

SECTION GW

GLASSES, WINDOW SYSTEM & MIRRORS

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PRECAUTIONS

PRECAUTIONS

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Precautions for Supplemental Restraint System (SRS) “AIR BAG” and “SEAT BELT PRE-TENSIONER”

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

Handling for Adhesive and Primer

AIS00039

- Do not use an adhesive which is past its usable date. Shelf life of this product is limited to six months after the date of manufacture. Carefully adhere to the expiration or manufacture date printed on the box.
- Keep primers and adhesive in a cool, dry place. Ideally, they should be stored in a refrigerator.
- Open the seal of the primer and adhesive just before application. Discard the remainder.
- Before application, be sure to shake the primer container to stir the contents. If any floating material is found, do not use it.
- If any primer or adhesive contacts the skin, wipe it off with gasoline or equivalent and wash the skin with soap.
- When using primer and adhesive, always observe the precautions in the instruction manual.

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GW

PREPARATION

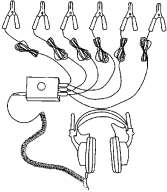
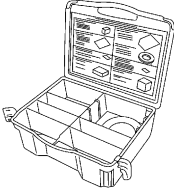
PREPARATION

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Special Service Tools

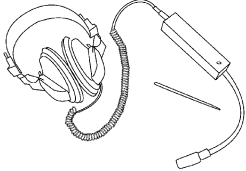
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The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.

Tool number (Kent-Moore No.) Tool name	Description
(J-39570) Chassis ear <div style="text-align: center;">  <p>SIIA0993E</p> </div>	Locating the noise
(J-43980) NISSAN Squeak and Rattle Kit <div style="text-align: center;">  <p>SIIA0994E</p> </div>	Repairing the cause of noise

Commercial Service Tools

AIS0007E

Tool name	Description
Engine ear <div style="text-align: center;">  <p>SIIA0995E</p> </div>	Locating the noise

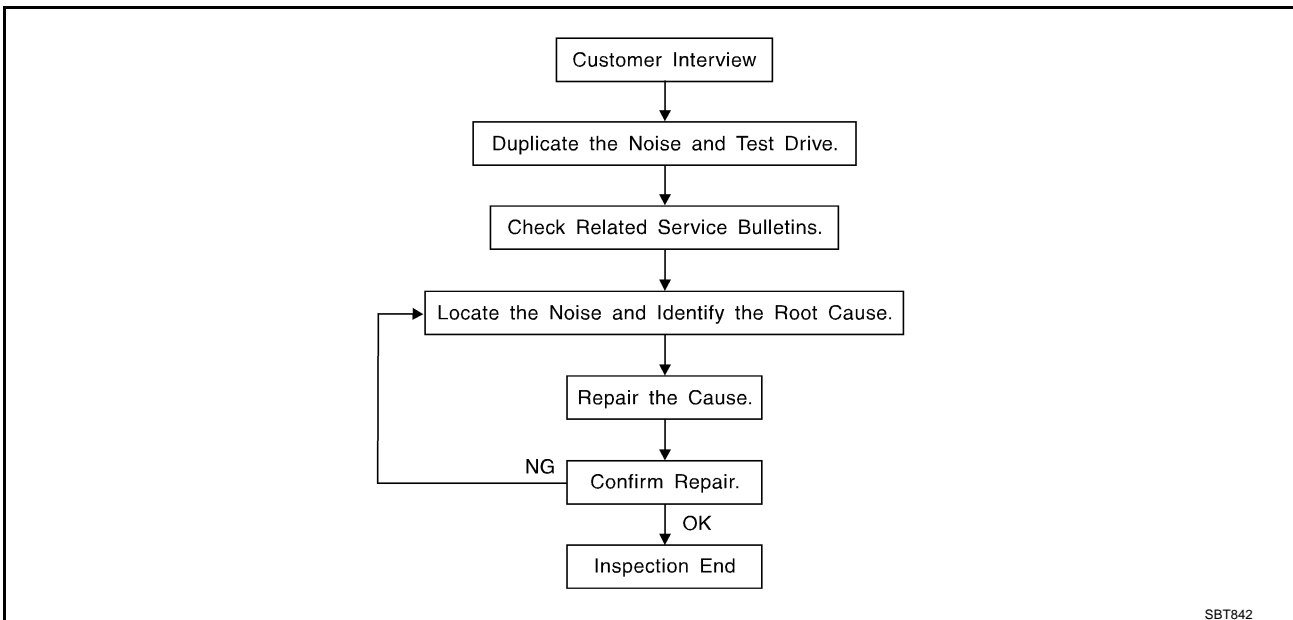
SQUEAK AND RATTLE TROUBLE DIAGNOSES

SQUEAK AND RATTLE TROUBLE DIAGNOSES

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Work Flow

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CUSTOMER INTERVIEW

Interview the customer if possible, to determine the conditions that exist when the noise occurs. Use the Diagnostic Worksheet during the interview to document the facts and conditions when the noise occurs and any customer's comments; refer to [GW-9, "Diagnostic Worksheet"](#). This information is necessary to duplicate the conditions that exist when the noise occurs.

- The customer may not be able to provide a detailed description or the location of the noise. Attempt to obtain all the facts and conditions that exist when the noise occurs (or does not occur).
- If there is more than one noise in the vehicle, be sure to diagnose and repair the noise that the customer is concerned about. This can be accomplished by test driving the vehicle with the customer.
- After identifying the type of noise, isolate the noise in terms of its characteristics. The noise characteristics are provided so the customer, service adviser and technician are all speaking the same language when defining the noise.
- Squeak—(Like tennis shoes on a clean floor)
Squeak characteristics include the light contact/fast movement/brought on by road conditions/hard surfaces=higher pitch noise/softer surfaces=lower pitch noises/edge to surface=chirping
- Creak—(Like walking on an old wooden floor)
Creak characteristics include firm contact/slow movement/twisting with a rotational movement/pitch dependent on materials/often brought on by activity.
- Rattle—(Like shaking a baby rattle)
Rattle characteristics include the fast repeated contact/vibration or similar movement/loose parts/missing clip or fastener/incorrect clearance.
- Knock—(Like a knock on a door)
Knock characteristics include hollow sounding/sometimes repeating/often brought on by driver action.
- Tick—(Like a clock second hand)
Tick characteristics include gentle contacting of light materials/loose components/can be caused by driver action or road conditions.
- Thump—(Heavy, muffled knock noise)
Thump characteristics include softer knock/dead sound often brought on by activity.
- Buzz—(Like a bumble bee)
Buzz characteristics include high frequency rattle/firm contact.
- Often the degree of acceptable noise level will vary depending upon the person. A noise that you may judge as acceptable may be very irritating to the customer.
- Weather conditions, especially humidity and temperature, may have a great effect on noise level.

SQUEAK AND RATTLE TROUBLE DIAGNOSES

DUPLICATE THE NOISE AND TEST DRIVE

If possible, drive the vehicle with the customer until the noise is duplicated. Note any additional information on the Diagnostic Worksheet regarding the conditions or location of the noise. This information can be used to duplicate the same conditions when you confirm the repair.

If the noise can be duplicated easily during the test drive, to help identify the source of the noise, try to duplicate the noise with the vehicle stopped by doing one or all of the following:

- 1) Close a door.
 - 2) Tap or push/pull around the area where the noise appears to be coming from.
 - 3) Rev the engine.
 - 4) Use a floor jack to recreate vehicle "twist".
 - 5) At idle, apply engine load (electrical load, half-clutch on M/T model, drive position on A/T model).
 - 6) Raise the vehicle on a hoist and hit a tire with a rubber hammer.
- Drive the vehicle and attempt to duplicate the conditions the customer states exist when the noise occurs.
 - If it is difficult to duplicate the noise, drive the vehicle slowly on an undulating or rough road to stress the vehicle body.

CHECK RELATED SERVICE BULLETINS

After verifying the customer concern or symptom, check ASIST for Technical Service Bulletins (TSBs) related to that concern or symptom.

If a TSB relates to the symptom, follow the procedure to repair the noise.

LOCATE THE NOISE AND IDENTIFY THE ROOT CAUSE

1. Narrow down the noise to a general area. To help pinpoint the source of the noise, use a listening tool (Chassis Ear: J-39570, Engine Ear and mechanics stethoscope).
2. Narrow down the noise to a more specific area and identify the cause of the noise by:
 - removing the components in the area that you suspect the noise is coming from.
Do not use too much force when removing clips and fasteners, otherwise clips and fastener can be broken or lost during the repair, resulting in the creation of new noise.
 - tapping or pushing/pulling the component that you suspect is causing the noise.
Do not tap or push/pull the component with excessive force, otherwise the noise will be eliminated only temporarily.
 - feeling for a vibration with your hand by touching the component(s) that you suspect is (are) causing the noise.
 - placing a piece of paper between components that you suspect are causing the noise.
 - looking for loose components and contact marks.
Refer to [GW-7, "Generic Squeak and Rattle Troubleshooting"](#).

REPAIR THE CAUSE

- If the cause is a loose component, tighten the component securely.
- If the cause is insufficient clearance between components:
 - separate components by repositioning or loosening and retightening the component, if possible.
 - insulate components with a suitable insulator such as urethane pads, foam blocks, felt cloth tape or urethane tape. A Nissan Squeak and Rattle Kit (J-43980) is available through your authorized Nissan Parts Department.

CAUTION:

Do not use excessive force as many components are constructed of plastic and may be damaged.

Always check with the Parts Department for the latest parts information.

The following materials are contained in the Nissan Squeak and Rattle Kit (J-43980). Each item can be ordered separately as needed.

URETHANE PADS [1.5 mm (0.059 in) thick]

Insulates connectors, harness, etc.

76268-9E005: 100 × 135 mm (3.94 × 5.31 in)/76884-71L01: 60 × 85 mm (2.36 × 3.35 in)/76884-

71L02: 15 × 25 mm (0.59 × 0.98 in)

INSULATOR (Foam blocks)

Insulates components from contact. Can be used to fill space behind a panel.

73982-9E000: 45 mm (1.77 in) thick, 50 × 50 mm (1.97 × 1.97 in)/73982-

50Y00: 10 mm (0.39 in) thick, 50 × 50 mm (1.97 × 1.97 in)

SQUEAK AND RATTLE TROUBLE DIAGNOSES

INSULATOR (Light foam block)

80845-71L00: 30 mm (1.18 in) thick, 30 × 50 mm (1.18 × 1.97 in)

FELT CLOTHTAPE

Used to insulate where movement does not occur. Ideal for instrument panel applications.

68370-4B000: 15 × 25 mm (0.59 × 0.98 in) pad/68239-13E00: 5 mm (0.20 in) wide tape roll

The following materials, not found in the kit, can also be used to repair squeaks and rattles.

UHMW (TEFLON) TAPE

Insulates where slight movement is present. Ideal for instrument panel applications.

SILICONE GREASE

Used in place of UHMW tape that will be visible or not fit.

Note: Will only last a few months.

SILICONE SPRAY

Use when grease cannot be applied.

DUCT TAPE

Use to eliminate movement.

CONFIRM THE REPAIR

Confirm that the cause of a noise is repaired by test driving the vehicle. Operate the vehicle under the same conditions as when the noise originally occurred. Refer to the notes on the Diagnostic Worksheet.

Generic Squeak and Rattle Troubleshooting

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Refer to Table of Contents for specific component removal and installation information.

INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

1. The cluster lid A and instrument panel
2. Acrylic lens and combination meter housing
3. Instrument panel to front pillar garnish
4. Instrument panel to windshield
5. Instrument panel mounting pins
6. Wiring harnesses behind the combination meter
7. A/C defroster duct and duct joint

These incidents can usually be located by tapping or moving the components to duplicate the noise or by pressing on the components while driving to stop the noise. Most of these incidents can be repaired by applying felt cloth tape or silicon spray (in hard to reach areas). Urethane pads can be used to insulate wiring harness.

CAUTION:

Do not use silicone spray to isolate a squeak or rattle. If you saturate the area with silicone, you will not be able to recheck the repair.

CENTER CONSOLE

Components to pay attention to include:

1. Shifter assembly cover to finisher
2. A/C control unit and cluster lid C
3. Wiring harnesses behind audio and A/C control unit

The instrument panel repair and isolation procedures also apply to the center console.

DOORS

Pay attention to the:

1. Finisher and inner panel making a slapping noise
2. Inside handle escutcheon to door finisher
3. Wiring harnesses tapping
4. Door striker out of alignment causing a popping noise on starts and stops

Tapping or moving the components or pressing on them while driving to duplicate the conditions can isolate many of these incidents. You can usually insulate the areas with felt cloth tape or insulator foam blocks from the Nissan Squeak and Rattle Kit (J-43980) to repair the noise.

SQUEAK AND RATTLE TROUBLE DIAGNOSES

TRUNK

Trunk noises are often caused by a loose jack or loose items put into the trunk by the owner. In addition look for:

1. Trunk lid dumpers out of adjustment
2. Trunk lid striker out of adjustment
3. The trunk lid torsion bars knocking together
4. A loose license plate or bracket

Most of these incidents can be repaired by adjusting, securing or insulating the item(s) or component(s) causing the noise.

SUNROOF/HEADLINING

Noises in the sunroof/headlining area can often be traced to one of the following:

1. Sunroof lid, rail, linkage or seals making a rattle or light knocking noise
2. Sunvisor shaft shaking in the holder
3. Front or rear windshield touching headlining and squeaking

Again, pressing on the components to stop the noise while duplicating the conditions can isolate most of these incidents. Repairs usually consist of insulating with felt cloth tape.

SEATS

When isolating seat noise it's important to note the position the seat is in and the load placed on the seat when the noise is present. These conditions should be duplicated when verifying and isolating the cause of the noise.

Cause of seat noise include:

1. Headrest rods and holder
2. A squeak between the seat pad cushion and frame
3. The rear seatback lock and bracket

These noises can be isolated by moving or pressing on the suspected components while duplicating the conditions under which the noise occurs. Most of these incidents can be repaired by repositioning the component or applying urethane tape to the contact area.

UNDERHOOD

Some interior noise may be caused by components under the hood or on the engine wall. The noise is then transmitted into the passenger compartment.

Causes of transmitted underhood noise include:

1. Any component mounted to the engine wall
2. Components that pass through the engine wall
3. Engine wall mounts and connectors
4. Loose radiator mounting pins
5. Hood bumpers out of adjustment
6. Hood striker out of adjustment

These noises can be difficult to isolate since they cannot be reached from the interior of the vehicle. The best method is to secure, move or insulate one component at a time and test drive the vehicle. Also, engine RPM or load can be changed to isolate the noise. Repairs can usually be made by moving, adjusting, securing, or insulating the component causing the noise.

SQUEAK AND RATTLE TROUBLE DIAGNOSES

Diagnostic Worksheet

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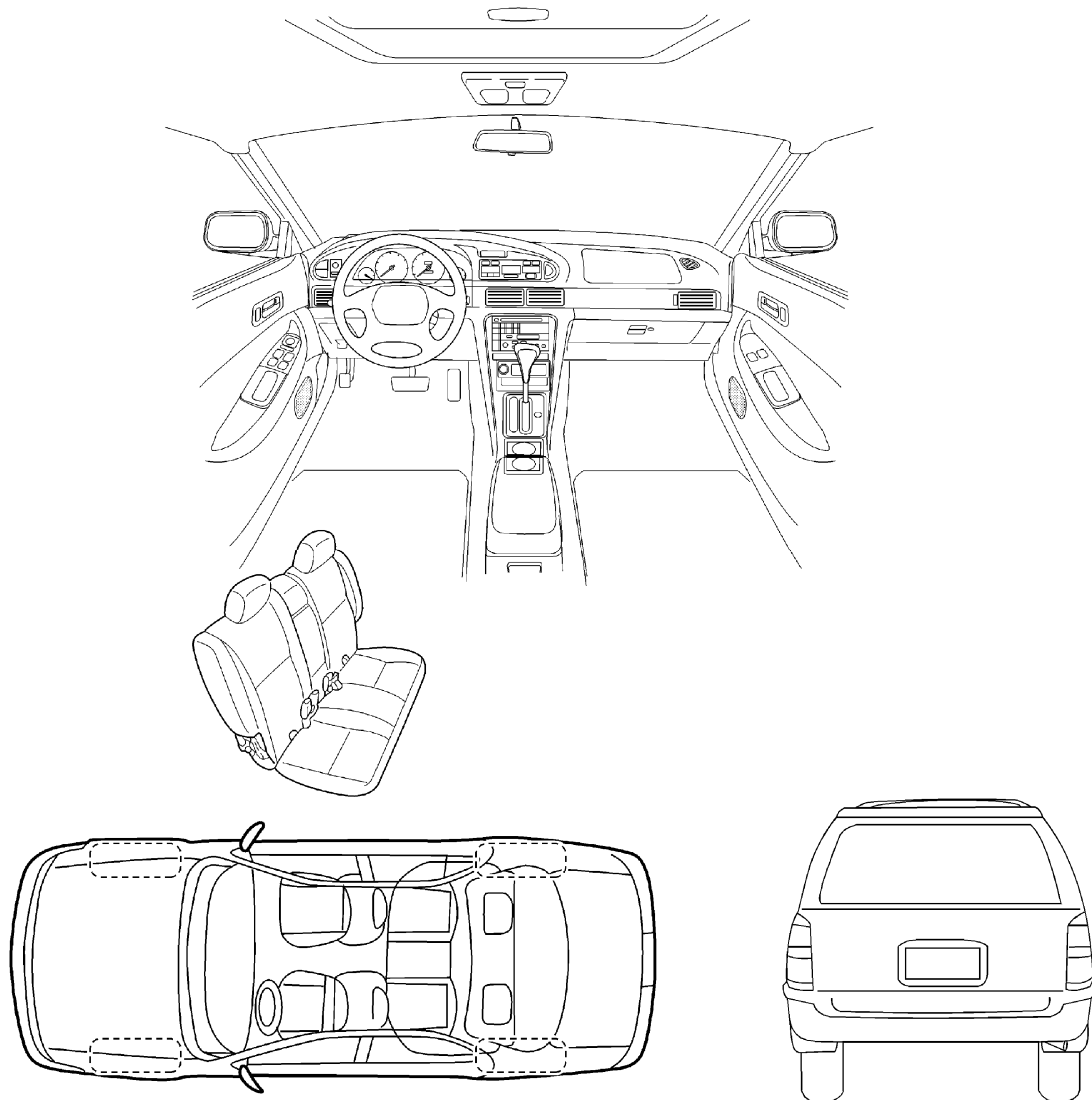
SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

Dear Infiniti Customer:

We are concerned about your satisfaction with your Infiniti vehicle. Repairing a squeak or rattle sometimes can be very difficult. To help us fix your Infiniti right the first time, please take a moment to note the area of the vehicle where the squeak or rattle occurs and under what conditions. You may be asked to take a test drive with a service advisor or technician to ensure we confirm the noise you are hearing.

I. WHERE DOES THE NOISE COME FROM? (circle the area of the vehicle)

The illustrations are for reference only, and may not reflect the actual configuration of your vehicle.



Continue to the back of the worksheet and briefly describe the location of the noise or rattle. In addition, please indicate the conditions which are present when the noise occurs.

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SQUEAK AND RATTLE TROUBLE DIAGNOSES

SQUEAK & RATTLE DIAGNOSTIC WORKSHEET- page 2

Briefly describe the location where the noise occurs:

II. WHEN DOES IT OCCUR? (check the boxes that apply)

- | | |
|--|---|
| <input type="checkbox"/> anytime | <input type="checkbox"/> after sitting out in the sun |
| <input type="checkbox"/> 1 st time in the morning | <input type="checkbox"/> when it is raining or wet |
| <input type="checkbox"/> only when it is cold outside | <input type="checkbox"/> dry or dusty conditions |
| <input type="checkbox"/> only when it is hot outside | <input type="checkbox"/> other: _____ |

III. WHEN DRIVING:

- through driveways
- over rough roads
- over speed bumps
- only at about ____ mph
- on acceleration
- coming to a stop
- on turns : left, right or either (circle)
- with passengers or cargo
- other: _____
- after driving ____ miles or ____ minutes

IV. WHAT TYPE OF NOISE?

- squeak (like tennis shoes on a clean floor)
- creak (like walking on an old wooden floor)
- rattle (like shaking a baby rattle)
- knock (like a knock on a door)
- tick (like a clock second hand)
- thump (heavy, muffled knock noise)
- buzz (like a bumble bee)

TO BE COMPLETED BY DEALERSHIP PERSONNEL

Test Drive Notes:

	YES	NO	Initials of person performing
Vehicle test driven with customer	<input type="checkbox"/>	<input type="checkbox"/>	_____
- Noise verified on test drive	<input type="checkbox"/>	<input type="checkbox"/>	_____
- Noise source located and repaired	<input type="checkbox"/>	<input type="checkbox"/>	_____
- Follow up test drive performed to confirm repair	<input type="checkbox"/>	<input type="checkbox"/>	_____

VIN: _____ Customer Name: _____

W.O. #: _____ Date: _____

This form must be attached to Work Order

SBT844


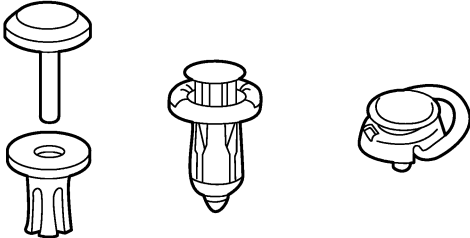
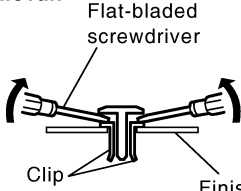
CLIP AND FASTENER

CLIP AND FASTENER

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Clip and Fastener

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Symbol No.	Shapes	Removal & Installation
<p>C205</p> 		<p>Removal:</p>  <p>Flat-bladed screwdriver</p> <p>Clip</p> <p>Finisher</p>

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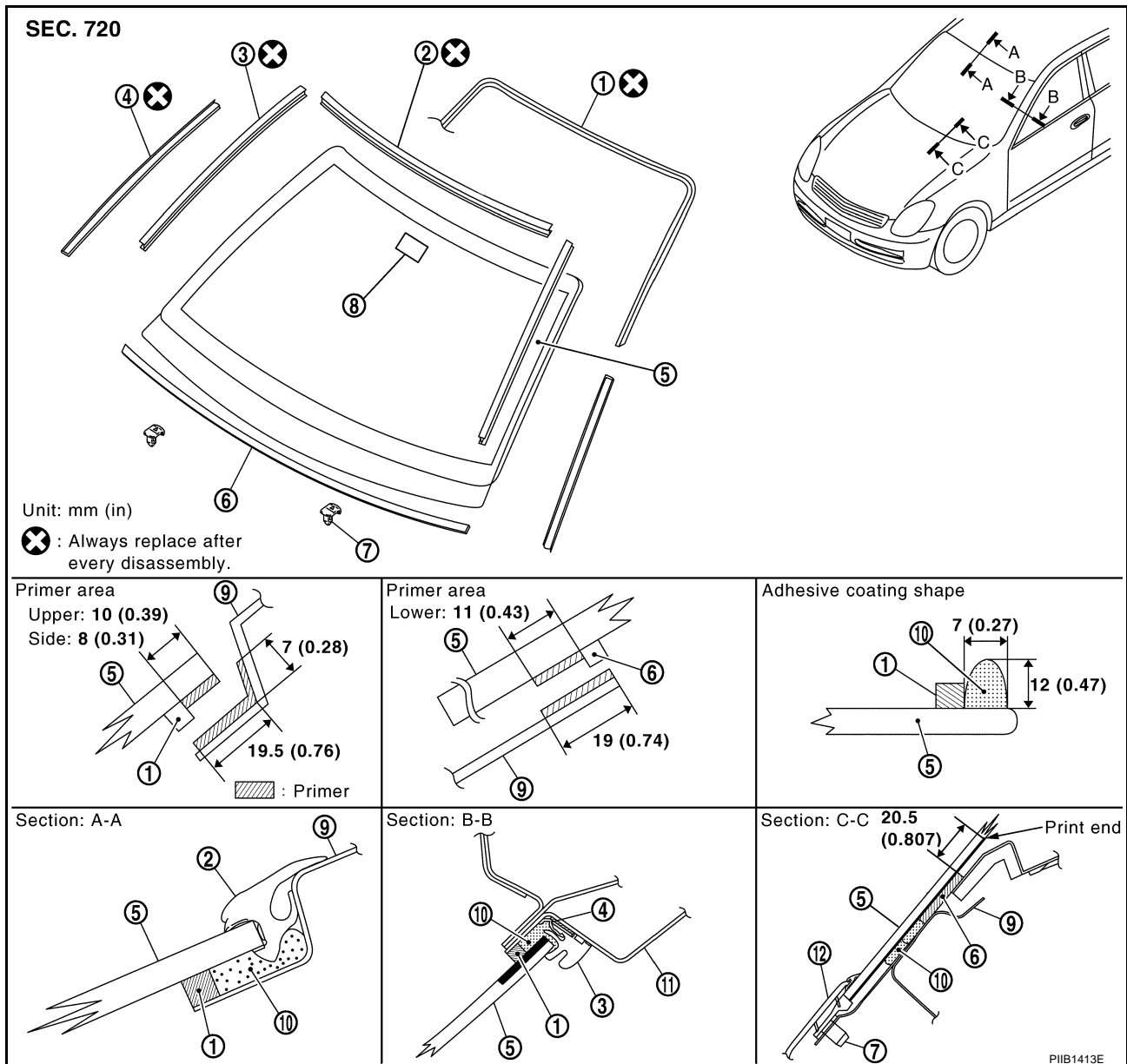
WINDSHIELD GLASS

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WINDSHIELD GLASS

Removal and Installation



- | | | |
|---------------|-----------------------|--------------------|
| 1. Dam rubber | 2. Molding (upper) | 3. Molding (side) |
| 4. Fastener | 5. Windshield glass | 6. Insulator |
| 7. Spacer | 8. Mirror base | 9. Panel |
| 10. Adhesive | 11. Body side (outer) | 12. Cowl top cover |

REMOVAL

1. Remove the front pillar garnish. Refer to [EI-39, "BODY SIDE TRIM"](#) .
2. Partially remove the headlining (front edge). Refer to [EI-45, "HEADLINING"](#) .
3. Remove the front wiper arms. Refer to [WW-32, "Removal and Installation of Front Wiper Arms, Adjustment of Wiper Arms Stop Location"](#) .
4. Remove the roof side molding. Refer to [EI-36, "Removal and Installation"](#) .
5. Apply protective tape around the windshield glass to protect the painted surface from damage.
6. Cut the moldings with the cutting knife.

After removing moldings using pliers, remove glass using piano wire or power cutting tool and an inflatable pump bag.

- If a windshield glass is to be reused, mark the body and the glass with mating marks.

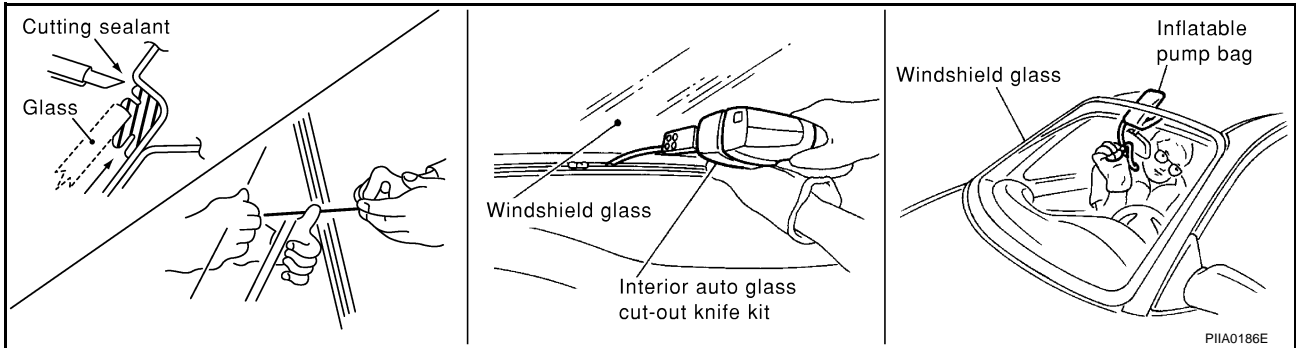
WINDSHIELD GLASS

WARNING:

When cutting the glass from the vehicle, always wear safety glasses and heavy gloves to help prevent glass splinters from entering your eyes or cutting your hands.

CAUTION:

- When a windshield glass is to be reused, do not use a cutting knife or power cutting tool.
- Be careful not to scratch the glass when removing.
- Do not set or stand the glass on its edge. Small chips may develop into cracks.



7. Remove the windshield glass, using suction lifter.

INSTALLATION

- The dam rubber and the insulator should be installed in position.
- Use a genuine Nissan Urethane Adhesive Kit (if available) or equivalent and follow the instructions furnished with it.
- While the urethane adhesive is curing, open a door window. This will prevent the glass from being forced out by passenger compartment air pressure when a door is closed.
- The molding and the fastener must be installed securely so that it is in position and leaves no gap.
- Inform the customer that the vehicle should remain stationary until the urethane adhesive has completely cured (preferably 24 hours). Curing time varies with temperature and humidity.

WARNING:

- Keep heat and open flames away as primers and adhesive are flammable.
- The materials contained in the kit are harmful if swallowed, and may irritate skin and eyes. Avoid contact with the skin and eyes.
- Use in an open, well ventilated location. Avoid breathing the vapors. They can be harmful if inhaled. If affected by vapor inhalation, immediately move to an area with fresh air.
- Driving the vehicle before the urethane adhesive has completely cured may affect the performance of the windshield in case of an accident.

CAUTION:

- Do not use an adhesive which is past its usable term. Shelf life of this product is limited to six months after the date of manufacture. Carefully adhere to the expiration or manufacture date printed on the box.
- Keep primers and adhesive in a cool, dry place. Ideally, they should be stored in a refrigerator.
- Do not leave primers or adhesive cartridge unattended with their caps open or off.
- The vehicle should not be driven for at least 24 hours or until the urethane adhesive has completely cured. Curing time varies depending on temperature and humidity. The curing time will increase under lower temperature and lower humidity.

Repairing Water Leaks for Windshield

Leaks can be repaired without removing and reinstalling glass.

If water is leaking between the urethane adhesive material and body or glass, determine the extent of leakage.

This can be done by applying water to the windshield area while pushing glass outward.

To stop the leak, apply primer (if necessary) and then urethane adhesive to the leak point.

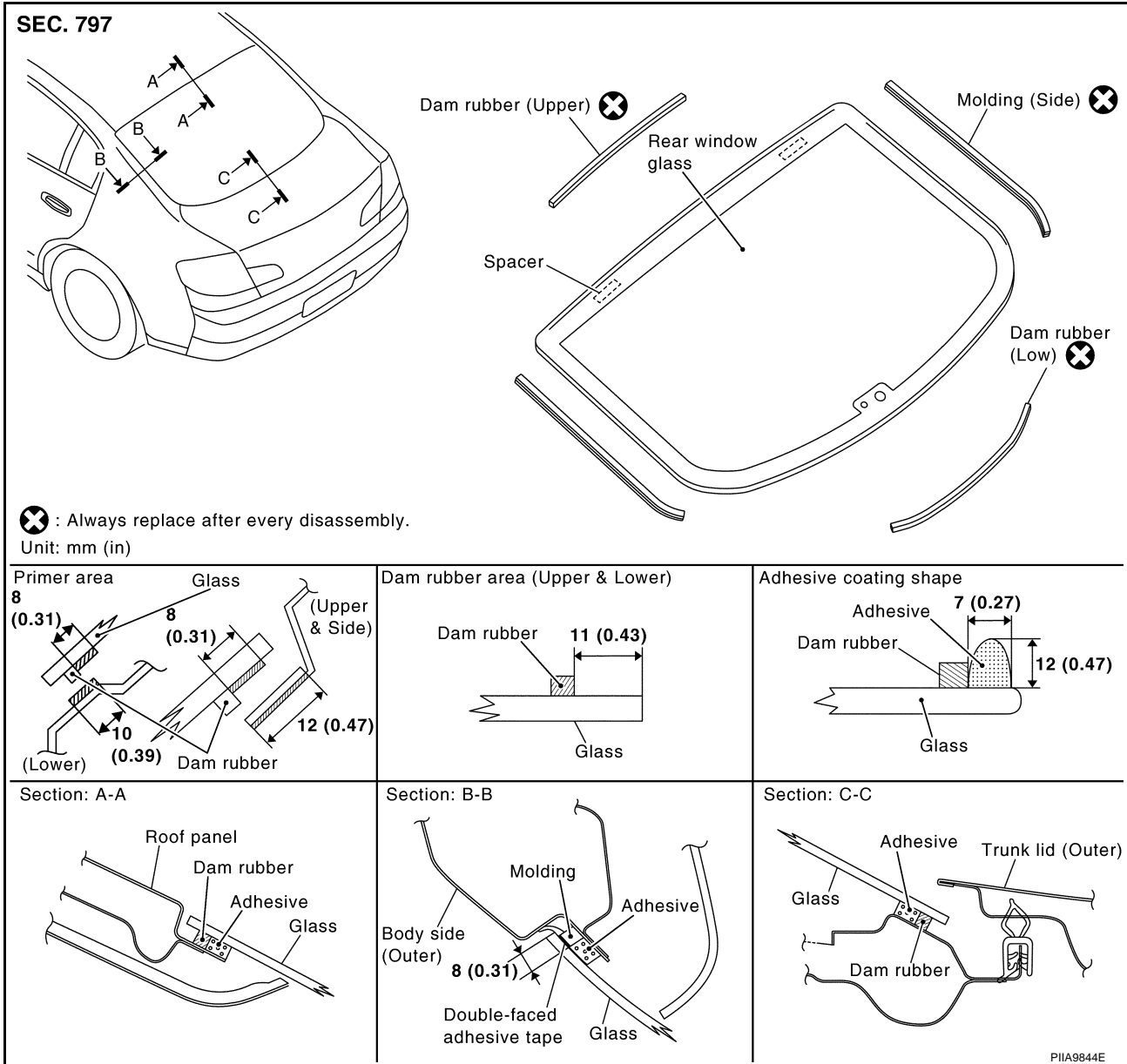
REAR WINDOW GLASS AND MOLDING

PFP:79712

AIS0003H

REAR WINDOW GLASS AND MOLDING

Removal and Installation



REMOVAL

1. Remove the rear of the headlining. Refer to [EI-45, "HEADLINING"](#).
2. Remove the rear pillar finisher. Refer to [EI-39, "BODY SIDE TRIM"](#).
3. Remove the rear parcel shelf finisher. Refer to [EI-41, "REAR PARCEL SHELF FINISHER"](#).
4. Remove the connectors and grounds for the rear window defogger and printed antenna.
5. Apply protective tape around the rear window glass to protect the painted surface from damage.
 - After cutting the lip of moldings, remove glass using piano wire or power cutting tool and an inflatable pump bag.
 - If a rear window glass is to be reused, mark the body and the glass with mating marks.

WARNING:

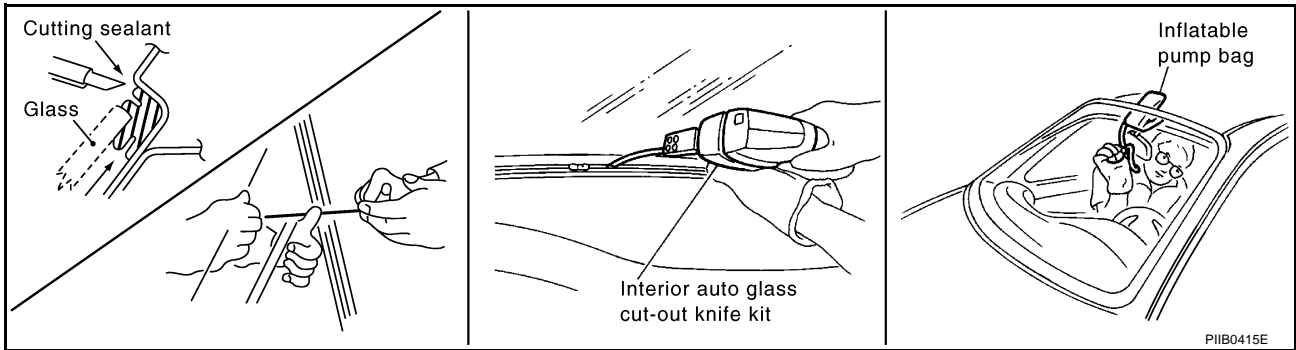
When cutting the glass from the vehicle, always wear safety glasses and heavy gloves to help prevent glass splinters from entering your eyes or cutting your hands.

CAUTION:

- When a rear window glass is to be reused, do not use a cutting knife or power cutting tool.
- Be careful not to scratch the glass when removing.

REAR WINDOW GLASS AND MOLDING

- Do not set or stand the glass on its edge. Small chips may develop into cracks.



6. Remove the rear window glass, using suction liter.

INSTALLATION

- The dam rubber should be installed in position.
- Use a genuine Nissan Urethane Adhesive Kit (if available) or equivalent and follow the instructions furnished with it.
- While the urethane adhesive is curing, open a door window. This will prevent the glass from being forced out by passenger compartment air pressure when a door is closed.
- The molding must be installed securely with the double-faced adhesive tape so that it is in position and leaves no gap.
- Inform the customer that the vehicle should remain stationary until the urethane adhesive has completely cured (preferably 24 hours). Curing time varies with temperature and humidity.

WARNING:

- Keep heat and open flames away as primers and adhesive are flammable.
- The materials contained in the kit are harmful if swallowed, and may irritate skin and eyes. Avoid contact with the skin and eyes.
- Use in an open, well ventilated location. Avoid breathing the vapors. They can be harmful if inhaled. If affected by vapor inhalation, immediately move to an area with fresh air.
- Driving the vehicle before the urethane adhesive has completely cured may affect the performance of the rear window in case of an accident.

CAUTION:

- Do not use an adhesive which is past its usable term. Shelf life of this product is limited to six months after the date of manufacture. Carefully adhere to the expiration or manufacture date printed on the box.
- Keep primers and adhesive in a cool, dry place. Ideally, they should be stored in a refrigerator.
- Do not leave primers or adhesive cartridge unattended with their caps open or off.
- The vehicle should not be driven for at least 24 hours or until the urethane adhesive has completely cured. Curing time varies depending on temperature and humidity. The curing time will increase under lower temperature and lower humidity.

