

**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

EIS002UE

- 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.

### Trouble Diagnosis Precaution

EIS002UF

When you read wiring diagrams, refer to the following:

- [GI-15, "How to Read Wiring Diagrams"](#).
- [PG-4, "POWER SUPPLY ROUTING CIRCUIT"](#).

When you perform trouble diagnosis, refer to the following:

- [GI-11, "HOW TO FOLLOW TEST GROUPS IN TROUBLE DIAGNOSES"](#).
- [GI-27, "How to Perform Efficient Diagnosis for an Electrical Incident"](#).

Check for any service bulletins before servicing the vehicle.

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# PREPARATION

## PREPARATION

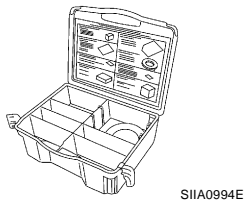
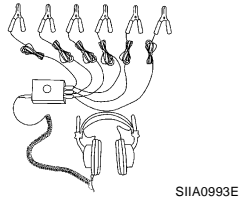
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### Special Service Tool

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

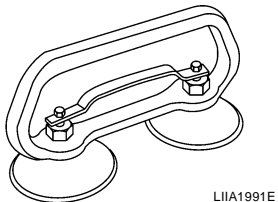
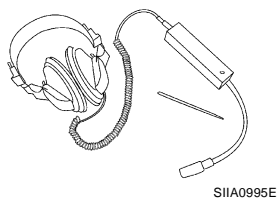
Tool number (Kent-Moore No.) Tool name	Description
— (J-39570) Chassis ear	Locating the noise
— (J-43980) NISSAN Squeak and Rattle Kit	Repairing the cause of noise



## Commercial Service Tool

EIS002UH

Tool number (Kent-Moore No.) Tool name	Description
(J-39565) Engine ear	Locating the noise
Suction Lifter ( — )	Holding door glass



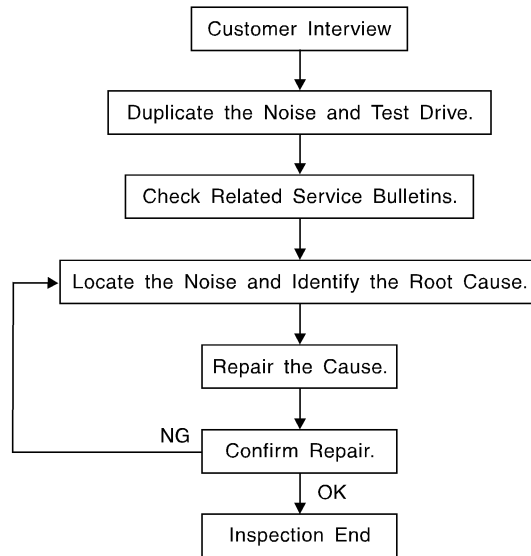
# SQUEAK AND RATTLE TROUBLE DIAGNOSES

## SQUEAK AND RATTLE TROUBLE DIAGNOSES

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### Work Flow

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SBT842

### 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: J-39565 and mechanic's 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 fasteners 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)

INSULATOR (Light foam block)

# SQUEAK AND RATTLE TROUBLE DIAGNOSES

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

## FELT CLOTH TAPE

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 instead 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

EIS002UJ

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 silicone 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.

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# SQUEAK AND RATTLE TROUBLE DIAGNOSES

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## 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 bumpers 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/HEADLINER

Noises in the sunroof/headliner 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. Sun visor shaft shaking in the holder
3. Front or rear windshield touching headliner 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.

## OVERHEAD CONSOLE (FRONT AND REAR)

Overhead console noises are often caused by the console panel clips not being engaged correctly. Most of these incidents are repaired by pushing up on the console at the clip locations until the clips engage.

In addition look for:

1. Loose harness or harness connectors.
2. Front console map/reading lamp lense loose.
3. Loose screws at console attachment points.

