION

1. CHECK REAR POWER WINDOW MOTOR RH

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

| Terminal | | Motor condition |
|----------|-----|-----------------|
| (+) | (-) | Wotor condition |
| 3 | 1 | DOWN |
| 1 | 3 | UP |

Is the inspection result normal?

YES >> Rear power window motor RH is OK.

NO >> Replace rear power window motor RH. Refer to GW-24, "Removal and Installation".

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ENCODER

DRIVER SIDE

DRIVER SIDE: Description

INFOID:0000000003071234

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

DRIVER SIDE: Component Function Check

INFOID:0000000003071235

1. CHECK ENCODER OPERATION

Does front door glass LH perform AUTO open/close operation normally when operating main power window and door lock/unlock switch?

Is the inspection result normal?

YES >> Encoder operation is OK.

NO >> Refer to PWC-88, "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE: Diagnosis Procedure

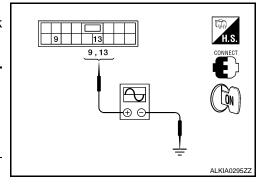
INFOID:0000000003071236

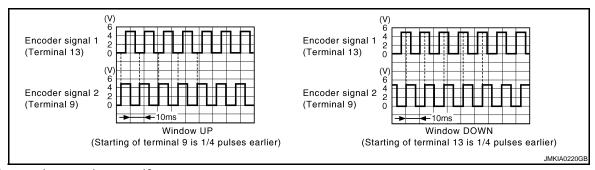
Encoder Circuit Check

1. CHECK ENCODER OPERATION

- 1. Turn ignition switch ON.
- 2. Check signal between main power window and door lock/unlock switch connector and ground with oscilloscope.

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





Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

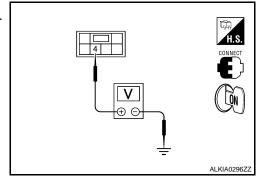
NO >> GO TO 2

2. CHECK FRONT POWER WINDOW MOTOR LH POWER SUPPLY

[LH&RH FRONT WINDOW ANTI-PINCH]

- 1. Turn ignition switch ON.
- Check voltage between front power window motor LH connector and ground.

| (+) | | | Voltage (V) |
|---|----------|--------|-------------|
| Front power win- dow motor LH con- nector | Terminal | (–) | (Approx.) |
| D9 | 4 | Ground | 10 |



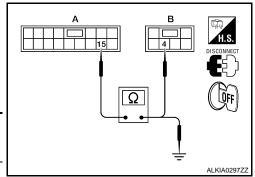
Is the measurement value within the specification?

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

3. CHECK HARNESS CONTINUITY 1

- 1. Turn ignition switch OFF.
- 2. Disconnect main power window and door lock/unlock switch and front power window motor LH.
- Check continuity between main power window and door lock/ unlock switch connector (A) and front power window motor LH connector (B).

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



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

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

Is the inspection result normal?

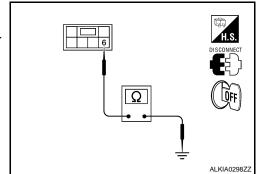
YES >> Replace main power window and door lock/unlock switch. Refer to PWC-60, "Removal and Installation". After that, refer to PWC-75, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

NO >> Repair or replace harness.

4. CHECK GROUND CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect front power window motor LH.
- 3. Check continuity between front power window motor LH connector and ground.

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



Is the inspection result normal?

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

CHECK HARNESS CONTINUITY 2

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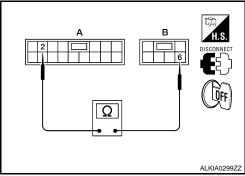
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[LH&RH FRONT WINDOW ANTI-PINCH]

- 1. Disconnect main power window and door lock/unlock switch.
- Check continuity between main power window and door lock/ unlock switch connector (A) and front power window motor LH connector (B).

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



Is the inspection result normal?

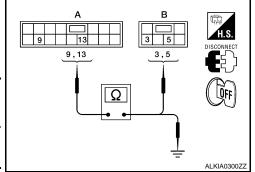
YES >> Replace main power window and door lock/unlock switch. Refer to PWC-60, "Removal and Installation". After that, refer to PWC-75, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

NO >> Repair or replace harness.

6. CHECK HARNESS CONTINUITY 3

- 1. Disconnect main power window and door lock/unlock switch.
- Check continuity between main power window and door lock/ unlock switch connector (A) and front power window motor LH connector (B).

| Main power window and door lock/unlock switch connector | Terminal | Front power window motor LH connector | Terminal | Continuity |
|---|----------|---------------------------------------|----------|------------|
| D7 (A) | 9 | D9 (B) | 3 | Yes |
| DI (A) | 13 | D9 (B) | 5 | 165 |



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

| Main power window and door lock/unlock switch connector | Terminal | _ | Continuity |
|---|----------|--------|------------|
| D7 (A) | 9 | Ground | No |
| DI (A) | 13 | | 140 |

Is the inspection result normal?

YES >> Replace front power window motor LH. Refer to <u>GW-18</u>, "<u>Removal and Installation</u>". After that, refer to PWC-82, "DRIVER SIDE: Special Repair Requirement".

NO >> Repair or replace harness.

PASSENGER SIDE

PASSENGER SIDE : Description

INFOID:0000000003071237

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

PASSENGER SIDE : Component Function Check

INFOID:0000000003071238

1. CHECK ENCODER OPERATION

Does front door glass RH perform AUTO open/close operation normally when operating power window and door lock/unlock switch RH?

Is the inspection result normal?

YES >> Encoder operation is OK.

NO >> Refer to PWC-91, "PASSENGER SIDE : Diagnosis Procedure".

PASSENGER SIDE: Diagnosis Procedure

INFOID:0000000003071239

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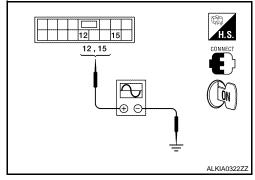
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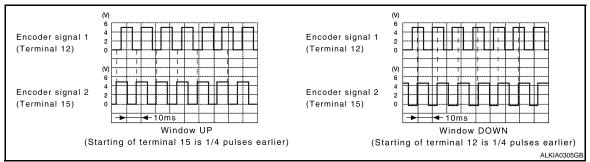
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1. CHECK ENCODER SIGNAL

- 1. Connect front power window motor RH.
- 2. Turn ignition switch ON.
- 3. Check signal between power window and door lock/unlock switch RH connector and ground with oscilloscope.

| - | | | | |
|---|----------|---------|--------------------|--|
| (+) | | | Signal | |
| Power window and door lock/unlock switch RH connector | Terminal | (–) | (Reference value) | |
| D105 | 12 | Ground | Refer to following | |
| D103 | 15 | Giodila | signal | |





Is the inspection result normal?

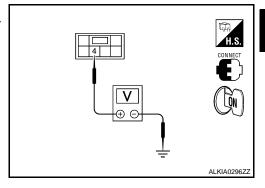
YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> GO TO 2

$2.\,$ Check front power window motor RH power supply

- 1. Turn ignition switch ON.
- Check voltage between front power window motor RH connector and ground.

| (+) | | | Voltage (V) |
|---------------------------------------|----------|--------|-------------|
| Front power window motor RH connector | Terminal | (–) | (Approx.) |
| D105 | 4 | Ground | 10 |

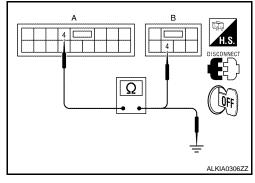


Is the measurement value within the specification?

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

3. CHECK HARNESS CONTINUITY 1

- Turn ignition switch OFF.
- 2. Disconnect power window and door lock/unlock switch RH and front power window motor RH.
- Check continuity between power window and door lock/unlock switch RH connector (A) and front power window motor RH connector (B).



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

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

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

Is the inspection result normal?

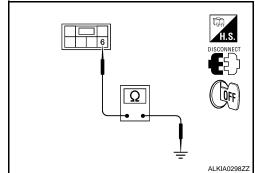
YES >> Replace power window and door lock/unlock switch RH. Refer to <u>PWC-60</u>, "Removal and Installation". After that, refer to <u>PWC-77</u>, "FRONT POWER WINDOW SWITCH: Special Repair Requirement".

NO >> Repair or replace harness.

4. CHECK GROUND CIRCUIT

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

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



Is the inspection result normal?