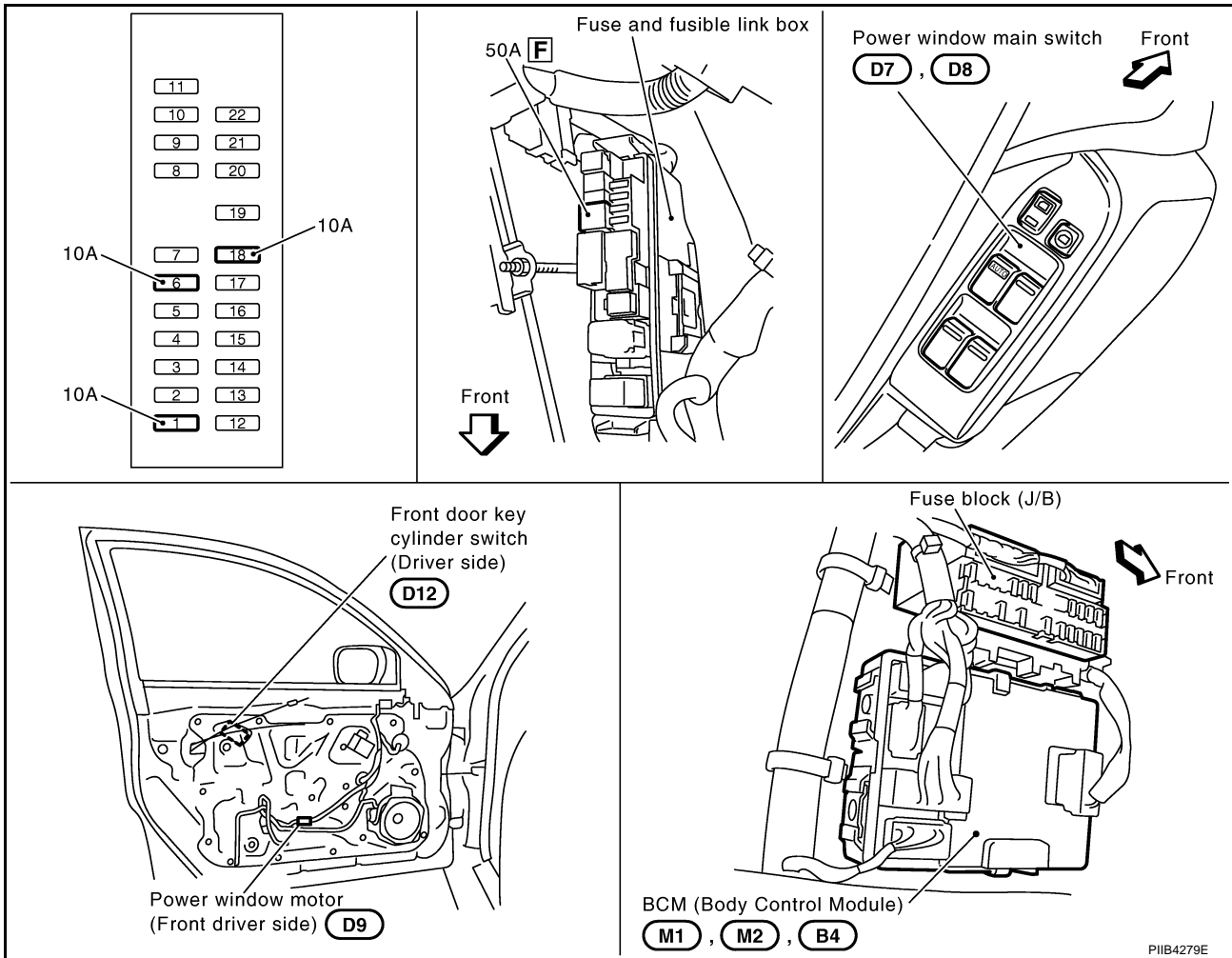
POWER WINDOW SYSTEM

POWER WINDOW SYSTEM

PFP:25401

Component Parts and Harness Connector Location

AIS0007I



PIIB4279E

System Description

AIS0007J

Power is supplied at all time / with front left and right power window anti-pinch system

- through 50A fusible link (letter **F** , located in the fuse and fusible link box)
- to BCM terminal 55, and
- through 10A fuse [No.18, located in the fuse block (J/B)]
- to BCM terminal 42.
- through BCM terminal 54
- to power window main switch terminal 19
- to power window sub switch (front passenger side) terminal 10.

Power is supplied at all time / with front and rear window anti-pinch system

- through 50A fusible link (letter **F** , located in the fuse and fusible link box)
- to BCM terminal 55, and
- through 10A fuse [No.18, located in the fuse block (J/B)]
- to BCM terminal 42.
- through BCM terminal 54
- to power window main switch terminal 19
- to power window sub switch (front passenger side) terminal 10
- to power window sub switch (rear LH and RH) terminal 6.

With ignition switch is in ON or START position,

Power is supplied / with front left and right power window anti-pinch system

POWER WINDOW SYSTEM

- through 10A fuse [No.1, located in the fuse block (J/B)]
- to BCM terminal 38, and
- through BCM terminal 53
- to power window main switch terminal 10
- to power window sub switch (rear LH and RH) terminal 1.

With ignition switch is in ON or START position,

Power is supplied / with front and rear power window anti-pinch system

- through 10A fuse [No.1,located in the fuse block (J/B)]
- to BCM terminal 38, and
- through BCM terminal 53
- to power window main switch terminal 10

Ground supplied / with front left and right power window anti-pinch

- to BCM terminal 52
- through body grounds M30 and M66
- to power window main switch terminal 17
- through body grounds M30 and M66
- to power window sub switch (front passenger side) terminal 11
- through body grounds M30 and M66
- to power window sub switch (rear LH and RH) terminal 7
- through body grounds B5 and B29.

Ground supplied / with front and rear power window anti-pinch

- to BCM terminal 52
- through body grounds M30 and M66
- to power window main switch terminal 17
- through body grounds M30 and M66
- to power window sub switch (front passenger side) terminal 11
- through body grounds M30 and M66
- to power window sub switch (rear LH and RH) terminal 7
- through body grounds B5 and B29.

MANUAL OPERATION

Front Driver Side Door / With Front Left and Right Power Window Anti-pinch System

WINDOW UP

When the front LH switch in the power window main switch is pressed in the up position,

Power is supplied

- through power window main switch terminal 8
- to power window motor (front driver side) terminal 2.

Ground is supplied

- to power window motor (front driver side) terminal 1
- through power window main switch terminal 11.

Then, the motor raises the window until the switch is released.

WINDOW DOWN

When the front LH switch in the power window main switch is pressed in the down position

Power is supplied

- through power window main switch terminal 1
- to power window motor (front driver side) terminal 2.

Ground is supplied

- to power window motor (front driver side) terminal 3
- through power window main switch terminal 3.

Then, the motor lowers the window until the switch is released.

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POWER WINDOW SYSTEM

Front Driver Side Door / With Front and Rear Power Window Anti-pinch System

WINDOW UP

When the front LH switch in the power window main switch is pressed in the up position
Power is supplied

- through power window main switch terminal 8
- to power window motor (front driver side) terminal 2.

Ground is supplied

- to power window motor (front driver side) terminal 1
- through power window main switch terminal 11.

Then, the motor raises the window until the switch is released.

WINDOW DOWN

When the front LH switch in the power window main switch is pressed in the down position
Power is supplied

- through power window main switch terminal 11.
- to power window motor (front driver side) terminal 1

Ground is supplied

- to power window motor (front driver side) terminal 2
- through power window main switch terminal 8.

Then, the motor lowers the window until the switch is released.

Front Passenger Side Door

POWER WINDOW SUB-SWITCH (FRONT PASSENGER SIDE) OPERATION

WINDOW UP

When the power window sub-switch (front passenger side) is pressed in the up position
Power is supplied

- through power window sub-switch (front passenger side) terminal 8
- to power window motor (front passenger side) terminal 2.

Ground is supplied

- to power window motor (front passenger side) terminal 1
- through power window sub-switch (front passenger side) terminal 9.

Then, the motor raises the window until the switch is released.

WINDOW DOWN

When the power window sub-switch (front passenger side) is pressed in the down position
Power is supplied

- through power window sub-switch (front passenger side) terminal 9
- to power window motor (front passenger side) terminal 1.

Ground is supplied

- to power window motor (front passenger side) terminal 2
- through power window sub-switch (front passenger side) terminal 8.

Then, the motor lowers the window until the switch is released.

POWER WINDOW MAIN SWITCH OPERATION

Signal is sent

- through power window main switch terminal 14
- to power window sub-switch (front passenger side) terminal 16.

The operation of power window after receive the signal is as same as the operation of the power window with sub-switch (front passenger side).

POWER WINDOW SYSTEM

Rear Door (LH or RH) / With Front Left and Right Power Window Anti-pinch System

POWER WINDOW SUB-SWITCH (REAR LH OR RH) OPERATION

WINDOW UP

When the power window sub-switch (rear LH or RH) is pressed in the up position

Power is supplied

- through power window sub-switch (rear LH or RH) terminal 5
- to power window motor (rear LH or RH) terminal 1.

Ground is supplied

- to power window motor (rear LH or RH) terminal 2
- through power window sub-switch (rear LH or RH) terminal 4.

Then, the motor raises the window until the switch is released.

WINDOW DOWN

When the power window sub-switch (rear LH or RH) is pressed in the down position

Power is supplied

- through power window sub-switch (rear LH or RH) terminal 4
- to power window motor (rear LH or RH) terminal 2.

Ground is supplied

- to power window motor (rear LH or RH) terminal 1
- through power window sub-switch (rear LH or RH) terminal 5.

Then, the motor lowers the window until the switch is released.

POWER WINDOW MAIN SWITCH OPERATION

WINDOW UP

When the power window main switch (rear LH or RH) is pressed in the up position

Power is supplied

- through power window main switch terminal 1 (LH) or 7 (RH)
- through power window sub-switch (rear LH or RH) terminal 2
- through power window sub-switch (rear LH or RH) terminal 5
- to power window motor (rear LH or RH) terminal 1.

Ground is supplied

- to power window motor (rear LH or RH) terminal 2
- through power window sub-switch (rear LH or RH) terminal 4
- through power window sub-switch (rear LH or RH) terminal 3
- through power window main switch terminal 3 (LH) or 5 (RH)

Then, the motor raises the window until the switch is released.

WINDOW DOWN

When the power window main switch (rear LH or RH) is pressed in the down position

Power is supplied

- through power window main switch terminal 3 (LH) or 5 (RH)
- through power window sub-switch (rear LH or RH) terminal 3
- through power window sub-switch (rear LH or RH) terminal 4
- to power window motor (rear LH or RH) terminal 2.

Ground is supplied

- to power window motor (rear LH or RH) terminal 1
- through power window sub-switch (rear LH or RH) terminal 5
- through power window sub-switch (rear LH or RH) terminal 2
- through power window main switch terminal 1 (LH) or 7 (RH)

Then, the motor lowers the window until the switch is released.

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POWER WINDOW SYSTEM

Rear Door (LH or RH) / With Front and Rear Power Window Anti-pinch System

POWER WINDOW SUB-SWITCH (REAR LH OR RH) OPERATION

WINDOW UP

When the power window sub-switch (rear LH or RH) is pressed in the up position

Power is supplied

- through power window sub-switch (rear LH or RH) terminal 5
- to power window motor (rear LH or RH) terminal 1.

Ground is supplied

- to power window motor (rear LH or RH) terminal 3
- through power window sub-switch (rear LH or RH) terminal 4.

Then, the motor raises the window until the switch is released.

WINDOW DOWN

When the power window sub-switch (rear LH or RH) is pressed in the down position

Power is supplied

- through power window sub-switch (rear LH or RH) terminal 4
- to power window motor (rear LH or RH) terminal 3.

Ground is supplied

- to power window motor (rear LH or RH) terminal 1
- through power window sub-switch (rear LH or RH) terminal 5.

Then, the motor lowers the window until the switch is released.

POWER WINDOW MAIN SWITCH OPERATION

Signal is sent

- through power window main switch terminal 14
- to power window sub-switch (rear LH or RH) terminal 11.

The operation of power window after receive the signal is as same as the operation of the power window with sub-switch (rear LH or RH).

AUTO OPERATION

The power window AUTO feature enables the driver to open or close the window without holding the window switch in the down or up position.

V35 models have two types of auto operation systems.

The one is applied only for front doors and the other is for all doors.

POWER WINDOW SERIAL LINK

With Front Left and Right Power Window Anti-pinch System

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

The under mentioned signal is transmitted from BCM to power window main switch and power window sub-switch (front passenger side)

- Keyless power window down signal.

The under mentioned signal is transmitted from power window main switch to power window sub-switch (front passenger side)

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

POWER WINDOW SYSTEM

With Front and Rear Power Window Anti-pinch System

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

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

- Keyless power window down signal.

The under mentioned signal is transmitted from power window main switch to power window sub-switch (front passenger side)

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

The under mentioned signal is transmitted from power window main switch to rear power window switch (LH or RH)

- Rear LH or RH side door window operation signal.
- Power window control by key cylinder switch signal.
- Power window lock signal.
- Retained power operation signal.

POWER WINDOW LOCK

With Front Left and Right Power Window Anti-pinch System

The power window lock is designed to lock operation of all windows except for driver side door window. When the lock position, ground of the rear power window switches in the power window main switch is disconnected. The power window lock signal is transmitted to power window sub-switch (front passenger side) by power window serial link. This prevents the power window motors from operating.

With Front and Rear Power Window Anti-pinch System

The power window lock is designed to lock operation of all windows except for driver side door window. When the lock position, the power window lock signal is transmitted to power window sub-switch (front passenger side) and rear power window switches by power window serial link. This prevents the power window motors from operating.

RETAINED POWER OPERATION

When the ignition switch is turned to the OFF position from ON or START position.

Power is Supplied for 45 Seconds / with Front Left and Right Power Window Anti-pinch System

- through BCM terminal 53
- to power window main switch terminal 10
- to power window sub-switch (rear LH and RH) terminals 1.

Power is Supplied for 45 Seconds / with Front and Rear Power Window Anti-pinch System

- through BCM terminal 53
- to power window main switch terminal 10.

When power and ground are supplied, the BCM continues to be energized, and the power window can be operated.

The retained power operation is canceled when the driver or passenger side door is opened.

RAP signal period can be changed by CONSULT-II. Refer to [GW-43, "CONSULT-II Function \(BCM\)"](#).

ANTI-PINCH SYSTEM

With Front Left and Right Power Window Anti-pinch System

Power window main switch and power window sub-switch (passenger side) monitors the power window motor operation and the power window position (full closed or other) for driver side and passenger side power window by the signals of encoder and limit switch in front power window motor (driver side and passenger side).

When power window main switch detects interruption during the following close operation,

- automatic close operation when ignition switch is in the "ON" position
- automatic close operation during retained power operation

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POWER WINDOW SYSTEM

- manual close operation during retained power operation

power window main switch or power window sub-switch (passenger side) controls each power window motor for open and the power window will be lowered about 150 mm (5.91 in).

With Front and Rear Power Window Anti-pinch System

Power window main switch and power window each sub-switch monitors the power window motor operation and the power window position (full closed or other) for each power window by the signals of encoder and limit switch in front power window motor.

When power window main switch detects interruption during the following close operation,

- automatic close operation when ignition switch is in the "ON" position
- automatic close operation during retained power operation
- manual close operation during retained power operation

Power window main switch or each power window sub-switch controls each power window motor for open and the power window will be lowered about 150 mm (5.91 in).

POWER WINDOW CONTROL BY THE KEY CYLINDER SWITCH

When ignition key switch is OFF, front power window (with front left and right power window anti-pinch system) or all window (with front and rear power window anti-pinch system) can be opened or closed by turning the front door key cylinder driver side UNLOCK / LOCK position more than 1.5 second over condition.

- Power window can be opened as the door key cylinder is kept fully turning to the UNLOCK position.
- Power window can be closed as the door key cylinder is kept fully turning to the LOCK position.

The power window opening stops when the following operations are carried out.

- While performing open / close the window, power window is stopped at the position as the door key cylinder is placed on NEUTRAL.
- When the ignition switch is turned ON while the power window opening is operated.

POWER WINDOW SYSTEM

CAN Communication System Description

AIS003Y2

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

CAN Communication Unit

AIS004RL

Refer to [LAN-21, "CAN Communication Unit"](#)

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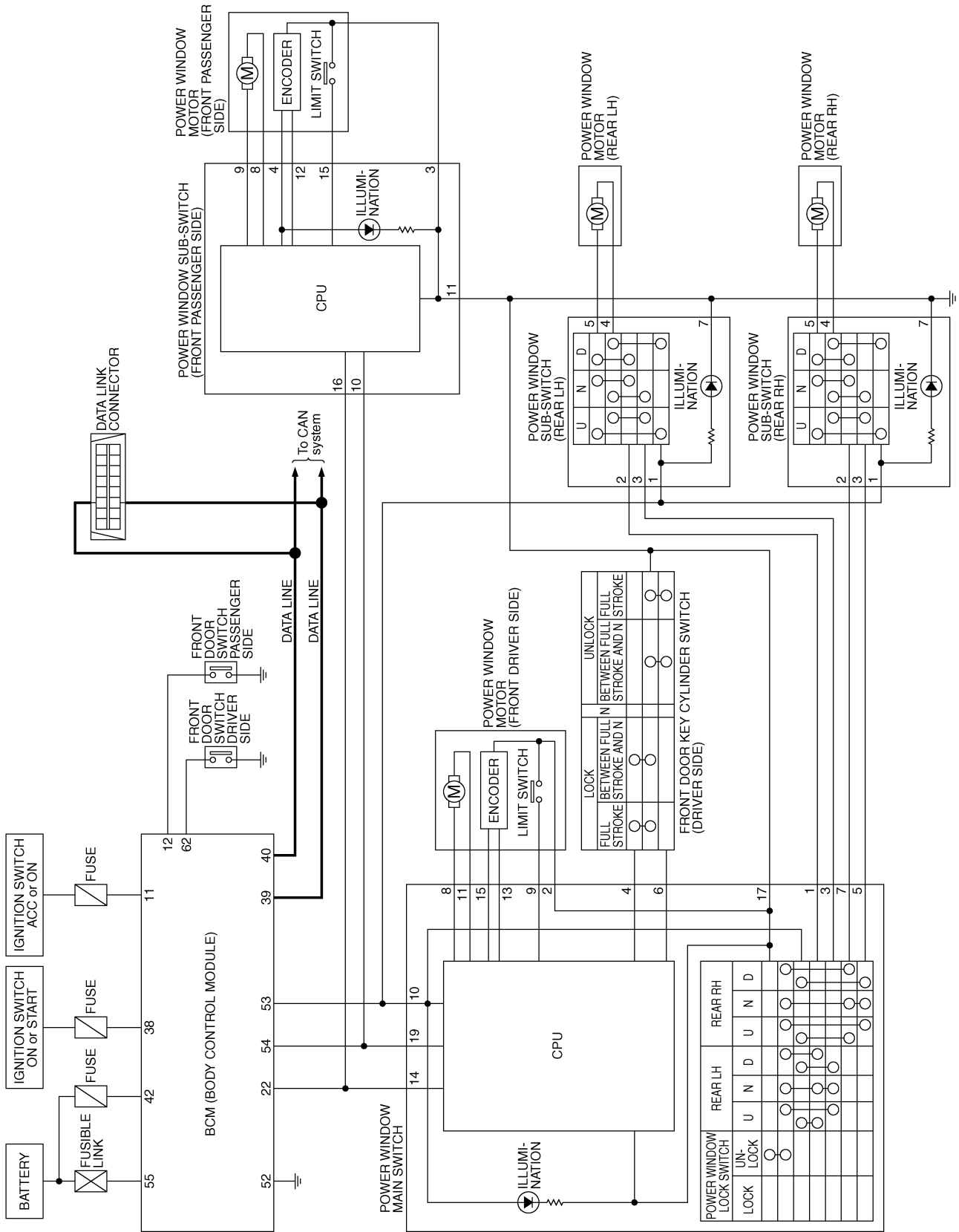
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POWER WINDOW SYSTEM

Schematic/With Front Left and Right Power Window Anti-pinch System

AIS0003K



TIWM1073E

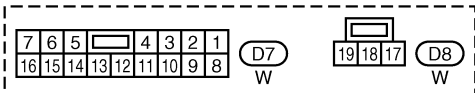
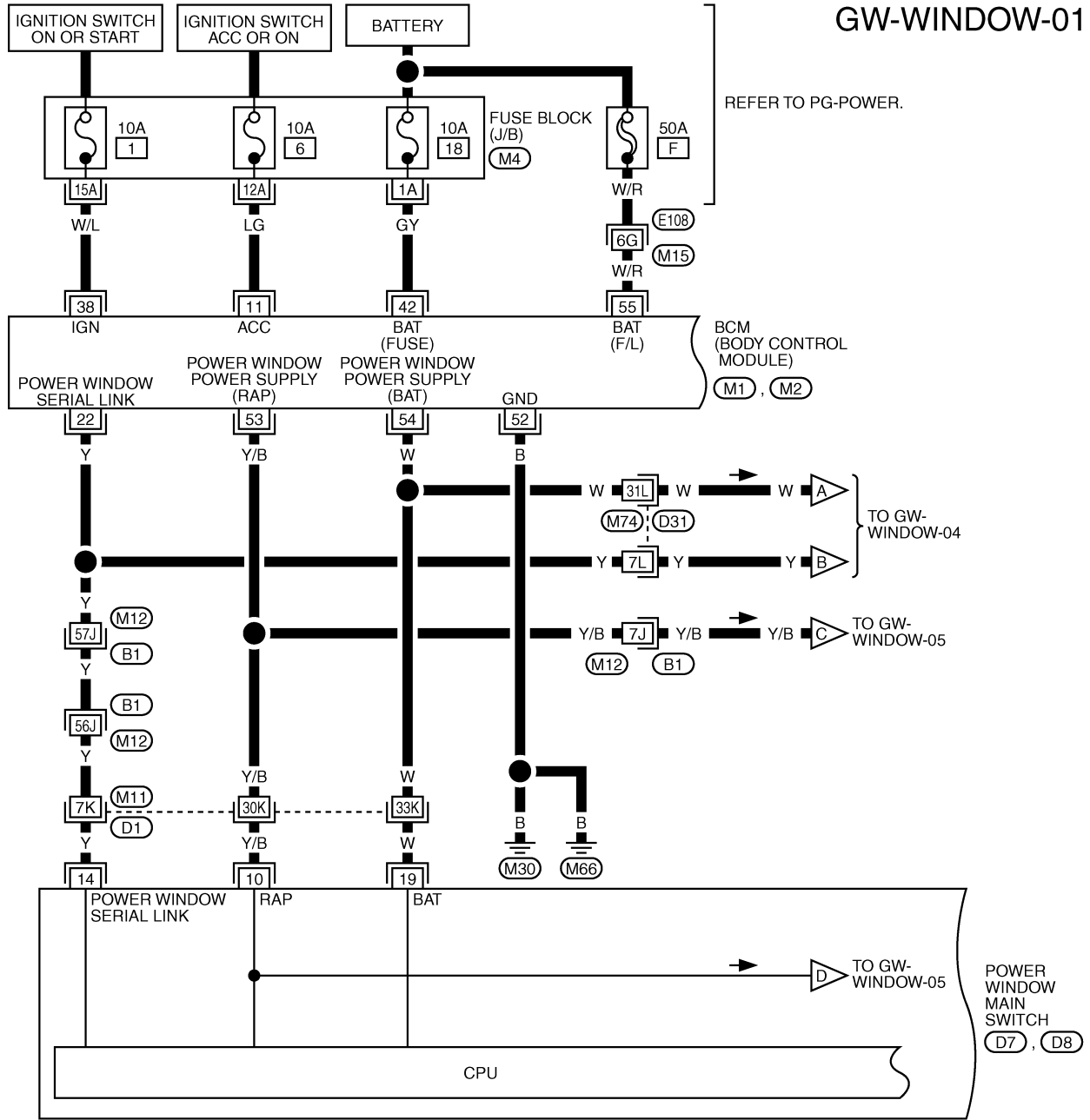
POWER WINDOW SYSTEM

Wiring Diagram — WINDOW —/With Front Left and Right Power Window Anti-pinch System

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GW-WINDOW-01



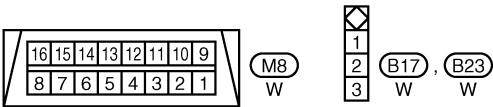
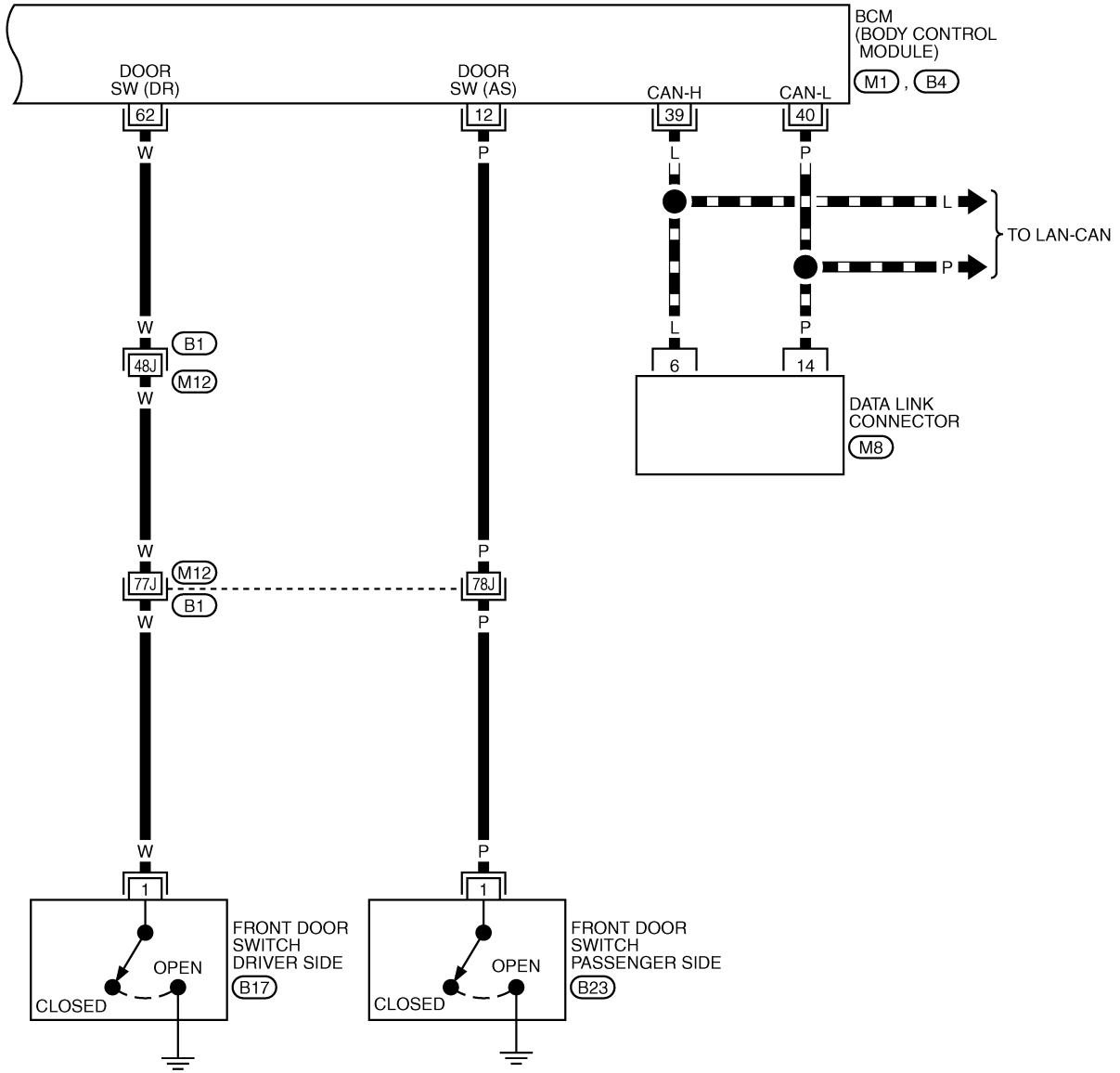
REFER TO THE FOLLOWING.
 (E108), (B1), (D1), (D31)
 -SUPER MULTIPLE JUNCTION (SMJ)
 (M4) -FUSE BLOCK-JUNCTION BOX (J/B)
 (M1), (M2) -ELECTRICAL UNITS

TIWM1074E

POWER WINDOW SYSTEM

GW-WINDOW-02

▬ : DATA LINE



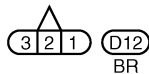
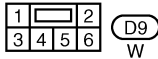
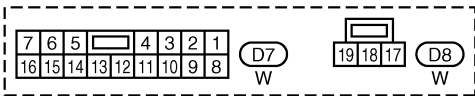
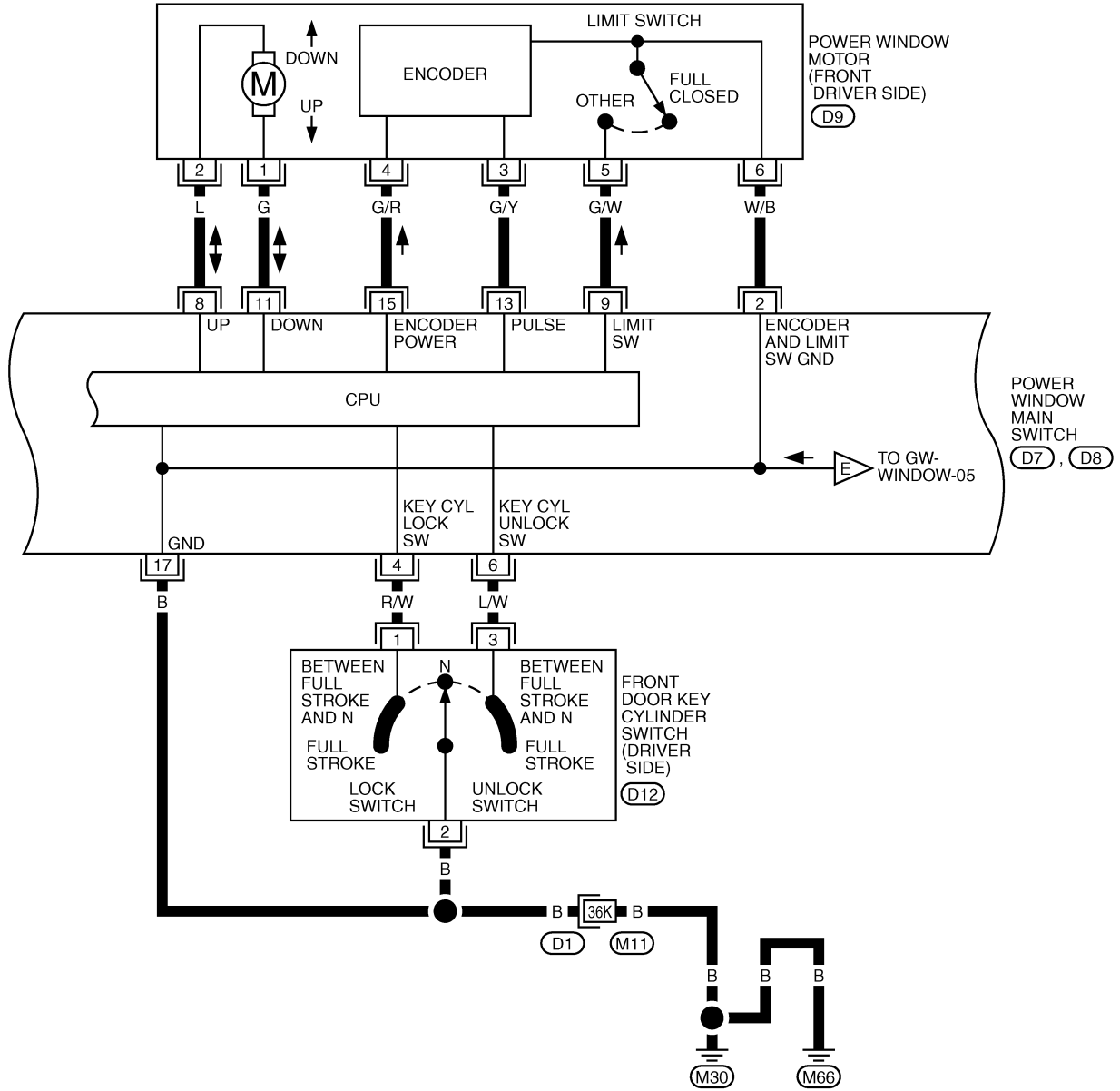
REFER TO THE FOLLOWING.

- (B1) -SUPER MULTIPLE JUNCTION (SMJ)
- (M1), (B4) -ELECTRICAL UNITS

TIWM1075E

POWER WINDOW SYSTEM

GW-WINDOW-03

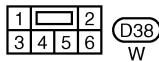
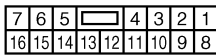
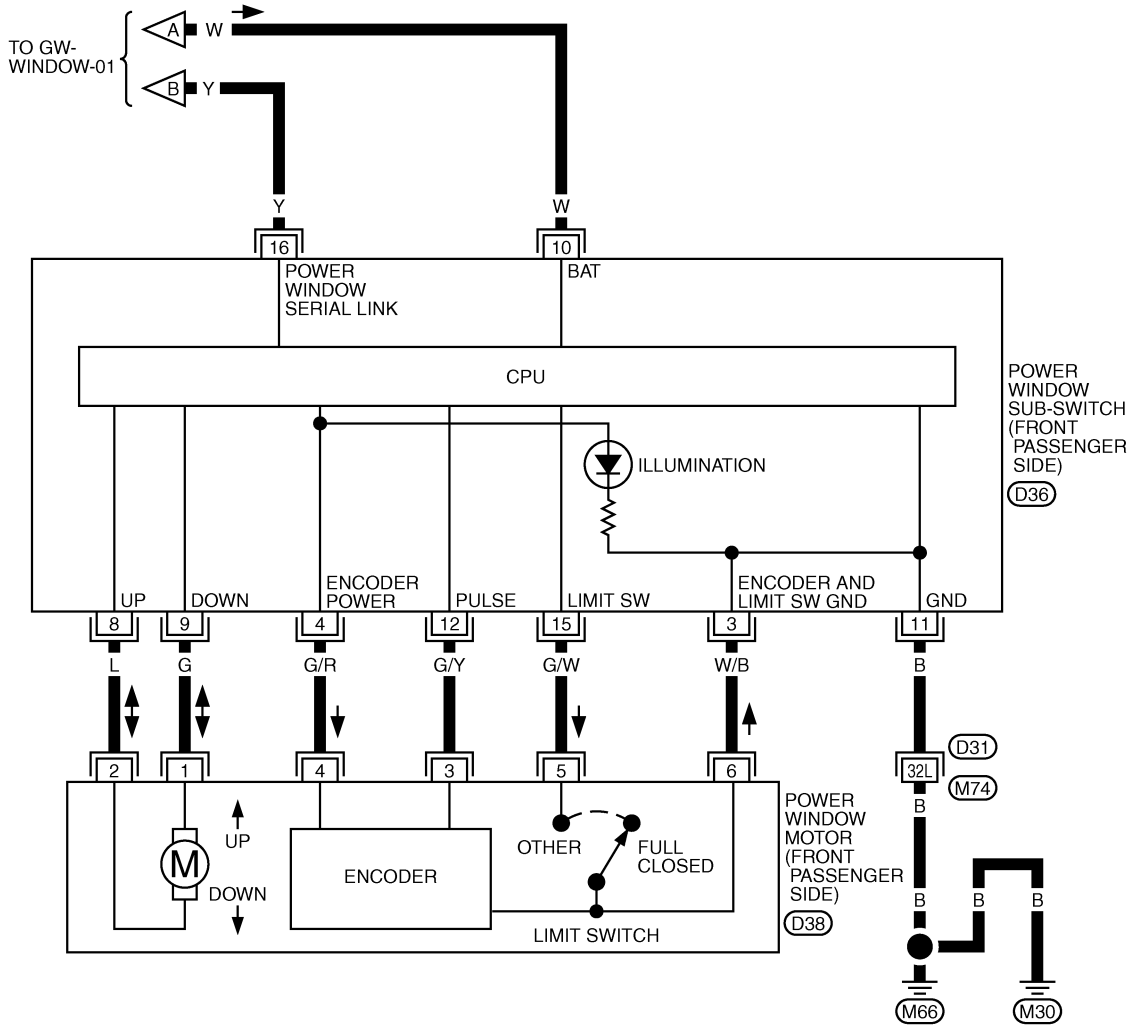


REFER TO THE FOLLOWING.
 (D1) -SUPER MULTIPLE JUNCTION (SMJ)

TIWM1076E

POWER WINDOW SYSTEM

GW-WINDOW-04

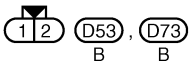
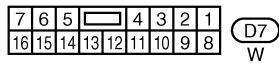
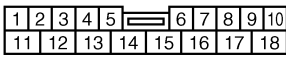
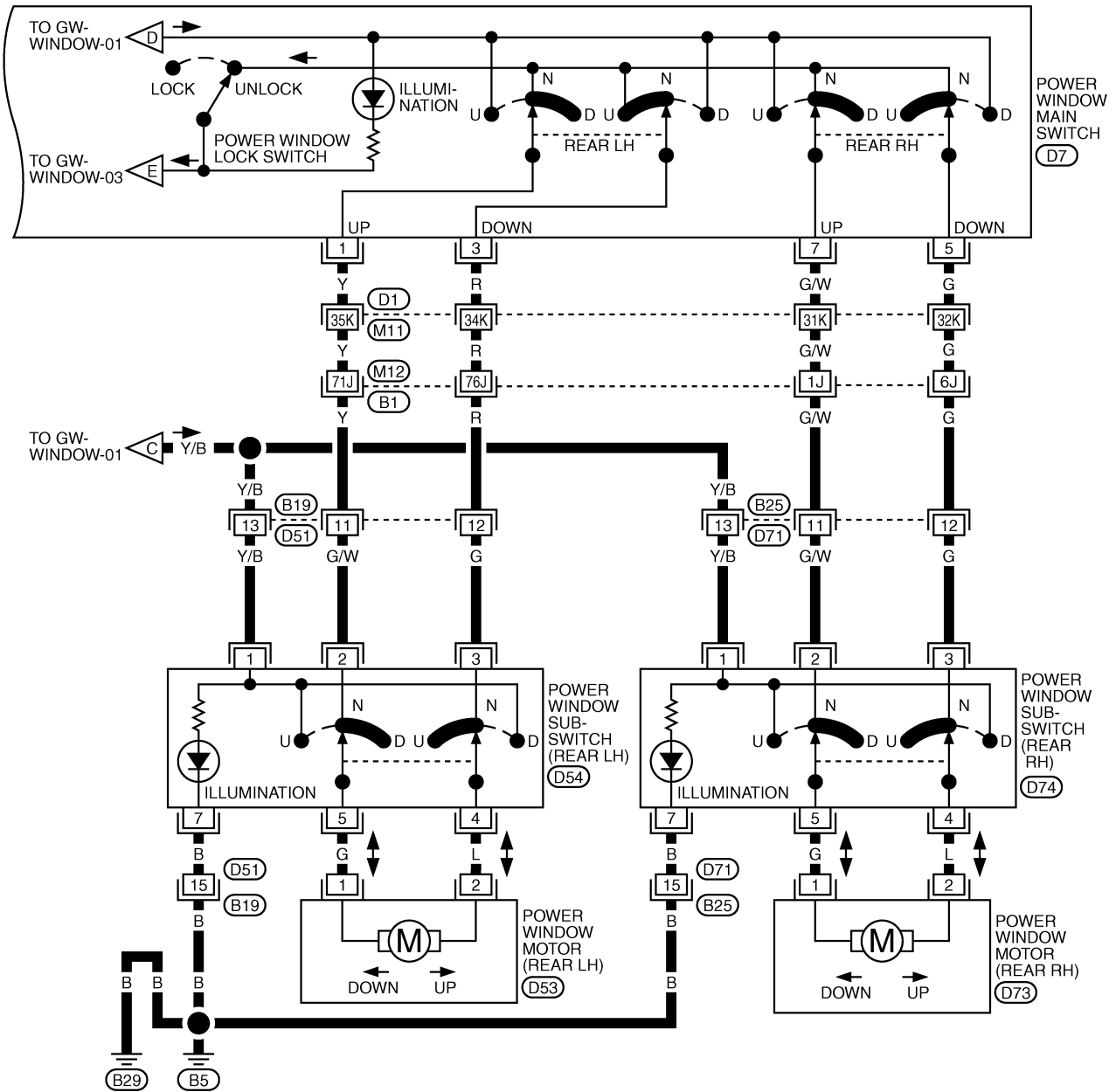


REFER TO THE FOLLOWING.
 (D31) -SUPER MULTIPLE JUNCTION (SMJ)

TIWM1077E

POWER WINDOW SYSTEM

GW-WINDOW-05



REFER TO THE FOLLOWING.