## 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

EIS002UK



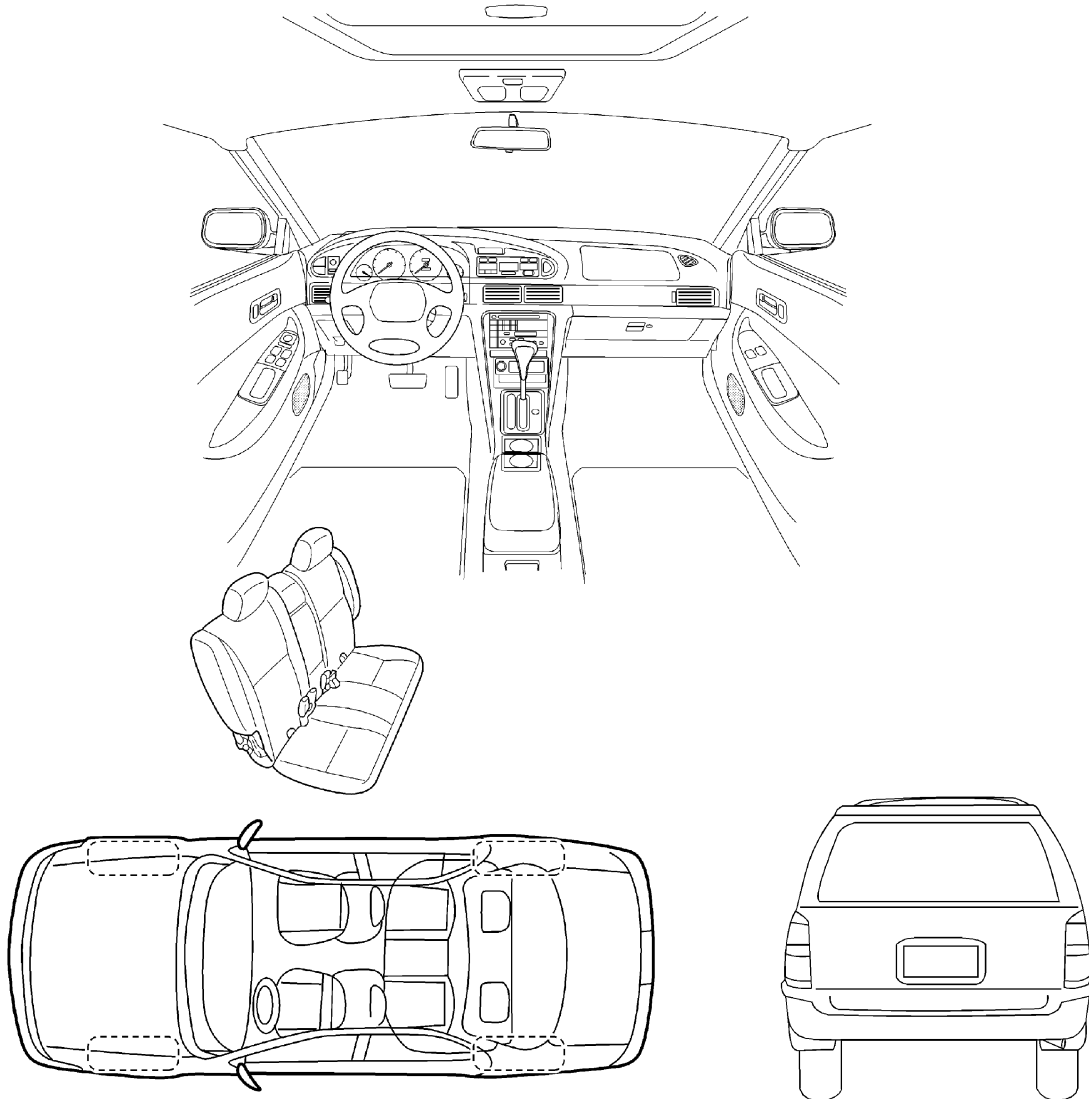
### SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

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:

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### 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 <sup>st</sup> 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:

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	<u>YES</u>	<u>NO</u>	<u>Initials of person performing</u>
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: \_\_\_\_\_