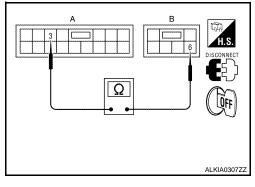
YES >> GO TO 6 NO >> GO TO 5

5. CHECK HARNESS CONTINUITY 2

1. Disconnect power window and door lock/unlock switch RH.

 Check continuity between power window and door lock/unlock switch RH connector (A) and front power window motor RH connector (B).

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



Is the inspection result normal?

YES >> Replace power window and door lock/unlock switch RH.

Refer to <u>PWC-60</u>, "Removal and Installation". After that, refer to <u>PWC-77</u>, "FRONT POWER WINDOW SWITCH: Special Repair Requirement".

NO >> Repair or replace harness.

6. CHECK HARNESS CONTINUITY 3

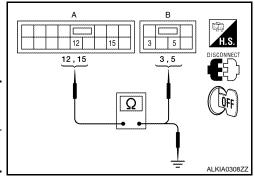
ENCODER

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

- 1. Disconnect power window and door lock/unlock switch RH.
- 2. Check continuity between power window and door lock/unlock switch RH connector (A) and front power window motor RH connector (B).

| Power window and door lock/unlock switch RH connector | Terminal | Front power window motor RH connector | Terminal | Continuity |
|---|----------|---------------------------------------|----------|------------|
| D105 (A) | 12 | D104 (B) | 5 | Yes |
| D103 (A) | 15 | D 104 (B) | 3 | 163 |



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

| Power window and door lock/unlock switch RH connector | Terminal | Ground | Continuity |
|---|----------|--------|------------|
| D105 (A) | 12 | | No |
| D103 (A) | 15 | | NO |

Is the inspection result normal?

YES >> Replace front power window motor RH. Refer to <u>GW-18</u>, "<u>Removal and Installation</u>". After that, refer to <u>PWC-84</u>, "<u>PASSENGER SIDE</u>: <u>Special Repair Requirement</u>".

NO >> Repair or replace harness.

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DOOR SWITCH

Detects door open/close condition and transmits the signal to BCM.

Component Function Check

INFOID:0000000003071241

1. CHECK FRONT DOOR SWITCH INPUT SIGNAL

Check ("DOOR SW-DR" and "DOOR SW-AS") in "DATA MONITOR" mode with CONSULT-III. Refer to PWC-70, "RETAINED PWR: CONSULT-III Function (BCM - RETAINED PWR)".

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

Is the inspection result normal?

YES >> Front door switch circuit is OK.

NO >> Refer to PWC-94, "Diagnosis Procedure".

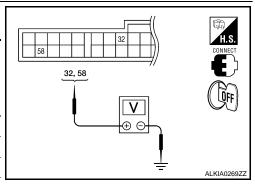
Diagnosis Procedure

INFOID:0000000003071242

1. CHECK HARNESS CONTINUITY

Check voltage between BCM connector and ground.

| | Terminals | | | | | |
|---------------|-----------|------------|----------------|-------|-----------------|--|
| (+) | | | Door condition | | Voltage (V) | |
| BCM connector | Terminal | (–) | | | (Approx.) | |
| | 32 | | Front door | OPEN | 0 | |
| M18 | | Ground | RH | CLOSE | Battery voltage | |
| IVITO | 59 | Front door | OPEN | 0 | | |
| | 58 | | LH | CLOSE | Battery voltage | |



Is the measurement value within the specification?

YES >> Replace BCM. Refer to BCS-85, "Removal and Installation".

NO >> GO TO 2

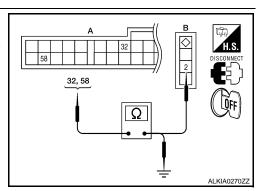
2. CHECK HARNESS CONTINUITY

Turn ignition switch OFF.

- Disconnect BCM and front door switch.
- 3. Check continuity between BCM connector (A) and front door switch connector (B).

| BCM connector | Terminal | Front door switch connector | Terminal | Continuity |
|---------------|----------|-----------------------------|----------|------------|
| M18 (A) | 32 | RH: B108 (B) | 2 | Yes |
| WTO (A) | 58 | LH: B8 (B) | 2 | 163 |

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



| BCM connector | Terminal | | Continuity |
|---------------|----------|--------|------------|
| M18 (A) | 32 | Ground | No |
| | 58 | | INO |

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Is the inspection result normal?

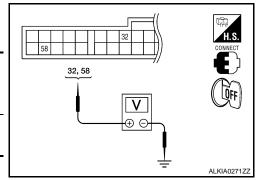
YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK BCM OUTPUT SIGNAL

- 1. Connect BCM connector.
- 2. Check voltage between BCM connector and ground.

| | Valence (A.A. | | | |
|---------------|---------------|---------|--------------------------|--|
| (- | +) | (-) | Voltage (V) (Approx.) | |
| BCM connector | Terminal | (-) | , | |
| M18 | 32 | Ground | Battery voltage | |
| IVITO | 58 | Giodila | Dattery Voltage | |



Is the measurement value within the specification?

YES >> GO TO 4

NO >> Replace BCM. Refer to BCS-85, "Removal and Installation".

4. CHECK FRONT DOOR SWITCH

Check front door switch.

Refer to PWC-95, "Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace front door switch.

Component Inspection

INFOID:0000000003071243

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1. CHECK FRONT DOOR SWITCH

Check front door switches.

| Terminal | | Door switch | Continuity | |
|---------------|----------------------------|-------------|------------|--|
| Door switches | | Door Switch | | |
| 2 | Ground part of door switch | Pressed | No | |
| | | Released | Yes | |

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Is the inspection result normal?

YES >> Front door switch is OK.

NO >> Replace front door switch.

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DOOR KEY CYLINDER SWITCH

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

Component Function Check

INFOID:0000000003071245

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 SYSTEM" with CONSULT-III. Refer to SEC-20, "COMMON ITEM: CONSULT-III Function".

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

Is the inspection result normal?

YES >> Key cylinder switch is OK.

NO >> Refer to PWC-96, "Diagnosis Procedure".

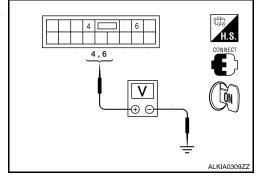
Diagnosis Procedure

INFOID:0000000003071246

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

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

| Te | erminals | | | | |
|---|----------|--------|----------------|-------------|--|
| (+) | | | | Voltage (V) | |
| Main power window and door lock/unlock switch connector | Terminal | (-) | Key position | (Approx.) | |
| | 6 | Ground | Lock | 0 | |
| D7 | | | Neutral/Unlock | 5 | |
| D1 | | | Unlock | 0 | |
| | | | Neutral/Lock | 5 | |



Is the measurement value within the specification?

YES >> Replace main power window and door lock/unlock switch. After that, refer to PWC-75, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

NO >> GO TO 2

2. CHECK DOOR KEY CYLINDER SIGNAL CIRCUIT

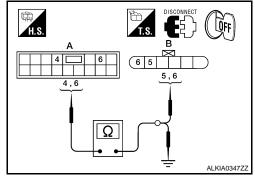
DOOR KEY CYLINDER SWITCH

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

- Turn ignition switch OFF.
- Disconnect main power window and door lock/unlock switch and front door lock assembly LH (key cylinder switch).
- 3. Check continuity between main power window and door lock/ unlock switch connector (A) and front door lock assembly LH (key cylinder switch) connector (B).

| Main power window and door lock/unlock switch connector | Terminal | Front door lock as- sembly LH (key cylin- der switch) connector | Terminal | Continuity |
|---|----------|---|----------|------------|
| D7 (A) | 4 | D10 (B) | 6 | Yes |
| Dr (A) | 6 | D 10 (B) | 5 | 165 |



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

| Main power window and door lock/unlock switch connector | Terminal | | Continuity |
|---|----------|--------|------------|
| D7 (A) | 4 | Ground | No |
| D7 (A) | 6 | | INO |

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

$3.\,$ CHECK DOOR KEY CYLINDER SWITCH GROUND CIRCUIT

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

| Front door lock assembly LH (key cylinder switch) connector | Terminal | Ground | Continuity |
|---|----------|--------|------------|
| D10 | 4 | | Yes |

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Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

4. CHECK DOOR KEY CYLINDER SWITCH

Check door key cylinder switch.

Refer to PWC-97, "Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

>> Replace front door lock assembly LH (door key cylinder switch). After that, refer to PWC-98, "Spe-NO cial Repair Requirement".