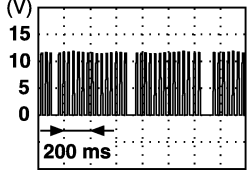
(B1), (D1) -SUPER MULTIPLE JUNCTION (SMJ)

TIWM1078E

POWER WINDOW SYSTEM

Terminal and Reference Value for BCM/With Front Left and Right Power Window Anti-pinch System

AIS001Y3

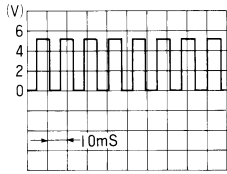
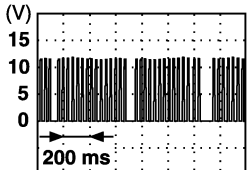
Terminal	Wire color	Item	Condition	Voltage [V] (Approx.)
11	LG	Ignition switch (ACC or ON)	Ignition switch is in ACC or ON position.	Battery voltage
12	P	Front door switch passenger side signal	ON (Open)	0
			OFF (Close)	Battery voltage
22	Y	Power window link signal	—	 <p style="text-align: right; font-size: small;">PIIA2344J</p>
38	W/L	Ignition switch (ON or START)	Ignition switch is in ON or START position.	Battery voltage
39	L	CAN - H	—	—
40	P	CAN - L	—	—
42	GY	Power source (Fuse)	—	Battery voltage
52	B	Ground	—	0
53	Y/B	Rap signal	Ignition switch is in ON or START position.	Battery voltage
			Within 45 seconds after ignition switch is turned to OFF	Battery voltage
			Ignition switch OFF and retained power operation is not activated.	0
54	W	Power window power supply	—	Battery voltage
55	W/R	Power source (Fusible link)	—	Battery voltage
62	W	Front door switch driver side signal	ON (Open)	0
			OFF (Close)	Battery voltage

Terminal and Reference Value for Power Window Main Switch/With Front Left and Right Power Window Anti-pinch System

AIS0007K

Terminal	Wire color	Item	Condition	Voltage [V] (Approx.)
1	Y	Rear LH power window UP signal	when rear LH switch in power window main switch is at UP operation.	Battery voltage
2	W/B	Limit switch encoder ground	—	0
3	R	Rear LH power window DOWN signal	When rear LH switch in power window main switch is at DOWN operation.	Battery voltage
4	R/W	Front door key cylinder (driver side) switch lock signal	Key position (Neutral → Locked)	5 → 0
5	G	Rear RH power window DOWN signal	When rear RH switch in power window main switch is at DOWN operation.	Battery voltage
6	L/W	Front door key cylinder (drive side) switch unlock signal	Key position (Neutral → Unlocked)	5 → 0

POWER WINDOW SYSTEM

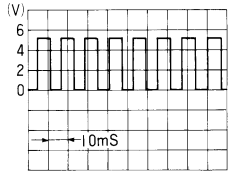
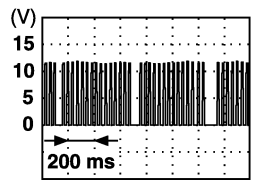
Terminal	Wire color	Item	Condition	Voltage [V] (Approx.)
7	G/W	Rear RH power window UP signal	When rear RH switch in power window main switch is at UP operation.	Battery voltage
8	L	Front driver side power window motor UP signal	When power window motor is at UP operation.	Battery voltage
9	G/W	Limit switch signal	Driver side door window is between fully-open and just before fully-closed position (ON)	0
			Driver side door window is between just before fully-closed position and fully-closed position (OFF)	5
10	Y/B	Rap signal	Ignition switch is in ON or START position.	Battery voltage
			Within 45 seconds after ignition switch is turned to OFF	Battery voltage
			Ignition switch is in OFF position and retained power operation is not activated.	0
11	G	Front driver side power window motor DOWN signal	When power window motor is at DOWN operation.	Battery voltage
13	G/Y	Encoder pulse signal	When power window motor operates.	 OCC3383D
14	Y	Power window serial link	—	 PIIA2344J
15	G/R	Encoder power supply	When ignition switch ON or retained power operation is activated.	10
17	B	Ground	—	0
19	W	BAT power supply	—	Battery voltage

Terminal and Reference Value for Power Window Sub-switch (Front Passenger Side) / With Front Left and Right Power Window Anti-pinch System

AIS001Y2

Terminal	Wire color	Item	Condition	Voltage [V] (Approx.)
3	W/B	Limit switch and encoder ground	—	0
4	G/R	Encoder power supply	When ignition switch ON or power window timer operates	10
8	L	Front passenger side power window motor UP signal	When power window motor is at UP operation.	Battery voltage
9	G	Front passenger side power window motor DOWN signal	When power window motor is at DOWN operation.	Battery voltage
10	W	BAT power supply	—	Battery voltage

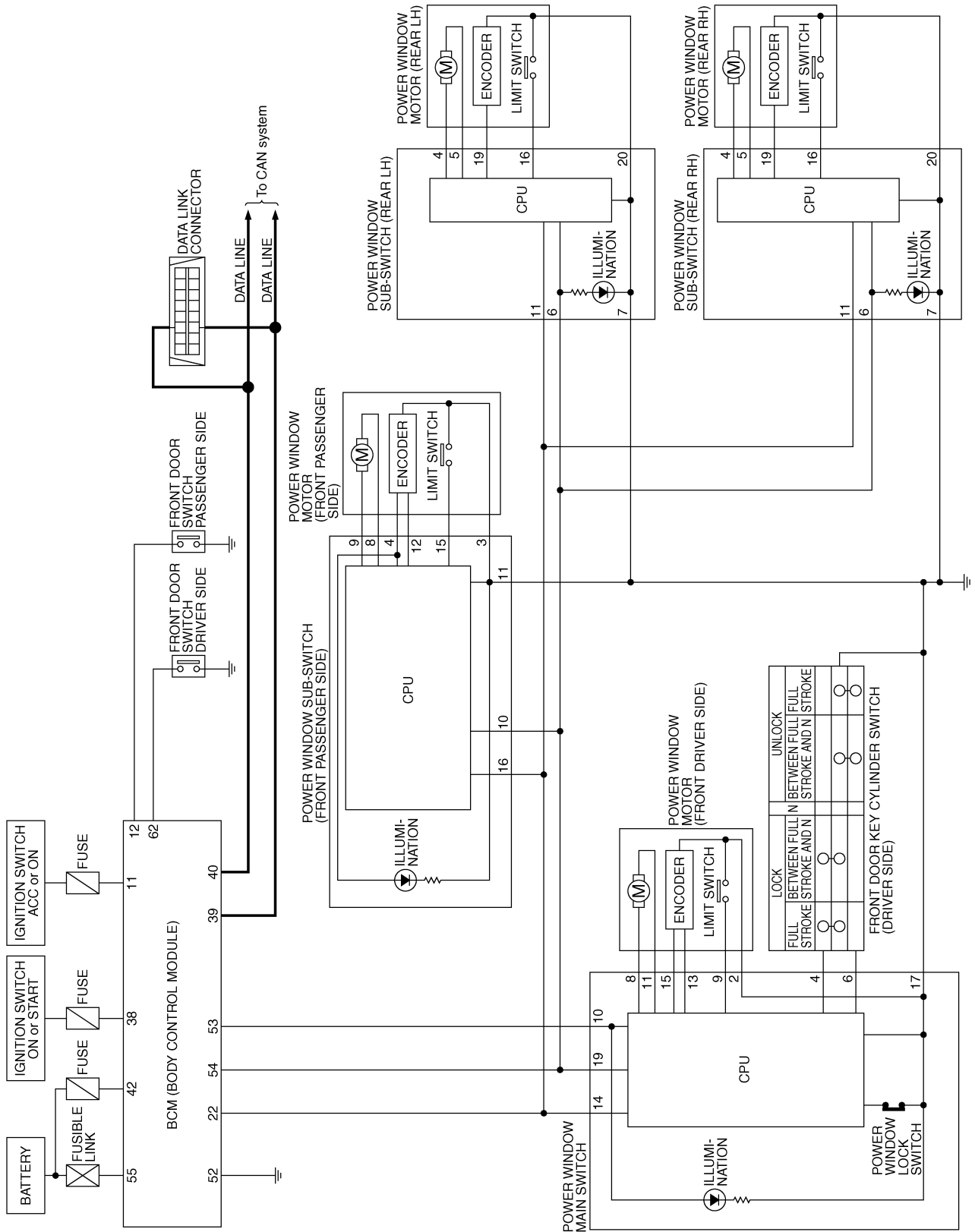
POWER WINDOW SYSTEM

Terminal	Wire color	Item	Condition	Voltage [V] (Approx.)
11	B	Ground	—	0
12	G/Y	Encoder pulse signal	When power window motor operates.	 <p style="text-align: right; font-size: small;">OCC3383D</p>
15	G/W	Limit switch signal	Passenger side door window is between fully-open and just before fully-closed position (ON)	0
			Passenger side door window is between just before fully-closed position and fully-closed position (OFF)	5
16	Y	Power window serial link	—	 <p style="text-align: right; font-size: small;">PIIA2344J</p>

POWER WINDOW SYSTEM

Schematic/With Front and Rear Power Window Anti-pinch System

AIS0007M



TIWM1079E

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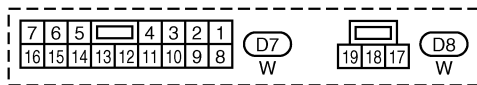
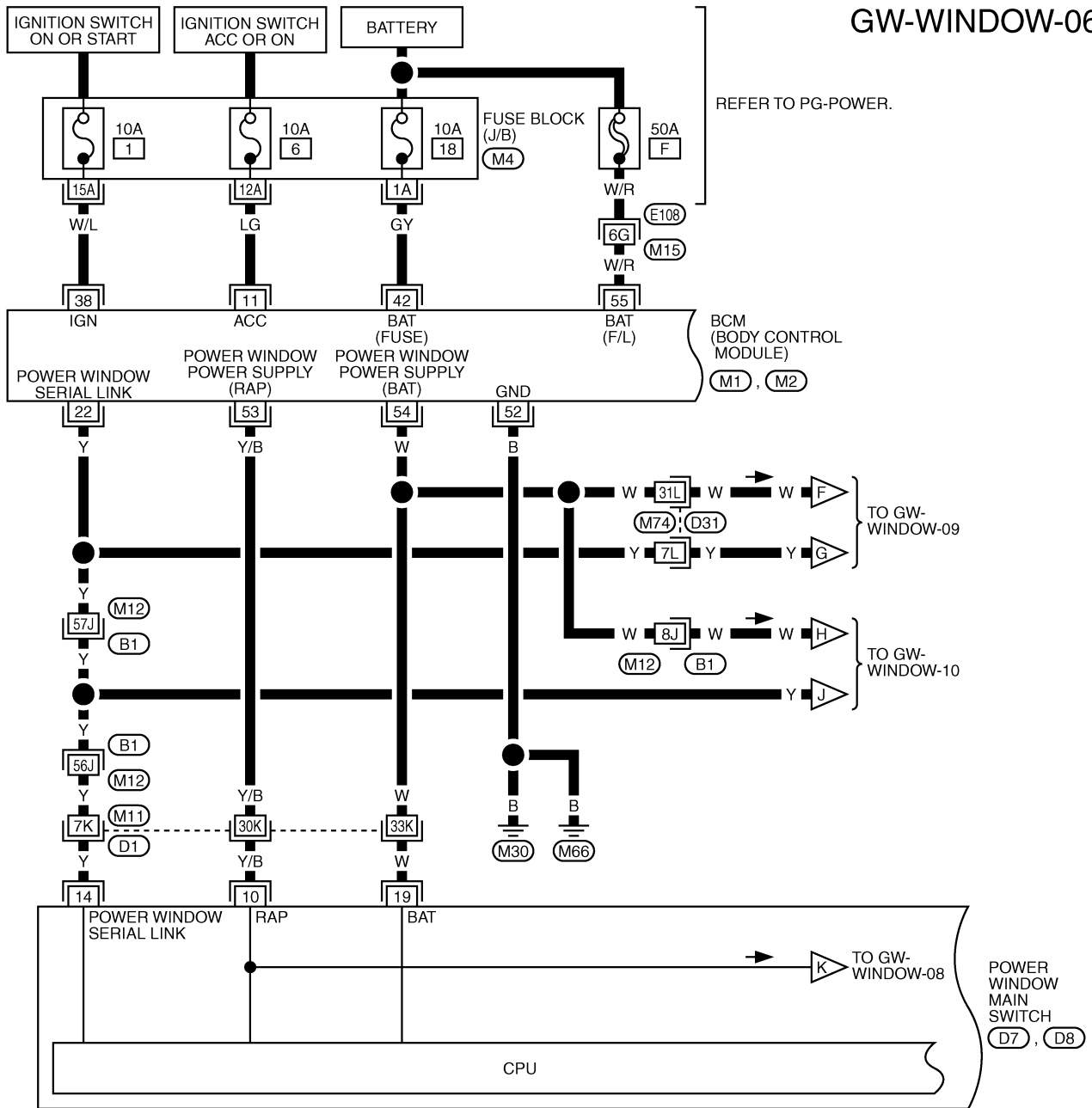
GW

POWER WINDOW SYSTEM

Wiring Diagram — WINDOW —/With Front and Rear Power Window Anti-pinch System

AIS0007N

GW-WINDOW-06



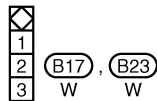
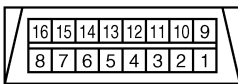
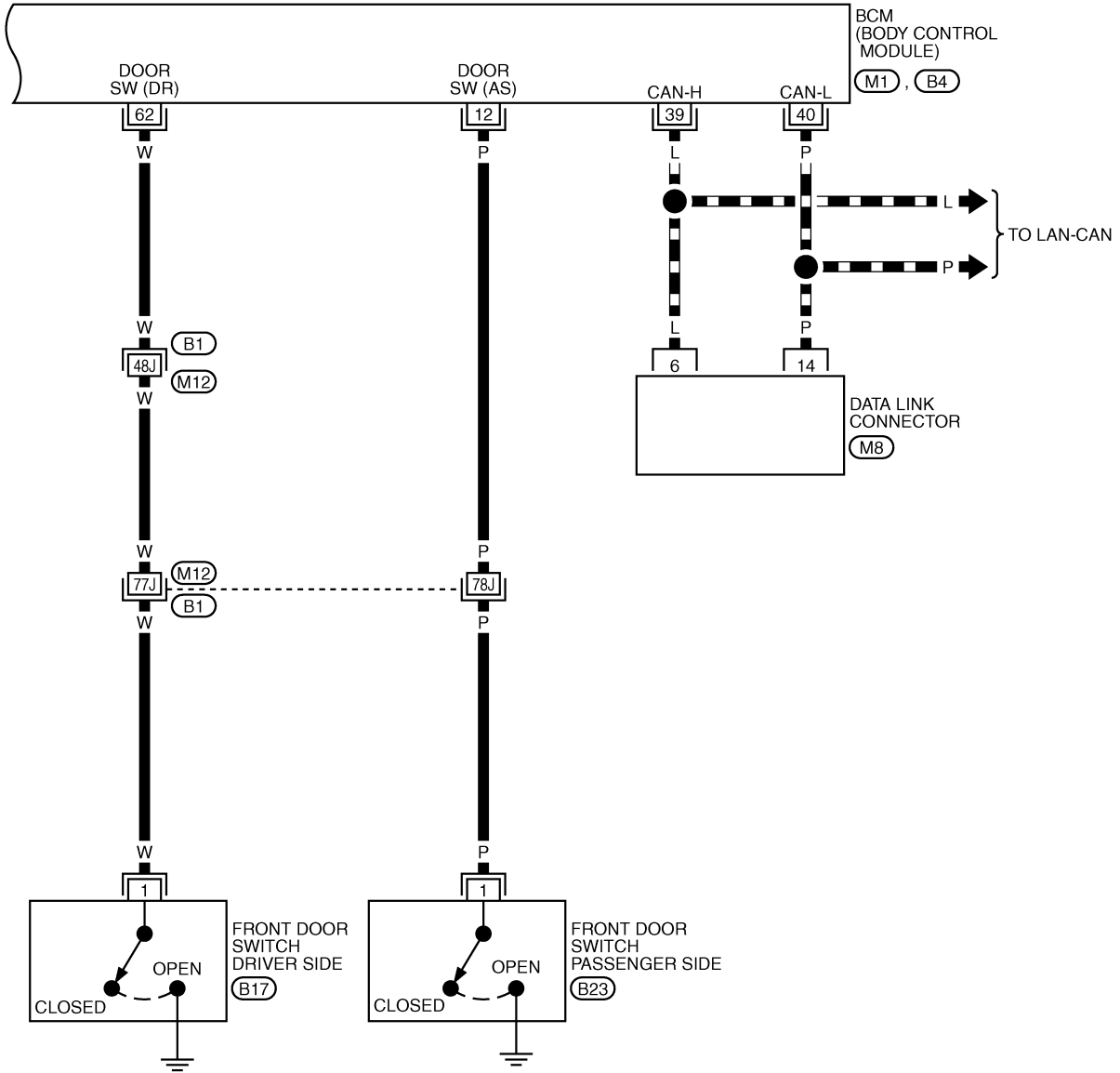
REFER TO THE FOLLOWING.
 (E108), (B1), (D1), (D31)
 -SUPER MULTIPLE JUNCTION (SMJ)
 (M4) -FUSE BLOCK-JUNCTION BOX (J/B)
 (M1), (M2) -ELECTRICAL UNITS

TIWM1080E

POWER WINDOW SYSTEM

GW-WINDOW-07

▬ : DATA LINE



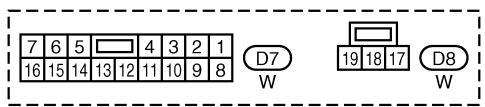
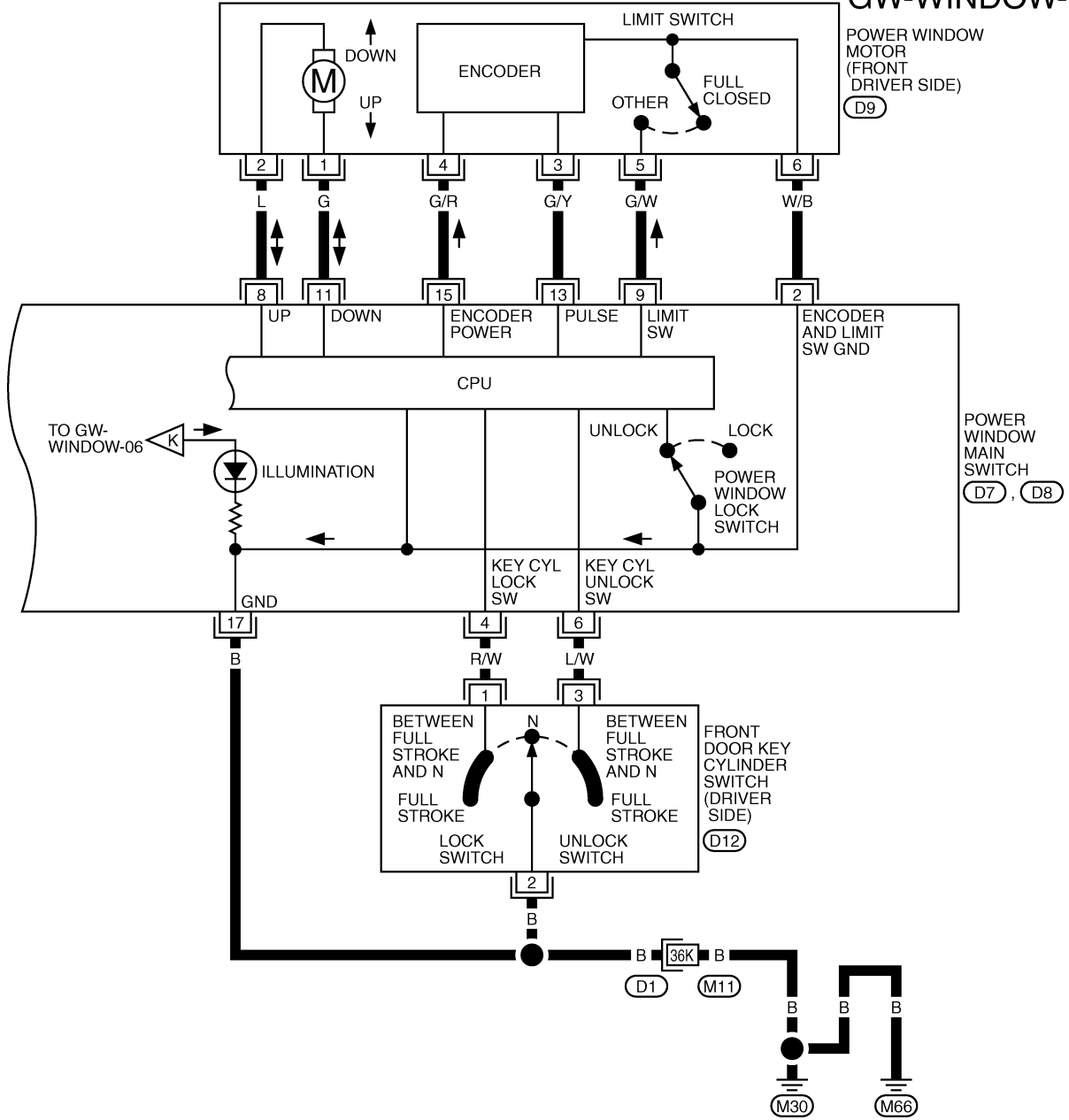
REFER TO THE FOLLOWING.

- (B1) -SUPER MULTIPLE JUNCTION (SMJ)
- (M1), (B4) -ELECTRICAL UNITS

TIWM1081E

POWER WINDOW SYSTEM

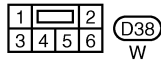
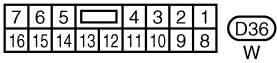
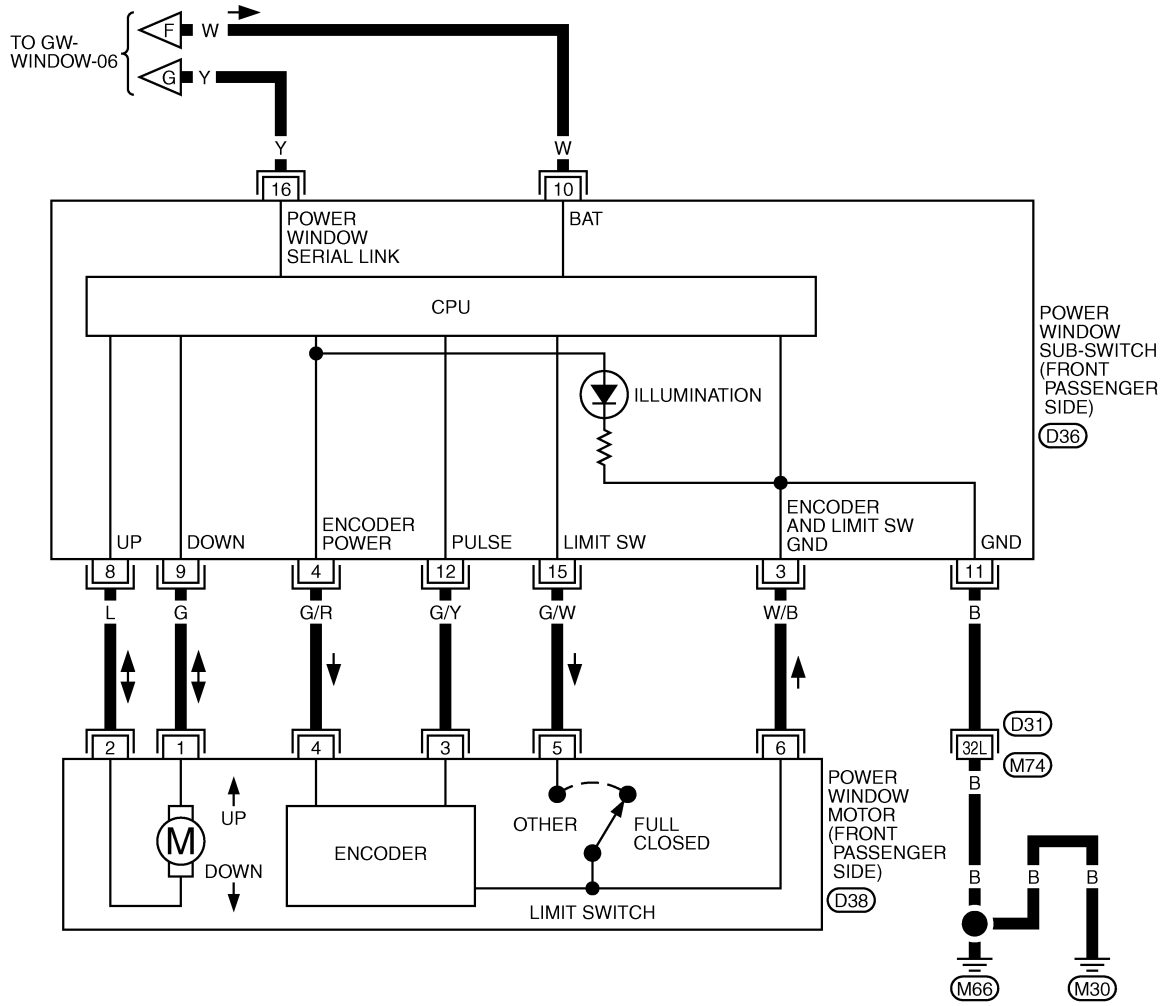
GW-WINDOW-08



REFER TO THE FOLLOWING.
 (D1) -SUPER MULTIPLE JUNCTION (SMJ)

POWER WINDOW SYSTEM

GW-WINDOW-09



REFER TO THE FOLLOWING.

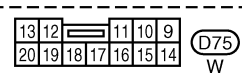
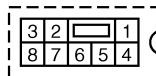
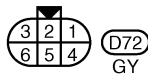
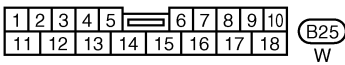
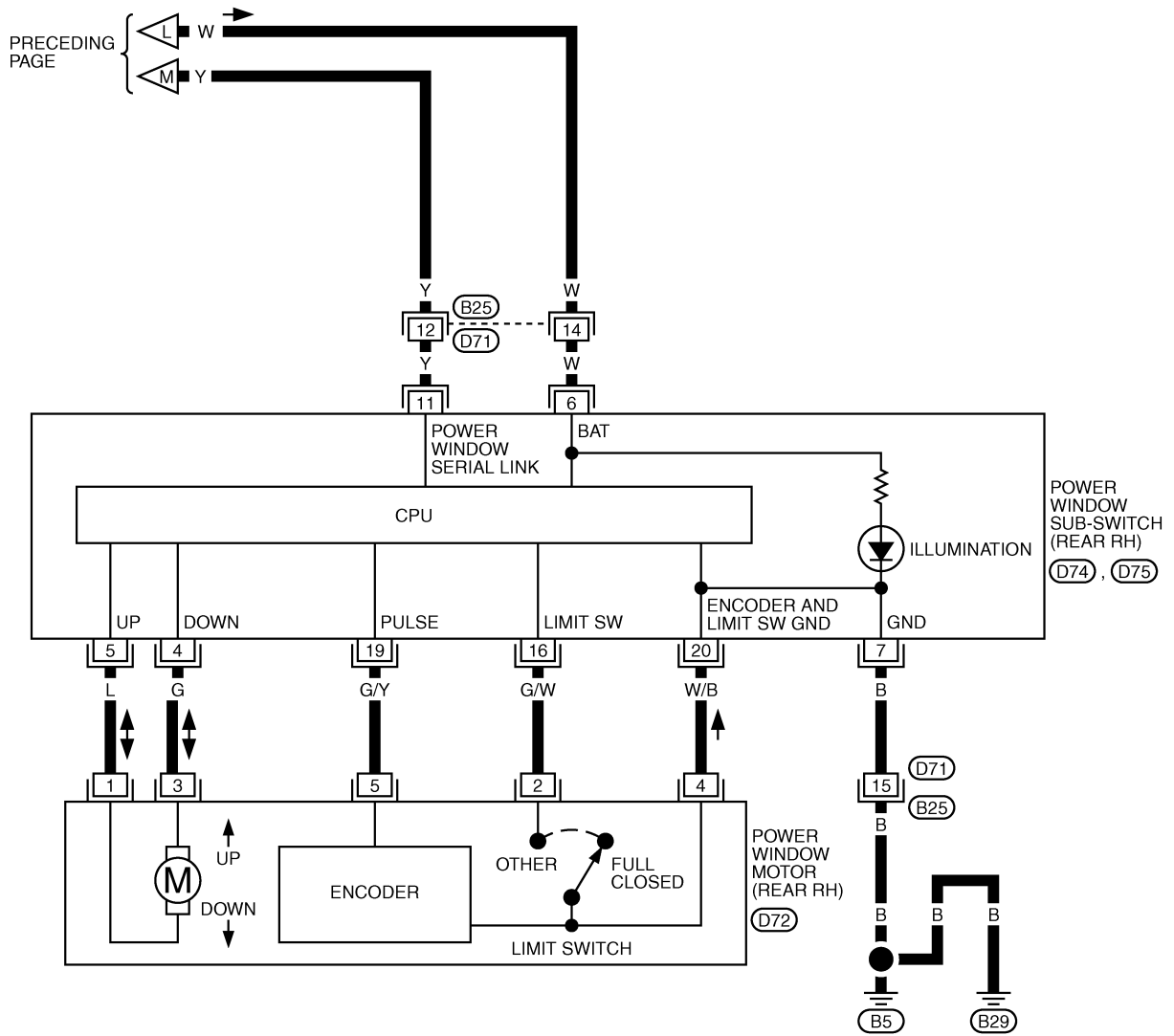
(D31) -SUPER MULTIPLE JUNCTION (SMJ)

TIWM1083E

POWER WINDOW SYSTEM

GW-WINDOW-11

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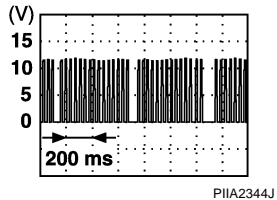
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TIWM1085E

POWER WINDOW SYSTEM

Terminal and Reference Value for BCM/With Front and Rear Power Window Anti-pinch

AIS0007L

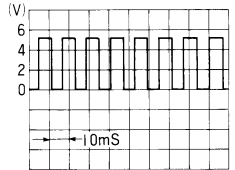
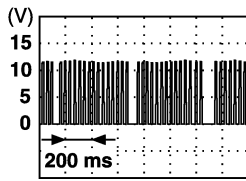
TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE [V] (Approx.)
11	LG	Ignition switch (ACC or ON)	Ignition switch is in ACC or ON position.	Battery voltage
12	P	Front door switch signal (passenger side)	ON (Open)	0
			OFF (Close)	Battery voltage
22	Y	Power window serial link	—	
38	W/L	Ignition switch (ON or START)	Ignition switch is in ON or START position.	Battery voltage
39	L	CAN - H	—	—
40	R	CAN - L	—	—
42	GY	Power source (Fuse)	—	Battery voltage
52	B	Ground	—	0
53	Y/B	Rap signal	Ignition switch is in ON or START position.	Battery voltage
			Within 45 seconds after ignition switch is turned to OFF	Battery voltage
			Ignition switch is in OFF position or retained power operation is not activated.	0
54	W	Power window power supply	—	Battery voltage
55	W/R	Power source (Fusible link)	—	Battery voltage
62	W	Front door switch signal (driver side)	ON (Open)	0
			OFF (Close)	Battery voltage

Terminal and Reference Value for Power Window Main Switch/With Front and Rear Power Window Anti-pinch System

AIS0007O

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE [V] (Approx.)
2	W/B	Limit switch and encoder ground	—	0
4	R/W	Front door key cylinder (driver side) switch lock signal	Key position (Neutral → Locked)	5 → 0
6	L/W	Front door key cylinder (driver side) switch unlock signal	Key position (Neutral → Unlocked)	5 → 0
8	L	Front driver side power window motor UP signal	When power window motor is at UP operation.	Battery voltage
9	G/W	Limit switch signal	Driver side door window is between fully-open and just before fully-closed position (ON).	0
			Driver side door window is between just before fully-closed position and fully-closed position (OFF).	5

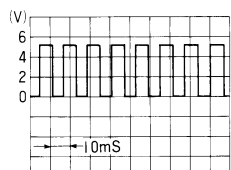
POWER WINDOW SYSTEM

TERMI-NAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE [V] (Approx.)
10	Y/B	Rap signal	Ignition switch is in ON or START position.	Battery voltage
			Within 45 seconds after ignition switch is turned to OFF	Battery voltage
			Ignition switch is in OFF position or retained power operation is not activated.	0
11	G	Front driver side power window motor DOWN signal	When power window motor is at DOWN operation.	Battery voltage
13	G/Y	Encoder pulse signal	When power window motor operates.	 OCC3383D
14	Y	Power window serial link	—	 PIIA2344J
15	G/R	Encoder power supply	When ignition switch ON or power window timer operates.	10
17	B	Ground	—	0
19	W	BAT power supply	—	Battery voltage

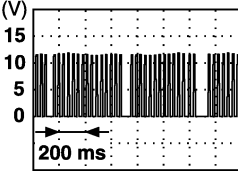
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Terminal and Reference Value for Power Window Sub-switch (Front Passenger Side)/With Front and Rear Window Anti-pinch System AIS0069X

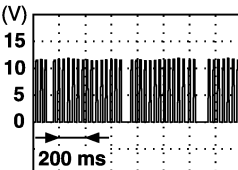
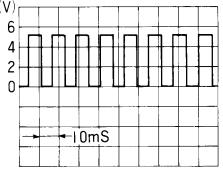
TERMI-NAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE [V] (Approx.)
3	W/B	Limit switch and encoder ground	—	0
4	G/R	Encoder power supply	When ignition switch ON or power window timer operates	10
8	L	Power window motor UP signal	When power window motor is at UP operation.	Battery voltage
9	G	Power window motor DOWN signal	When power window motor is at DOWN operation.	Battery voltage
10	W	BAT power supply	—	Battery voltage
11	B	Ground	—	0
12	G/Y	Encoder pulse signal	When power window motor operates.	 OCC3383D

POWER WINDOW SYSTEM

TERMI-NAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE [V] (Approx.)
15	G/W	Limit switch signal	Door window is between fully-open and just before fully-closed position (ON)	0
			Door window is between just before fully-closed position and fully-closed position (OFF)	5
16	Y	Power window serial link	—	 <p style="text-align: right; font-size: small;">PIIA2344J</p>

Terminal and Reference Value for Power Window Sub-switch (Rear LH or RH)/ With Front and Rear Window Anti-pinch System

AIS0007P

TERMI-NAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE [V] (Approx.)
4	G	Power window motor DOWN signal	When power window motor is at DOWN operation.	Battery voltage
5	L	Power window motor UP signal	When power window motor is at UP operation.	Battery voltage
6	W	BAT power supply	—	Battery voltage
7	B	Ground	—	0
11	Y	Power window serial link	—	 <p style="text-align: right; font-size: small;">PIIA2344J</p>
16	G/W	Limit switch signal	Door window is between fully-open and just before fully-closed position (ON)	0
			Door window is between just before fully-closed position and fully-closed position (OFF)	5
19	G/Y	Encoder pulse signal	When power window motor operates.	 <p style="text-align: right; font-size: small;">OCC3383D</p>
20	W/B	Limit switch and encoder ground	—	0

POWER WINDOW SYSTEM

CONSULT-II Function (BCM)

AIS0007Q

CONSULT-II can display each diagnostic item using the diagnostic test modes shown following.

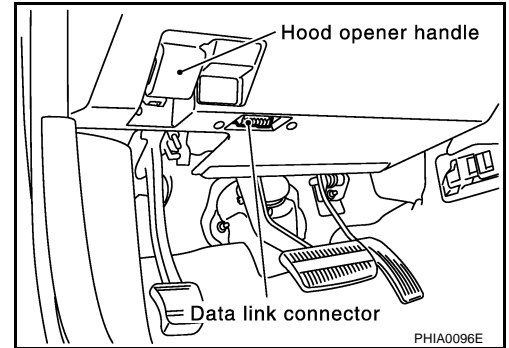
BCM diagnostic test item	Check item diagnostic test mode	Content
RETAINED PWR	Work support	Changes setting of each function.
	Data monitor	Displays the input data of BCM in real time.
	Active test	Gives a drive signal to a load to check the operation.

CONSULT-II INSPECTION PROCEDURE

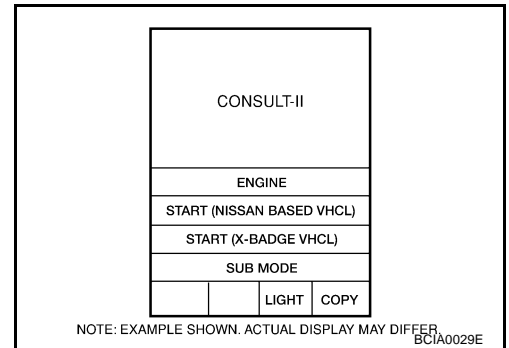
CAUTION:

If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carry out CAN communication.

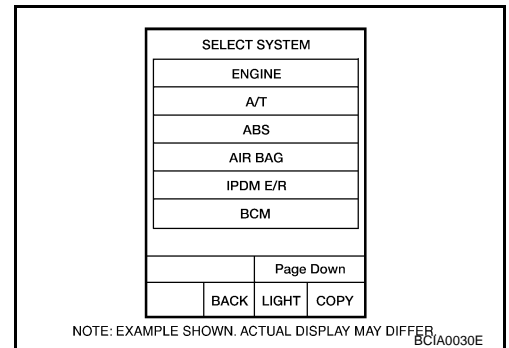
1. Turn ignition switch "ON".
2. Connect "CONSULT-II and CONSULT-II CONVERTER" to the data link connector.