SBT844

**This form must be attached to Work Order**

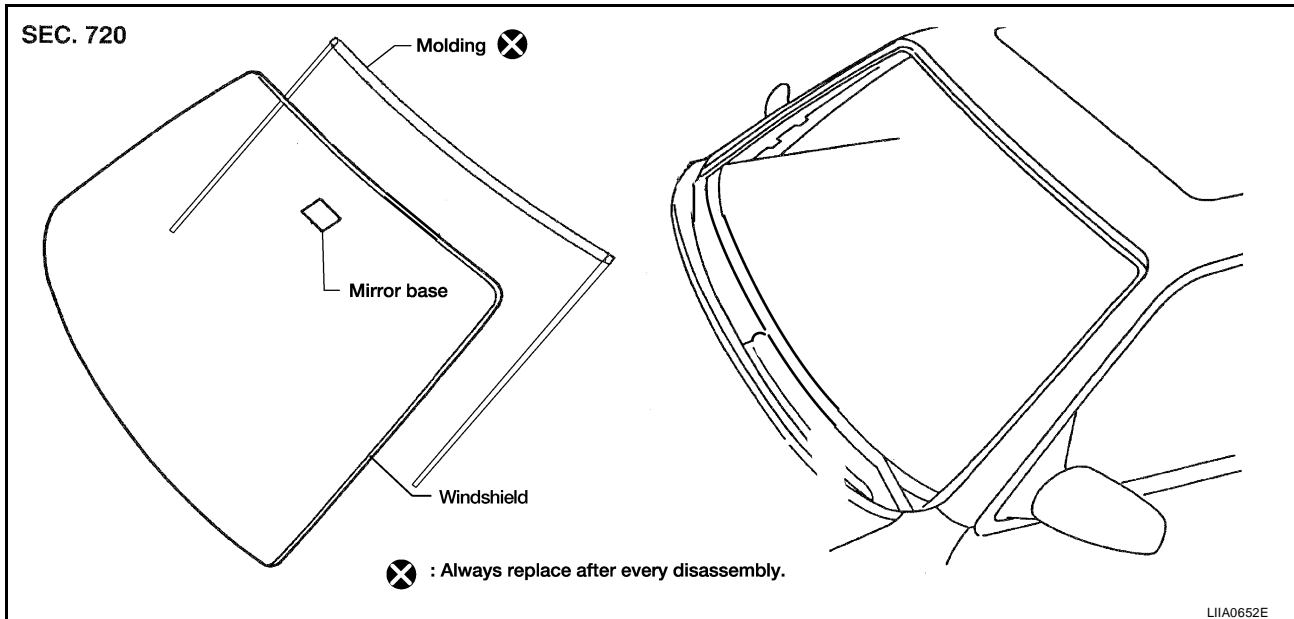
# WINDSHIELD GLASS

PFP:72712

## WINDSHIELD GLASS

### Removal and Installation

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### REMOVAL

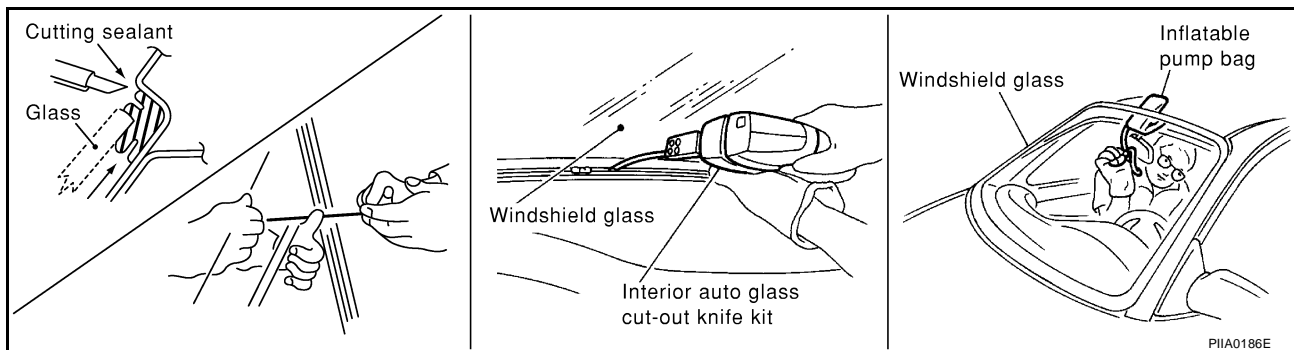
1. Remove inside mirror. Refer to [GW-77, "Removal and Installation"](#) .
  2. Partially remove the headlining (front edge). Refer to [EI-37, "HEADLINING"](#) .
  3. Remove cowl top cover. Refer to [EI-18, "Removal and Installation"](#) .
  4. Apply a protective tape around the windshield glass to protect the painted surface from damage.
- 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.

### 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 glass on its edge. Small chips may develop into cracks.



### INSTALLATION

- 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 so that it is in position and leaves no gap.