Component Inspection

COMPONENT INSPECTION

1. CHECK DOOR KEY CYLINDER SWITCH

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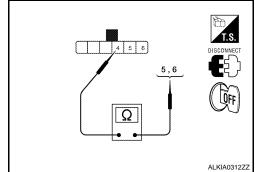
DOOR KEY CYLINDER SWITCH

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

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

| Terminal Front door lock assembly LH (key cylinder switch) connector | | | |
|--|----------------|--------------|------------|
| | | Key position | Continuity |
| 5 | | Unlock | Yes |
| 3 | | Neutral/Lock | No |
| 6 | 4 | Lock | Yes |
| 6 | Neutral/Unlock | No | |



Is the inspection result normal?

YES >> Key cylinder switch is OK.

NO >> Replace front door lock assembly LH (key cylinder switch). After that, refer to PWC-98, "Special Repair Requirement".

Special Repair Requirement

INFOID:0000000003071248

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-64</u>, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

POWER WINDOW SERIAL LINK

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

POWER WINDOW SERIAL LINK POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH: Description

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Main power window and door lock/unlock switch, power window and door lock/unlock switch RH and BCM transmit and receive the signal by power window serial link.

The signal mentioned below is transmitted from BCM to main power window and door lock/unlock switch and power window and door lock/unlock switch RH

Keyless power window down signal

The signal mentioned below is transmitted from main power window and door lock/unlock switch to power window and door lock/unlock switch RH

- Front door window RH 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:0000000003071250

 ${f 1}$. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL

Check ("CDL LOCK SW", "CDL UNLOCK SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYSTEM" with CONSULT-III. Refer to SEC-20, "COMMON ITEM: CONSULT-III Function".

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

Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> Refer to PWC-99, "POWER WINDOW MAIN SWITCH: Diagnosis Procedure".

POWER WINDOW MAIN SWITCH: Diagnosis Procedure

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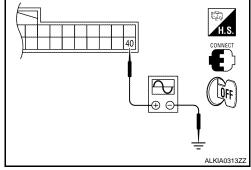
Power Window Serial Link Check

${f 1}$. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL

1. Remove Intelligent Key, and close front door LH and RH.

2. Check signal between BCM connector and ground with oscilloscope when door lock and unlock switch (LH and RH) is turned to "LOCK" or "UNLOCK".

 Check that signals which are shown in the figure below can be detected during 10 second just after door lock and unlock switch (LH and RH) is turned to "LOCK" or "UNLOCK".



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| | Terminal | | |
|---------------|----------|--------|-----------------------------|
| (+) | | () | Signal (Reference value) |
| BCM connector | Terminal | (–) | (Neierence value) |
| M18 | 40 | Ground | (V) 15 10 5 0 |

Is the inspection result normal?

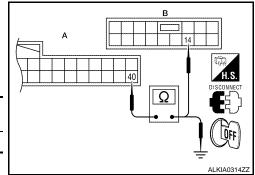
YES >> Power window serial link is OK.

NO >> GO TO 2

2. CHECK POWER WINDOW SERIAL LINK CIRCUIT

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

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



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

| BCM connector | Terminal | Ground | Continuity |
|---------------|----------|---------|------------|
| M18 (A) | 40 | Giodila | No |

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-60, "Removal and Installation". After that, refer to PWC-75, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

NO >> Repair or replace harness.

FRONT POWER WINDOW SWITCH

FRONT POWER WINDOW SWITCH: Description

Main power window and door lock/unlock switch, power window and door lock/unlock switch RH and BCM transmit and receive the signal by power window serial link.

The signal mentioned below is transmitted from BCM to main power window and door lock/unlock switch and power window and door lock/unlock switch RH

Keyless power window down signal

The signal mentioned below is transmitted from main power window and door lock/unlock switch to power window and door lock/unlock switch RH

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

FRONT POWER WINDOW SWITCH: Component Function Check

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

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POWER WINDOW SERIAL LINK

< COMPONENT DIAGNOSIS >

[LH&RH 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 SEC-20, "COMMON ITEM: CONSULT-III Function".

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

Is the inspection result normal?

YES >> Power window serial link is OK.

>> Refer to PWC-101, "FRONT POWER WINDOW SWITCH: Diagnosis Procedure". NO

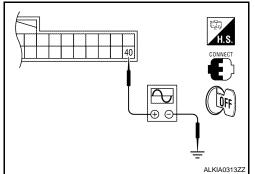
FRONT POWER WINDOW SWITCH: Diagnosis Procedure

Power Window Serial Link Check

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

- Remove Intelligent Key, and close the front door LH and RH.
- Check signal between BCM connector and ground with oscilloscope when door lock and unlock switch (LH and RH) is turned to "LOCK" or "UNLOCK".
- 3. Check that signals which are shown in the figure below can be detected during 10 second just after door lock and unlock switch (LH and RH) is turned to "LOCK" or "UNLOCK".

| | Terminal | Signal (Reference value) | |
|---------------|----------|-----------------------------|------------------------------------|
| (+) | | | |
| BCM connector | Terminal | (-) | , |
| M18 | 40 | Ground | (V) 15 10 5 0 10 ms |



Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> GO TO 2

2. CHECK POWER WINDOW SERIAL LINK CIRCUIT

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

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

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Check continuity between BCM connector (A) and ground.

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POWER WINDOW SERIAL LINK

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

| BCM connector | Terminal | Terminal Ground | |
|---------------|----------|-----------------|----|
| M18 (A) | 40 | Ground | No |

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-60, "Removal and Installation". After that, refer to PWC-75, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

NO >> Repair or replace harness.

POWER WINDOW LOCK SWITCH

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

POWER WINDOW LOCK SWITCH

Description

Ground circuit of main power window and door lock/unlock switch shuts off if power window lock switch of main power window and door lock/unlock switch is operated. This inhibits all operation, except for the main switch.

Component Function Check

1. CHECK POWER WINDOW LOCK SIGNAL

Exchanges for a normal main power window and door lock/unlock switch, and operation is checked. Does power window lock operate?

YES >> Replace main power window and door lock/unlock switch. Refer to <u>PWC-60</u>, "Removal and Installation". After that, refer to <u>PWC-103</u>, "Special Repair Requirement".

NO >> Check condition of harness and connector.

Special Repair Requirement

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-64, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

| Monitor Item | Condition | Value/Status |
|---------------|---|--------------|
| DOOR SW-DR | Front door LH closed | OFF |
| | Front door LH opened | ON |
| DOOR SW-AS | Front door RH closed | OFF |
| | Front door RH opened | ON |
| KEY CYL LK-SW | Other than front door key cylinder LH LOCK position | OFF |
| | Front door key cylinder LH LOCK position | ON |
| KEY CYL UN-SW | Other than front door key cylinder LH UNLOCK position | OFF |
| | Front door key cylinder LH UNLOCK position | ON |
| KEY CYL SW-TR | NOTE: The item is indicated, but not monitored. | OFF |

TERMINAL LAYOUT

Refer to BCS-50, "Terminal Layout".

PHYSICAL VALUES

Refer to BCS-51, "Physical Values".

POWER WINDOW MAIN SWITCH

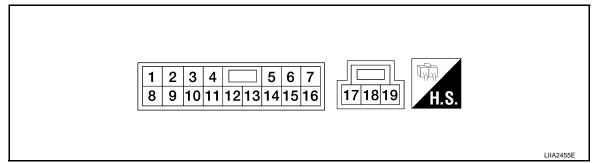
< ECU DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

POWER WINDOW MAIN SWITCH

Reference Value

TERMINAL LAYOUT



PHYSICAL VALUES

MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

| Terminal No. | | Description | | | Voltage [V] | |
|--------------|--------|--|------------------|---|----------------------------------|--|
| + | _ | Signal name | Input/ Output | Condition | (Approx.) | |
| 1 (G/B) | Ground | Rear power window motor LH UP signal | Output | When rear LH switch in power window main switch is operated UP. | Battery voltage | |
| 2 (W/B) | Ground | Encoder ground | _ | _ | 0 | |
| 3 (G/O) | Ground | Rear power window motor LH DOWN signal | Output | When rear LH switch in power window main switch is operated DOWN. | Battery voltage | |
| 4 (L/B) | Ground | Door key cylinder switch LH LOCK signal | Input | Key position (Neutral → Locked) | 5 → 0 | |
| 5 (G/R) | Ground | Rear power window motor RH DOWN signal | Output | When rear RH switch in power window main switch is operated DOWN. | Battery voltage | |
| 6 (L/R) | Ground | Door key cylinder switch LH UNLOCK signal | Input | Key position (Neutral → Unlocked) | 5 → 0 | |
| 7 (G/W) | Ground | Rear power window motor RH UP signal | Output | When rear RH switch in power window main switch is operated UP. | Battery voltage | |
| 8 (L/R) | 11 | Front door power window motor LH UP signal | Output | When front LH switch in power window main switch is operated UP. | Battery voltage | |
| 9 (G/W) | 2 | Encoder pulse signal 2 | Input | When power window motor operates. | (V) 6 4 2 0 10 ms | |