3. Turn ignition switch "ON".
4. Touch "START (NISSAN BASED VHCL)".

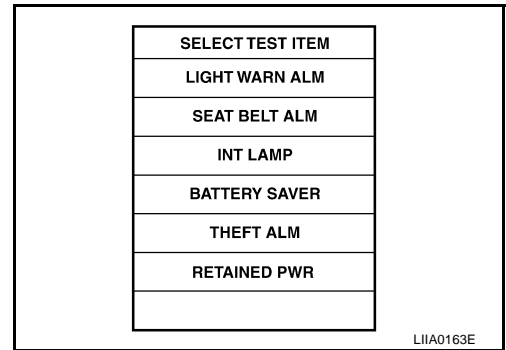


5. Touch "BCM".
If "BCM" is not indicated, go to Refer to [GI-39](#) , "CONSULT-II Date Link Connector (DLC) Circuit"

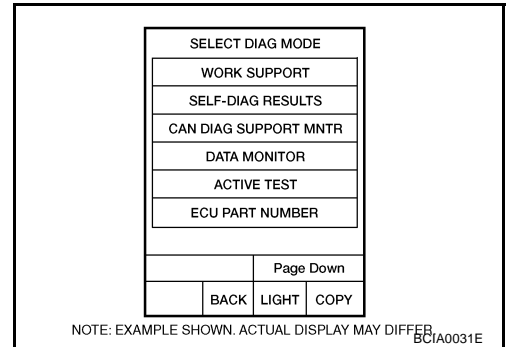


POWER WINDOW SYSTEM

6. Touch "RETAINED PWR".



7. Select diagnosis mode. "DATA MONITOR", "ACTIVE TEST" and "WORK SUPPORT" are available.



ACTIVE TEST

Test Item	Description
RETAINED PWR	<p>This test is able to supply RAP signal (power) from BCM (body control module) to power window system and power sunroof system (if equipped). Those systems can be operated when turning on "RETAINED PWR" on CONSULT-II screen even if the ignition switch is turned OFF.</p> <p>NOTE: During this test, CONSULT-II can be operated with ignition switch in "OFF" position. "RETAINED PWR" should be turned "ON" or "OFF" on CONSULT-II screen when ignition switch is ON. Then turn ignition switch OFF to check retained power operation. CONSULT-II might be stuck if "RETAINED PWR" is turned "ON" or "OFF" on CONSULT-II screen when ignition switch is OFF.</p>

WORK SUPPORT

Work item	Description
RETAINED PWR	<p>Rap signal's power supply period can be changed by mode setting. Selects rap signal's power supply period between three steps</p> <ul style="list-style-type: none"> ● MODE1 (45 sec.) / MODE2 (OFF) / MODE 3 (2 min.).

DATE MONITOR

Work item	Description
IGN ON SW	Indicates (ON / OFF) condition of ignition switch
DOOR SW-DR	Indicates (ON / OFF) condition of front door switch driver side
DOOR SW-AS	Indicates (ON / OFF) condition of front door switch passenger side

POWER WINDOW SYSTEM

Work Flow

AIS0021N

1. Check the symptom and customer's requests.
2. Understand the outline of system. Refer to [GW-16, "System Description"](#)
3. According to the trouble diagnosis chart, repair or replace the cause of the malfunction.
Refer to [GW-45, "Trouble Diagnoses Symptom Chart/With Front Left and Right Power Window Anti-pinch System"](#) or [GW-46, "Trouble Diagnoses Symptom Chart/With Front and Rear Power Window Anti-pinch System"](#)
4. Does power window system operate normally? Yes, GO TO 5, If No, GO TO 3.
5. INSPECTION END.

Trouble Diagnoses Symptom Chart/With Front Left and Right Power Window Anti-pinch System

AIS0007R

Check that other systems using the signal of the following systems operate normally.

Symptom	Repair order	Refer to page
None of the power windows can be operated using any switch.	1. BCM power supply and ground circuit check	GW-48
	2. Power window main switch power supply and ground circuit check	GW-48
	3. Replace power window main switch	EI-37
Driver side power window alone does not operated.	1. Power window motor (driver side) circuit check	GW-52
	2. Replace power window main switch	EI-37
Front passenger side power window alone does not operated.	1. Power window sub-switch (front passenger side) power and ground circuit check	GW-50
	2. Power window motor (front passenger side) circuit check	GW-52
	3. Power window serial link check	GW-73
	4. Replace BCM	BCS-16
Rear LH side power window alone does not operated	1. Power window motor (rear LH) circuit check	GW-53
Rear RH side power window alone does not operated	1. Power window motor (rear RH) circuit check	GW-55
Anti-pinch system does not operate normally (driver side)	1. Door window sliding part malfunction ● A foreign material adheres to window glass or glass run rubber. ● Glass run rubber wear or deformation. ● Sash is tilted too much, or no enough.	—
	2. Limit switch adjusting	GW-78
	3. Limit switch circuit check (driver side)	GW-58
	4. Encoder circuit check (driver side)	GW-64
Anti-pinch system does not operate normally (passenger side)	1. Door window sliding part malfunction ● A foreign material adheres to window glass or glass run rubber. ● Glass run rubber wear or deformation. ● Sash is tilted too much, or no enough.	—
	2. Limit switch adjusting	GW-78
	3. Limit switch circuit check (passenger side)	GW-60
	4. Encoder circuit check (passenger side)	GW-66
Power window retained power operation does not operate properly	1. Check the retained power operation mode setting.	GW-44
	2. Door switch check	GW-69
	3. Replace BCM.	BCS-16

POWER WINDOW SYSTEM

Symptom	Repair order	Refer to page
Does not operate by key cylinder switch	1. Door key cylinder switch check	GW-71
	2. Replace power window main switch	EI-37
Power window lock switch does not function	1. Power window lock switch circuit check	GW-75

Trouble Diagnoses Symptom Chart/With Front and Rear Power Window Anti-pinch System

AIS0021P

Check that other systems using the signal of the following systems operate normally.

Symptom	Repair order	Refer to page
None of the power windows can be operated using any switch.	1. BCM power supply and ground circuit check	GW-48
	2. Power window main switch power supply and ground circuit check	GW-48
	3. Replace power window main switch	EI-37
Driver side power window alone does not operated.	1. Power window motor (driver side) circuit check	GW-52
	2. Replace power window main switch	EI-37
Front passenger side power window alone does not operated.	1. Power window sub-switch (front passenger side) power and ground circuit check	GW-50
	2. Power window motor (front passenger side) circuit check	GW-52
	3. Power window serial link check	GW-73
	4. Replace BCM	BCS-16
Rear LH side power window alone does not operated	1. Power window sub-switch (rear LH or RH) power and ground circuit check	GW-51
	2. Power window motor (rear LH) circuit check	GW-57
	3. Power window serial link check	GW-75
	4. Replace power window sub-switch (rear LH)	EI-37
Rear RH side power window alone does not operated	1. Power window sub-switch (rear LH or RH) power and ground circuit check	GW-51
	2. Power window motor (rear RH) circuit check	GW-58
	3. Power window serial link check	GW-75
	4. Replace power window sub-switch (rear RH)	EI-37
Anti-pinch system does not operate normally (driver side)	1. Door window sliding part malfunction ● A foreign material adheres to window glass or glass run rubber. ● Glass run rubber wear or deformation. ● Sash is tilted too much, or no enough.	—
	2. Limit switch adjusting	GW-78
	3. Limit switch circuit check (driver side)	GW-58
	4. Encoder circuit check (driver side)	GW-64
Anti-pinch system does not operate normally (passenger side)	1. Door window sliding part malfunction ● A foreign material adheres to window glass or glass run rubber. ● Glass run rubber wear or deformation. ● Sash is tilted too much, or no enough.	—
	2. Limit switch adjusting	GW-78
	3. Limit switch circuit check (passenger side)	GW-60
	4. Encoder circuit check (passenger side)	GW-66

POWER WINDOW SYSTEM

Symptom	Repair order	Refer to page
Anti-pinch system does not operate normally (rear LH or RH)	1. Door window sliding part malfunction <ul style="list-style-type: none"> ● A foreign material adheres to window glass or glass run rubber. ● Glass run rubber wear or deformation. ● Sash is tilted too much, or no enough. 	—
	2. Limit switch adjusting	GW-78
	3. Limit switch circuit check (rear LH or RH)	GW-62
	4. Encoder circuit check (rear LH or RH)	GW-68
Power window retained power operation does not operate properly	1. Check the retained power operation mode setting.	GW-44
	2. Door switch check	GW-69
	3. Replace BCM.	BCS-16
Does not operate by key cylinder switch	1. Door key cylinder switch check	GW-71
	2. Replace power window main switch	EI-37
Power window lock switch does not function	1. Power window lock switch circuit check	GW-75

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POWER WINDOW SYSTEM

AIS00210

BCM Power Supply and Ground Circuit Check

1. CHECK FUSE

Check 50A fusible link (letter **F**, located in the fuse and fusible link box).
 Check 10A fuse [No.18, located in fuse block (J/B)].
 Check 10A fuse [No.1, located in fuse block (J/B)].

NOTE:

Refer to [GW-16, "Component Parts and Harness Connector Location"](#).

OK or NG

OK >> GO TO 2.

NG >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse. Refer to [PG-3, "POWER SUPPLY ROUTING CIRCUIT"](#).

2. HECK POWER SUPPLY CIRCUIT

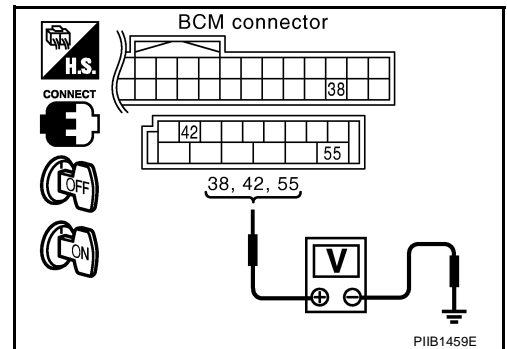
Check voltage between BCM connector M1, M2 terminal 38, 42, 55 and ground.

Connector	Terminal (Wire color)		Condition of ignition switch	Voltage [V] (Approx.)
	(+)	(-)		
M1	38 (W/L)	Ground	ON	Battery voltage
M2	42 (G/Y)		OFF	
	55 (W/R)			

OK or NG

OK >> GO TO 3.

NG >> Check BCM power supply circuit for open or short.



3. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check continuity between BCM connector M2 terminal 52 and ground.

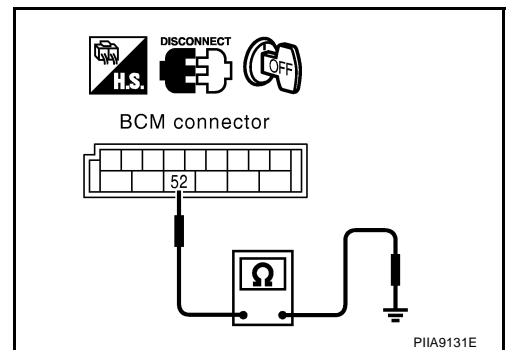
52 (B) – Ground

Continuity should exist.

OK or NG

OK >> Power supply and ground circuit is OK.

NG >> Check BCM ground circuit for open or short.



Power Window Main Switch Power Supply and Ground Circuit Check

AIS003KW

1. CHECK POWER SUPPLY CIRCUIT

Check voltage between power window main switch connector D7, D8 terminal 10, 19 and ground.

10 (Y/B) – Ground

: Battery voltage

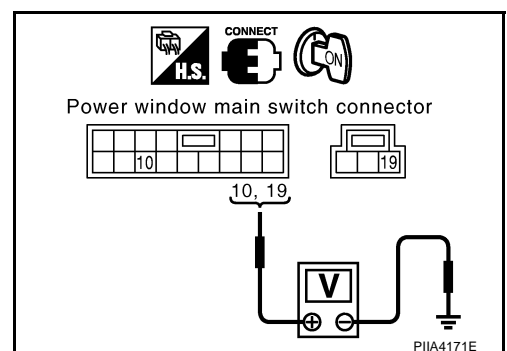
19 (W) – Ground

: Battery voltage

OK or NG

OK >> GO TO 2.

NG >> GO TO 3.



POWER WINDOW SYSTEM

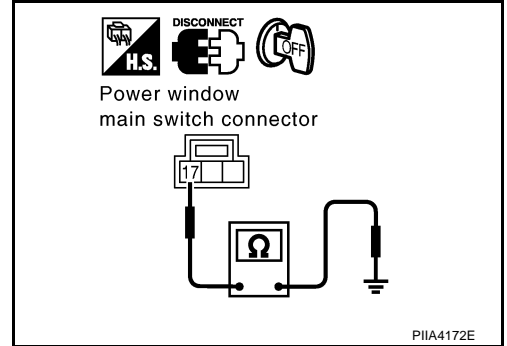
2. CHECK GROUND CIRCUIT

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

17 (B) – Ground :Continuity should exist.

OK or NG

- OK >> Power window main switch power supply and ground circuits are OK.
NG >> Repair or replace harness.



3. CHECK POWER WINDOW MAIN SWITCH POWER SUPPLY CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between BCM connector M2 terminal 53, 54 and power window main switch connector D7, D8 terminal 10, 19.

53 (Y/B) – 10 (Y/B) :Continuity should exist.

54 (W) – 19 (W) :Continuity should exist.

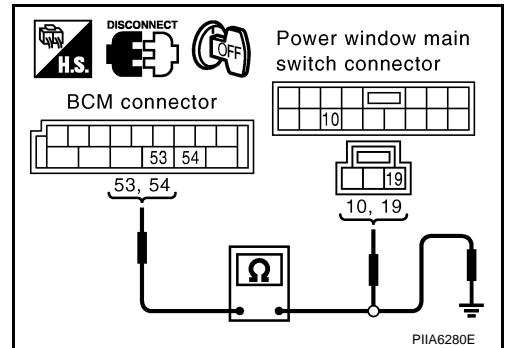
3. Check continuity between BCM connector M2 terminal 53, 54 and ground.

53 (Y/B) – Ground :Continuity should not exist.

54 (W) – Ground :Continuity should not exist.

OK or NG

- OK >> GO TO 4.
NG >> Repair or replace harness.



4. CHECK BCM OUTPUT SIGNAL

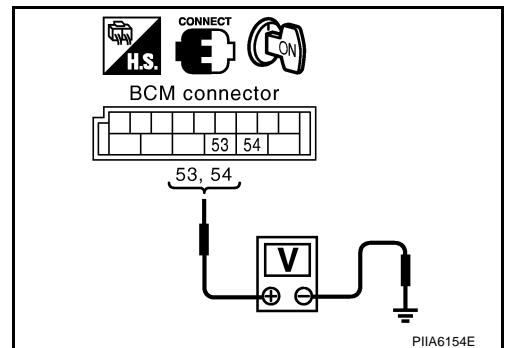
1. Connect BCM connector.
2. Turn ignition switch ON.
3. Check voltage between BCM connector M2 terminal 53, 54 and ground.

53 (Y/B) – Ground :Battery voltage

54 (W) – Ground :Battery voltage

OK or NG

- OK >> Check the condition of the harness and the connector.
NG >> Replace BCM.



POWER WINDOW SYSTEM

Power Window Sub-switch (Front Passenger Side) Power Supply and Ground Circuit Check

AI50026L

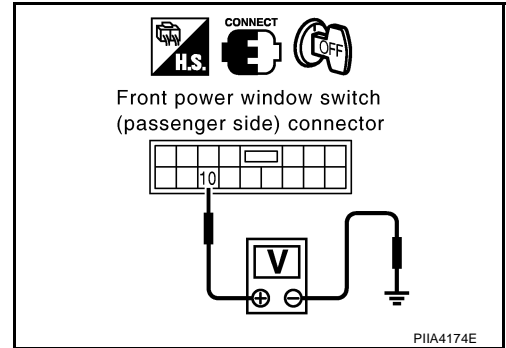
1. CHECK POWER SUPPLY CIRCUIT

Check voltage between power window sub-switch (front passenger side) connector D36 terminal 10 and ground.

10 (W) – Ground : Battery voltage

OK or NG

- OK >> GO TO 2.
NG >> GO TO 3.



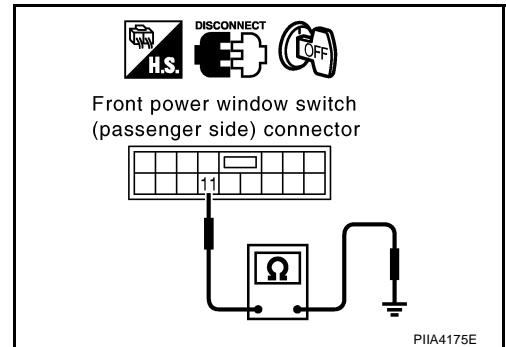
2. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect power window sub-switch (front passenger side) connector.
3. Check continuity between power window sub-switch (front passenger side) connector D36 terminal 11 and ground.

11 (B) – Ground : Continuity should exist.

OK or NG

- OK >> Power window sub-switch (front passenger side) power supply and ground circuits are OK.
NG >> Repair or replace harness.



3. CHECK POWER WINDOW SUB-SWITCH POWER SUPPLY CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between BCM connector M2 terminal 54 and power window sub-switch (front passenger side) connector D36 terminal 10.

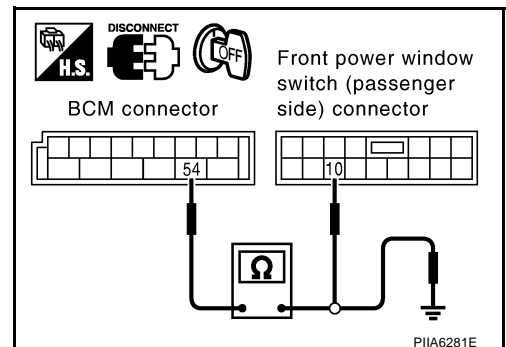
54 (W) – 10 (W) : Continuity should exist.

3. Check continuity between BCM connector M2 terminal 54 and ground.

54 (W) – Ground : Continuity should not exist.

OK or NG

- OK >> Check the condition of the harness and the connector.
NG >> Repair or replace harness.



POWER WINDOW SYSTEM

Power Window Sub-switch (Rear LH or RH) Power Supply and Ground Circuit Check/With Front and Rear Power Window Anti-pinch System

AIS0026Q

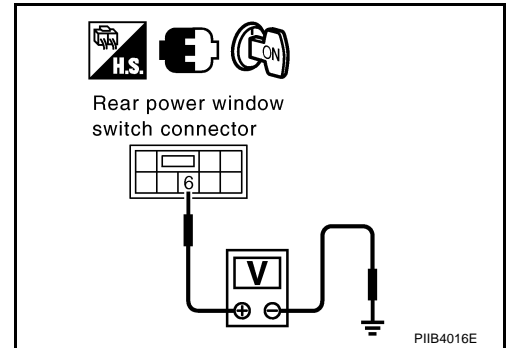
1. CHECK POWER WINDOW POWER SUPPLY CIRCUIT

1. Turn ignition switch ON.
2. Check voltage between power window sub-switch (rear LH or RH) connector D54 (LH), D74 (RH) terminal 6 and ground.

6 (W) – Ground : Battery voltage

OK or NG

- OK >> GO TO 2.
NG >> GO TO 3.



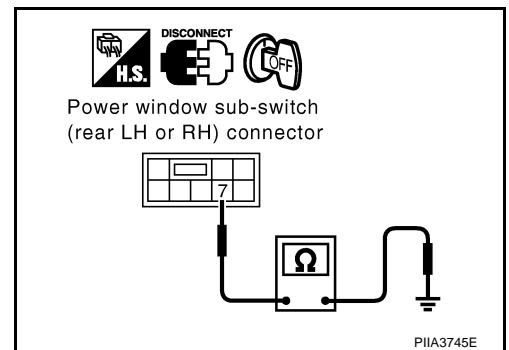
2. CHECK POWER WINDOW GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect power window sub-switch (rear LH or RH) connector.
3. Check continuity between power window sub-switch (rear LH or RH) connector D54 (LH), D74 (RH) terminal 7 and ground.

7 (B) – Ground : Continuity should exist.

OK or NG

- OK >> Power window sub-switch (rear LH or RH) power supply and ground circuit is OK. Refer to symptom chart.
NG >> Repair or replace harness.



3. CHECK POWER WINDOW SUB-SWITCH POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check continuity between BCM connector M2 terminal 54 and power window sub-switch (rear LH or RH) connector terminal 6.

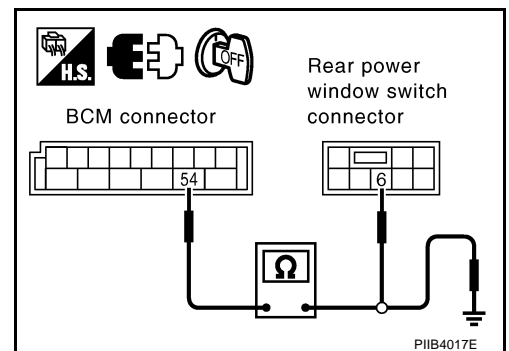
54 (W) – 6 (W) : Continuity should exist.

4. Check continuity between BCM connector M2 terminal 54 and ground.

54 (W) – Ground : Continuity should not exist.

OK or NG

- OK >> Check the condition of the harness and the connector.
NG >> Repair or replace harness.



POWER WINDOW SYSTEM

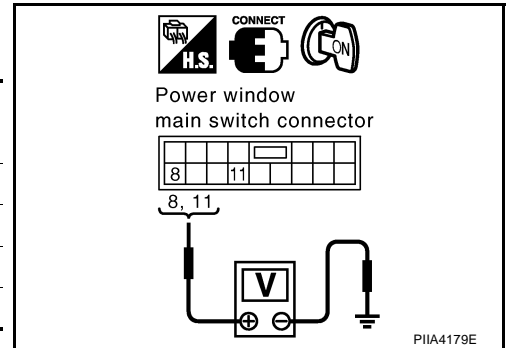
Power Window Motor (Front Driver Side) Circuit Check

AIS0009N

1. CHECK POWER WINDOW MAIN SWITCH OUTPUT SIGNAL

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

Connector	Terminals (Wire color)		Condition of power window main switch	Voltage [V] (Approx.)
	(+)	(-)		
D7	8 (L)	Ground	Up	Battery voltage
			Down	0
	11 (G)		Up	0
			Down	Battery voltage



OK or NG

- OK >> GO TO 2.
 NG >> Replace power window main switch.

2. CHECK POWER WINDOW MOTOR CIRCUIT

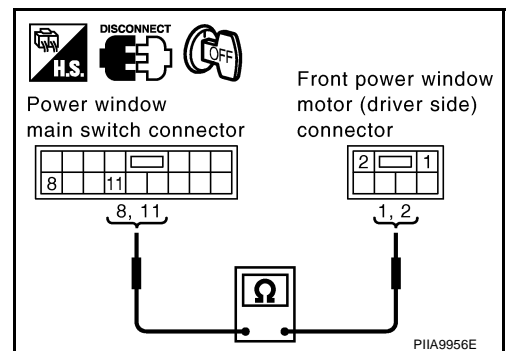
1. Turn ignition switch OFF.
2. Disconnect power window main switch and power window motor (front driver side) connector.
3. Check continuity between power window main switch connector D7 terminal 8, 11 and power window motor (front driver side) connector D9 terminal 1,2.

8 (L) – 2 (L) : Continuity should exist.

11 (G) – 1 (G) : Continuity should exist.

OK or NG

- OK >> Replace power window motor (front driver side).
 NG >> Repair or replace harness.



Power Window Motor (Front Passenger Side) Circuit Check

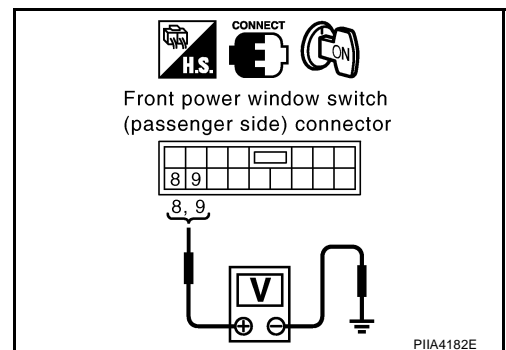
AIS0009P

1. CHECK POWER WINDOW SUB-SWITCH (FRONT PASSENGER SIDE) OUTPUT SIGNAL

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

Connector	Terminals (Wire color)		Condition of switch*	Voltage [V] (Approx.)
	(+)	(-)		
D36	8 (L)	Ground	Closing	Battery voltage
			Opening	0
	9 (G)		Closing	0
			Opening	Battery voltage

*: power window main switch or power window sub-switch (passenger side)



OK or NG

- OK >> GO TO 2.
 NG >> Replace power window sub-switch (front passenger side).

POWER WINDOW SYSTEM

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

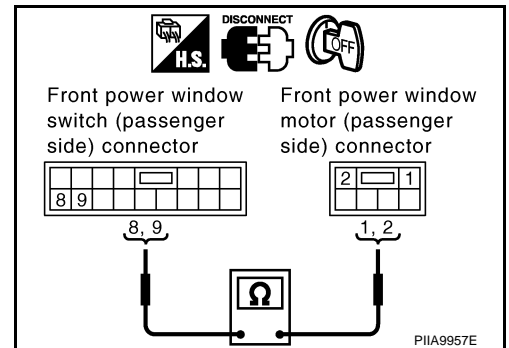
1. Turn ignition switch OFF.
2. Disconnect power window motor (front passenger side) and power window sub-switch (front passenger side) connector.
3. Check continuity between power window sub-switch (front passenger side) connector D37 terminals 8, 9 and power window motor (front passenger side) connector D38 terminals 1, 2.

8 (L) – 2 (L) :Continuity should exist.

9 (G) – 1 (G) :Continuity should exist.

OK or NG

- OK >> Replace power window motor (front passenger side)
 NG >> Repair or replace harness.



Power Window Motor (Rear LH) Circuit Check/With Front Left and Right Anti-pinch System

AIS0009Q

1. CHECK POWER WINDOW SUB-SWITCH (REAR LH) OUTPUT SIGNAL

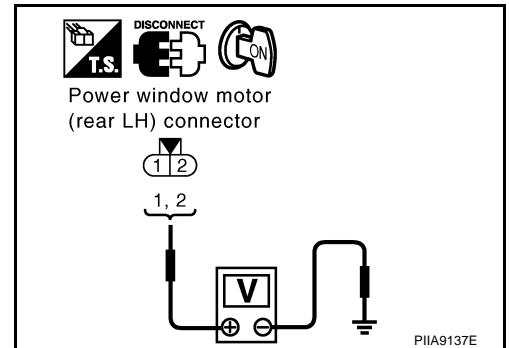
1. Turn ignition switch OFF.
2. Disconnect power window motor (rear LH).
3. Turn ignition switch ON.
4. Check voltage between power window motor (rear LH) connector D53 terminal 1 and 2.

Connector	Terminals (Wire color)		Condition of switch*	Voltage [V] (Approx.)
	(+)	(-)		
D53	1 (G)	Ground	Up	Battery voltage
			Down	0
	2 (L)		Up	0
			Down	Battery voltage

*: Power window main switch or power window sub-switch (rear LH)

OK or NG

- OK >> Replace power window motor (rear LH).
 NG >> GO TO 2.



2. CHECK POWER WINDOW MOTOR (REAR LH) CIRCUIT

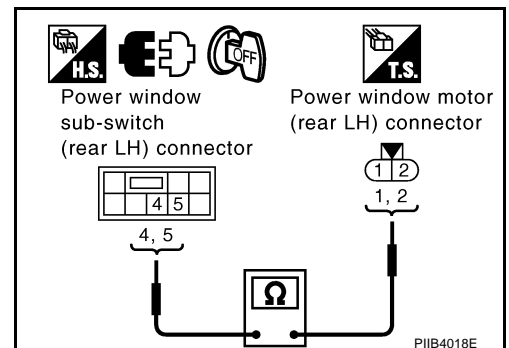
1. Turn ignition switch OFF.
2. Disconnect power window sub-switch (rear LH) connector.
3. Check continuity between power window sub-switch (rear LH) connector D54 terminal 4, 5 and power window motor (rear LH) connector D53 terminal 1, 2.

4 (L) – 2 (L) :Continuity should exist.

5 (G) – 1 (G) :Continuity should exist.

OK or NG

- OK >> GO TO 3.
 NG >> Repair or replace harness.



POWER WINDOW SYSTEM

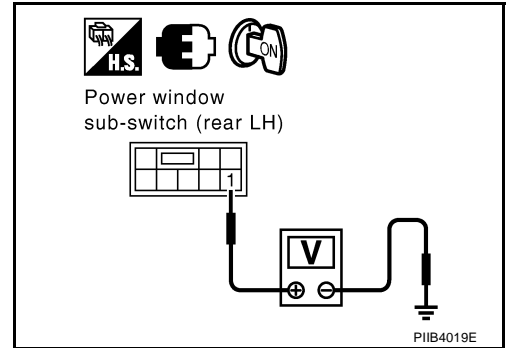
3. CHECK POWER SUPPLY

1. Connect power window sub-switch (rear LH)
2. Turn ignition switch ON.
3. Check voltage between power window sub-switch (rear LH) connector D54 terminal 1 and ground.

1 (Y/B) – Ground :Battery voltage

OK or NG

- OK >> GO TO 4.
 NG >> Check harness connector for open or short between BCM and power window sub-switch (rear LH).



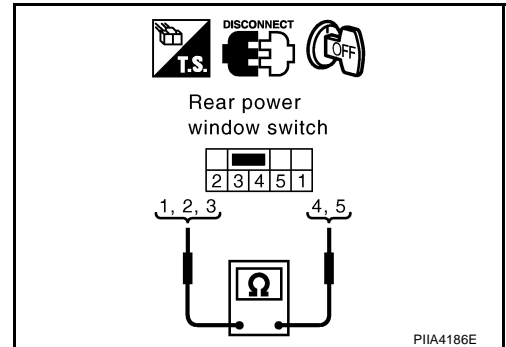
4. CHECK REAR POWER WINDOW SWITCH

1. Turn ignition switch OFF.
2. Disconnect rear power window switch connector.
3. Rear power window switch (LH) operate, check continuity between rear power window switch terminal 1, 2, 3 and 4, 5.

Terminals		Window condition	Continuity
1	5	UP	Yes
1	4	DOWN	
2	5	No operation	
3	4	No operation	

OK or NG

- OK >> GO TO 5.
 NG >> Replace rear power window switch (LH).



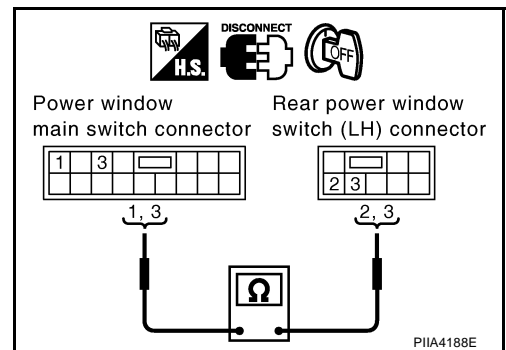
5. CHECK HARNESS CONTINUITY

1. Disconnect power window main switch connector.
2. Check continuity between power window main switch connector D7 terminal 1, 3 and rear power window switch (LH) connector D54 terminal 2, 3.

1 (Y) – 2 (G/W) : Continuity should exist.
3 (R) – 3 (G) : Continuity should exist.

OK or NG

- OK >> GO TO 6.
 NG >> Repair or replace harness.

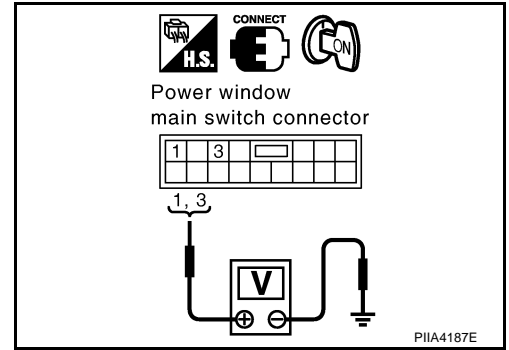


POWER WINDOW SYSTEM

6. CHECK POWER WINDOW MAIN SWITCH OUTPUT SIGNAL

1. Connect power window main switch connector.
2. Turn ignition switch ON.
3. Rear LH switch in power window main switch is operated, check voltage between power window main switch connector and ground.

Connector	Terminals (Wire color)		Window condition	Voltage [V] (Approx.)
	(+)	(-)		
D7	1 (Y)	Ground	UP	Battery voltage
			DOWN	0
	3 (R)		UP	0
			DOWN	Battery voltage



OK or NG

- OK >> Check condition of harness and connector.
 NG >> Replace power window main switch.

Power Window Motor (Rear RH) Circuit Check/With Front Left and Right Anti-pinch System

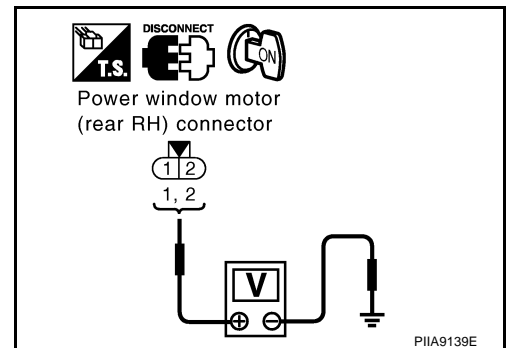
AIS0026B

1. CHECK POWER WINDOW SUB-SWITCH (REAR RH) OUTPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect power window motor (rear RH).
3. Turn ignition switch ON.
4. Check voltage between power window motor (rear RH) connector D73 terminal 1 and 2.

Connector	Terminals (Wire color)		Condition of switch*	Voltage [V] (Approx.)
	(+)	(-)		
D73	1 (G)	Ground	Up	Battery voltage
			Down	0
	2 (L)		Up	0
			Down	Battery voltage

*: Power window main switch or power window sub-switch (rear RH)



OK or NG

- OK >> Replace power window motor (rear RH).
 NG >> GO TO 2.

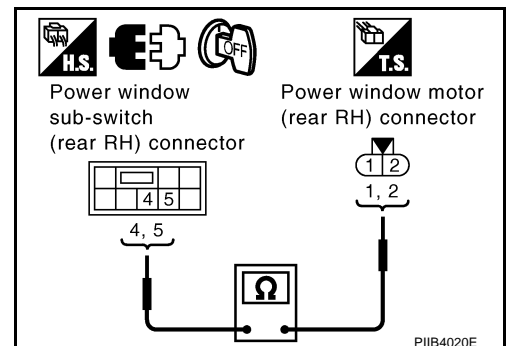
2. CHECK POWER WINDOW MOTOR (REAR RH) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect power window sub-switch (rear RH) connector.
3. Check continuity between power window sub-switch (rear RH) connector D74 terminal 4, 5 and power window motor (rear RH) connector D73 terminal 1, 2.

- 4 (L) – 2 (L) :Continuity should exist.**
5 (G) – 1 (G) :Continuity should exist.

OK or NG

- OK >> GO TO 3.
 NG >> Repair or replace harness.



POWER WINDOW SYSTEM

3. CHECK POWER SUPPLY

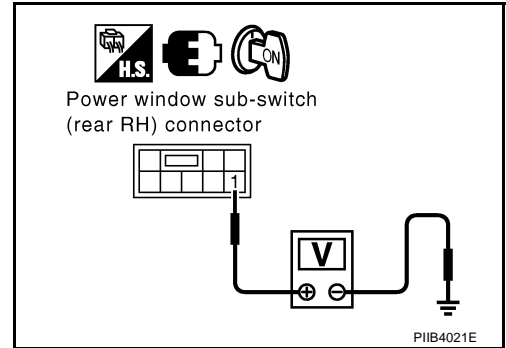
1. Connect power window sub-switch (rear RH)
2. Turn ignition switch ON.
3. Check voltage between power window sub-switch (rear RH) connector D74 terminal 1 and ground.

1 (Y/B) – Ground :Battery voltage

OK or NG

OK >> GO TO 4.

NG >> Check harness connector for open or short between BCM and power window sub-switch (rear RH).



4. CHECK REAR POWER WINDOW SWITCH

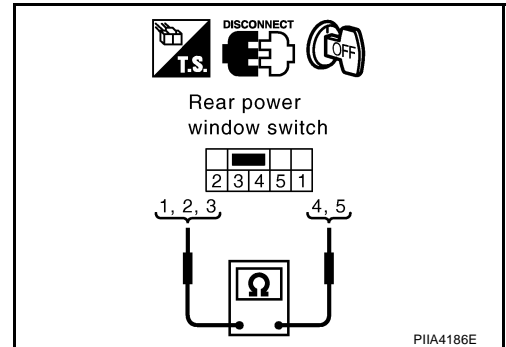
1. Turn ignition switch OFF.
2. Disconnect rear power window switch connector.
3. Rear power window switch (RH) operate, check continuity between rear power window switch terminals 1, 2, 3 and 4, 5.

Terminals		Window condition	Continuity
1	5	UP	Yes
1	4	DOWN	
2	5	No operation	
3	4	No operation	

OK or NG

OK >> GO TO 5.

NG >> Replace rear power window switch (RH).



5. CHECK HARNESS CONTINUITY

1. Disconnect power window main switch connector.
2. Check continuity between power window main switch connector D7 terminals 5, 7 and rear power window switch (RH) connector D74 terminals 2, 3.

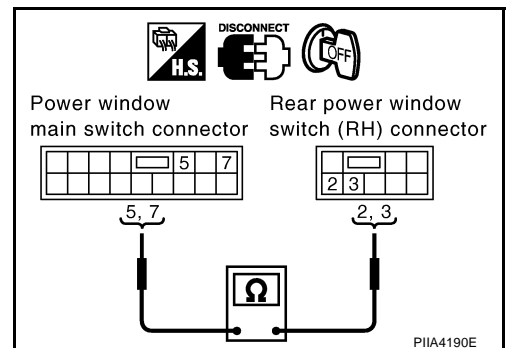
5 (G) – 3 (G) : Continuity should exist.

7 (G/W) – 2 (G/W) : Continuity should exist.

OK or NG

OK >> GO TO 6.

NG >> Repair or replace harness.

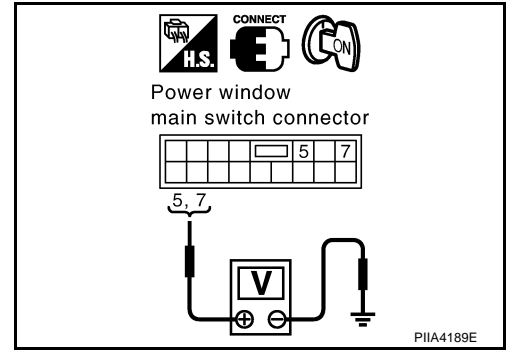


POWER WINDOW SYSTEM

6. CHECK POWER WINDOW MAIN SWITCH OUTPUT SIGNAL

1. Connect power window main switch connector.
2. Turn ignition switch ON.
3. Rear RH switch in power window main switch is operated, check voltage between power window main switch connector and ground.

Connector	Terminals (Wire color)		Window condition	Voltage [V] (Approx.)
	(+)	(-)		
D7	5 (G)	Ground	UP	0
			DOWN	Battery voltage
	7 (LG)		UP	Battery voltage
			DOWN	0



OK or NG

- OK >> Check condition of harness and connector.
 NG >> Replace power window main switch.

Power Window Motor (Rear LH) Circuit Check/With Front and Rear Power Window Anti-pinch System

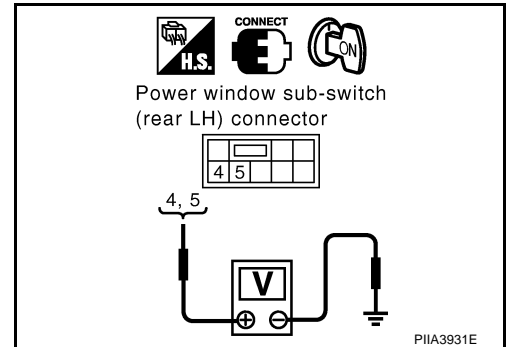
AIS0026M

1. CHECK POWER WINDOW SUB-SWITCH OUTPUT SIGNAL

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

Connector	Terminals (Wire color)		Condition of switch*	Voltage [V] (Approx.)
	(+)	(-)		
D54	4 (G)	Ground	Up	0
			Down	Battery voltage
	5 (L)		Up	Battery voltage
			Down	0

*: Power window main switch or power window sub-switch (rear LH)



OK or NG

- OK >> GO TO 2.
 NG >> Replace power window sub-switch (rear LH).