# WINDSHIELD GLASS

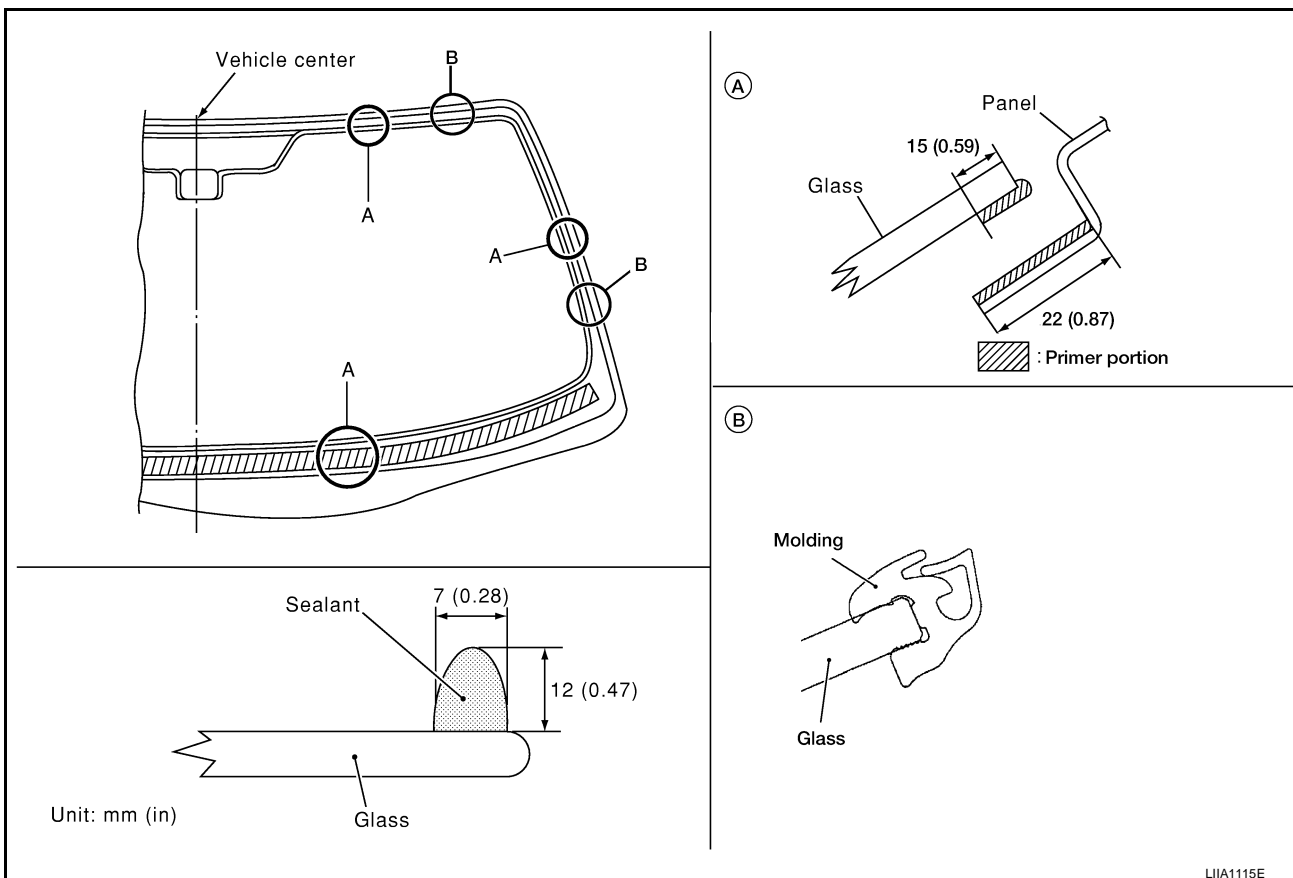
- Inform the customer that the vehicle should remain stationary until the urethane adhesive has completely cured (preferably 24 hours). Curing time varies with temperature and humidity.
- Install parts removed.