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POWER WINDOW MAIN SWITCH [LH&RH FRONT WINDOW ANTI-PINCH]

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| Terminal No. | | Description | | | Voltago [V] | |
|--------------|--------|--|------------------|---|---|--|
| + | _ | Signal name | Input/ Output | Condition | Voltage [V] (Approx.) | |
| | | | | IGN SW ON | Battery voltage | |
| 10 (L/W) | Ground | RAP signal | Input | Within 45 second after ignition switch is turned to OFF. | Battery voltage | |
| | | | | When front LH or RH door is opened during retained power operation. | 0 | |
| 11 (L/B) | 8 | Front door power window motor LH DOWN signal | Output | When front LH switch in power window main switch is operated DOWN. | Battery voltage | |
| 13 (G/Y) | 2 | Encoder pulse signal 1 | Input | When power window motor operates. | (V) 6 4 2 0 10 ms | |
| 14 (Y/G) | Ground | Power window serial link | Input/ Output | IGN SW ON or power window timer operating. | (V) 15 10 5 0 10 ms JPMIA0013GB | |
| 15 (G/R) | Ground | Encoder power supply | Output | When ignition switch ON or power window timer operates. | 10 | |
| 17 (B) | Ground | Ground | _ | _ | 0 | |
| 19 (R/Y) | Ground | Battery power supply | Input | _ | Battery voltage | |

POWER WINDOW MAIN SWITCH [LH&RH FRONT WINDOW ANTI-PINCH] < ECU DIAGNOSIS > Wiring Diagram INFOID:0000000003071260 Α REAR POWER WINDOW MOTOR LH D204 REAR POWER WINDOW MOTOR RH (D304) \$ \$ В FRONT POWER WINDOW MOTOR RH (D104) ENCODER \$ REAR POWER WINDOW SWITCH LH (D203) REAR POWER WINDOW SWITCH RH (D303) C D POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH POWER WINDOW SYSTEM-WITH LEFT AND RIGHT FRONT POWER WINDOW ANTI-PINCH Е B100 93J B1 M14 M10 B104 CPU F D105) M6 M6 G Н FRONT DOOR LOCK ASSEMBLY LH (KEY CYLINDER SWITCH) (D10) FRONT POWER WINDOW MOTOR LH ENCODER \$ J D1) [M1] TO INTELLIGENT KEY SYSTEM 1 4 4 1 W22 PWC M12 [2] 10 L 19 REAR RH z CPU $\overline{}$ FUSE BLOCK (J/B) (M3) BCM (BODY CONTROL MODULE) (M16), (M17), (M18), (M19) M REAR LH z o lacksquareFRONT DOOR 8108 SWITCH RH OPEN MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH D7 . (D8) 10A POWER WINDOW LOCK SWITCH

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FRONT DOOR BB

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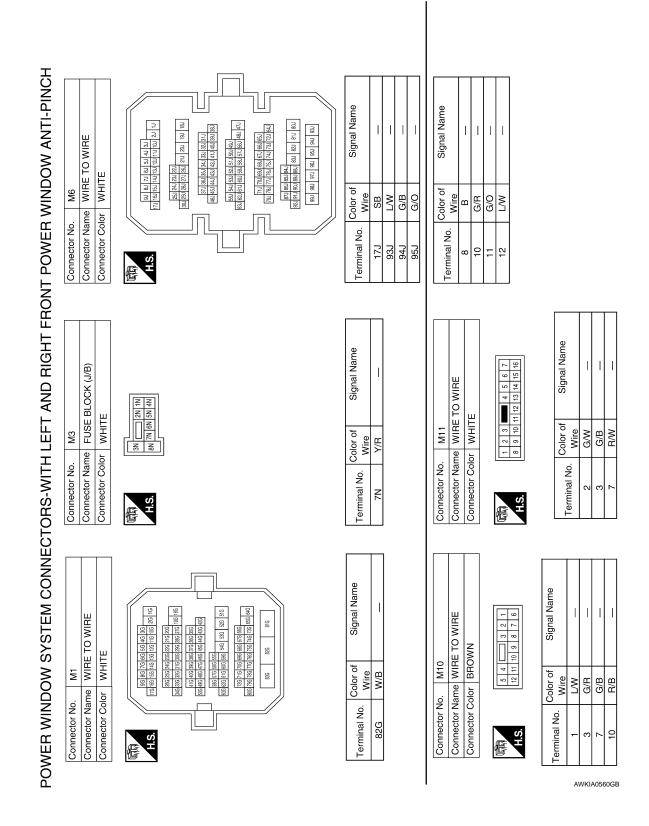
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POWER WINDOW MAIN SWITCH

[LH&RH FRONT WINDOW ANTI-PINCH]

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| | Connector Name BCM (BODY CONTROL | MODULE) | × | | 2 | ī | Signal Name | BAT_POWER_F/L | P/W POWER SUPPL | Y_PERM | POWER_ WINDOW_ | POWER_ SUPPLY | (HAP) |
|---------------------|----------------------------------|-----------------------|-----------------------|-------------|------------------------|----|-------------------|---------------|-----------------|--------|----------------|---------------|-------|
| M16 | e BCM | MOD | ır BLAC | | | -1 | Color of Wire | W/B | , , , | H/Y | | 3 | |
| Connector No. | Connector Nan | | Connector Color BLACK | 4 | S.H | | Terminal No. | - | (| N | | က | |
| | | | | | | 3 | | | | | | | |
| | TO WIRE | | | 8 8 8 | 8 9 10 | | Signal Name | 1 | | 1 | | | |
| M14 | . MIRE | WHITE | | | 5 6 7 | | Color of Wire | R/Υ | В | Y/G | | | |
| Connector No. M14 | Connector Name WIRE TO WIRE | Connector Color WHITE | | E | H.S. | | Terminal No. | 4 | 5 | 8 | | | |
| | | | _ | | _ | | | | 1 | | | | |
| | ro wire | | | | 5 6 7 8 13 14 15 16 | | Signal Name | I | | | | | |
| ΟI | Connector Name WIRE TO W | Connector Color WHITE | | | 1 2 3 4 9 10 11 12 | | Terminal No. Wire | Y/G | | | | | |
| Connector No. M12 | - | | | | - 6 | Ш | 0 | \vdash | | | | | |

| Connector No. | M19 | |
|------------------|-------------------------|----------------------------------|
| Connector Name | me BCM MOD | BCM (BODY CONTROL MODULE) |
| Connector Color | or BLACK | X |
| H.S. | | |
| 7 27 77 77 87 67 | 74 73 72 71 | 70 69 68 67 66 65 64 63 62 61 60 |
| 99 98 97 96 95 | 96 95 94 93 92 91 90 89 | 90 89 88 87 86 85 84 83 82 81 80 |
| | | |
| Terminal No. | Color of Wire | Signal Name |
| 6 | - | CH I NO NO |

| | | | | 21 20 | 41 40 | ١., | | | | | | |
|---------------|------------------------------|-----------------|-----------|-------------------------------|-------------------------------|-----|--------------|-------------|------------|-----------|--------------|------------|
| | BCM (BODY CONTROL MODULE) | EN | | 31 30 29 28 27 26 25 24 23 22 | 51 50 49 48 47 46 45 44 43 42 | | Signal Name | | AS_DOOR_SW | BW K-LINE | S/L LOCK LED | DR DOOR SW |
| M18 | | or GREEN | | 34 33 32 3 | 54 53 52 5 | | Color of | Wire | B/B | Y/G | ۳ | SB |
| Connector No. | Connector Name | Connector Color | 南 H.S. | 39 38 37 36 35 | 59 58 57 56 55 8 | | Toximinal No | ellilla NO. | 32 | 40 | 42 | 58 |

| | | | | | | Γ |
|---------------------------|-----------------|----------------------------|--------------|--------------|------|---|
| BCM (BODY CONTROL MODULE) | TE | 11 12 13 14 15 16 17 18 19 | Signal Name | BAT_BCM_FUSE | GND1 | 1 J J J J J J J J J J J J J J J J J J J |
| | or WHITE | 11 12 13 | Color of | γ/R | В | 5 |
| Connector Name | Connector Color | 所 H.S. | Terminal No. | 11 | 13 | 7 |