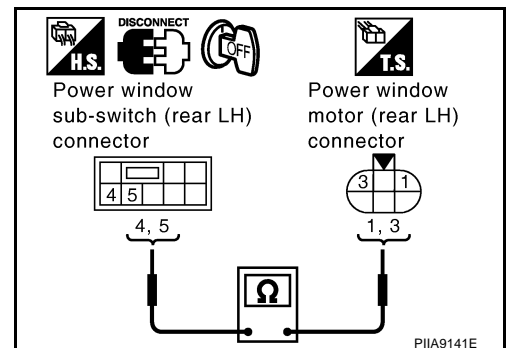
2. CHECK POWER WINDOW MOTOR (REAR LH) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect power window sub-switch (rear LH) and power window motor (rear LH) connector.
3. Check continuity between power window sub-switch (rear LH) connector D54 terminal 4, 5 and power window motor (rear LH) connector D52 terminal 1, 3.

- 4 (G) – 3 (G) :Continuity should exist.**
5 (L) – 1 (L) :Continuity should exist.

OK or NG

- OK >> Replace power window motor (rear LH).
 NG >> Repair or replace harness.



POWER WINDOW SYSTEM

Power Window Motor (Rear RH) Circuit Check/With Front and Rear Power Window Anti-pinch System

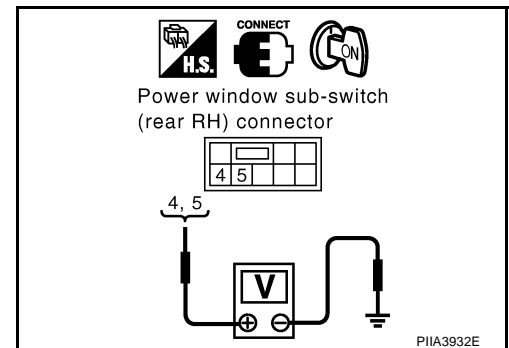
AIS0026N

1. CHECK POWER WINDOW SUB-SWITCH OUTPUT SIGNAL

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

Connector	Terminals (Wire color)		Condition or switch*	Voltage [V] (Approx.)
	(+)	(-)		
D74	4 (G)	Ground	Up	0
			Down	Battery voltage
	5 (L)		Up	Battery voltage
			Down	0

*: Power window main switch or power window sub-switch (rear RH)



OK or NG

- OK >> GO TO 2.
 NG >> Replace power window sub-switch (rear RH).

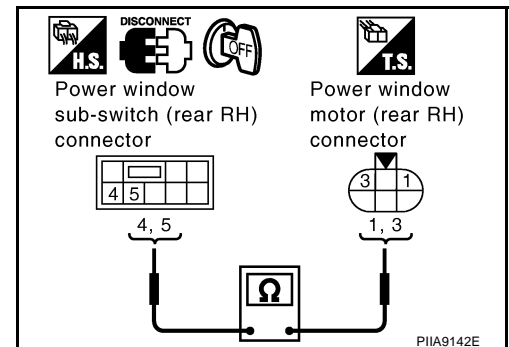
2. CHECK POWER WINDOW MOTOR (REAR RH) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect power window sub-switch (rear RH) and power window motor (rear RH) connector.
3. Check continuity between power window sub-switch (rear RH) connector D74 terminal 4, 5 and power window motor (rear RH) connector D72 terminal 1, 3.

- 4 (G) – 3 (G) : Continuity should exist.**
5 (L) – 1 (L) : Continuity should exist.

OK or NG

- OK >> Replace power window motor (rear RH).
 NG >> Repair or replace harness.



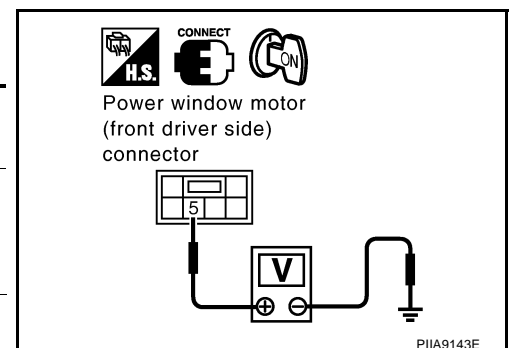
Limit Switch Circuit Check (Driver Side)

AIS0007T

1. CHECK DRIVER DOOR MAIN SWITCH LIMIT SIGNAL

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

Connector	Terminals (Wire color)		Condition of window	Voltage [V] (Approx.)
	(+)	(-)		
D9	5 (G/W)	Ground	Driver side door window is between fully-open and just before fully-closed position (ON)	0
			Driver side door window is between just before fully-closed position and fully-closed position (OFF)	5



OK or NG

- OK >> Limit sw circuit is OK.
 NG >> GO TO 2.

POWER WINDOW SYSTEM

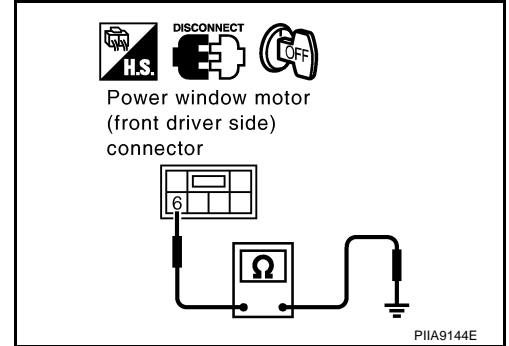
2. CHECK LIMIT SWITCH GROUND CIRCUIT

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

6 (W/B) – Ground : Continuity should exist.

OK or NG

- OK >> GO TO 4.
NG >> GO TO 3.



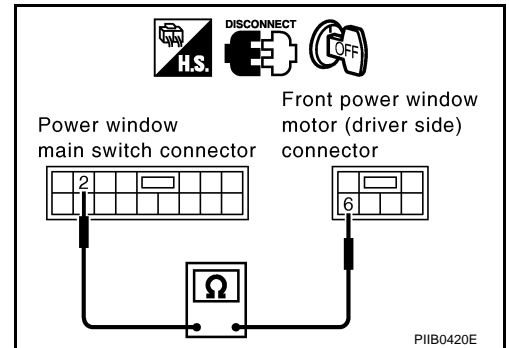
3. CHECK HARNESS CONTINUITY

1. Disconnect power window main switch connector.
2. Check continuity between power window motor (front driver side) connector D9 terminal 6 and power window main switch connector D7 terminal 2.

6 (W/B) – 2 (W/B) : Continuity should exist.

OK or NG

- OK >> Replace power window main switch.
NG >> Repair or replace harness.



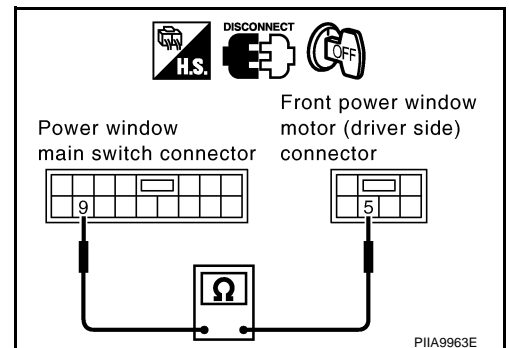
4. CHECK HARNESS CONTINUITY

1. Disconnect power window main switch connector.
2. Check continuity between power window motor (front driver side) connector D9 terminal 5 and power window main switch connector D7 terminal 9.

5 (G/W) – 9 (G/W) : Continuity should exist.

OK or NG

- OK >> GO TO 5.
NG >> Repair or replace harness.



POWER WINDOW SYSTEM

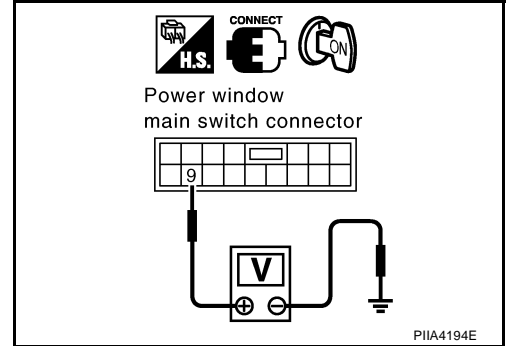
5. CHECK POWER WINDOW MAIN SWITCH OUTPUT SIGNAL

1. Connect power window main switch connector.
2. Turn ignition switch ON.
3. Check voltage between power window main switch connector D7 terminal 9 and ground.

9 (G/W) – Ground : Approx. 5V

OK or NG

- OK >> Replace power window motor (front driver side).
 NG >> Replace power window main switch.



Limit Switch Circuit Check (Passenger Side)

1. CHECK POWER WINDOW SUB-SWITCH (PASSENGER SIDE) LIMIT SIGNAL

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

Connector	Terminals (Wire color)		Condition of window	Voltage [V] (Approx.)
	(+)	(-)		
D38	5 (G/W)	Ground	Passenger side door window is between fully-open and just before fully-closed position (ON)	0
			Passenger side door window is between just before fully-closed position and fully-closed position (OFF)	5

OK or NG

- OK >> Limit sw circuit is OK.
 NG >> GO TO 2.

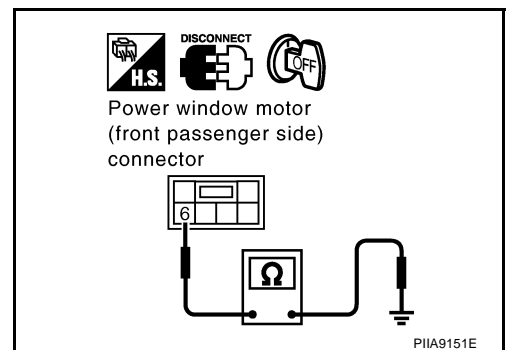
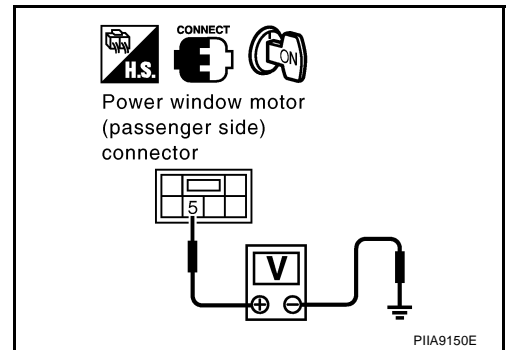
2. CHECK LIMIT SWITCH GROUND CIRCVIT

1. Turn ignition switch OFF.
2. Disconnect power window motor (front passenger side) connector.
3. Check continuity between power window motor (front passenger side) connector D38 terminal 6 and ground.

6 (W/B) – Ground : Continuity should exist.

OK or NG

- OK >> GO TO 4.
 NG >> GO TO 3.



POWER WINDOW SYSTEM

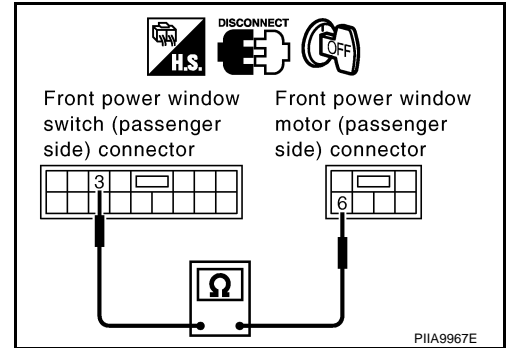
3. CHECK HARNESS CONTINUITY

1. Disconnect power window sub-switch (front passenger side) connector.
2. Check continuity between power window motor (front passenger side) connector D38 terminal 6 and power window sub-switch (front passenger side) connector D36 terminal 3.

6 (W/B) – 3 (W/B) : Continuity should exist.

OK or NG

- OK >> Replace power window sub-switch (front passenger side).
NG >> Repair or replace harness.



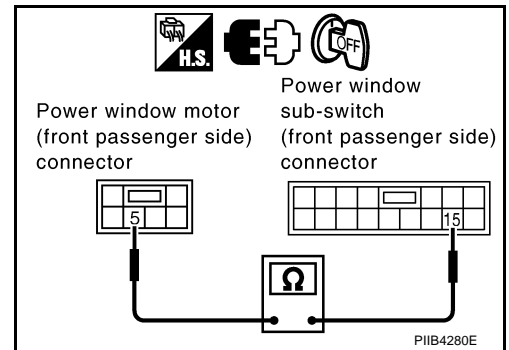
4. CHECK HARNESS CONTINUITY

1. Disconnect power window sub-switch (front passenger side) connector.
2. Check continuity between power window sub-switch (front passenger side) connector D36 terminal 15 and power window motor (front passenger side) connector D38 terminal 5.

15 (G/W) – 5 (G/W) : Continuity should exist.

OK or NG

- OK >> GO TO 5.
NG >> Repair or replace harness.



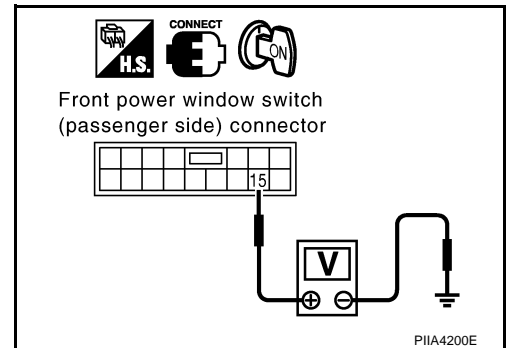
5. CHECK POWER WINDOW SUB-SWITCH (FRONT PASSENGER SIDE) OUTPUT SIGNAL

1. Connect power window sub-switch (front passenger side) connector.
2. Turn ignition switch ON.
3. Check voltage between power window sub-switch (front passenger side) connector D36 terminal 15 and ground.

15 (G/W) – Ground : Approx. 5V

OK or NG

- OK >> Replace power window motor (front passenger side).
NG >> Replace power window sub-switch (front passenger side).



POWER WINDOW SYSTEM

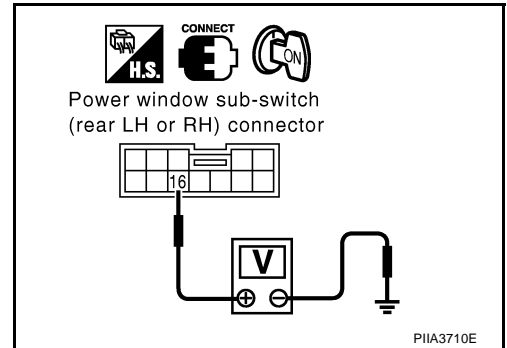
Limit Switch Circuit Check (Rear LH or RH)/With Front and Rear Anti-pinch System

AIS0026F

1. CHECK POWER WINDOW MAIN SWITCH LIMIT SIGNAL

1. Turn ignition switch ON.
2. Check voltage between power window sub-switch (rear LH or RH) connector and ground.

Connector	Terminals (Wire color)		Condition of window	Voltage [V] (Approx.)
	(+)	(-)		
D55 (LH) D75 (RH)	16 (G/W)	Ground	Rear (LH or RH) side door window is between fully-open and just before fully-closed position (ON)	0
			Rear (LH or RH) side door window is between just before fully-closed position and fully-closed position (OFF)	5



OK or NG

- OK >> Limit sw circuit is OK.
NG >> GO TO 2.

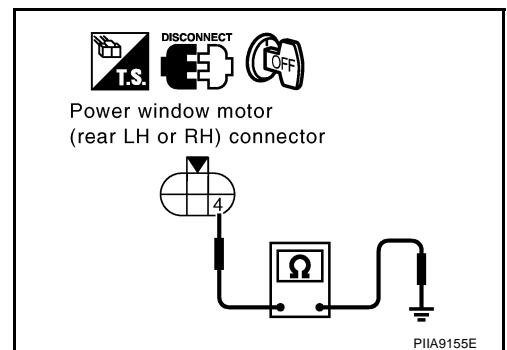
2. CHECK LIMIT SWITCH GROUND CIRCVIT

1. Turn ignition switch OFF.
2. Disconnect power window motor (rear LH or RH) connector.
3. Check continuity between power window motor (rear LH or RH) connector D52 (LH), D72 (RH) terminal 4 and ground.

4 (W/B) – Ground : Continuity should exist.

OK or NG

- OK >> GO TO 4.
NG >> GO TO 3.



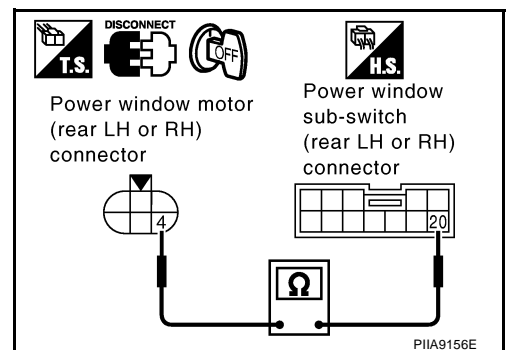
3. CHECK HARNESS CONTINUITY

1. Disconnect power window sub-switch (rear LH or RH) connector.
2. Check continuity between power window motor (rear LH or RH) connector D52 (LH), D72 (RH) terminal 4 and power window sub-switch (rear LH or RH) connector D55 (LH), D75 (RH) terminal 20.

4 (W/B) – 20 (W/B) : Continuity should exist.

OK or NG

- OK >> Replace power window sub-switch (rear LH or RH).
NG >> Repair or replace harness.



POWER WINDOW SYSTEM

4. CHECK HARNESS CONTINUITY

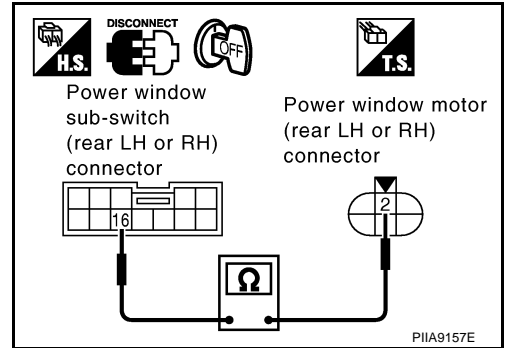
1. Turn ignition switch OFF.
2. Disconnect power window sub-switch (rear LH or RH) connector.
3. Check continuity between power window sub-switch (rear LH or RH) connector D55 (LH), D75 (RH) terminal 16 and power window motor (rear LH or RH) connector D52 (LH), D72 (RH) terminal 2.

16 (G/W) – 2 (G/W) : Continuity should exist.

OK or NG

OK >> GO TO 5.

NG >> Repair or replace harness.



5. CHECK POWER WINDOW SUB-SWITCH (REAR LH OR RH) OUTPUT SIGNAL

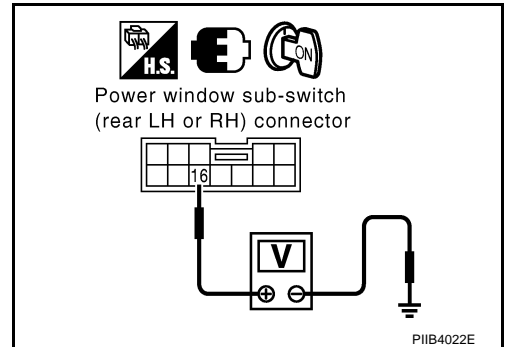
1. Connect power window sub-switch (rear LH or RH) connector.
2. Turn ignition switch ON.
3. Check voltage between power window sub-switch (rear LH or RH) harness connector D55 (LH) or D75 (RH) terminal 16 (G/W) and ground.

16 (G/W) – Ground : Approx. 5V

OK or NG

OK >> Replace power window motor (rear LH or RH).

NG >> Replace power window sub-switch (rear LH or RH).



A
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POWER WINDOW SYSTEM

AI5000BG

Encoder Circuit Check (Driver Side)

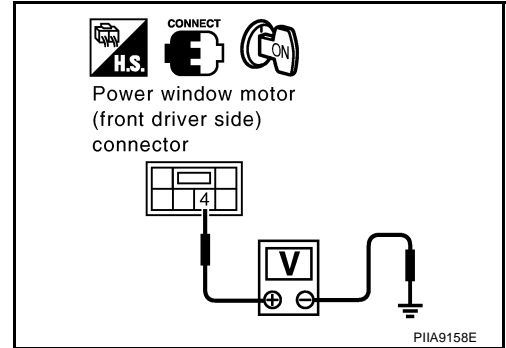
1. CHECK POWER WINDOW MOTOR (FRONT DRIVER SIDE) POWER SUPPLY

1. Turn ignition switch ON.
2. Check voltage between power window motor (front driver side) connector D9 terminal 4 and ground.

4 (G/R) – Ground : Approx. 10V

OK or NG

- OK >> GO TO 3.
NG >> GO TO 2.



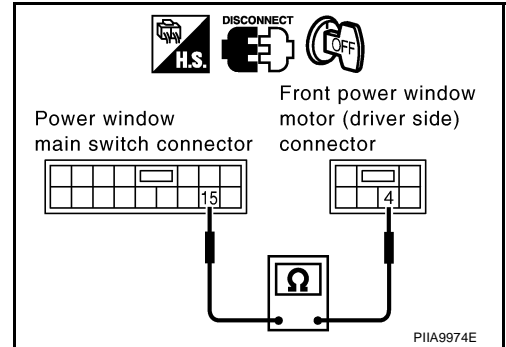
2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect power window motor (front driver side) and power window main switch.
3. Check continuity between power window motor (front driver side) connector D9 terminal 4 and power window main switch connector D7 terminal 15.

4 (G/R) – 15 (G/R) : Continuity should exist.

OK or NG

- OK >> Replace power window main switch.
NG >> Repair or replace harness.



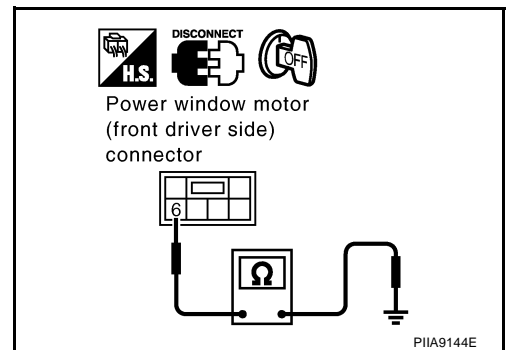
3. CHECK ENCODER GROUND

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

6 (W/B) – Ground : Continuity should exist.

OK or NG

- OK >> GO TO 5.
NG >> GO TO 4.



POWER WINDOW SYSTEM

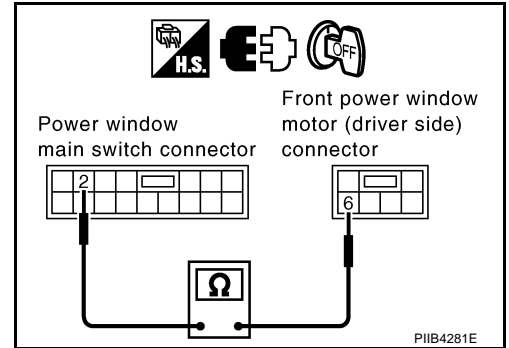
4. CHECK ENCODER GROUND CIRCUIT

1. Disconnect power window main switch connector.
2. Check continuity between power window motor (front driver side) connector D9 terminal 6 and power window main switch connector D7 terminal 2.

6 (W/B) – 2 (W/B) : Continuity should exist.

OK or NG

- OK >> Replace power window main switch.
 NG >> Repair or replace harness.

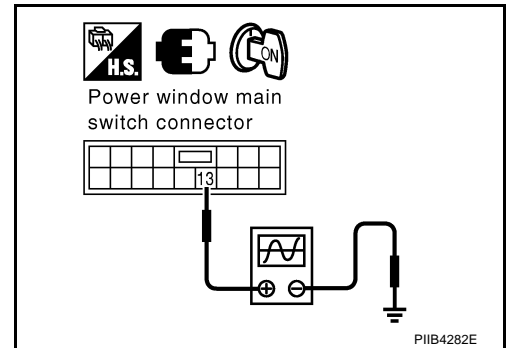


5. CHECK ENCODER SIGNAL

1. Connect power window motor (front driver side) connector.
2. Turn ignition switch ON.
3. Check the signal between power window main switch connector and ground with oscilloscope.

Connector	Terminals (Wire color)		Condition of window	Signal (Reference value)
	(+)	(-)		
D7	13 (G/Y)	Ground	opening	

OCC3383D



OK or NG

- OK >> Replace power window main switch.
 NG >> GO TO 6.

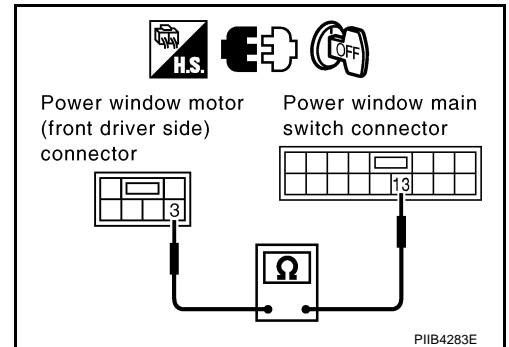
6. CHECK ENCODER CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect power window motor (front driver side) and power window main switch connector.
3. Check continuity between power window motor (front driver side) connector D9 terminal 3 and power window main switch connector D7 terminal 13.

3 (G/Y) – 13 (G/Y) : Continuity should exist.

OK or NG

- OK >> Replace power window motor (front driver side)
 NG >> Repair or replace harness.



POWER WINDOW SYSTEM

AIS0026G

Encoder Circuit Check (Front Passenger Side)

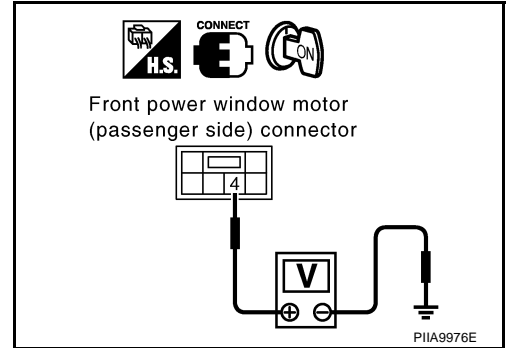
1. CHECK POWER WINDOW MOTOR (FRONT PASSENGER SIDE) POWER SUPPLY

1. Turn ignition switch ON.
2. Check voltage between power window motor (front passenger side) connector D38 terminal 4 and ground.

4 (G/R) – Ground : Approx.10V

OK or NG

- OK >> GO TO 3.
NG >> GO TO 2.



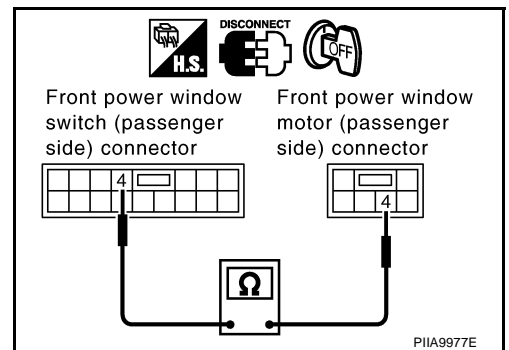
2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect power window motor (front passenger side) and power window sub-switch (front passenger side).
3. Check continuity between power window motor (front passenger side) connector D38 terminal 4 and power window sub-switch (front passenger side) connector D36 terminal 4.

4 (G/R) – 4 (G/R) : Continuity should exist.

OK or NG

- OK >> Replace power window sub-switch (front passenger side).
NG >> Repair or replace harness.



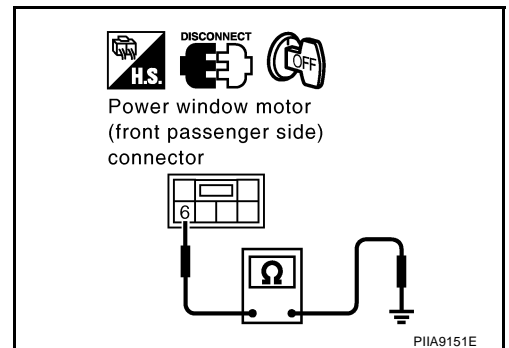
3. CHECK ENCODER GROUND

1. Turn ignition switch OFF.
2. Disconnect power window motor (front passenger side) connector.
3. Check continuity between power window motor (front passenger side) connector D38 terminal 6 and ground.

6 (W/B) – Ground : Continuity should exist.

OK or NG

- OK >> GO TO 5.
NG >> GO TO 4.

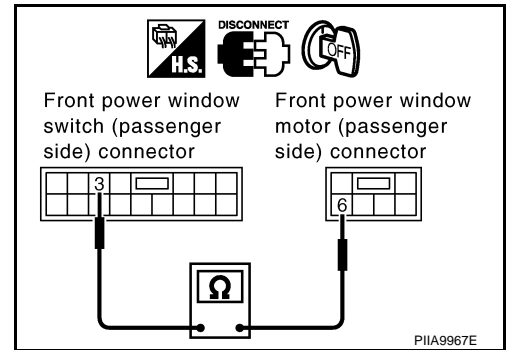


POWER WINDOW SYSTEM

4. CHECK ENCODER GROUND CIRCUIT

1. Disconnect power window sub-switch (front passenger side) connector.
2. Check continuity between power window motor (front passenger side) connector D38 terminal 6 and power window sub-switch (front passenger side) connector D36 terminal 3.

6 (W/B) – 3 (W/B) : Continuity should exist.



OK or NG

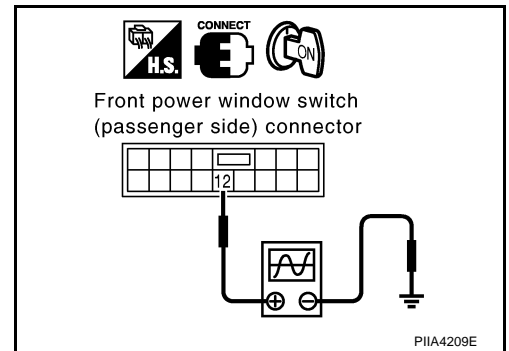
- OK >> Replace power window sub switch (front passenger side).
- NG >> Repair or replace harness.

5. CHECK ENCODER SIGNAL

1. Connect power window motor (front passenger side) connector.
2. Turn ignition switch ON.
3. Check the signal between power window sub-switch (front passenger side) connector and ground with oscilloscope.

Connector	Terminals (Wire color)		Condition of window	Signal (Reference value)
	(+)	(-)		
D36	12 (G/Y)	Ground	opening	

OCC3383D



OK or NG

- OK >> Replace power sub-switch (front passenger side).
- NG >> GO TO 6.

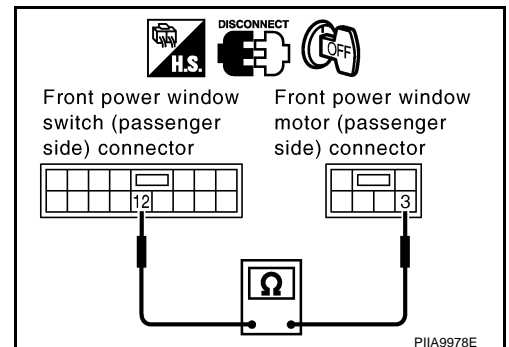
6. CHECK ENCODER CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect power window motor (front passenger side) and power window sub-switch (front passenger side) connector.
3. Check continuity between power window motor (front passenger side) connector D38 terminal 3 and power window sub-switch (front passenger side) connector D36 terminal 12.

3 (G/Y) – 12 (G/Y) : Continuity should exist.

OK or NG

- OK >> Replace power window motor (front passenger side).
- NG >> Repair or replace harness.



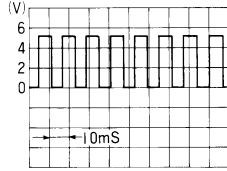
POWER WINDOW SYSTEM

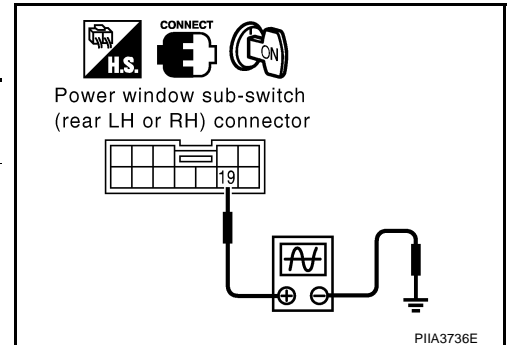
Encoder Circuit Check (Rear LH or RH)/With Front and Rear Power Window Anti-pinch System

AIS0026H

1. CHECK ENCODER SIGNAL

1. Turn ignition switch ON.
2. Check the signal between power window sub-switch (rear LH or RH) connector and ground with oscilloscope.

Connector	Terminals (Wire color)		Condition of window	Signal (Reference value)
	(+)	(-)		
D55 (LH) D75 (RH)	19 (G/Y)	Ground	opening	 <p>OCC3383D</p>



OK or NG

- OK >> Encoder sw circuit is OK
 NG >> GO TO 2.

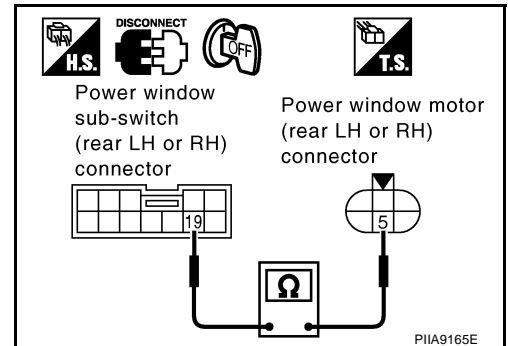
2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect power window sub-switch (rear LH or RH) and power window motor (rear LH or RH).
3. Check continuity between power window sub-switch (rear LH or RH) connector D55 (LH), D75 (RH) terminal 19 and power window motor (rear LH or RH) connector D52 (LH), D72 (RH) terminal 5.

19 (G/Y) – 5 (G/Y) : Continuity should exist.

OK or NG

- OK >> GO TO 3.
 NG >> Repair or replace harness.



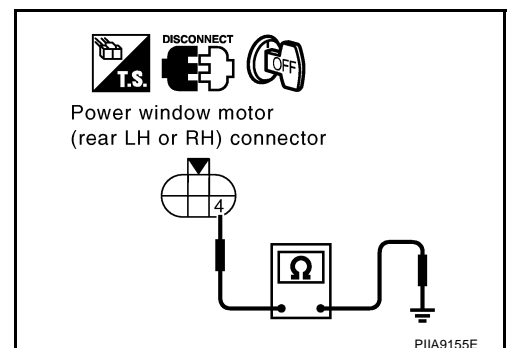
3. CHECK ENCODER GROUND

1. Connect power window sub-switch (rear LH or RH) connector.
2. Check continuity between power window motor (rear LH or RH) connector D52 (LH), D72 (RH) terminal 4 and ground.

4 (W/B) – Ground : Continuity should exist.

OK or NG

- OK >> Replace power window motor (rear LH or RH).
 NG >> GO TO 4.



POWER WINDOW SYSTEM

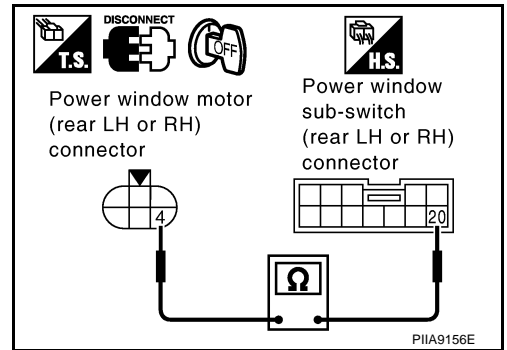
4. CHECK ENCODER GROUND CIRCUIT

Check continuity between power window motor (rear LH or RH) connector D52 (LH), D72 (RH) terminal 4 and power window sub-switch (rear LH or RH) connector D55 (LH), D75 (RH) terminal 20.

4 (W/B) – 20 (W/B) : Continuity should exist.

OK or NG

- OK >> Replace power window sub-switch (rear LH or RH).
- NG >> Repair or replace harness.



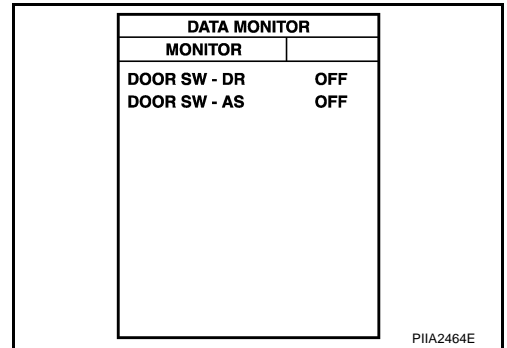
Door Switch Check

1. CHECK DOOR SWITCH INPUT SIGNAL

Ⓛ With CONSULT-II

Check door switches (“DOOR SW-DR” and “DOOR SW-AS”) in “DATA MONITOR” mode with CONSULT-II.

Monitor item	Condition of door	DATA MONITOR
DOOR SW-DR	Open	ON
	Close	OFF
DOOR SW-AS	Open	ON
	Close	OFF



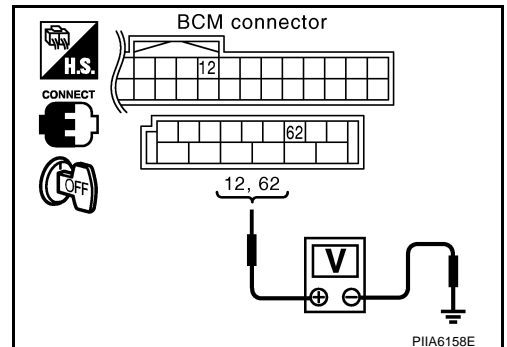
⊗ Without CONSULT-II

Check voltage between BCM connector and ground.

Item	Connector	Terminals (Wire color)		Condition of door	Voltage [V] (Approx.)
		(+)	(-)		
Passenger side	M1	12 (P)	Ground	Open	0
				Close	Battery voltage
Driver side	B4	62(W)	Ground	Open	0
				Close	Battery voltage

OK or NG

- OK >> Door switch is OK.
- NG >> GO TO 2.



POWER WINDOW SYSTEM

2. CHECK DOOR SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect door switch and BCM connector.
3. Check continuity between BCM connector B4, M1 terminals 12, 62 and front door switch driver side and passenger side connector B17, B23 terminals 1.

Front door switch driver side

62 (W) – 1 (W) : Continuity should exist.

Front door switch passenger side

12 (P) – 1 (P) : Continuity should exist.

4. Check continuity between BCM connector B4, M1 terminal 12, 62 and ground.

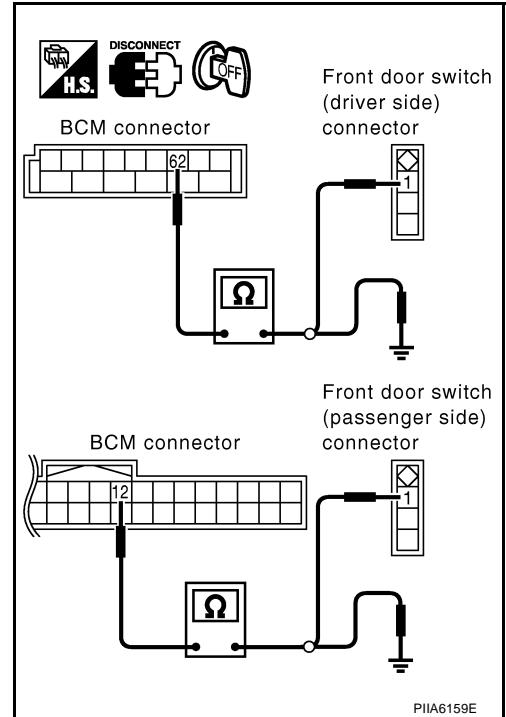
12 (P) – Ground : Continuity should not exist.