## 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.

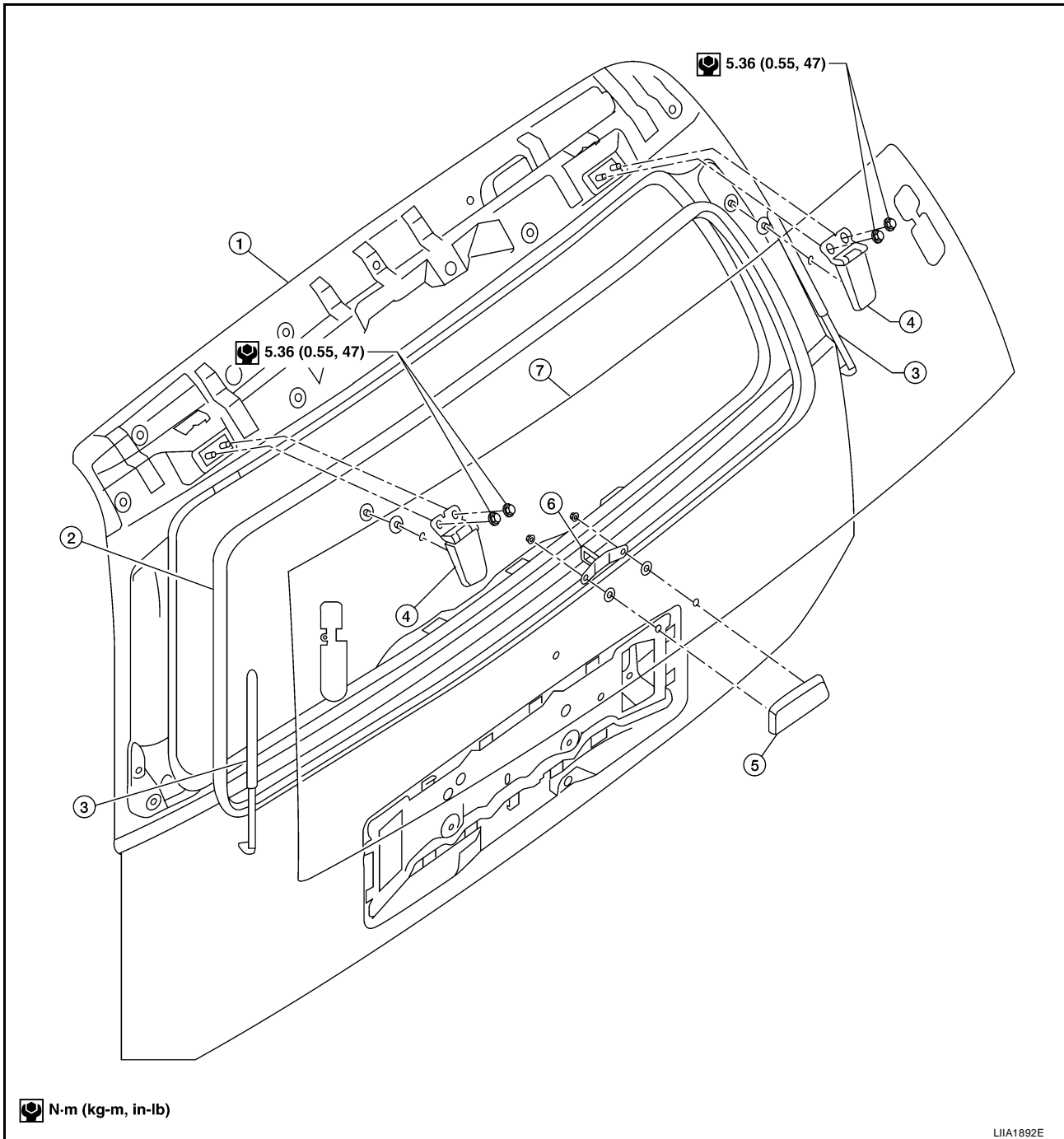
# REAR WINDOW GLASS AND MOLDING

## REAR WINDOW GLASS AND MOLDING

PF:79712

### Removal and Installation

EIS005TU



- |                                      |                             |                                    |
|--------------------------------------|-----------------------------|------------------------------------|
| 1. Back door assembly                | 2. Weatherstrip             | 3. Rear glass stay RH, LH          |
| 4. Rear window hinge assembly RH, LH | 5. Rear window glass handle | 6. Rear window glass latch striker |
| 7. Rear glass assembly               |                             |                                    |

### REMOVAL

1. Remove the rear spoiler. Refer to [EI-26, "REAR SPOILER"](#).
2. Disconnect the rear window defogger electrical connectors.
3. Remove the rear glass stays.
4. Remove the hinge nuts and the rear glass assembly.
5. Remove the striker and handle.

## REAR WINDOW GLASS AND MOLDING

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6. Remove the rear glass hinges.

### **INSTALLATION**

Installation is in the reverse order of removal.