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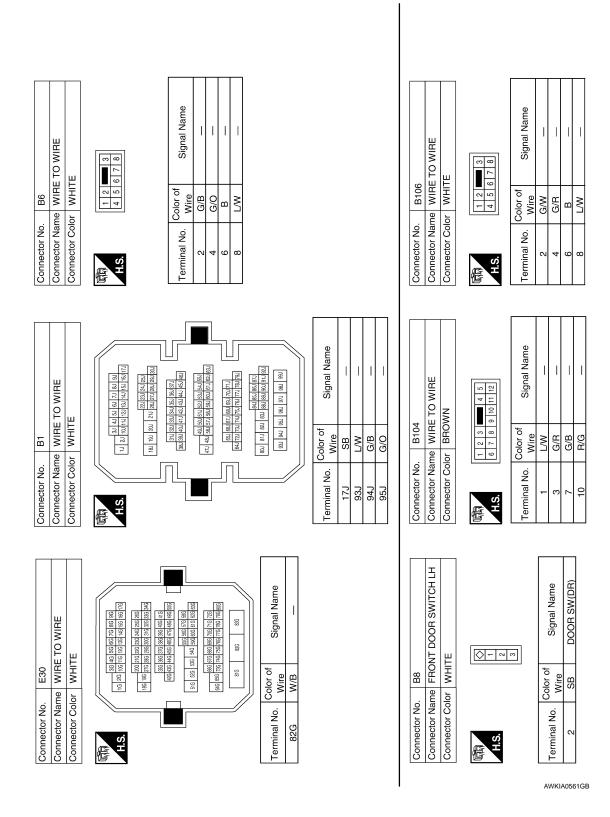
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Connector No.



POWER WINDOW MAIN SWITCH

[LH&RH FRONT WINDOW ANTI-PINCH]

< ECU DIAGNOSIS >

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|------------------|-----------------------------|-----------------------|---|---|------------------------|-------------------|-----|-----|--------------|----------|--------------|-----|----|
| | Connector Name WIRE TO WIRE | <u> </u> | | 5 4 3 2 1 | 16 15 14 13 12 11 10 9 | | | | Signal Name | | ı | | |
| D2 | WIRE | -MHI | | 8 9 | 16 15 14 | | | | olor of | Wire | Y/G | | |
| Connector No. | nector Name | Connector Color WHITE | 7 | v. | 3 | | | | Terminal No. | | 10 | | |
| Conr | Con | Conr | Ą | E T | | | | | Tern | | | | |
| | | | i | | | | | | | _ | | _ | |
| | ro wire | | | 2 11 10 9 8 | | Signal Name | 1 | 1 | Ī | I | 1 | 1 | 1 |
| Б | WIRE | WHITE | | 7 6 5 4 3 3 1 10 10 10 10 10 10 10 10 10 10 10 10 1 | | Color of Wire | G/W | G/B | R/Υ | В | G/R | 9/0 | ΓW |
| No. | Name | Color | | 7 (16 1 | | <u></u> | O | 9 | _ | | | | _ |
| Connector No. D1 | Connector Name WIRE TO WIRE | Connector Color WHITE | ą | E T | | Terminal No. Wire | 2 | 3 | 7 | 80 | 2 | = | 12 |
| | | | | | | | | | | | | | |
| | IT DOOR SWITCH RH | ш | | ⊘ − | 2 | [3] | | | Signal Name | | DOOR SW (AS) | | |
| B108 | FRON | WHIT | | | | | | - | olor of | Wire | R/B | | |
| Connector No. | Connector Name FRONT DOOR | Connector Color WHITE | | | 2 | | | | Terminal No. | | 2 | | |

| Connector No. | . D8 | |
|-----------------|------------------|---|
| Connector Na | me MAIN LOCK | Connector Name MAIN POWER WINDOW AND LOCK/UNLOCK SWITCH |
| Connector Color | lor WHITE | Ш |
| 雨 H.S. | 4 | 18 19 |
| Terminal No. | Color of Wire | Signal Name |
| 17 | В | GND |
| 19 | R/Υ | BAT |
| | | |

| Terminal No | Color of | Signal Name |
|-------------|----------|----------------|
| Cillian 40. | Wire | Olginal Ivanie |
| - | G/B | RL_UP |
| 2 | M/B | ENCODER GND |
| 3 | 0/5 | RL_DOWN |
| 4 | I/B | LOCK |
| 5 | G/R | RR_DOWN |
| 9 | L/R | UNLOCK |
| 7 | G/W | RR_UP |
| 8 | I/R | AS_UP |
| 6 | G/W | ENCODER_SIG2 |
| 10 | Γ/W | IGN |
| 11 | L/B | AS_DOWN |
| 13 | G/Y | ENCODER_SIG1 |
| 14 | Y/G | COM |
| 15 | G/R | ENCODER_POWER |

| for Name AND LOCK/UNLOCK SWITCH COlor WHITE | <u> </u> | NA SW WHI | MAIN PC MAIN PC SWITCH WHITE | IRQ꾼Im I | 홍웅 [[| LED | | ALOCK | 12 분 | MO . |
|---|----------|-----------|---------------------------------------|-----------|---------------|-----|----|-------|------|------|
| | -1 | ıآ | , | ٠] | IJ | 1 | ۶[| - | - | _ |
| | α | σ | 8 9 10 11 12 13 14 15 16 | Ξ | 12 | 13 | 14 | ħ | ď | |



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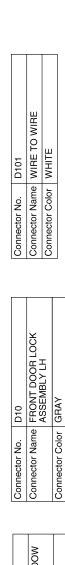
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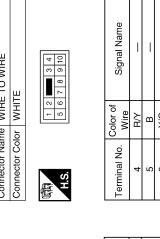
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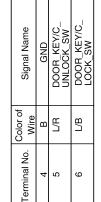
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H.S. F



| | FRONT POWER WINDOW MOTOR LH | | | Signal Name | - | - | 1 | 1 | 1 | 1 |
|---------------|-----------------------------|-----------------------|-------------|--------------|-----|-----|-----|-----|-----|-----|
| 60 | | WHITE | 1 3 4 5 6 | Color of Się | L/B | L/R | G/W | G/R | G/Y | M/B |
| Connector No. | Connector Name | Connector Color WHITE | (南) H.S. | Terminal No. | - | 2 | 3 | 4 | 5 | 9 |

| | _ | _ | _ | _ | _ | _ | _ | _ | _ |
|------------------|-----|---------------|-----|------|------|-----|--------------|--------------|-----|
| Signal Name | GND | ENCODER POWER | dn | NMOG | BATT | GND | ENCODER SIG1 | ENCODER SIG2 | COM |
| Color of Wire | M/B | G/R | L/R | I/B | R/Y | В | G/Y | G/W | 5// |
| Terminal No. | က | 4 | 8 | 6 | 10 | 11 | 12 | 15 | 16 |

| Oppositor No | F | 15 | 100 | | | | | | | |
|---|---|----|------------|------|-------------------------------------|-----|----|-----|------------|----|
| COLLIECTO INC. | | 5 | 3 | | | | | | | |
| Connector Name DOOR LOCK/UNLOCK SWITCH RH | 9 | | <u>₹</u> Ø | l쀼녹우 | POWER WIN DOOR LOCK SWITCH RH | 돌옷ェ | 25 | ≥j | ₹ 8 | 급조 |
| Connector Color WHITE | _ | ∣≶ | 두 | ш | | | | | | |
| | | | | | | | | | | |
| 管 | - | 2 | 2 3 4 | 4 | Ш | П | 2 | 5 6 | 7 | |
| JE C | 8 | 6 | 10 | 11 | 9 10 11 12 13 14 15 16 | 13 | 14 | 15 | 16 | |





| Connector Name FRONT POWER WINDOW MOTOR RH | TE | 3 1 5 6 |
|--|-----------------------|---------|
| nnector Name FRC MOT | Connector Color WHITE | - 6 |