62 (W) – Ground : Continuity should not exist.

OK or NG

OK >> GO TO 3.

NG >> Repair or replace harness.



3. CHECK DOOR SWITCH

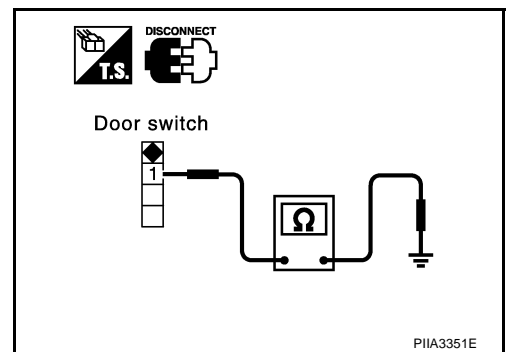
Check continuity between each door switch terminal 1 and ground part of door switch.

Terminal	Condition of door switch	Continuity
1	Pushed	No
	Released	Yes

OK or NG

OK >> Further inspection is necessary. Refer to symptom chart.

NG >> Replace malfunction door switch.



POWER WINDOW SYSTEM

Front Door Key Cylinder Switch (Driver Side) Check/With Front Left and Right Power Window Anti-pinch System

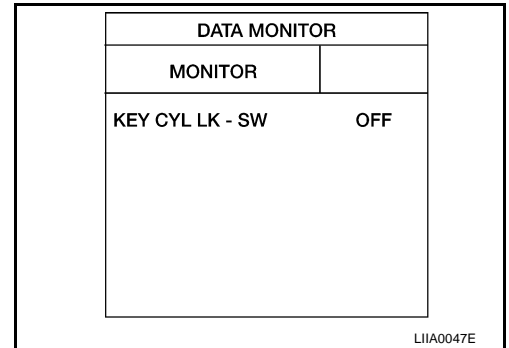
AIS0026J

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

Ⓟ With CONSULT-II

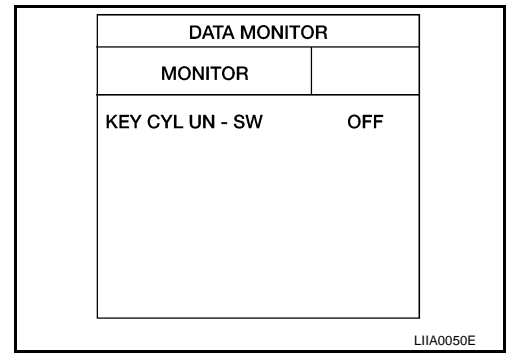
- Check door key cylinder switch ("KEY CYL LK SW") in "DATA MONITOR" mode for "POWER DOOR ROCK SYSTEM" with CONSULT-II. Refer to [BL-37, "Data Monitor"](#)

"KEY CYL LK-SW" should be "ON" when key inserted in door key cylinder is turned to lock.



- Check door key cylinder switch ("KEY CYL UN-SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYSTEM" with CONSULT-II. Refer to [BL-37, "Data Monitor"](#)

"KEY CYL UN-SW" should be "ON" when key inserted in door key cylinder was turned to unlock.



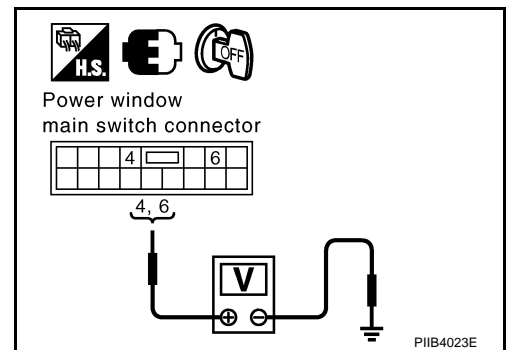
ⓧ Without CONSULT-II

Check voltage between power window main switch connector and ground.

Connector	Terminals (Wire color)		Condition of key cylinder switch	Voltage [V] (Approx.)
	(+)	(-)		
D7	4 (R/W)	Ground	Neutral/Unlock	5
			Lock	0
	6 (L/W)		Neutral/Lock	5
			Unlock	0

OK or NG

- OK >> Further inspection is necessary. Refer to symptom chart.
- NG >> GO TO 2.



POWER WINDOW SYSTEM

2. CHECK DOOR KEY CYLINDER SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect power window main switch and front door key cylinder switch (driver side) connector.
3. Check continuity between power window main switch connector D7 terminal 4, 6 and front door key cylinder switch (driver side) connector D12 terminals 1, 3.

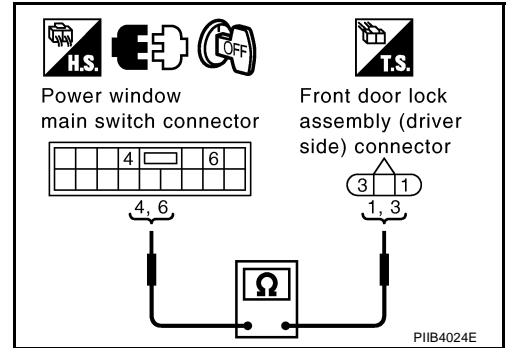
4 (R/W) – 1 (R/W) :Continuity should exist.

6 (L/W) – 3 (L/W) :Continuity should exist.

OK or NG

OK >> GO TO 3.

NG >> Repair or replace harness.



3. CHECK DOOR KEY CYLINDER SWITCH GROUND

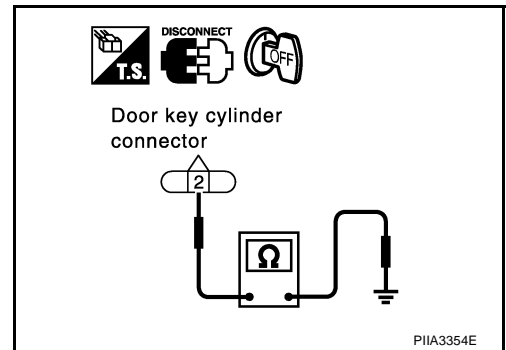
Check continuity between front door key cylinder switch (driver side) connector D12 terminal 2 and ground.

2 (B) – Ground :Continuity should exist.

OK or NG

OK >> GO TO 4.

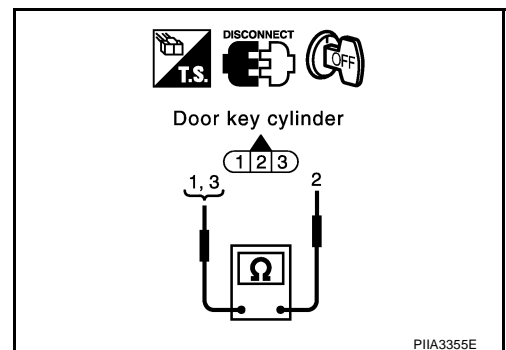
NG >> Repair or replace harness.



4. CHECK DOOR KEY CYLINDER SWITCH

Check continuity between door key cylinder switch terminal 1, 3 and 2.

Terminals	Condition of key cylinder switch	Continuity
1	Neutral/Unlock	No
	Lock	Yes
3	Neutral/Lock	No
	Unlock	Yes



OK or NG

OK >> Further inspection is necessary. Refer to symptom chart.

NG >> Replace front door key cylinder (driver side) switch.

POWER WINDOW SYSTEM

Power Window Serial Link Check (Front Passenger Side)

AIS0026P

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

With CONSULT-II

Check door lock and unlock switch ("LOCK SW DR/AS", "UNLK SW DR/AS") in DATA MONITOR mode for "REMOTE KEYLESS ENTRY SYSTEM" with CONSULT-II. Refer to [BL-37, "Data Monitor"](#).

- When door lock and unlock switch is turned to LOCK
LOCK SW DR/AS : ON
- When door lock and unlock switch is turned to UNLOCK
UNLK SW DR/AS : ON

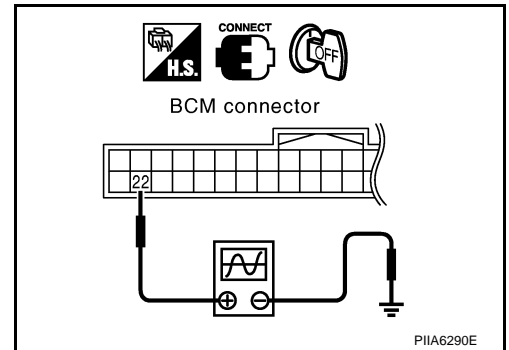
DATA MONITOR	
MONITOR	
LOCK SW DR/AS	OFF
UNLK SW DR/AS	OFF

LIIA0172E

Without CONSULT-II

- Remove key from ignition switch, and the door of driver side and passenger side is closed.
- Check the signal between BCM connector and ground with oscilloscope when door lock and unlock switch (driver side and passenger side) is turned "LOCK" or "UNLOCK".
- Make sure signals which are shown in the figure below can be detected during 10 second just after door lock and unlock switch (driver side and passenger side) is turned "LOCK" or "UNLOCK".

Connector	Terminals (Wire color)		Signal (Reference value)
	(+)	(-)	
M1	22 (Y)	Ground	<p style="text-align: right;">PIIA1297E</p>



OK or NG

- OK >> GO TO 2.
- NG >> GO TO 3.

2. CHECK BCM OUTPUT SIGNAL

Check power window serial link ("POWER WINDOW DOWN") in "ACTIVE TEST" mode with CONSULT-II. Refer to [BL-68, "Active Test"](#).

When "ACTIVE TEST" is executed, is driver side and passenger side window (with front left and right anti-pinch system) or front and rear window (with front and rear anti-pinch system) lowered.

OK or NG

- OK >> Further inspection is necessary. Refer to symptom chart.
- NG >> Replace BCM.

ACTIVE TEST	
POWER WINDOW DOWN	OFF
ON	

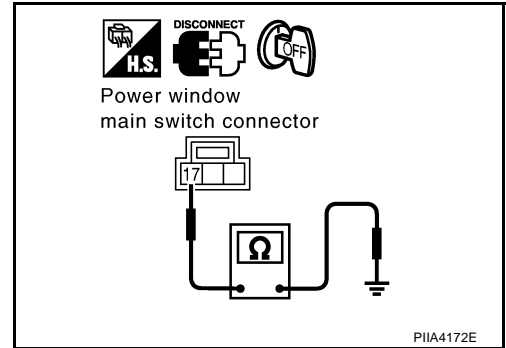
PIIA3080E

POWER WINDOW SYSTEM

3. CHECK POWER WINDOW SWITCH GROUND

1. Turn ignition switch OFF.
2. Disconnect power window main switch and power window sub-switch connector.
3. Check continuity between power window main switch connector D8 terminal 17 and ground.

17 (B) – Ground : Continuity should exist.

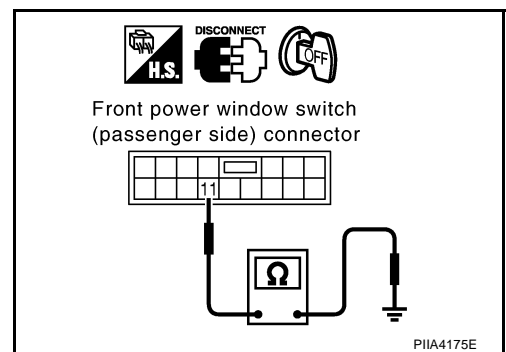


4. Check continuity between power window sub-switch connector D36 terminal 11 and ground.

11 (B) – Ground : Continuity should exist.

OK or NG

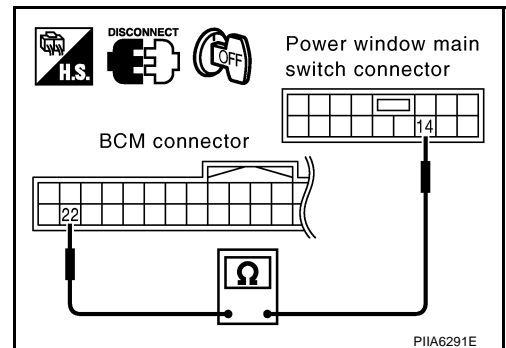
- OK >> GO TO 4.
NG >> Repair or replace harness.



4. CHECK POWER WINDOW SERIAL LINK CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between BCM connector M1 terminal 22 and power window main switch connector D7 terminal 14.

22 (Y) – 14 (Y) : Continuity should exist.

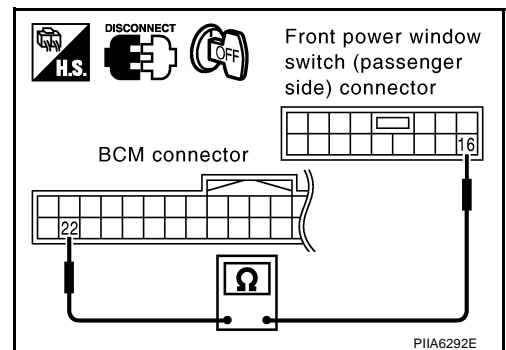


3. Check continuity between BCM connector M1 terminal 22 and power window sub-switch connector D36 terminal 16.

22 (Y) – 16 (Y) : Continuity should exist.

OK or NG

- OK >> Power window serial link is ok.
NG >> Repair or replace harness.



POWER WINDOW SYSTEM

Power Window Serial Link Check (Rear LH or RH)/With Front and Rear Power Window Anti-pinch System

AIS0026S

1. CHECK POWER WINDOW SUB-SWITCH

1. Change with operative power window sub-switch (rear LH or RH).
2. Whether operates normally is confirmed.

OK or NG

- OK >> Replace power window sub-switch (rear LH or RH).
NG >> GO TO 2.

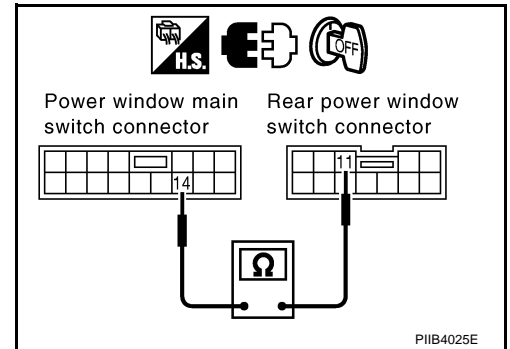
2. CHECK POWER WINDOW SERIAL LINK CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect power window main switch and power window sub-switch (rear LH or RH) connector.
3. Check continuity between power window main switch connector D7 terminal 14 and power window sub-switch connector D55 (LH), D75 (RH) terminal 11.

14 (Y) – 11 (Y) : Continuity should exist.

OK or NG

- OK >> Power window serial link (rear LH or RH) is ok.
NG >> Repair or replace harness.



Power Window Lock Switch Check

AIS0026T

1. CHECK POWER WINDOW LOCK SIGNAL

Exchanges for a normal power window main switch, and operation is checked.

Dose power window lock operate?

- YES >> Replace power window main switch.
NO >> Check condition of harness and connector.

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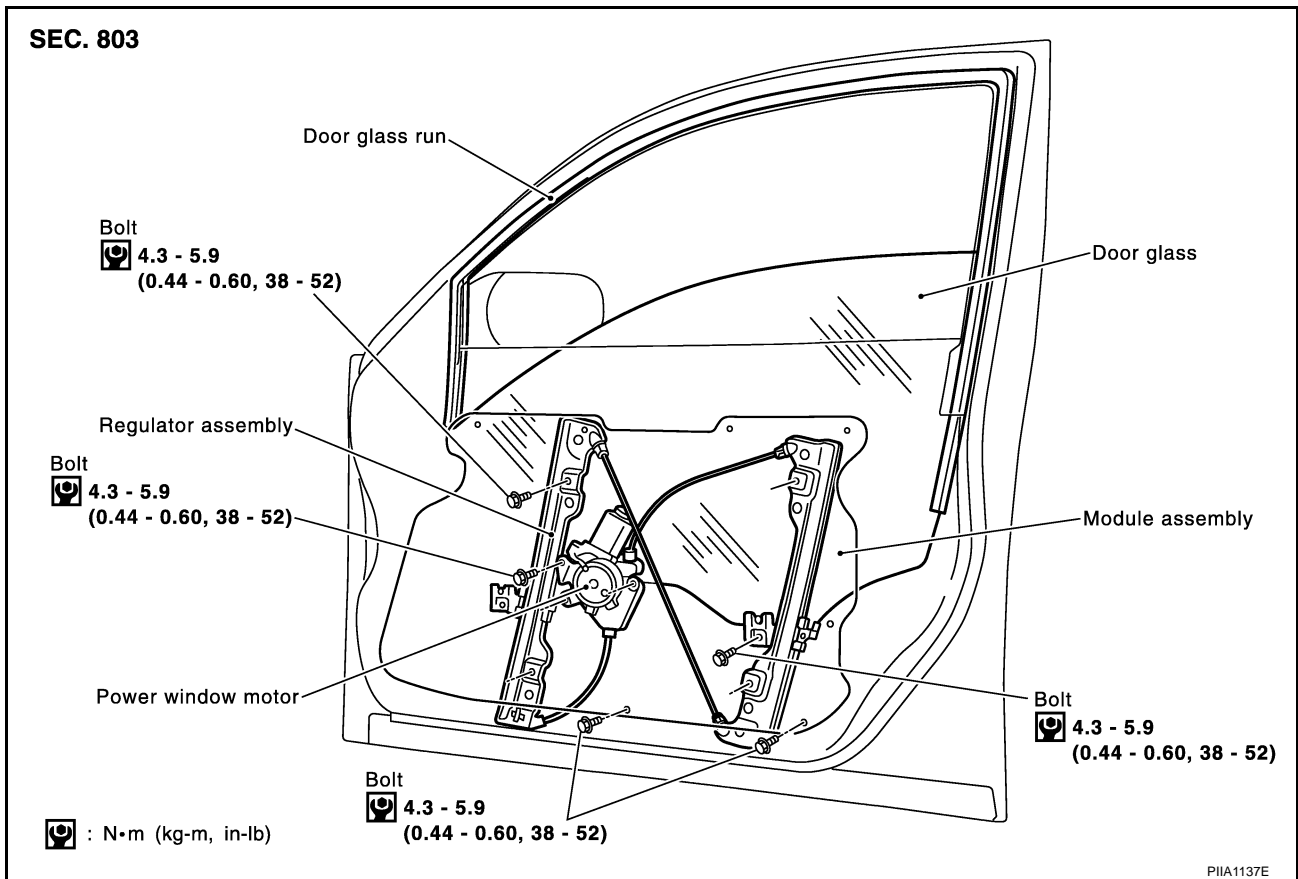
FRONT DOOR GLASS AND REGULATOR

FRONT DOOR GLASS AND REGULATOR

PFP:80300

Removal and Installation

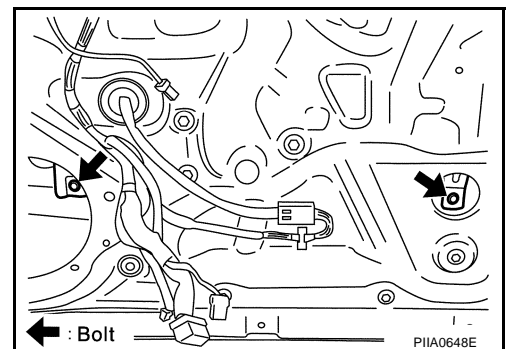
AIS0003U



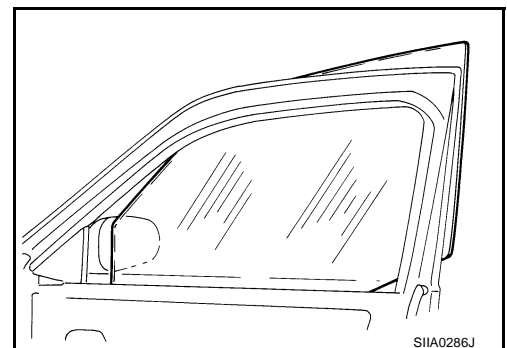
DOOR GLASS

Removal

1. Remove the front door finisher. Refer to [EI-37, "DOOR FINISHER"](#) .
2. Remove the door speaker. Refer to [AV-28, "Removal and Installation of Door Speaker"](#) .
3. Operate the power window main switch to raise/lower the door window until the glass mounting bolts can be seen.
4. Remove the glass mounting bolts.



5. While holding the door window, raise it at the rear end to pull the glass out of the sash toward the outside of the door.



FRONT DOOR GLASS AND REGULATOR

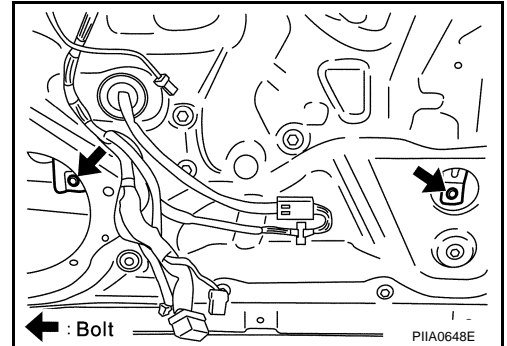
Installation

Install in the reverse order of removal.

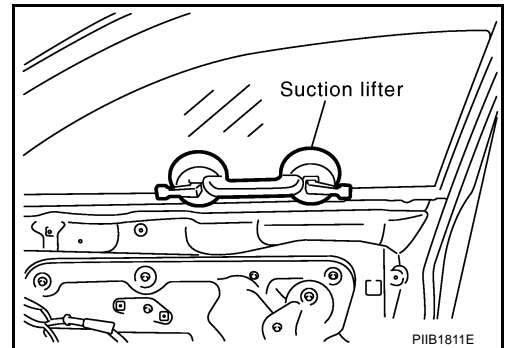
REGULATOR ASSEMBLY

Removal

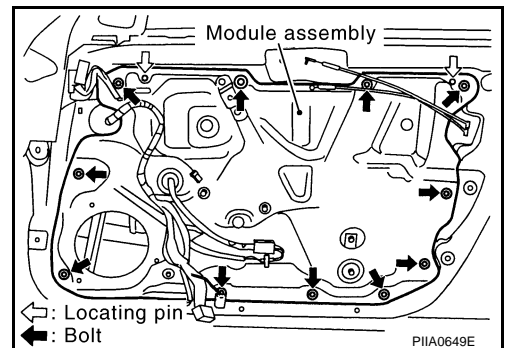
1. Remove the front door finisher. Refer to [EI-37, "DOOR FINISHER"](#) .
2. Remove the door speaker. Refer to [AV-28, "Removal and Installation of Door Speaker"](#) .
3. Operate the power window main switch to raise/lower the door window until the glass mounting bolts can be seen.
4. Remove the glass mounting bolts.



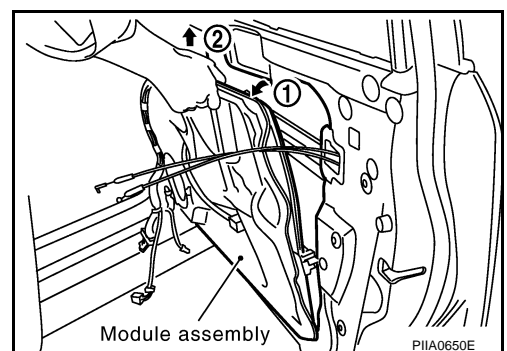
5. Raise up the door glass and hold with a suction lifter.



6. Remove the module assembly mounting bolts.



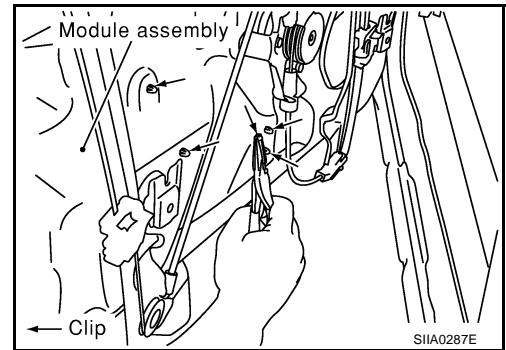
7. Draw out the locating pins on the upper of the module assembly from the door panel, and then remove the module assembly by drawing forward and moving upward.



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FRONT DOOR GLASS AND REGULATOR

8. Disconnect the harness connector for the module assembly, and unclip the harness from the back.



Installation

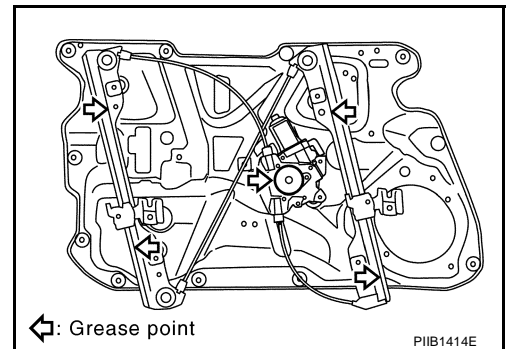
Install in the reverse order of removal.

Inspection after Removal

Check the regulator assembly for the following items. If a malfunction is detected, replace or grease it.

- Wire wear
- Regulator deformation
- Grease condition for each sliding part

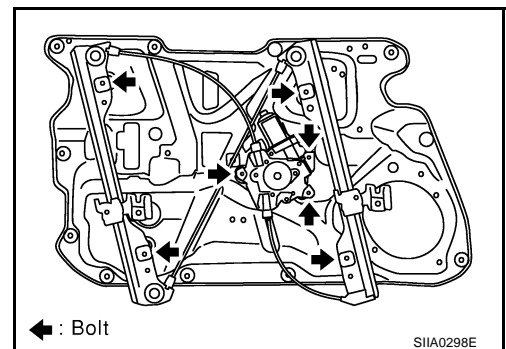
The arrows in the figure show the application points of the grease "Multemp HL-D" or equivalent.



Disassembly and Assembly REGULATOR ASSEMBLY

Disassembly

Remove power window motor and guide rail from module assembly.



Assembly

Assemble in the reverse order of removal.

Inspection after Installation SETTING OF LIMIT SWITCH

If any of the following work has been done, set the limit switch (integrated in the motor).

- Removal and installation of the regulator.
- Removal and installation of the motor from the regulator.
- Operate the regulators as a unit.
- Removal and installation of the glass.
- Removal and installation of the glass run.

Resetting

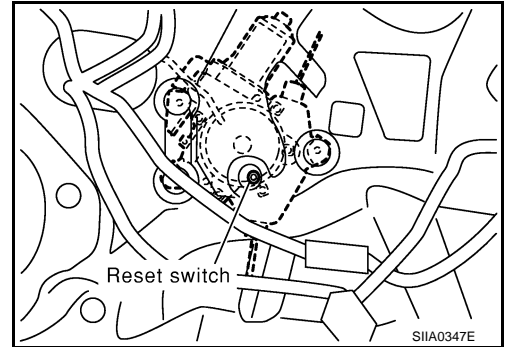
After installing each component to the vehicle, follow the steps below.

FRONT DOOR GLASS AND REGULATOR

1. Raise the glass to the top position.
2. While pressing and holding the reset switch, lower the glass to the bottom position.
3. Release the reset switch, and check the reset switch returns to the original position, and then raise the glass to the top position.

CAUTION:

Do not operate the glass automatically to raise the glass to the top position.



FITTING INSPECTION

- Check that the glass is securely fit into the glass run groove.
- Lower the glass slightly [approx. 10 to 20 mm (0.39 to 0.79 in)] and check that the clearance to the sash is parallel. If the clearance between the glass and sash is not parallel, loosen the regulator mounting bolts, guide rail mounting bolts, and glass and guide rail mounting bolts to correct the glass position.

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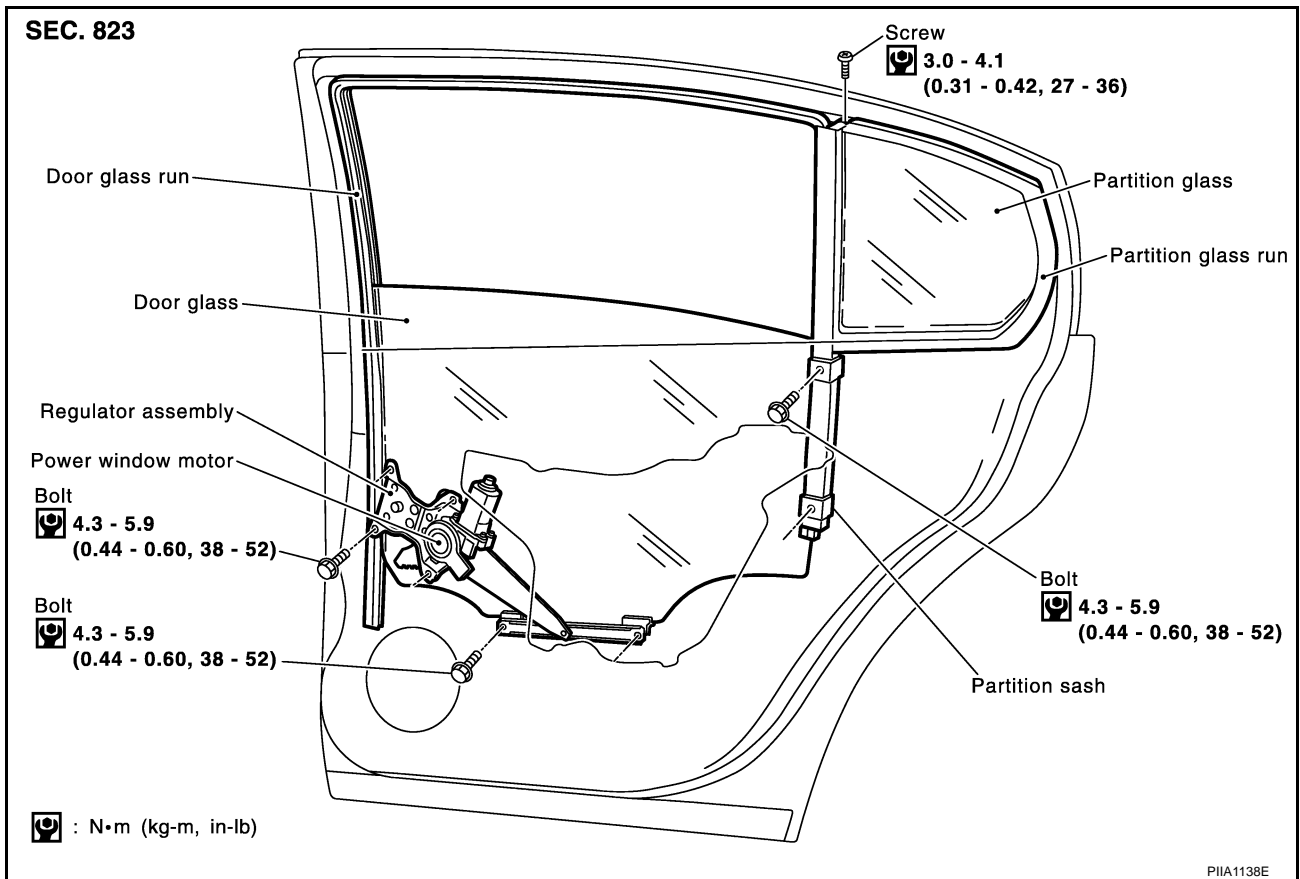
REAR DOOR GLASS AND REGULATOR

PFP:82300

REAR DOOR GLASS AND REGULATOR

Removal and Installation

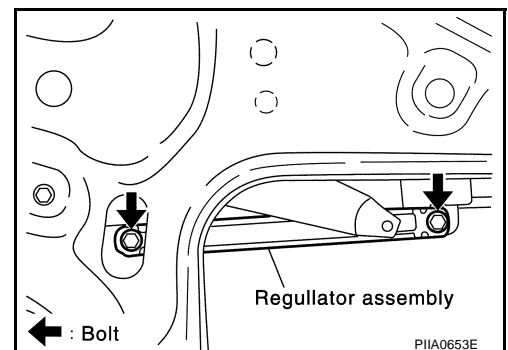
AIS0003V



DOOR GLASS

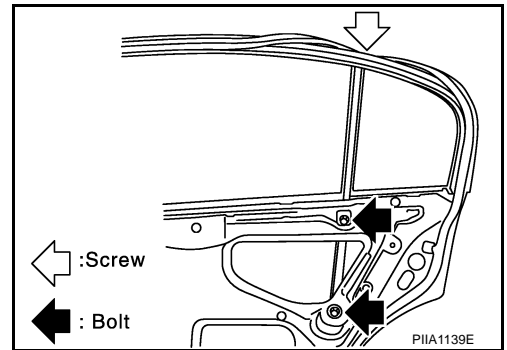
Removal

1. Remove the rear door finisher. Refer to [EI-37, "DOOR FINISHER"](#).
2. Remove the rear door out side molding. Refer to [EI-23, "Removal and Installation"](#).
3. Remove the rear door speaker. Refer to [AV-28, "Removal and Installation of Door Speaker"](#).
4. Remove the sealing screen.
5. Operate the power window switch to raise/lower the door window until the glass mounting bolts can be seen.

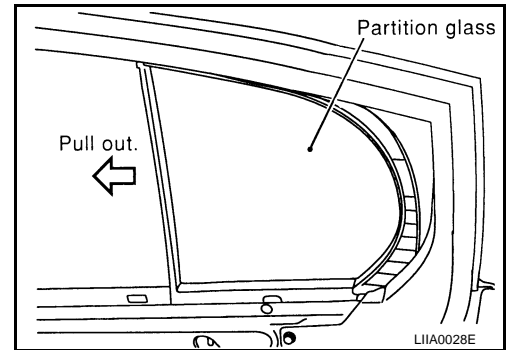


REAR DOOR GLASS AND REGULATOR

6. Remove a part of the rear door weatherstrip.
7. Remove the partition sash mounting bolts (lower) and screw (upper) to remove the sash.



8. Remove the glass mounting bolts, and remove the door glass.
9. Remove the partition glass from the panel.



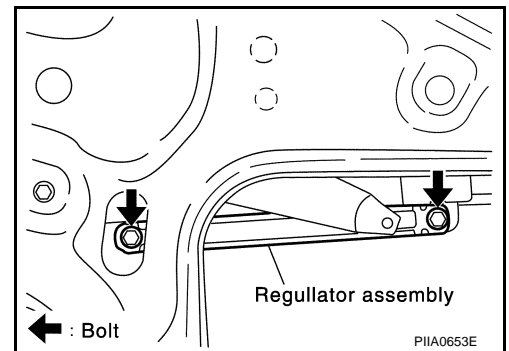
Installation

Install in the reverse order of removal.

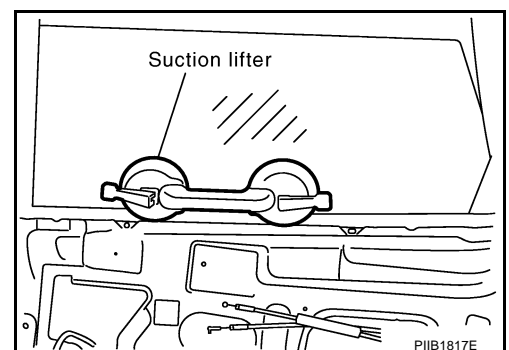
REGULATOR ASSEMBLY

Removal

1. Remove the rear door finisher. Refer to [EI-37, "DOOR FINISHER"](#).
2. Remove the rear door out side molding. Refer to [EI-23, "Removal and Installation"](#).
3. Remove the rear door speaker. Refer to [AV-28, "Removal and Installation of Door Speaker"](#).
4. Remove the sealing screen.
5. Operate the power window switch to raise/lower the door window until the glass mounting bolts can be seen.



6. Raise up the door glass and hold with a suction lifter.



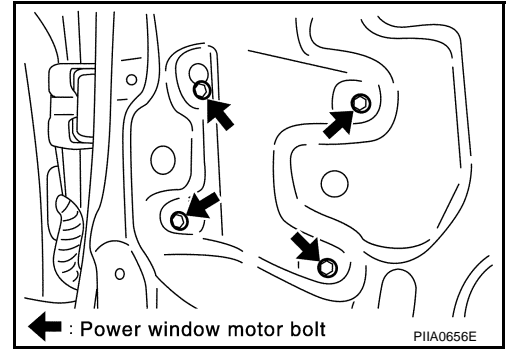
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REAR DOOR GLASS AND REGULATOR

7. Remove the power window motor mounting bolts, and remove the regulator from the panel.
8. Disconnect the connector for the regulator assembly.



Installation

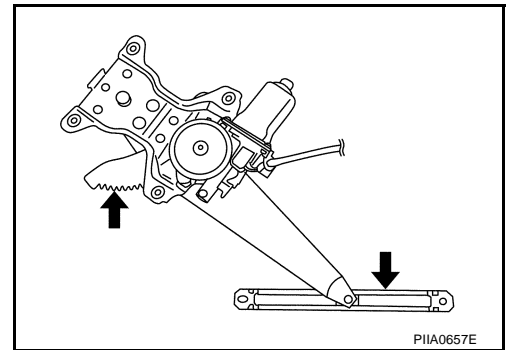
Install in the reverse order of removal.

Inspection after removal

Check the regulator assembly for the following items. If a malfunction is detected, replace or grease it.

- Gear wear
- Regulator deformation
- Spring damage
- Grease condition for each sliding part

The arrows in the figure show the application points of the grease "Dow Corning Moly Coat SK623" or equivalent.



Disassembly and Assembly REGULATOR ASSEMBLY

Disassembly

Remove power window motor from regulator assembly.

Assembly

Assemble in the reverse order of removal.

Inspection after Installation SETTING OF LIMIT SWITCH

When any of the following work has been done, reset the limit switch (integrated in the motor).

- Removal and installation of the regulator.
- Removal and installation of the motor from the regulator.
- Operate the regulators as a unit.
- Removal and installation of the glass.
- Removal and installation of the glass run.

Resetting

Remove the window regulator assembly from the door panel, follow the steps below.

1. To remove the window motor from the regulator assembly, operate the power window switch until the window motor mounting screws can be seen.
2. Remove the window motor from window regulator.
3. Connect the window motor to the switch harness. And run the motor more than 5 seconds to upward position by using power window switch.
4. Assemble the window motor and window regulator, then install it to the door.
5. Install window glass to the regulator assembly.
6. Use the Manual up position of power window switch to run the regulator to the top of its travel to set the limit switch.
7. Use the Manual down position of the power window switch to run the regulator to the bottom of its travel.

REAR DOOR GLASS AND REGULATOR

CAUTION:

Do not use Auto up or Auto down functions for step 6 and 7.

FITTING INSPECTION

- Check that the glass is securely fit into the glass run groove.
- Lower the glass slightly [approx. 10 to 20 mm (0.39 to 0.79 in)], and check that the clearance to the sash is parallel. If the clearance between the glass and sash is not parallel, loosen the regulator mounting bolts and the glass and carrier plate mounting bolts to correct the glass position.