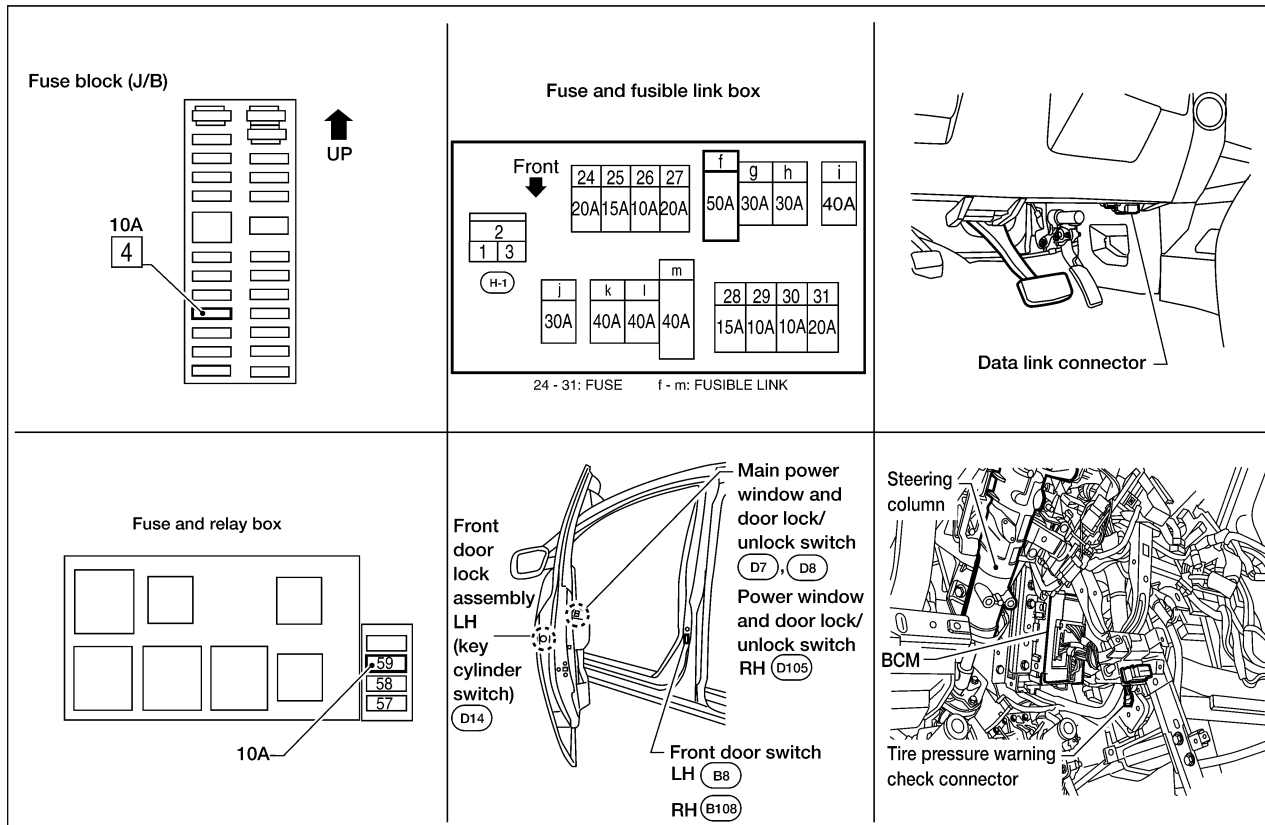
# POWER WINDOW SYSTEM

PF25401

## POWER WINDOW SYSTEM

### Component Parts and Harness Connector Location

EIS002UM



LIA1890E

## System Description

EIS002UN

Power is supplied at all time

- from 50A fusible link (letter f , located in the fuse and fusible link box)
- to BCM terminal 70
- through BCM terminal 69
- to main power window and door lock/unlock switch terminal 19
- to power window and door lock/unlock switch RH terminal 10.

With ignition switch in ON or START position,

Power is supplied

- through 10A fuse (No. 59, located in the fuse and relay box)
- to BCM terminal 38
- through BCM terminal 68
- to main power window and door lock/unlock switch terminal 10.
- to rear power vent window relays (OPEN and CLOSE) terminal 1.

With ignition switch in ON or START position,

Ground is supplied

- to BCM terminal 67
- to main power window and door lock/unlock switch terminal 17
- to power window and door lock/unlock switch RH terminal 11
- through body grounds M57, M61 and M79.

# POWER WINDOW SYSTEM

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## MANUAL OPERATION

### Front Driver Side Door

#### WINDOW UP

When the front LH switch in the main power window and door lock/unlock switch is pressed in the up position, Power is supplied

- through main power window and door lock/unlock switch terminal 8
- to front power window motor LH terminal 2.

Ground is supplied

- through main power window and door lock/unlock switch terminal 11
- to front power window motor LH terminal 1.

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

#### WINDOW DOWN

When the front LH switch in the main power window and door lock/unlock switch is pressed in the down position

Power is supplied

- through main power window and door lock/unlock switch terminal 11
- to front power window motor LH terminal 1.

Ground is supplied

- through main power window and door lock/unlock switch terminal 8
- to front power window motor LH terminal 2.

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

### Front Passenger Side Door

#### POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH OPERATION

##### WINDOW UP

When the power window and door lock/unlock switch RH is pressed in the up position  
Power is supplied

- through power window and door lock/unlock switch RH terminal 8
- to front power window motor RH terminal 2.

Ground is supplied

- through power window and door lock/unlock switch RH terminal 9
- to front power window motor RH terminal 1.

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

##### WINDOW DOWN

When the power window and door lock/unlock switch RH is pressed in the down position  
Power is supplied

- through power window and door lock/unlock switch RH terminal 9
- to front power window motor RH terminal 1.

Ground is supplied

- through power window and door lock/unlock switch RH terminal 8
- to front power window motor RH terminal 2.