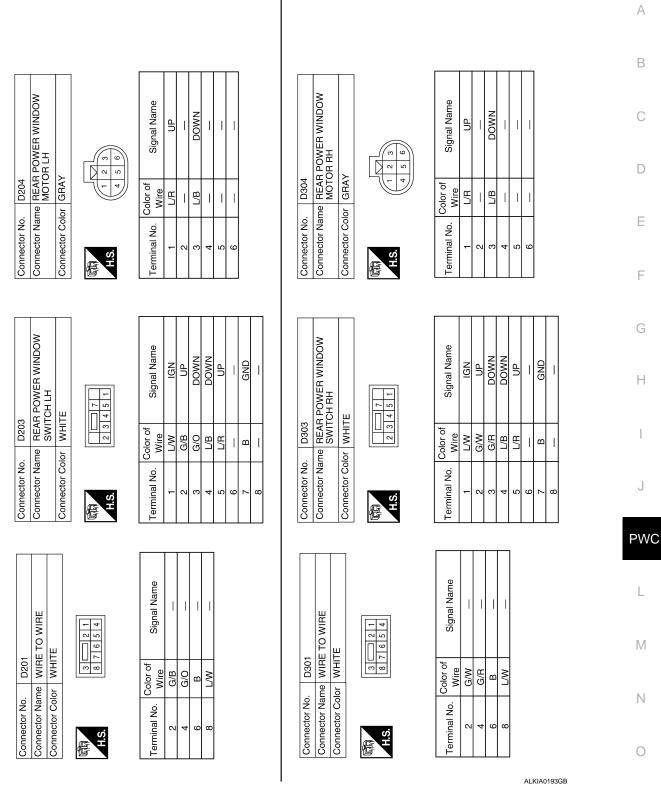


| Signal Name | | | | I | 1 | - |
|------------------|-----|-----|-----|-----|-----|-----|
| Color of Wire | L/B | L/R | G/W | G/R | G/Y | W/B |
| Ferminal No. | 1 | 2 | 3 | 4 | 5 | 9 |

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D104

Connector No.



Fail Safe

FAIL-SAFE CONTROL

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

[LH&RH FRONT WINDOW ANTI-PINCH]

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

It changes to condition before initialization and the following functions do not operate when switched to fail-safe control.

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

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

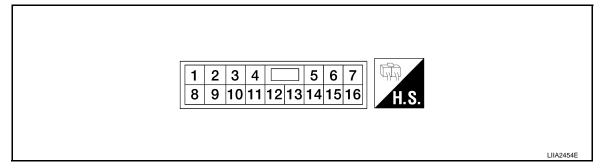
FRONT POWER WINDOW SWITCH

[LH&RH FRONT WINDOW ANTI-PINCH]

FRONT POWER WINDOW SWITCH

Reference Value

TERMINAL LAYOUT



PHYSICAL VALUES

POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

| Termi | nal No. | Description | | | Voltage IV/I |
|-------------|---------|--------------------------------|------------------|--|----------------------------------|
| + | _ | Signal name | Input/ Output | Condition | Voltage [V] (Approx.) |
| 3 (W/B) | Ground | Encoder ground | _ | _ | 0 |
| 4 (G/R) | Ground | Encoder power supply | Output | When ignition switch ON or power window timer operates | 10 |
| 8 (L/R) | 9 | Power window motor UP signal | Output | When power window motor is UP at operated. | Battery voltage |
| 9 (L/B) | 8 | Power window motor DOWN signal | Output | When power window motor is DOWN at operated. | Battery voltage |
| 10 (R/Y) | Ground | Battery power supply | Input | _ | Battery voltage |
| 11 (B) | Ground | Ground | _ | _ | 0 |
| 12 (G/Y) | 3 | Encoder pulse signal 1 | Input | When power window motor operates. | (V) 6 4 2 0 10 ms |

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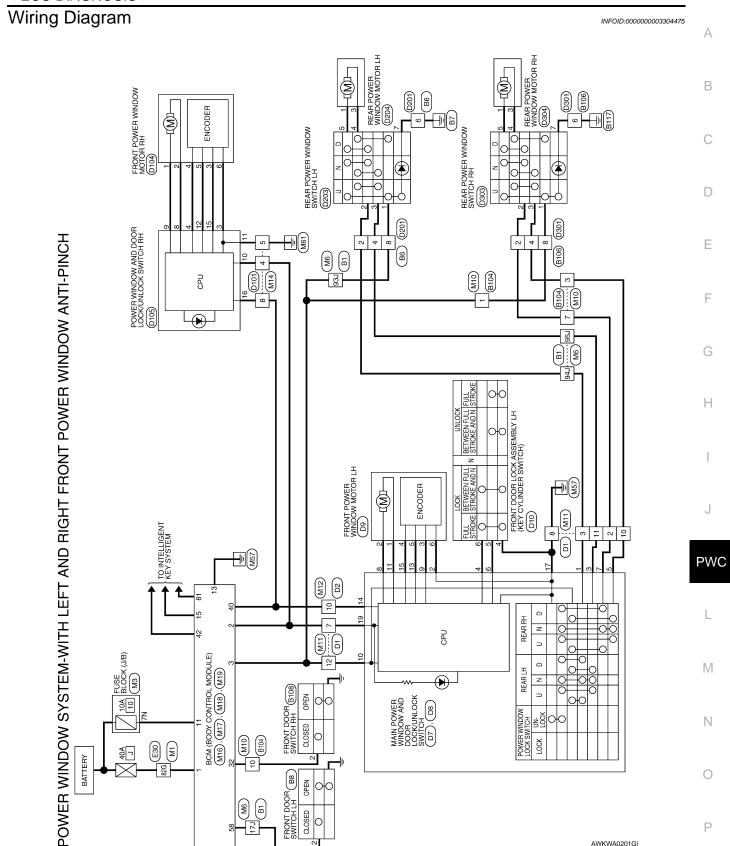
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FRONT POWER WINDOW SWITCH

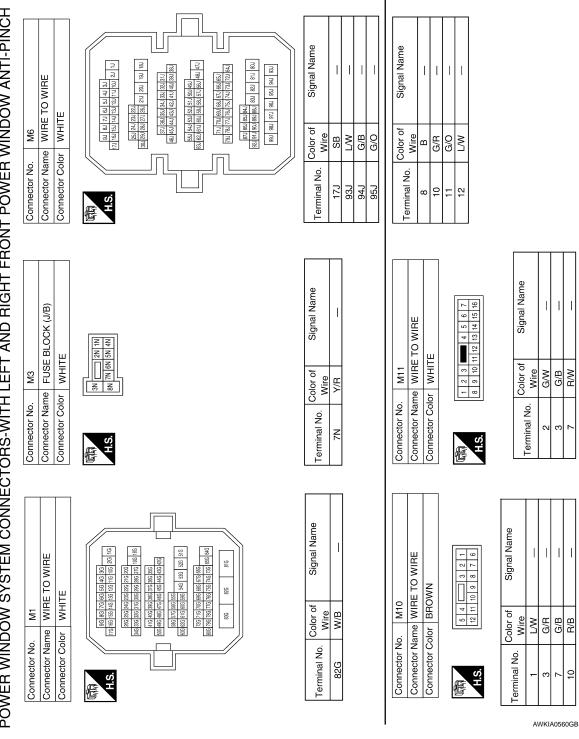
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[LH&RH FRONT WINDOW ANTI-PINCH]

| Termi | inal No. | Description | | | Voltage [V] |
|-------------|----------|--------------------------|------------------|--|---|
| + | _ | Signal name | Input/ Output | Condition | (Approx.) |
| 15 (G/W) | 3 | Encoder pulse signal 2 | Input | When power window motor operates. | (V) 6 4 2 0 10 ms |
| 16 (Y/G) | Ground | Power window serial link | Input/ Output | IGN SW ON or power window timer operating. | (V) 15 10 5 0 10 ms JPMIA0013GB |



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



FRONT POWER WINDOW SWITCH [LH&RH FRONT WINDOW ANTI-PINCH]

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Signal Name Signal Name Ī Connector Name WIRE TO WIRE Connector Name | WIRE TO WIRE 1 2 **• 3** 4 5 6 7 8 1 2 **1** 3 4 5 6 7 8 Connector Color WHITE Connector Color WHITE B106 Color of Wire Color of G/O B B6 G/R G/B ₹ \sim ш Connector No. Connector No. Terminal No. Ferminal No. 9 ဖ 8 H.S. 6 偃 Signal Name Signal Name 47J 48J 56J 57J 58J 53J 54J 55J 47J 48J 56J 57J 58J 59J 60J 61J 62J 63J 1 33 44 54 64 73 84 93 14 23 10/11/12/13/14/15/16/17/ 18J 19J 20J 21J 28J 28J 28J 30J 80J 81J 82J 83J 88J 89J 90J 92J 31J 32J 33J 34J 35J 36J 37J 38J 39J 40J 41J 42J 43J 44J 45J 46J 931 941 951 961 971 981 991 Connector Name WIRE TO WIRE Connector Color BROWN 1 2 3 1 4 5 6 7 8 9 10 11 12 Connector Name | WIRE TO WIRE WHITE B104 Color of Wire Color of G/B G/B Wire M R/G G/B 9/0 H SB Connector Color Connector No. Connector No. Terminal No. Ferminal No. 17 93J 94J 95 9 H.S. E 僵 Connector Name FRONT DOOR SWITCH LH DOOR SW(DR) Signal Name Signal Name 200 210 220 230 246 250 286 386 196 270 286 389 340 310 320 330 340 36G 36G 37G 38G|39G 40G 41G 42G|43G|44G|46G|47G|48G|49G|50G 51G 52G 53G 54G 55G 55G 53G 51G 52G 53G 54G 55G 61G 52G 53G Connector Name | WIRE TO WIRE 8 36 46 56 66 76 86 16 26 106 116 126 136 146 156 1 950 Q - α ε Connector Color | WHITE Connector Color WHITE Color of Wire 816 E30 Color of Wire W/B SB Connector No. Connector No. Terminal No. Terminal No.