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INSIDE MIRROR

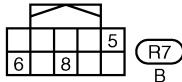
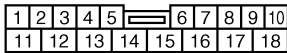
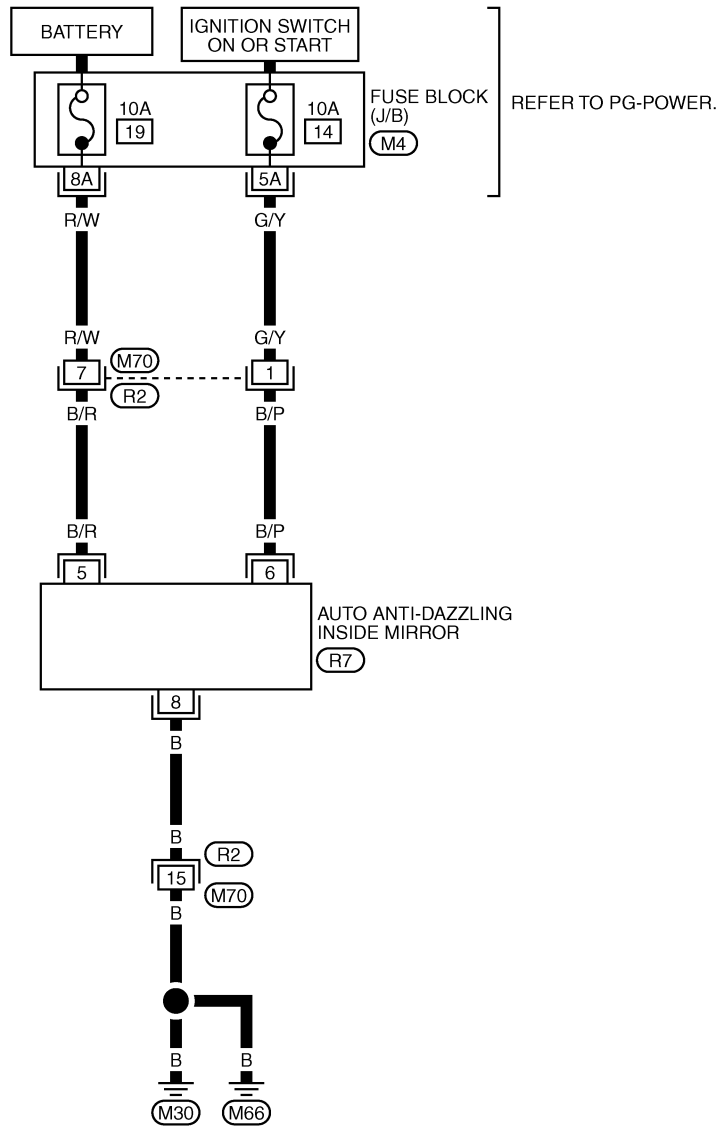
PFP:96321

INSIDE MIRROR

Wiring Diagram -I/MIRR-

AIS0003W

GW-I/MIRR-01



REFER TO THE FOLLOWING.

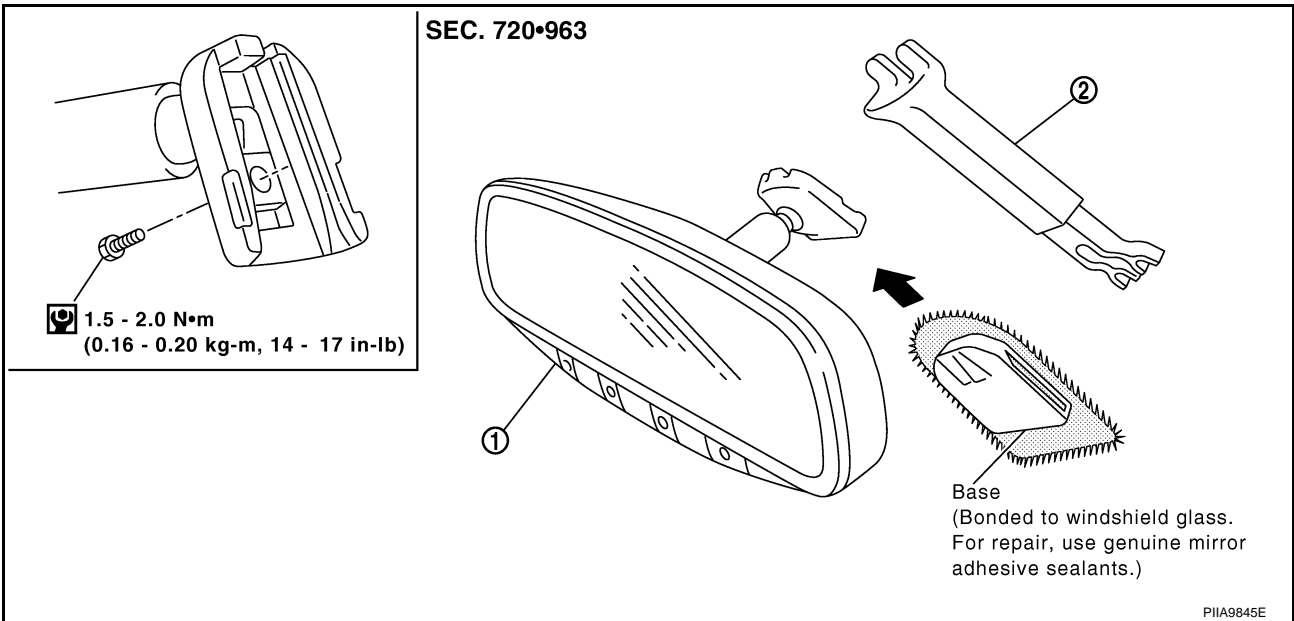
(M4) - FUSE BLOCK-JUNCTION BOX (J/B)

TIWM1234E

INSIDE MIRROR

Removal and Installation

AIS0003X



REMOVAL

1. Remove the inside mirror finisher (if equipped).
2. Remove the screw of mirror base.
3. Slide the mirror upward to remove.
4. Disconnect the connector (if equipped).

INSTALLATION

Install in the reverse order of removal.

CAUTION:

Apply Genuine Mirror Adhesive or equivalent to bonding surface of mounting bracket. Refer to [GI-47](#), "[RECOMMENDED CHEMICAL PRODUCTS AND SEALANTS](#)".

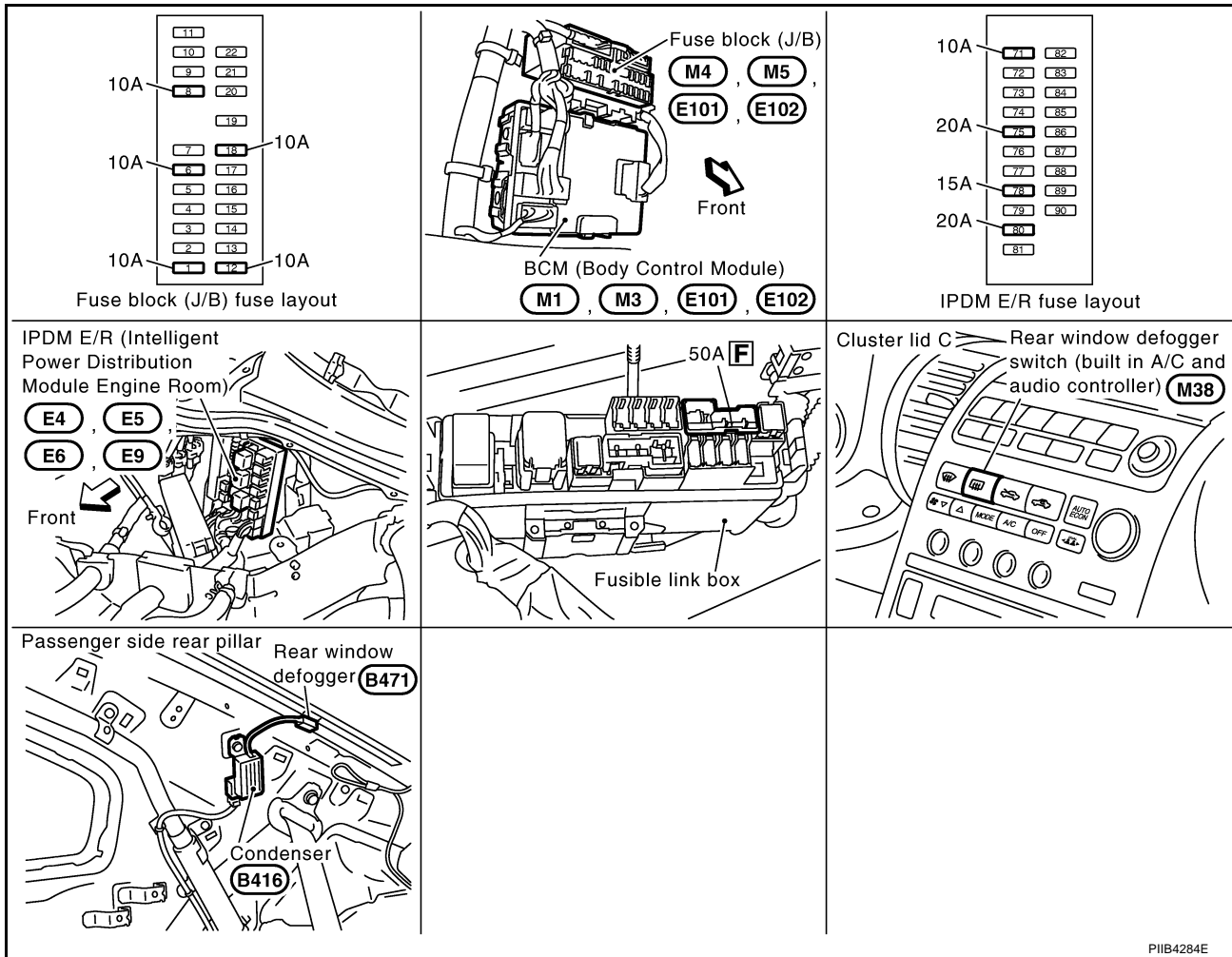
REAR WINDOW DEFOGGER

PFP:25350

REAR WINDOW DEFOGGER

Component Parts and Harness Connector Location

AIS002GH



PIIB4284E

System Description

AIS002GI

The rear window defogger system is controlled by BCM (Body Control Module) and IPDM E/R (Intelligent Power Distribution Module Engine Room).

The rear window defogger operates only for approximately 15 minutes.

Power is at all times supplied

- through 20A fuse [No. 75, and 80, located in the IPDM E/R]
- to rear window defogger relay terminal 3 and 6.
- through 10A fuse [No. 18, located in the fuse block (J/B)]
- to BCM terminal 42.
- through 50A fusible link [letter F, located in the fuse block (J/B)]
- to BCM terminal 55.

With the ignition switch turned to ON or START position,

Power is supplied

- through 10A fuse [No. 1, located in the fuse block (J/B)]
- to BCM terminal 38.
- through 10A fuse [No. 12, located in the fuse block (J/B)]
- to rear window defogger relay terminal 1, and
- to A/C and audio controller terminal 2.

With the ignition switch turned to ACC or ON position,

Power is supplied

- through 10A fuse [No. 6, located in the fuse block (J/B)]

REAR WINDOW DEFOGGER

- to BCM terminal 11.

Ground is supplied

- to BCM terminal 52
- through body grounds M30, and M66.
- to A/C and audio controller terminal 3
- through body grounds M30 and M66.
- to internal CPU of IPDM E/R terminal 38 and 60
- through body grounds E17, and E43.

When A/C and audio controller (rear window defogger switch) is turned to ON,
Ground is supplied

- to BCM terminal 9
- through A/C and audio controller terminal 12
- through A/C and audio controller terminal 3
- through body grounds M30 and M66.

Then BCM recognizes that rear window defogger switch is turned to ON.

Then rear window defogger switch is illuminated.

Then it sends rear window defogger switch signals to IPDM E/R via DATA LINE (CAN-H, CAN-L).

When IPDM receives rear window defogger switch signals,
Ground is supplied

- to rear window defogger relay terminal 2
- through IPDM E/R terminal 52
- through internal CPU of IPDM E/R and IPDM E/R terminal 60
- through body grounds E17 and E43.

and then rear window defogger relay is energized.

When rear window defogger relay is turned ON,
Power is supplied

- through rear window defogger relay terminals 5 and 7
- to rear window defogger terminal 2

rear window defogger terminal 1, is grounded through body ground B242.

With power and ground supplied, rear window defogger filaments heat and defog the rear window.

When rear window defogger relay is turned to ON,
Power is supplied

- through rear window defogger relay terminals 5 and 7,
- through fuse block (J/B) terminal 2C,
- through 10A fuse [No. 8, located in the fuse block (J/B)],
- through fuse block (J/B) terminal 5B.
- to door mirror defogger (Driver side and passenger side) terminal 2.

Door mirror defogger (Driver side and passenger side) terminal 1 is grounded through body grounds M30 and M66.

With power and ground supplied, door mirror defogger filaments heat and defog the mirror.

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REAR WINDOW DEFOGGER

CAN Communication System Description

AIS003Y3

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

CAN Communication Unit

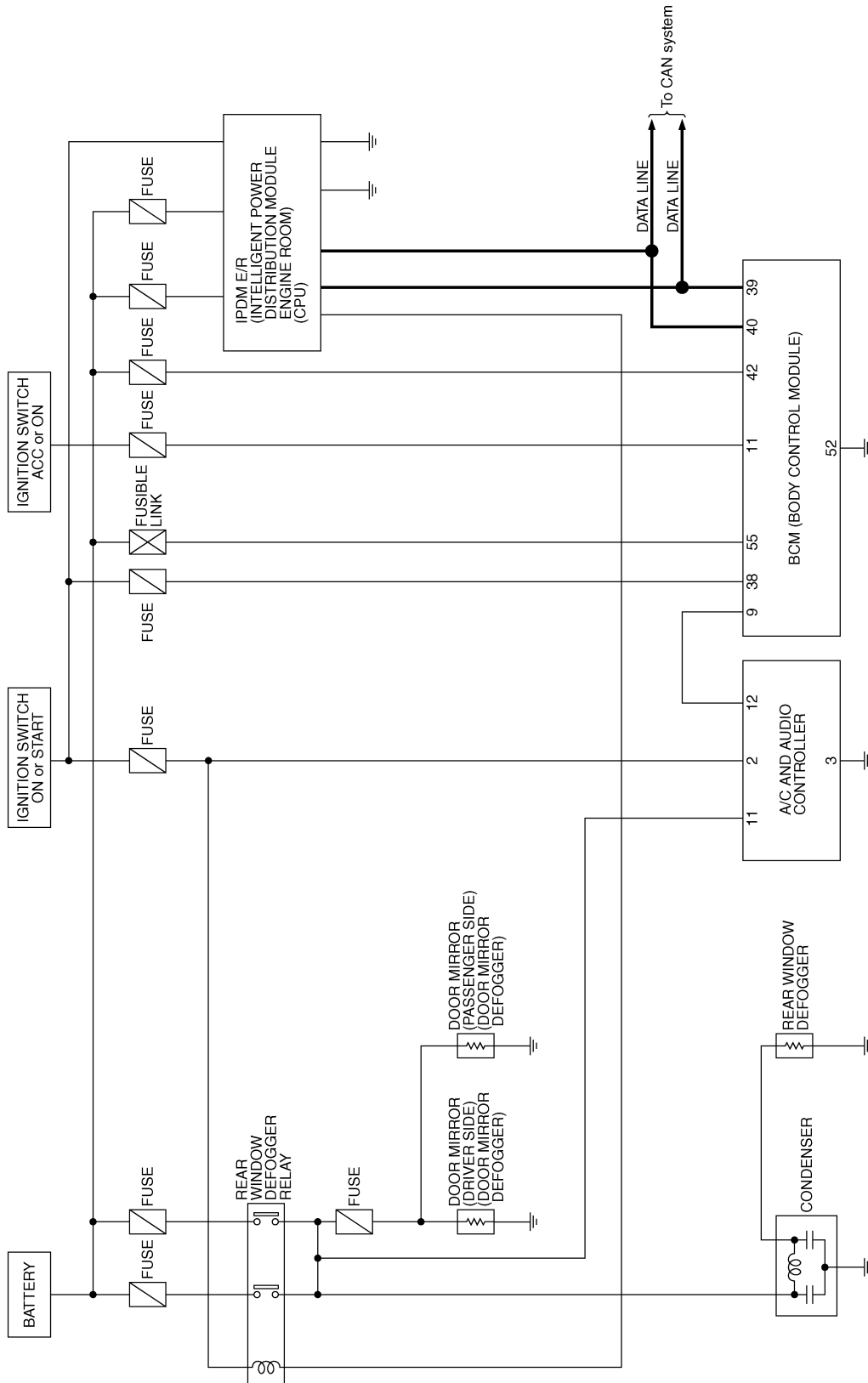
AIS004RK

Refer to [LAN-21, "CAN Communication Unit"](#)

REAR WINDOW DEFOGGER

Schematic

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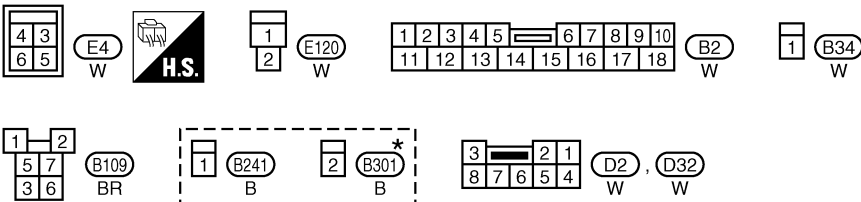
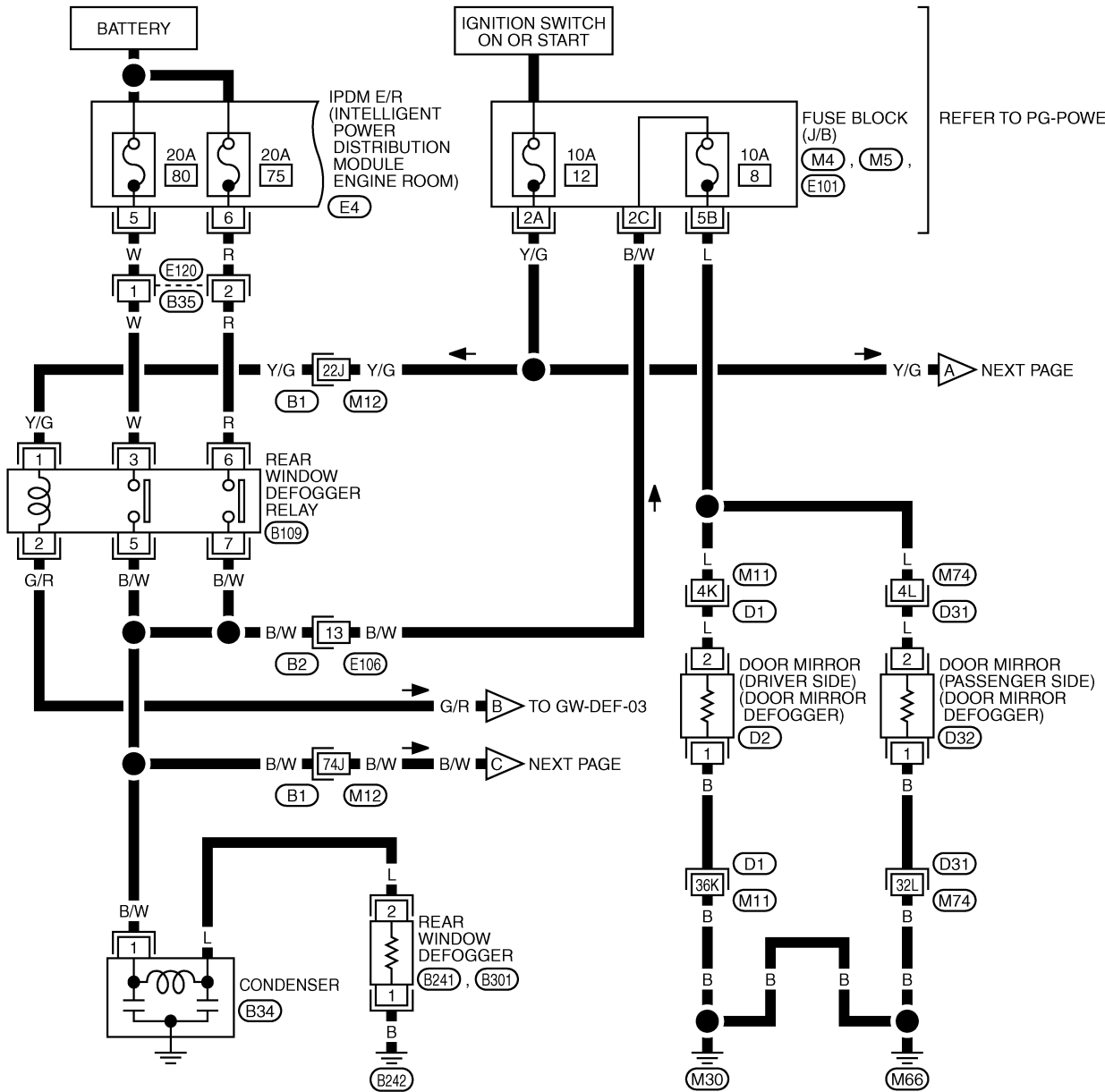
TIWT0934E

REAR WINDOW DEFOGGER

Wiring Diagram — DEF —

AIS002GL

GW-DEF-01



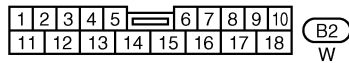
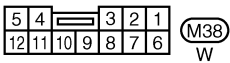
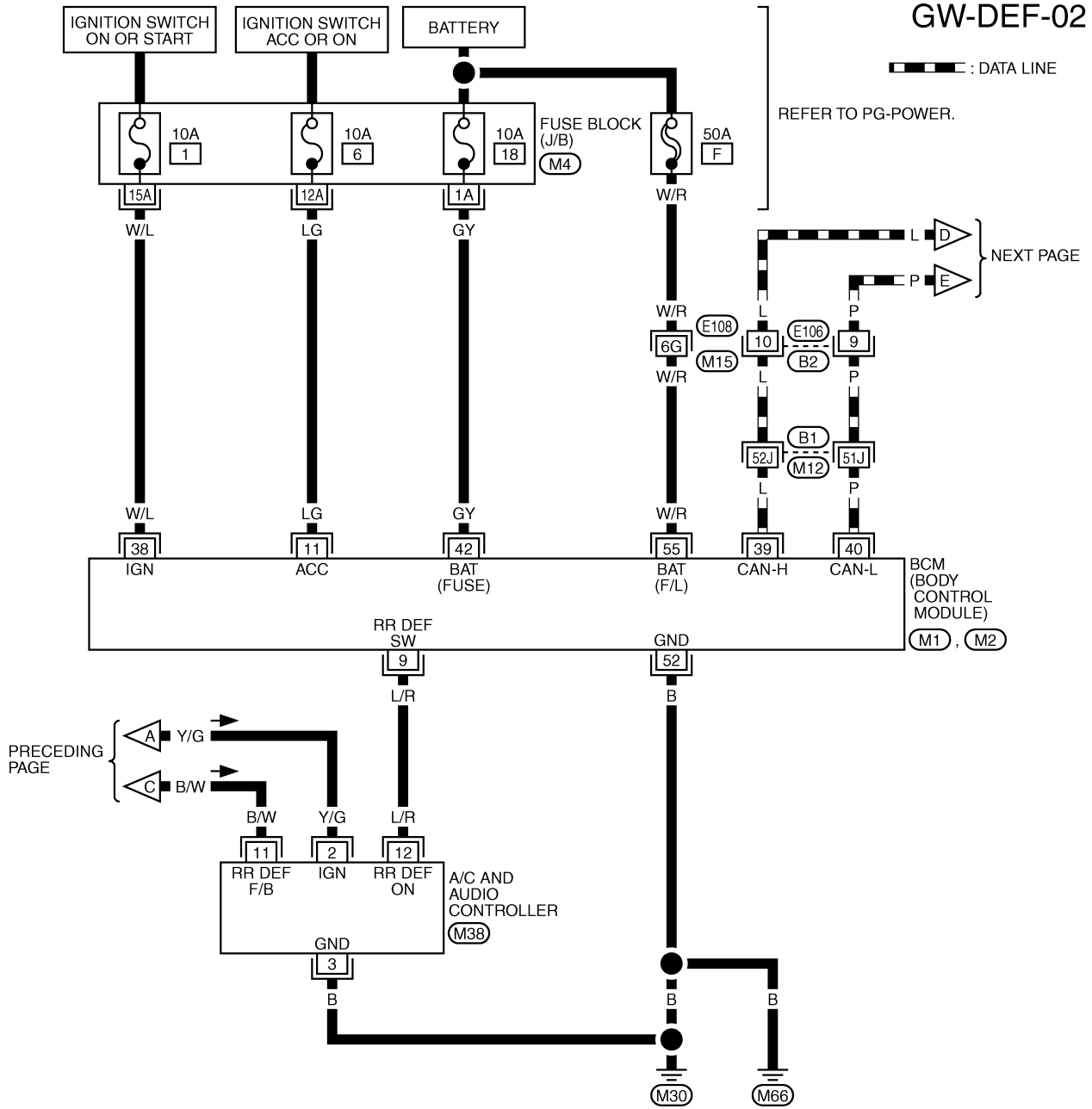
REFER TO THE FOLLOWING.
 (B1), (D1), (D31) -SUPER
 MULTIPLE JUNCTION (SMJ)
 (M4), (M5), (E101) -FUSE
 BLOCK-JUNCTION BOX (J/B)

*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

TIWM1087E

REAR WINDOW DEFOGGER

GW-DEF-02



REFER TO THE FOLLOWING.

(E108), (B1) -SUPER MULTIPLE JUNCTION (SMJ)

(M4) -FUSE BLOCK-JUNCTION BOX (J/B)

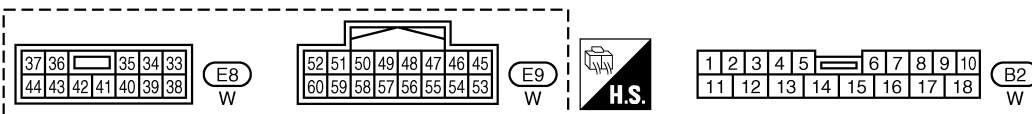
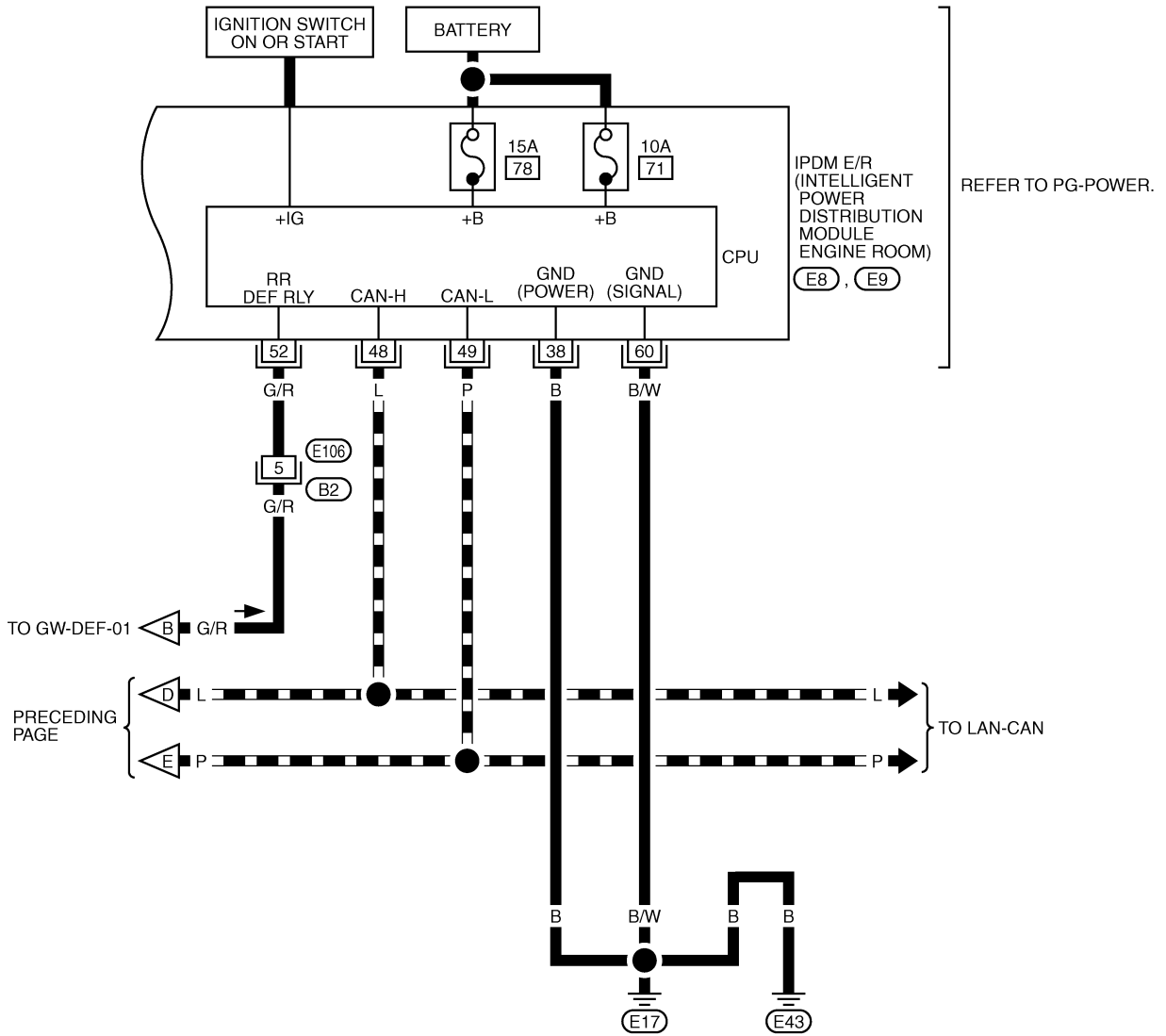
(M1), (M2) -ELECTRICAL UNITS

TIWM1088E

REAR WINDOW DEFOGGER

GW-DEF-03

▬ : DATA LINE



TIWM1089E

REAR WINDOW DEFOGGER

Terminal and Reference Value for BCM

AIS002GM

Terminal	Wire color	Item	Condition	Voltage [V] (Approx.)
9	L/R	Rear window defogger switch signal	When rear window defogger switch is pressed.	0
			When rear window defogger switch is OFF.	5
11	LG	Ignition switch (ACC or ON)	Ignition switch is in ACC or ON position.	Battery voltage
38	W/L	Ignition switch (ON or START)	Ignition switch is in ON or START position.	Battery voltage
39	L	CAN- H	—	—
40	P	CAN- L	—	—
42	GY	Power source (Fuse)	—	Battery voltage
52	B	Ground	—	0
55	W/R	Power source (Fusible link)	—	Battery voltage

Terminal and Reference Value for IPDM E/R

AIS002GM

Terminal	Wire color	Item	Condition	Voltage [V] (Approx.)
5	W	BAT power supply	—	Battery voltage
6	R	BAT power supply	—	Battery voltage
38	B	Ground (Power)	—	0
48	L	CAN- H	—	—
49	P	CAN- L	—	—
52	G/R	Rear window defogger relay control signal	When rear window defogger switch is ON.	0
			When rear window defogger switch is OFF.	Battery voltage
60	B/W	Ground (Signal)	—	0

REAR WINDOW DEFOGGER

AIS002GP

CONSULT-II Function (BCM)

CONSULT-II can display each diagnostic item using the diagnostic test modes shown following.

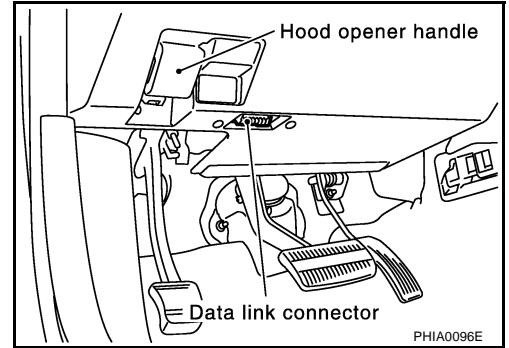
BCM diagnostic test item	Check item diagnostic test mode	Content
REAR DEFOGGER	Data monitor	Displays the input data of BCM in real time.
	Active test	Gives a drive signal to a load to check the operation.

CONSULT-II INSPECTION PROCEDURE

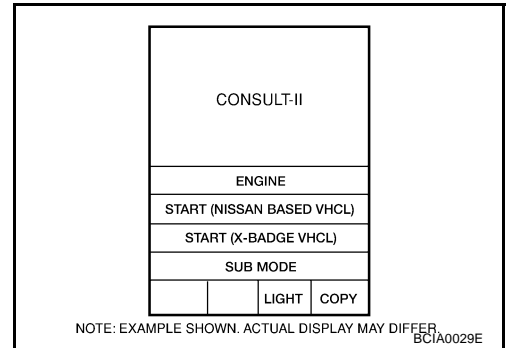
CAUTION:

If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carry out CAN communication.

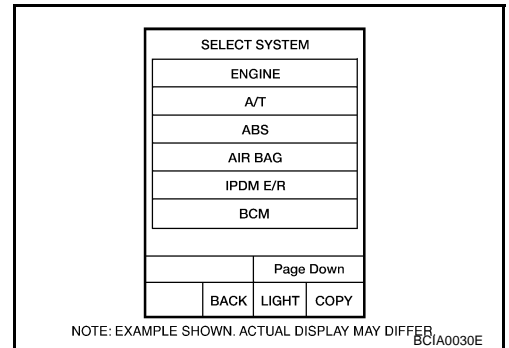
1. Turn ignition switch "OFF".
2. Connect "CONSULT-II" and CONSULT-II CONVERTER to data link connector.



3. Turn ignition switch "ON".
4. Touch "START(NISSAN BASED VHCL)".

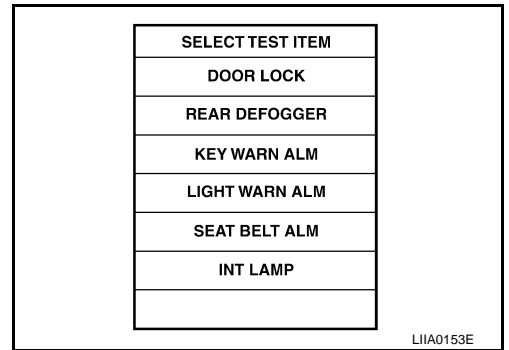


5. Touch "BCM".
If "BCM" is not indicated, go to [GI-39](#), "CONSULT-II Date Link Connector (DLC) Circuit"

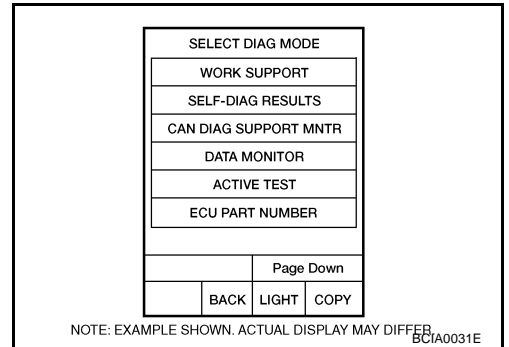


REAR WINDOW DEFOGGER

6. Touch "REAR DEFOGGER".



7. Select diagnosis mode, "DATA MONITOR" and "ACTIVE TEST" are available.



DATA MONITOR Display Item List

Monitor item "Operation"		Content
REAR DEF SW	"ON/OFF"	Displays "Press (ON)/others (OFF)" status determined with the rear window defogger switch.
IGN ON SW	"ON/OFF"	Displays "IGN (ON)/OFF" status determined with the ignition switch signal.

ACTIVE TEST Display Item List

Test item	Content
REAR DEFOGGER	Gives a drive signal to the rear window defogger to activate it.

A
B
C
D
E
F
G
H
J
K
L
M

GW

REAR WINDOW DEFOGGER

Work Flow

AIS002GO

1. Check the symptom and customer's requests.
2. Understand the outline of system. Refer to [GW-86, "System Description"](#) .
3. According to the trouble diagnosis chart, repair or replace the cause of the malfunction. Refer to [GW-96, "Trouble Diagnoses Symptom Chart"](#) .
4. Does rear window defogger operate normally? YES: GO TO 5, NO: GO TO 3.
5. INSPECTION END.

Trouble Diagnoses Symptom Chart

AIS002GO

Check that other systems using the signal of the following systems operate normally.

Symptom	Diagnoses / service procedure	Refer to page
Rear window defogger and door mirror defogger do not operate.	1. BCM power supply and ground circuit check.	GW-97
	2. IPDM E/R auto active test check.	PG-22
	3. Rear window defogger switch circuit check.	GW-98
	4. Rear window defogger power supply circuit check.	GW-99
	5. Replace IPDM E/R.	PG-28
Rear window defogger does not operated.	1. BCM power supply and ground circuit check.	GW-97
	2. IPDM E/R auto active test check.	PG-22
	3. Rear window defogger switch circuit check.	GW-98
	4. Rear window defogger power supply circuit check.	GW-99
	5. Rear window defogger circuit check.	GW-101
	6. Filament check.	GW-106
	7. Replace IPDM E/R.	PG-28
Rear window defogger does not operate but door mirror defoggers operate.	1. Rear window defogger circuit check.	GW-101
	2. Filament check.	GW-106
Both of door mirror defoggers do not operated but rear window defogger operate.	1. Door mirror defogger power supply circuit check.	GW-102
Driver side door mirror defogger does not operated.	1. Driver side door mirror defogger circuit check.	GW-103
Passenger side door mirror defogger does not operated.	1. Passenger side door mirror defogger circuit check.	GW-104

REAR WINDOW DEFOGGER

BCM Power Supply and Ground Circuit Check

AIS0020B

First perform the "SELF-DIAG RESULTS" in "BCM" with CONSULT-II, then perform the each trouble diagnosis of malfunction system indicated "SELF-DIAG RESULTS" of "BCM". Refer to [BCS-15, "CAN Communication Inspection Using CONSULT-II \(Self-Diagnosis\)"](#) .

1. CHECK FUSE

Check 50A fusible link (letter F , located in the fuse and fusible link box).

Check 10A fuse [No.18, located in fuse block (J/B)].

Check 10A fuse [No.1, located in fuse block (J/B)].

NOTE:

Refer to [GW-86, "Component Parts and Harness Connector Location"](#) .

OK or NG

OK >> GO TO 2.

NG >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse. Refer to [PG-3, "POWER SUPPLY ROUTING CIRCUIT"](#) .

2. CHECK POWER SUPPLY CIRCUIT

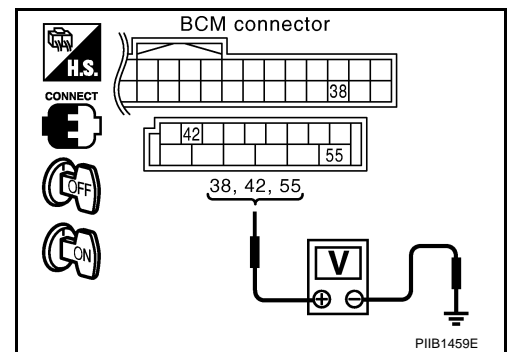
Check voltage between BCM connector M1, M2 terminal 38, 42, 55 and ground.

Connector	Terminal (Wire color)		Condition of ignition switch	Voltage [V] (Approx.)
	(+)	(-)		
M1	38 (W/L)	Ground	ON	Battery voltage
M2	42 (G/Y)		OFF	
	55 (W/R)			

OK or NG

OK >> GO TO 3.

NG >> Check BCM power supply circuit for open or short.