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

#### MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OPERATION

Signal is sent

- through main power window and door lock/unlock switch terminal 14
- to power window and door lock/unlock switch RH terminal 16.

The operation of power window after receiving the signal is the same as operating the power window with power window and door lock/unlock switch RH.

### Rear Door (LH or RH)

#### REAR POWER WINDOW SWITCH LH OR RH OPERATION

##### WINDOW UP

When the rear power window switch LH or RH is pressed in the up position  
Power is supplied



# POWER WINDOW SYSTEM

- to rear power window control unit LH or RH terminal 1
- through rear power window control unit LH or RH terminal 7
- through rear power window switch LH or RH terminal 2 and 3
- through rear power window switch LH or RH terminal 5
- through rear power window control unit LH or RH terminal 11
- to rear power window motor LH or RH terminal 2.

Ground is supplied

- to rear power window control unit LH or RH terminal 15
- through rear power window control unit LH or RH terminal 16
- through rear power window switch LH or RH terminal 1 and 7
- through rear power window switch LH or RH terminal 4
- through rear power window control unit LH or RH terminal 12
- to rear power window motor LH or RH terminal 1.

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

## WINDOW DOWN

When the rear power window switch LH or RH is pressed in the down position  
Power is supplied

- to rear power window control unit LH or RH terminal 1
- through rear power window control unit LH or RH terminal 7
- through rear power window switch LH or RH terminal 2 and 3
- through rear power window switch LH or RH terminal 4
- through rear power window control unit LH or RH terminal 12
- to rear power window motor LH or RH terminal 1.

Ground is supplied

- to rear power window control unit LH or RH terminal 15
- through rear power window control unit LH or RH terminal 16
- through rear power window switch LH or RH terminal 1 and 7
- through rear power window switch LH or RH terminal 5
- through rear power window control unit LH or RH terminal 11
- to rear power window motor LH or RH terminal 2.

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

## MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OPERATION

Signal is sent

- through main power window and door lock/unlock switch terminal 14
- to rear power window control unit LH or RH terminal 1.

The operation of power window after receiving the signal is the same as operating the power window with rear power window switch LH or RH.

## VENT WINDOW CLOSE

When the rear power vent window switch is pressed in the close position  
Power is supplied

- to rear power vent window relay (CLOSE) terminal 5
- through rear power vent window relay (CLOSE) terminal 3
- to rear power vent window motors terminal 2.

Ground is supplied

- to rear power vent window relay (OPEN) terminal 4
- through rear power vent window relay (OPEN) terminal 3
- to rear power vent window motors terminal 1.

Then, the motors close the windows until the switch is released.

## VENT WINDOW OPEN

When the main power window and door lock/unlock switch (rear LH) is pressed in the open position  
Power is supplied

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# POWER WINDOW SYSTEM

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- to rear power vent window relay (OPEN) terminal 5
- through rear power vent window relay (OPEN) terminal 3
- to rear power vent window motors terminal 1.

Ground is supplied

- to rear power vent window relay (CLOSE) terminal 4
- through rear power vent window relay (CLOSE) terminal 3
- to rear power vent window motors terminal 2.

Then, the motors open the windows until the switch is released.

## 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.

## POWER WINDOW SERIAL LINK

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

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

- Keyless power window down signal.
- Rear power window switch illumination.

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

- Front door window RH operation signal.
- Power window control by front door lock assembly LH (key cylinder switch) signal.
- Power window lock signal.
- Retained power operation signal.
- Rear power window operation.

## POWER WINDOW LOCK

The power window lock is designed to lock operation of all windows except for front door window LH.

When in the lock position, the power window lock signal is transmitted to power window and door lock/unlock switch RH by power window serial link. This prevents the power window motor 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

- to main power window and door lock/unlock switch terminal 10
- from BCM terminal 68.

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 front LH or front RH door is opened.

RAP signal period can be changed by CONSULT-II. Refer to [GW-33, "CONSULT-II Function \(BCM\)"](#) .

## ANTI-PINCH SYSTEM

Main power window and door lock/unlock switch, power window and door lock/unlock switch RH and rear power window control unit LH and RH monitors the power window motor operation and the power window position (full closed or other) for each power window by the signals from encoder and limit switch in power window motor.

When a window 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

Main power window and door lock/unlock switch, power window and door lock/unlock switch RH and rear power window control unit LH and RH controls each power window motor for open and the power window will be lowered about 150 mm (5.91 in).

# POWER WINDOW SYSTEM

## POWER WINDOW CONTROL BY THE FRONT DOOR LOCK ASSEMBLY LH (KEY CYLINDER SWITCH)

When ignition key switch is OFF, front power window LH and RH can be opened or closed by turning the front door lock assembly LH (key cylinder switch) to the UNLOCK / LOCK position for more than 3 seconds.