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H.S. E

FRONT POWER WINDOW SWITCH

[LH&RH FRONT WINDOW ANTI-PINCH]

| D1 Connector No. D2 | No. D1 Connector No. D2 | | <u>-</u> 0 | | | | Signal Name | | | | | |
|--|-------------------------------|--|--|-------------|---|-----|-------------|--|--------|---|--|--|
| D1 WIRE TO V WHITE WHI | Connector Name WIRE TO | Connector No. D2 Connector Name WIRE TO WIRE Connector Color WHITE | S. 8 7 8 16 15 14 15 14 15 14 15 14 15 14 15 15 15 15 15 15 15 15 15 15 15 15 15 | | | - (| Color of | | | | | |
| ector No. D1 ector Name WIRE ector Color WHIT 7 6 5 4 16 15 14 13 2 G/W 3 G/B 7 R/Y 10 G/R 11 G/O 12 L/W | | TO WIRE | 3 2 9 9 | Signal Name | 1 | | ı | | _ | 1 | | |
| | | ector No. D1 ector Name WIRE | | | | | | | 11 G/O | | | |

< ECU DIAGNOSIS >

| | NDOW AND | | | Signal Name | GND | RAT |
|---------------|---|-----------------|-----------|------------------|-----|-----|
| 8 | Connector Name MAIN POWER WINDOW AND LOCK/UNLOCK SWITCH | WHITE | 17 18 19 | | | |
| D8 | ne M/ | - | | Color of Wire | В | ₽Ÿ |
| Connector No. | Connector Nar | Connector Color | 是 H.S. | Terminal No. | 17 | 19 |

| Terminal No. 1 2 3 3 4 | Color of Wire G/B W/B G/O L/B | Signal Name RL UP ENCODER GND RL DOWN LOCK |
|------------------------|-------------------------------|--|
| 5 | G/R L/R | RR DOWN |
| 7 8 | G/W | RR UP AS UP |
| 9 | G/W | ENCODER SIG2 |
| 11 | L/B | AS DOWN |
| 13 | 6/Y Y/G | ENCODER SIG1 COM |
| 15 | G/R | ENCODER_POWER |

| or No. | _ | D7 | | | | | | | | |
|--|-----|-----|------------------------------|-----|---------------|--------------------------|----|------------|----------------|---|
| MAIN POWER WINDOW or Name AND LOCK/UNLOCK SWITCH | _ 0 | ₹ZX | MAIN PC AND LOC SWITCH | ROX | ŠX | 出り | ≥≒ | ₹ 8 | 只 ^똤 | W |
| or Color WHITE | | ۱ | Ę | ш | | | | | | |
| | | | | | | | | | | |
| | L- | 2 | 8 | 4 | $ \sqcup $ | П | 5 | 9 | 7 | |
| | 8 | 6 | 10 | 11 | 12 | 8 9 10 11 12 13 14 15 16 | 14 | 15 | 16 | |



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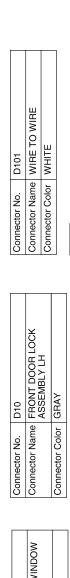
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| Г | | | | | | | |
| | Omol Long | Signal Ivalile | GND | DOOR_KEY/C_ | UNLOCK_SW | DOOR KEY/C | LOCK_SW |
| | Color of | Wire | В | L/R | | R | |
| | Torminal Mo | relimia NO. | 4 | 2 | | 9 | |

Signal Name

Color of Wire B M Y/G

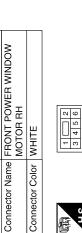
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| Signal Name | 1 | 1 | I | 1 | 1 | - |
|--------------|-----|-----|-----|-----|-----|-----|
| Color of | L/B | L/R | G/W | G/R | J/S | M/B |
| Terminal No. | - | 2 | 3 | 4 | 5 | 9 |

| 15 G/W ENCODER SIG2 16 Y/G COM | Terminal No. 3 4 4 4 8 8 9 10 11 11 | Color of Wire W/B G/R CJ/B L/B B/Y B/Y G/Y CJ/B B/Y CJ/B CJ/Y CJ/Y CJ/B CJ/Y CJ/P CJ/P CJ/P CJ/P CJ/P CJ/P CJ/P CJ/P | Signal Name GND ENCODER POWER UP DOWN BATT GND ENCODER SIG1 |
|-----------------------------------|-------------------------------------|--|--|
| J./G | 5 | G/W | ENCODER SIG2 |
| | 3 | Y/G | COM |

| | H | 12 | 1 | | | | | | | |
|---|-----|----|----------|-----|-------------------------------------|-----|----|-----|----|----|
| Connector No. | | 5 | D105 | | | | | | | |
| Connector Name DOOR LOCK/UNLOCK SWITCH RH | - е | 88 | <u> </u> | 문칙수 | POWER WIN DOOR LOCK SWITCH RH | ΞXェ | 25 | ≥∃ | ₹8 | 급ㅈ |
| Connector Color WHITE | _ | ≶ | 두 | ш | | | | | | |
| | | | | | | | | | | |
| 僵 | - | 2 | 3 | 4 | 2 3 4 | | 2 | 9 9 | 7 | |
| ¥ | 8 | 6 | 10 | 11 | 8 9 10 11 12 13 14 15 16 | 13 | 14 | 15 | 16 | |







Connector Color WHITE

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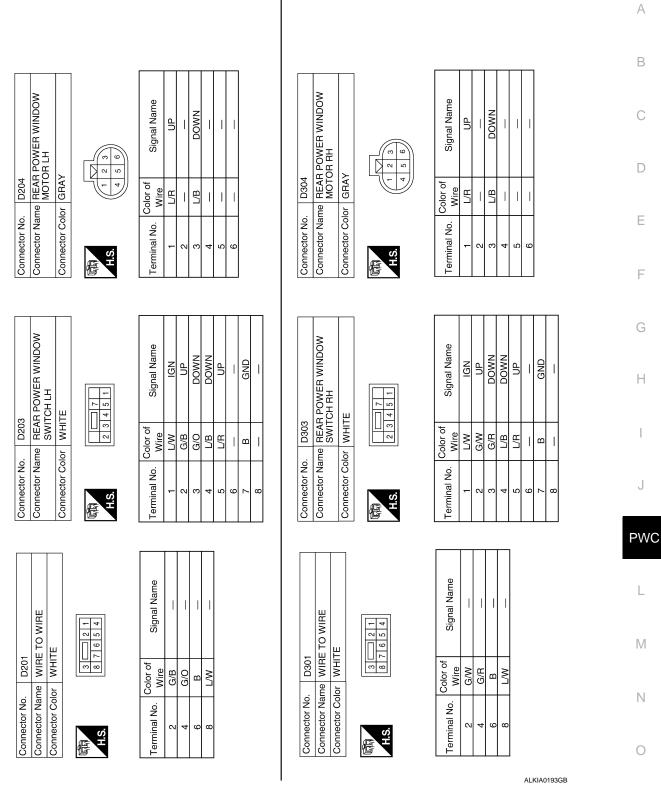
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| Signal Name | 1 | | I | ı | 1 | I |
|------------------|-----|-----|-----|-----|------|-----|
| Color of Wire | I/B | L/R | G/W | G/R | IJ/5 | W/B |
| Terminal No. | 1 | 2 | 3 | 4 | 9 | 9 |

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Fail Safe

FAIL-SAFE CONTROL

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

[LH&RH FRONT WINDOW ANTI-PINCH]

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

It changes to condition before initialization and the following functions do not operate when switched to fail-safe control.