3. CHECK GROUND CIRCUIT

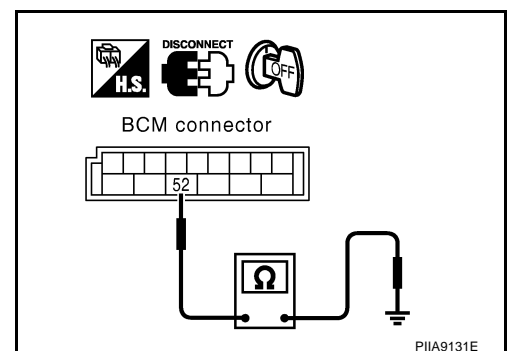
1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check continuity between BCM connector M2 terminal 52 and ground.

52 (B) – Ground : Continuity should exist.

OK or NG

OK >> Power supply and ground circuit is OK.

NG >> Check BCM ground circuit for open or short.



REAR WINDOW DEFOGGER

AIS002GR

Rear Window Defogger Switch Circuit Check

1. CHECK REAR WINDOW DEFOGGER SWITCH OPERATION

With CONSULT-II

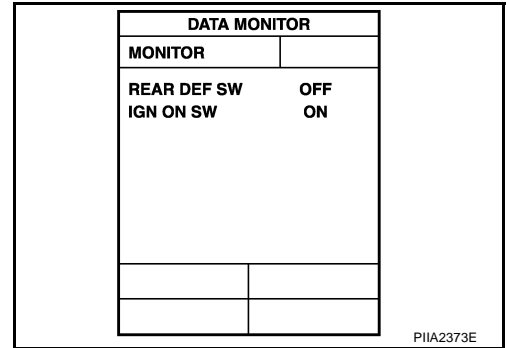
Check ("REAR DEF SW", "IGN ON SW") in DATA MONITOR mode with CONSULT-II.

When rear defogger switch is turned to ON

REAR DEF SW : ON

When ignition switch is turned to ON

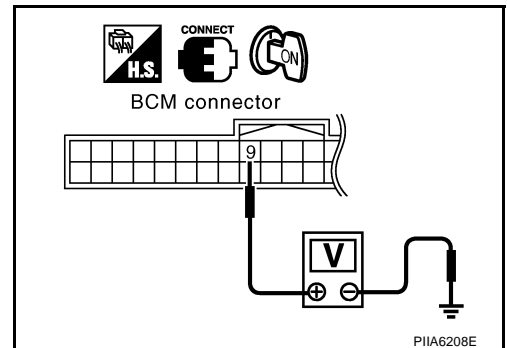
IGN ON SW : ON



With out CONSULT-II

1. Turn ignition switch ON.
2. Check voltage between BCM connector ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M1	9 (L/R)	Ground	Rear window defogger switch is pressed.	0
			Rear window defogger switch is OFF.	5



OK or NG

- OK >> Rear window defogger switch check is OK.
 NG >> GO TO 2.

2. CHECK REAR WINDOW DEFOGGER SWITCH CIRCUIT HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect BCM and A/C and audio controller connector.
3. Check continuity between BCM connector M1 terminal 9 and A/C and audio controller connector M38 terminal 12.

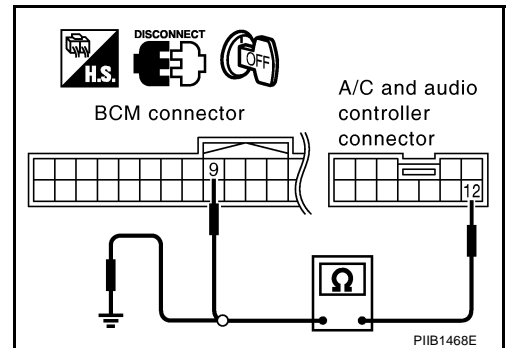
9 (L/R) – 12(L/R) : Continuity should exist

4. Check continuity between A/C and audio controller connector M38 terminal 12 and ground

12 (L/R) – Ground : Continuity should not exist

OK or NG

- OK >> GO TO 3.
 NG >> Repair or replace harness.



REAR WINDOW DEFOGGER

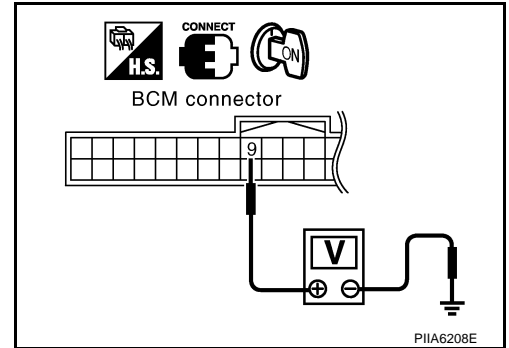
3. CHECK BCM OUTPUT SIGNAL

1. Connect BCM connector.
2. Check continuity between BCM connector M3 terminal 9 and ground.

9 (L/R) – Ground : Battery voltage

OK or NG

- OK >> Replace A/C and audio controller.
 NG >> Replace BCM.



Rear Window Defogger Power Supply Circuit Check

AIS002GS

1. CHECK FUSE

- Check 10A fuse [No.12, located in fuse block (J/B)]
 Check 20A fuse [No.75, located in the IPDM E/R]
 Check 20A fuse [No.80, located in the IPDM E/R]

NOTE:

Refer to [GW-86, "Component Parts and Harness Connector Location"](#) .

OK or NG

- OK >> GO TO 2.
 NG >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse, refer to [PG-3, "POWER SUPPLY ROUTING CIRCUIT"](#) .

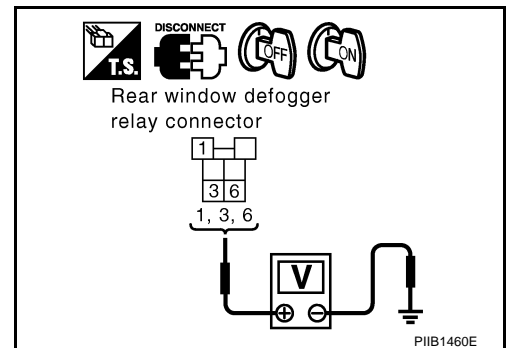
2. CHECK REAR WINDOW DEFOGGER RELAY POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect rear window defogger relay.
3. Check voltage between rear window defogger relay connector and ground.

Connector	Terminal (Wire color)		Condition of ignition switch	Voltage [V] (Approx.)
	(+)	(-)		
B109	1 (Y/G)	Ground	ON	Battery voltage
	3 (W)		OFF	
	6 (R)			

OK or NG

- OK >> GO TO 3.
 NG >> Repair or replace harness.

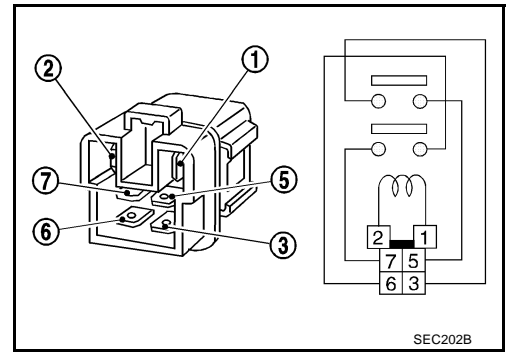


REAR WINDOW DEFOGGER

3. CHECK REAR WINDOW DEFOGGER RELAY

Check continuity between rear window defogger terminals 3 and 5, 6 and 7.

Terminal	Condition	Continuity
3	12V direct current supply between terminals 1 and 2	Yes
	No current supply	No
6	12V direct current supply between terminals 1 and 2	Yes
	No current supply	No



OK or NG

- OK >> GO TO 4.
- NG >> Replace rear window defogger relay.

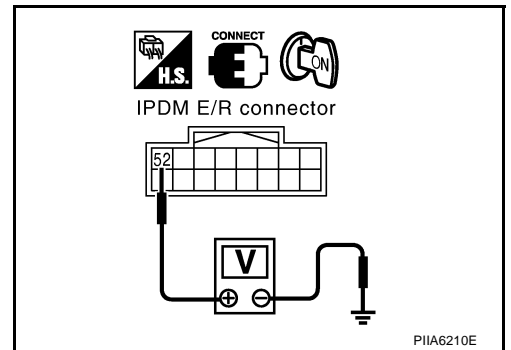
4. CHECK REAR WINDOW DEFOGGER RELAY GROUND CIRCUIT

1. Installation rear window defogger relay.
2. Turn ignition switch ON.
3. Turn rear window defogger switch OFF.
4. Check voltage between IPDM E/R connector E9 terminal 52 and ground.

52 (G/R) – Ground : Battery voltage

OK or NG

- OK >> Rear window defogger power supply circuit check is OK.
- NG >> GO TO 5.



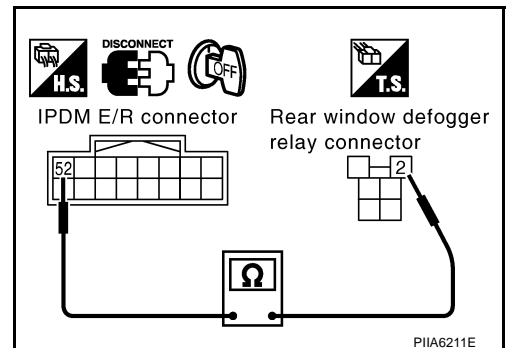
5. CHECK IPDM E/R HARNESS

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector and rear defogger relay.
3. Check continuity between IPDM E/R connector E9 terminal 52 and rear window defogger relay connector B109 terminal 2.

52 (G/R) – 2 (G/R) : Continuity should exist.

OK or NG

- OK >> Check the connector for damage and loose connection.
- NG >> Repair or replace harness.



REAR WINDOW DEFOGGER

AIS002GT

Rear Window Defogger Circuit Check

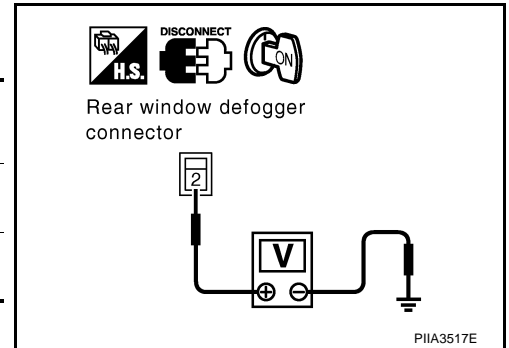
1. CHECK REAR WINDOW DEFOGGER POWER SUPPLY CIRCUIT 1

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

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
B301	2 (L)	Ground	Rear window defogger switch ON.	Battery voltage
			Rear window defogger switch OFF.	0

OK or NG

- OK >> GO TO 2.
NG >> GO TO 3.



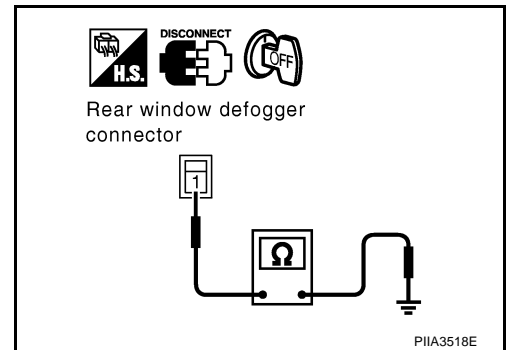
2. CHECK REAR WINDOW DEFOGGER GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between rear window defogger connector B241 terminal 1 and ground.

1(B) – Ground : Continuity should exist

OK or NG

- OK >> Check filament, Refer to [GW-106, "Filament Check"](#)
- If filament is OK.
Check the condition of the harness and the connector.
 - If filament is NG.
Repair filament.
- NG >> Repair or replace harness.



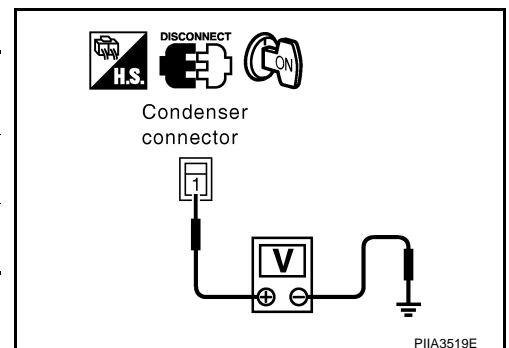
3. CHECK REAR WINDOW DEFOGGER POWER WINDOW SUPPLY CIRCUIT 2

1. Turn ignition switch OFF.
2. Disconnect condenser connector.
3. Turn ignition switch ON.
4. Check voltage between condenser connector and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
B34	1 (B/W)	Ground	Rear window defogger switch ON	Battery voltage
			Rear window defogger switch OFF	0

OK or NG

- OK >> Repair or replace harness.
NG >> GO TO 4.



REAR WINDOW DEFOGGER

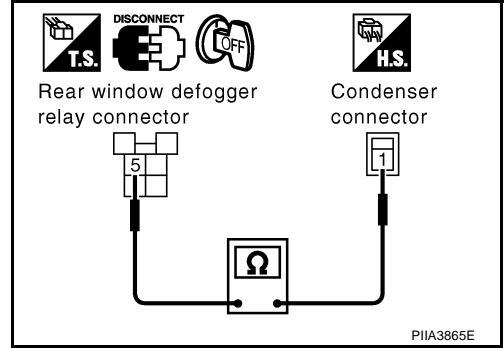
4. CHECK CONDENSER HARNESS

1. Turn ignition switch OFF.
2. Disconnect rear window defogger relay.
3. Check continuity between rear window defogger relay connector B109 terminal 5 and condenser connector B34 terminal 1.

5 (B/W) – 1 (B/W) : Continuity should exist.

OK or NG

- OK >> Check the condition of the harness and the connector.
 NG >> Repair or replace harness.



Door Mirror Defogger Power Supply Circuit Check

AIS002GU

1. CHECK FUSE

Check 10A fuse [No.8, located in fuse block (J/B)].

NOTE:

Refer to [GW-86, "Component Parts and Harness Connector Location"](#).

OK or NG

- OK >> GO TO 2.
 NG >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse, refer to [PG-3, "POWER SUPPLY ROUTING CIRCUIT"](#).

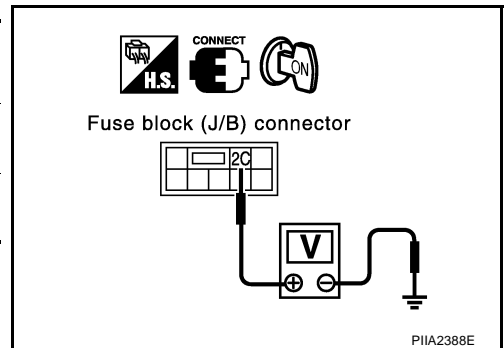
2. CHECK DOOR MIRROR DEFOGGER POWER SUPPLY CIRCUIT 1

1. Turn ignition switch ON.
2. Check voltage between fuse block (J/B) connector and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
E101	2C (B/W)	Ground	Rear window defogger switch ON	Battery voltage
			Rear window defogger switch OFF	0

OK or NG

- OK >> GO TO 3.
 NG >> Repair or replace harness.



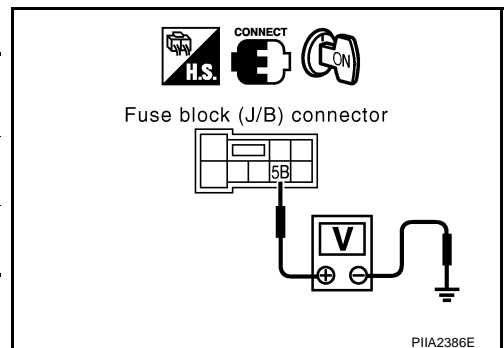
3. CHECK DOOR MIRROR DEFOGGER POWER SUPPLY 2

Check voltage between fuse block (J/B) connector and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M5	5B (L)	Ground	Rear window defogger switch ON	Battery voltage
			Rear window defogger switch OFF	0

OK or NG

- OK >> GO TO 4.
 NG >> Replace fuse block (J/B).



REAR WINDOW DEFOGGER

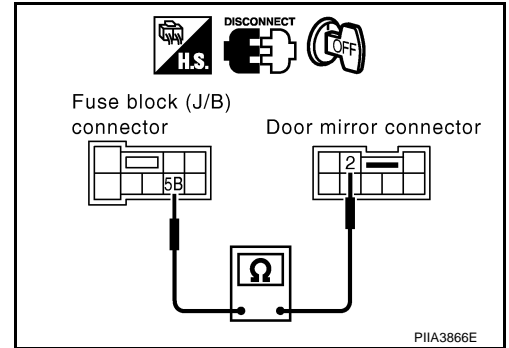
4. CHECK DOOR MIRROR DEFOGGER CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect fuse block (J/B) and each door mirror connector.
3. Check continuity between fuse block (J/B) connector M5 terminal 5B and each door mirror connector D2 (driver side), D32 (passenger side) terminal 2.

5B (L) – 2 (L) : Continuity should exist.

OK or NG

- OK >> INSPECTION END
 NG >> Repair or replace harness.



Driver Side Door Mirror Defogger Circuit Check

AIS002GV

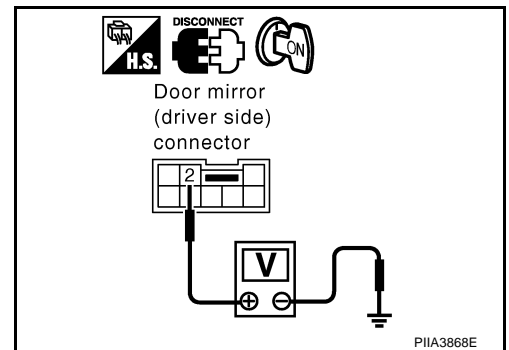
1. CHECK DOOR MIRROR DEFOGGER POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect door mirror (driver side) connector.
3. Turn ignition switch ON.
4. Check voltage between door mirror (driver side) connector and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
D2	2 (L)	Ground	Rear window defogger switch ON	Battery voltage
			Rear window defogger switch OFF.	0

OK or NG

- OK >> GO TO 2.
 NG >> Repair or replace harness.



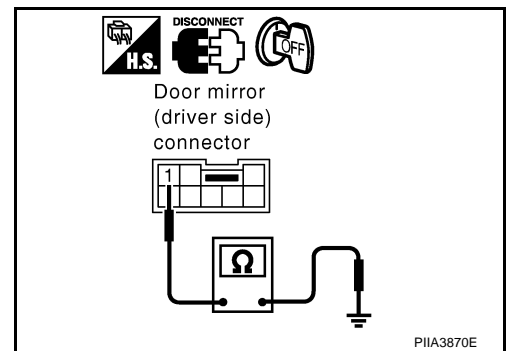
2. CHECK DOOR MIRROR DEFOGGER GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between door mirror (driver side) connector D2 terminal 1 and ground.

1 (B) – Ground : Continuity should exist.

OK or NG

- OK >> GO TO 3.
 NG >> Repair or replace harness.



REAR WINDOW DEFOGGER

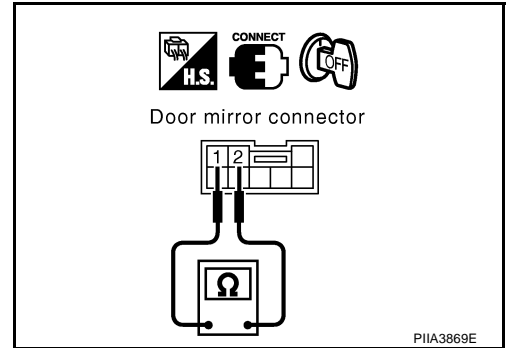
3. CHECK DOOR MIRROR DEFOGGER

1. Connect door mirror connector.
2. Check continuity between each door mirror (driver side) connector D2 terminal 1 and 2.

1 (B) – 2 (L) : Continuity should exist.

OK or NG

- OK >> Check the condition of the harness and the connector.
 NG >> Replace door mirror (driver side).



Passenger Side Door Mirror Defogger Circuit Check

AIS002GW

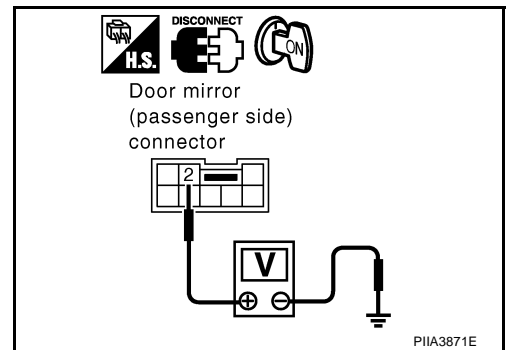
1. CHECK DOOR MIRROR DEFOGGER POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect door mirror (passenger side) connector.
3. Turn ignition switch ON.
4. Check voltage between door mirror (passenger side) connector and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
D32	2 (L)	Ground	Rear window defogger switch ON	Battery voltage
			Rear window defogger switch OFF	0

OK or NG

- OK >> GO TO 2.
 NG >> Repair or replace harness.



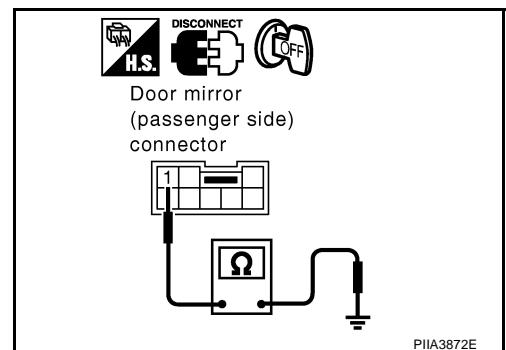
2. CHECK DOOR MIRROR DEFOGGER GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between door mirror (passenger side) connector D32 terminal 1 and ground.

1 (B) – Ground : Continuity should exist.

OK or NG

- OK >> GO TO 3.
 NG >> Repair or replace harness.



REAR WINDOW DEFOGGER

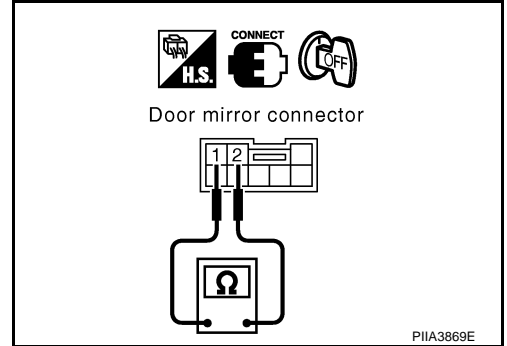
3. CHECK DOOR MIRROR DEFOGGER

1. Connect door mirror connector.
2. Check continuity between each door mirror (passenger side) connector D32 terminal 1 and 2.

1 (B) – 2 (L) : Continuity should exist.

OK or NG

- OK >> Check the condition of the harness and the connector.
NG >> Replace door mirror (passenger side).



A
B
C
D
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J
K
L
M

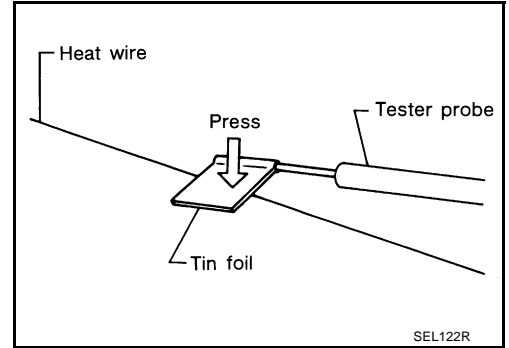
GW

REAR WINDOW DEFOGGER

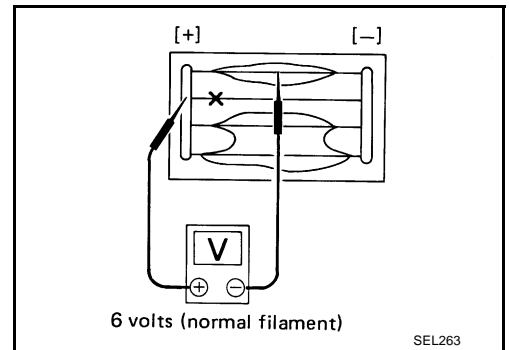
Filament Check

AIS002GX

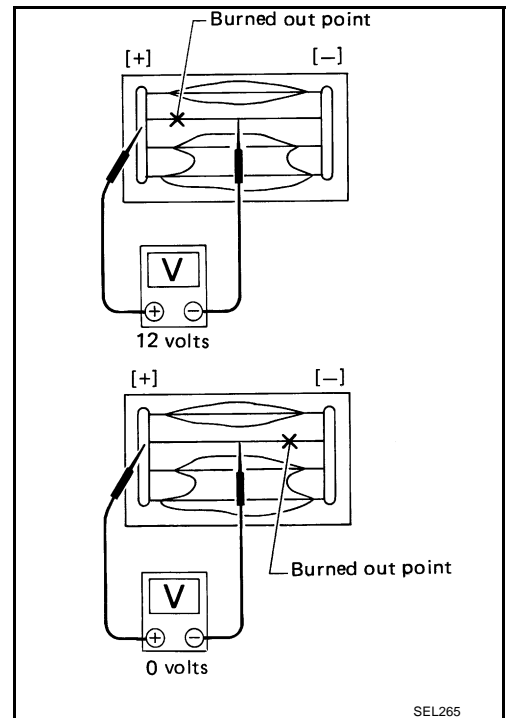
1. When measuring voltage, wrap tin foil around the top of the negative probe. Then press the foil against the wire with your finger.



2. Attach probe circuit tester (in Volt range) to middle portion of each filament.



3. If a filament is burned out, circuit tester registers 0 or battery voltage.
4. To locate burned out point, move probe to left and right along filament. Test needle will swing abruptly when probe passes the point.



Filament Repair REPAIR EQUIPMENT

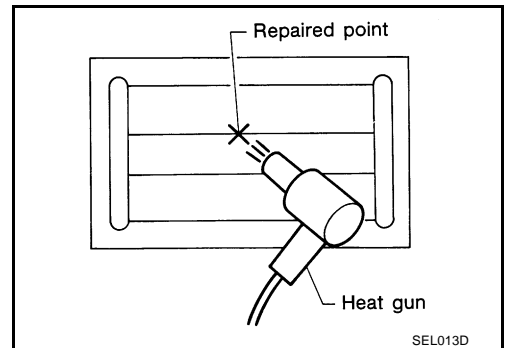
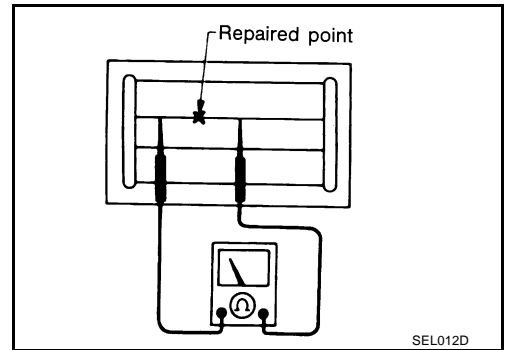
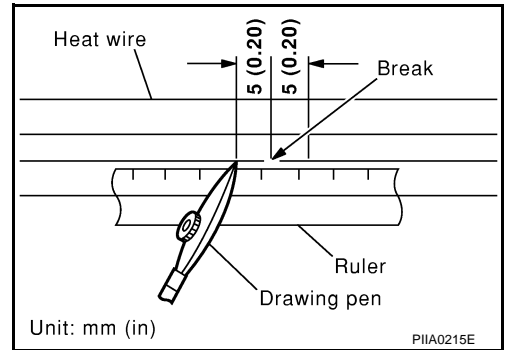
AIS002GY

- Conductive silver composition (DuPont No. 4817 or equivalent)
- Ruler 30 cm (11.8 in) long
- Drawing pen
- Heat gun
- Alcohol
- Cloth

REAR WINDOW DEFOGGER

REPAIRING PROCEDURE

1. Wipe broken heat wire and its surrounding area clean with a cloth dampened in alcohol.
2. Apply a small amount of conductive silver composition to tip of drawing pen.
Shake silver composition container before use.
3. Place ruler on glass along broken line. Deposit conductive silver composition on break with drawing pen. Slightly overlap existing heat wire on both sides [preferably 5 mm (0.20 in)] of the break.
4. After repair has been completed, check repaired wire for continuity. This check should be conducted 10 minutes after silver composition is deposited.
Do not touch repaired area while test is being conducted.
5. Apply a constant stream of hot air directly to the repaired area for approximately 20 minutes with a heat gun. A minimum distance of 3 cm (1.2 in) should be kept between repaired area and hot air outlet.
If a heat gun is not available, let the repaired area dry for 24 hours.



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DOOR MIRROR

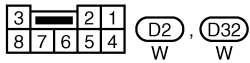
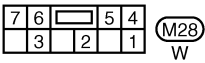
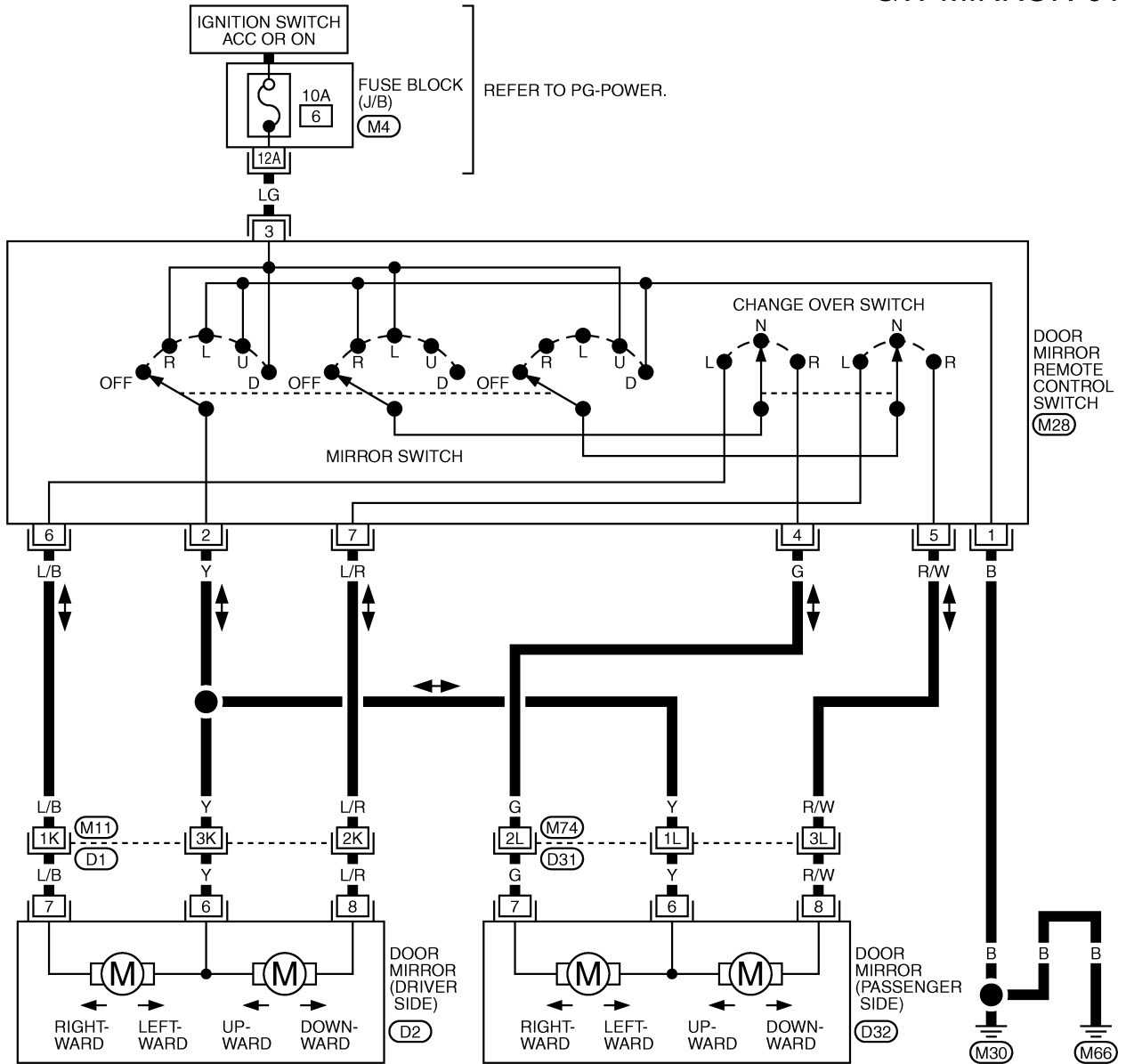
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DOOR MIRROR

Wiring Diagram –MIRROR–

AIS0004C

GW-MIRROR-01



REFER TO THE FOLLOWING.

(D1), (D31) -SUPER MULTIPLE JUNCTION (SMJ)

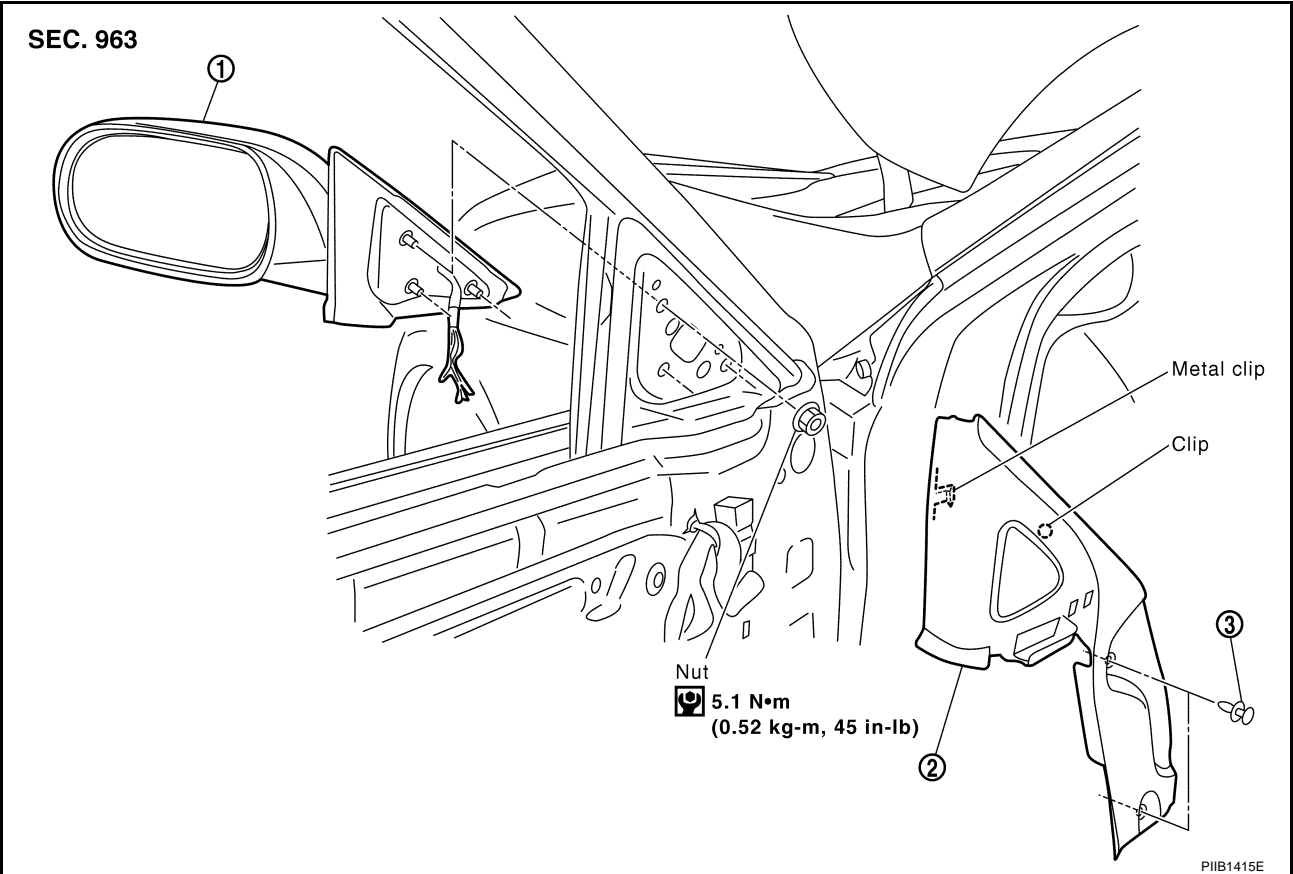
(M4) -FUSE BLOCK-JUNCTION BOX (J/B)

TIWT0245E

DOOR MIRROR

Removal and Installation

AIS0004D



CAUTION:
Be careful not to damage the mirror bodies.

REMOVAL

1. Remove the corner cover inner.
2. Remove the door mirror harness connector.
3. Remove the door mirror mounting nuts, and remove the door mirror assembly.

INSTALLATION

Install in the reverse order of removal.

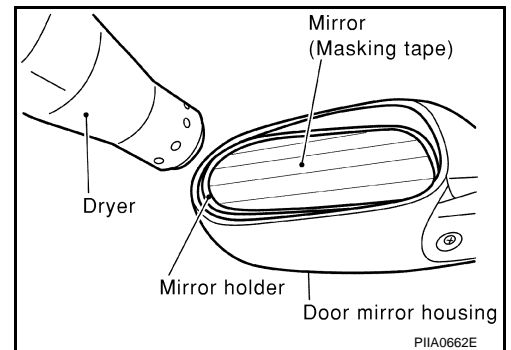
Disassembly and Assembly DISASSEMBLY

1. Apply masking tape to mirror housing and mirror face.
2. As shown in the figure, warm the circumference of the mirror holder with a dryer.

CAUTION:

Do not allow the dryer to approach the mirror holder excessively. Be careful not to warm the mirror holder too long. It may deform the mirror holder.

[Heat up outer surface of door mirror holder with dryer (heat gun) for about 3 minutes. The dryer should be kept approximately 10 mm (0.4 in) away from the door mirror holder. Then remove the door mirror.]



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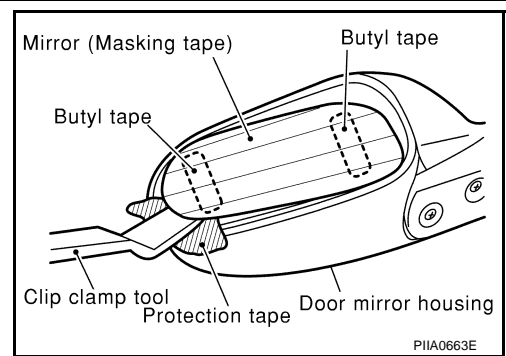
DOOR MIRROR

3. As shown in the figure, insert a plastic spatula, clip clamp tool, or something similar into the recess between the mirror holder (near corner) and the mirror.

NOTE:

Apply a shop cloth between the clip clamp tool and the mirror holder to protect the holder from damage.

4. Push up and remove the mirror slowly across the circumference of the mirror holder. At the same time, remove adhesive (butyl tape) on the mirror holder and mirror, and remove the mirror glass from the mirror holder.



ASSEMBLY

1. Warm the circumference of the mirror holder with a dryer.

CAUTION:

Do not allow the dryer to approach the mirror holder excessively. Be careful not to warm the mirror holder too long. It may deform the mirror holder.

[Heat up outer surface of door mirror holder with dryer (heat gun) for about 3 minutes. The dryer should be kept approximately 10 mm (0.4 in) away from the door mirror holder. Then install the door mirror.]

2. Apply adhesive (butyl tape) to the mirror holder.
3. Insert the mirror into the mirror holder, and push the circumference of the mirror to fit into the mirror holder.

CAUTION:

Be sure that the mirror holder is not deformed, and the mirror is fit into the mirror holder securely.