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

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

NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH SYMPTOM DIAGNOSIS > [LH&RH FRONT WINDOW ANTI-PINCH]

< SYMPTOM DIAGNOSIS > SYMPTOM DIAGNOSIS Α NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH В Diagnosis Procedure INFOID:0000000003071265 $oldsymbol{1}$. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT Check BCM power supply and ground circuit. Refer to BCS-41, "Diagnosis Procedure". D Is the inspection result normal? YES >> GO TO 2 NO >> Repair or replace the malfunctioning parts. Е 2. check main power window and door lock/unlock switch power supply and **GROUND CIRCUIT** Check power window switch main power supply and ground circuit. F Refer to PWC-71, "POWER WINDOW MAIN SWITCH: Component Function Check". Is the inspection result normal? YES >> GO TO 3 NO >> Repair or replace the malfunctioning parts. 3. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH SERIAL CIRCUIT Check main power window and door lock/unlock switch serial circuit. Refer to PWC-71, "POWER WINDOW MAIN SWITCH: Component Function Check". Is the inspection result normal? YES >> GO TO 4 NO >> Repair or replace the malfunctioning parts. $oldsymbol{4}$. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH Check main power window and door lock/unlock switch. Refer to PWC-71, "POWER WINDOW MAIN SWITCH: Component Function Check". Is the inspection result normal? **PWC** YES >> Inspection End. NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident". Ν

PWC-125

DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000003071266

1. CHECK FRONT POWER WINDOW MOTOR LH

Check front power window motor LH.

Refer to PWC-81, "DRIVER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42. "Intermittent Incident".

FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPERATE

| FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPER ATE Diagnosis Procedure 1. CHECK POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH Check power window and door lock/unlock switch RH. Refer to PWC-76, "FRONT POWER WINDOW SWITCH: Component Function Check". Is the inspection result normal? YES >> GO TO 2 NO >> Repair or replace the malfunctioning parts. 2. CHECK POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH SERIAL LINK CIRCUIT Check power window and door lock/unlock switch RH serial link circuit. Refer to PWC-100, "FRONT POWER WINDOW SWITCH: Component Function Check". Is the inspection result normal? YES >> GO TO 3 NO >> Repair or replace the malfunctioning parts. 3. CHECK FRONT POWER WINDOW MOTOR RH CIRCUIT Check front power window motor RH circuit. Refer to PWC-83, "PASSENGER SIDE: Component Function Check". Is the inspection result normal? YES >> Inspection result normal? YES >> Inspection End. NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident". |
|---|
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| YES >> Inspection End. |
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REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000003071268

1. CHECK REAR POWER WINDOW SWITCH LH

Check rear power window switch LH.

Refer to PWC-78, "REAR POWER WINDOW SWITCH: Component Function Check".

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace the malfunctioning parts.

2. CHECK REAR POWER WINDOW MOTOR LH

Check rear power window motor LH.

Refer to PWC-84, "REAR LH: Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

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REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE Α Diagnosis Procedure INFOID:0000000003071269 1. CHECK REAR POWER WINDOW SWITCH RH В Check rear power winodw switch RH. Refer to PWC-78, "REAR POWER WINDOW SWITCH: Component Function Check". C Is the inspection result normal? YES >> GO TO 2 NO >> Repair or replace the malfunctioning parts. D 2. CHECK REAR POWER WINDOW MOTOR RH Check rear power window motor RH. Refer to PWC-86, "REAR RH: Component Function Check". Е Is the inspection result normal? YES >> Inspection End. >> Check intermittent incident. Refer to GI-42, "Intermittent Incident". NO F Н J **PWC** L M Ν

ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (DRIVER SIDE) [LH&RH FRONT WINDOW ANTI-PINCH]

< SYMPTOM DIAGNOSIS >

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

Diagnosis Procedure

INFOID:0000000003071270

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-64, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace the malfunctioning parts.

2. CHECK DOOR WINDOW SLIDING PART

- · A foreign material adheres to window glass or glass run rubber.
- Glass run rubber wear or deformation.
- · Sash is tilted too much or not enough.

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace the malfunctioning parts.

$3.\,$ CHECK ENCODER CIRCUIT

Check encoder circuit.

Refer to PWC-88, "DRIVER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (PASSENGER SIDE) < SYMPTOM DIAGNOSIS > [LH&RH FRONT WINDOW ANTI-PINCH] ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (PASSENGER

ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (PASSENGER Α SIDE) **Diagnosis Procedure** INFOID:0000000003071271 В 1. PERFORM INITIALIZATION PROCEDURE Perform initialization procedure. Refer to PWC-64, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement". Is the inspection result normal? D YES >> GO TO 2 NO >> Repair or replace the malfunctioning parts. 2. CHECK DOOR WINDOW SLIDING PART Е · A foreign material adheres to window glass or glass run rubber. Glass run rubber wear or deformation. · Sash is tilted too much or not enough. F Is the inspection result normal? YES >> GO TO 3 NO >> Repair or replace the malfunctioning parts. 3. CHECK ENCODER CIRCUIT Check encoder circuit. Н Refer to PWC-90, "PASSENGER SIDE: Component Function Check". Is the inspection result normal? YES >> Inspection End. NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

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AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NORMAL-LY (DRIVER SIDE)

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NOR-MALLY (DRIVER SIDE)

Diagnosis Procedure

INFOID:0000000003071272

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-64, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace the malfunctioning parts.

2. CHECK ENCODER

Check encoder.

Refer to PWC-88, "DRIVER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NORMAL-LY (PASSENGER SIDE)

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NOR-MALLY (PASSENGER SIDE)

Diagnosis Procedure

INFOID:0000000003071273

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1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-64, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace the malfunctioning parts.

2. CHECK ENCODER

Check encoder.

Refer to PWC-90, "PASSENGER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42. "Intermittent Incident".

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POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPER-ATE PROPERLY

Diagnosis Procedure

INFOID:0000000003071274

1. CHECK FRONT DOOR SWITCH

Check front door switch.

Refer to PWC-94, "Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

DOES NOT OPERATE BY KEY CYLINDER SWITCH

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

DOES NOT OPERATE BY KEY CYLINDER SWITCH

Diagnosis Procedure

INFOID:0000000003071275

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1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-64</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace the malfunctioning parts.

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

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

Refer to PWC-96, "Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42. "Intermittent Incident".

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KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000003071276

1. CHECK INTELLIGENT KEY FUNCTION

Check Intelligent Key function.

Refer to DLK-112, "Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace BCM. Refer to BCS-85, "Removal and Installation".

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

Diagnosis Procedure

INFOID:0000000003071277

1. REPLACE MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH Replace main power window and door lock/unlock switch.

Refer to PWC-60, "Removal and Installation". After that, PWC-75, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

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PRECAUTIONS

[LH&RH FRONT WINDOW ANTI-PINCH]

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 SR and SB section of this Service Manual.

WARNING:

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

PRE-INSPECTION FOR DIAGNOSTIC

< ON-VEHICLE MAINTENANCE >

[LH&RH FRONT WINDOW ANTI-PINCH]

ON-VEHICLE MAINTENANCE

PRE-INSPECTION FOR DIAGNOSTIC

Basic Inspection

BASIC INSPECTION

1. INSPECTION START

- 1. Check the service history.
- 2. Check the following parts.
- Fuse/fusible link blown.
- Poor connection, open or short circuit of harness connector.
- · Battery voltage.

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace the malfunctioning parts.

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POWER WINDOW MAIN SWITCH

[LH&RH FRONT WINDOW ANTI-PINCH]

< ON-VEHICLE REPAIR >

ON-VEHICLE REPAIR

POWER WINDOW MAIN SWITCH

Removal and Installation

INFOID:0000000003071280

REMOVAL

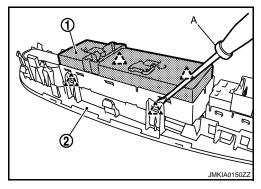
- 1. Remove the power window main switch finisher (2). Refer to INT-11, "Removal and Installation".
- 2. Power window main switch (1) is removed from power window main switch finisher (2) using flat-head screw driver (A) etc.



CAUTION:

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

The same procedure is also performed for power window and door lock/unlock switch RH and rear power window switch (LH & RH).



INSTALLATION

Install in the reverse order of removal.