- Front power windows can be opened as the front door lock assembly LH (key cylinder switch) is kept fully turned to the UNLOCK position.
- Front power windows can be closed as the front door lock assembly LH (key cylinder switch) is kept fully turned to the LOCK position.
- While performing open/close operation for the windows, power window is stopped when the front door lock assembly LH (key cylinder switch) is placed in the NEUTRAL position.
- When the ignition switch is turned ON while the power window opening operation is performed, the power window opening stops.

## CAN Communication System Description

EIS002U0

Refer to [LAN-5, "CAN COMMUNICATION"](#) .

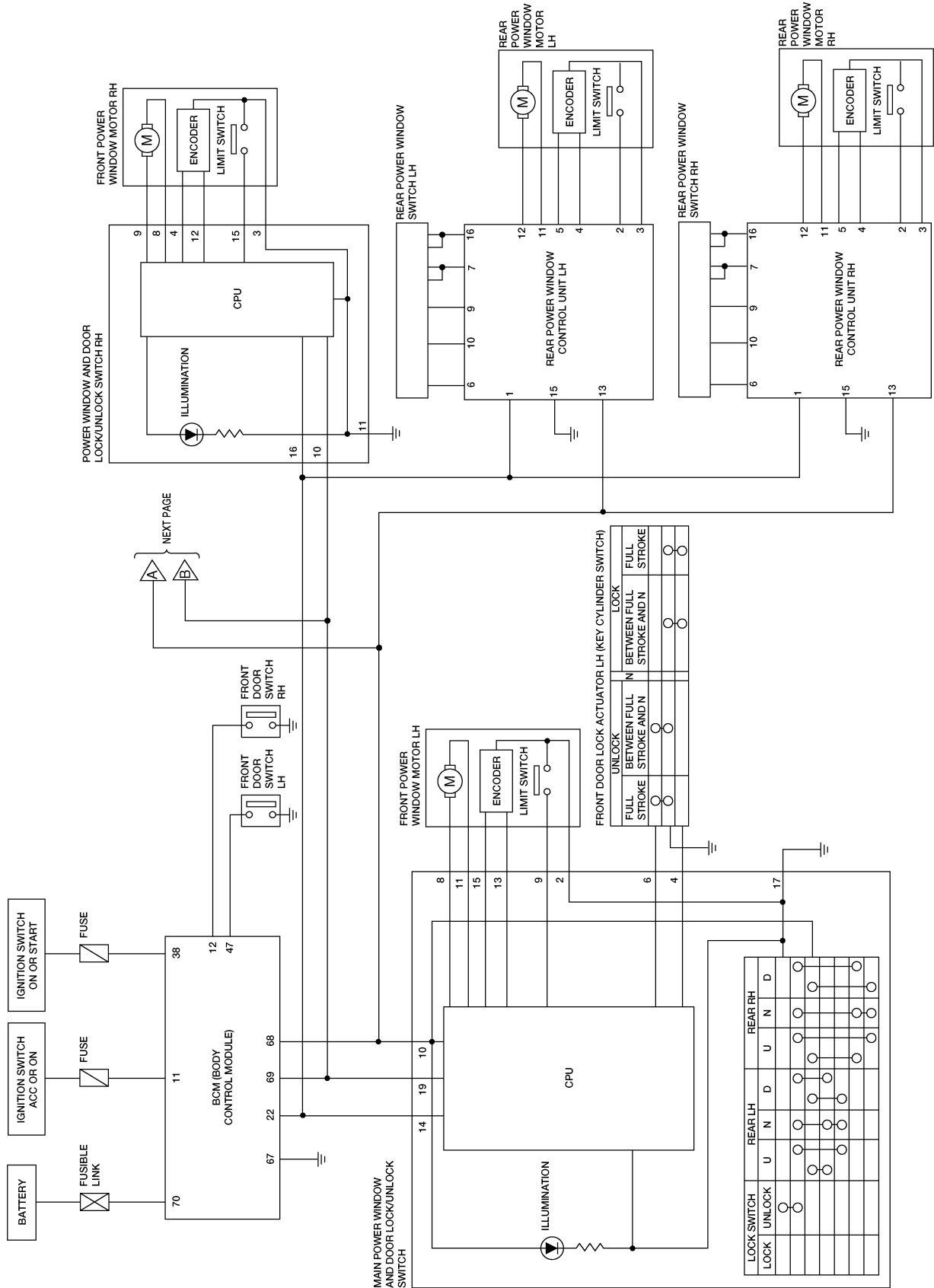
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# POWER WINDOW SYSTEM

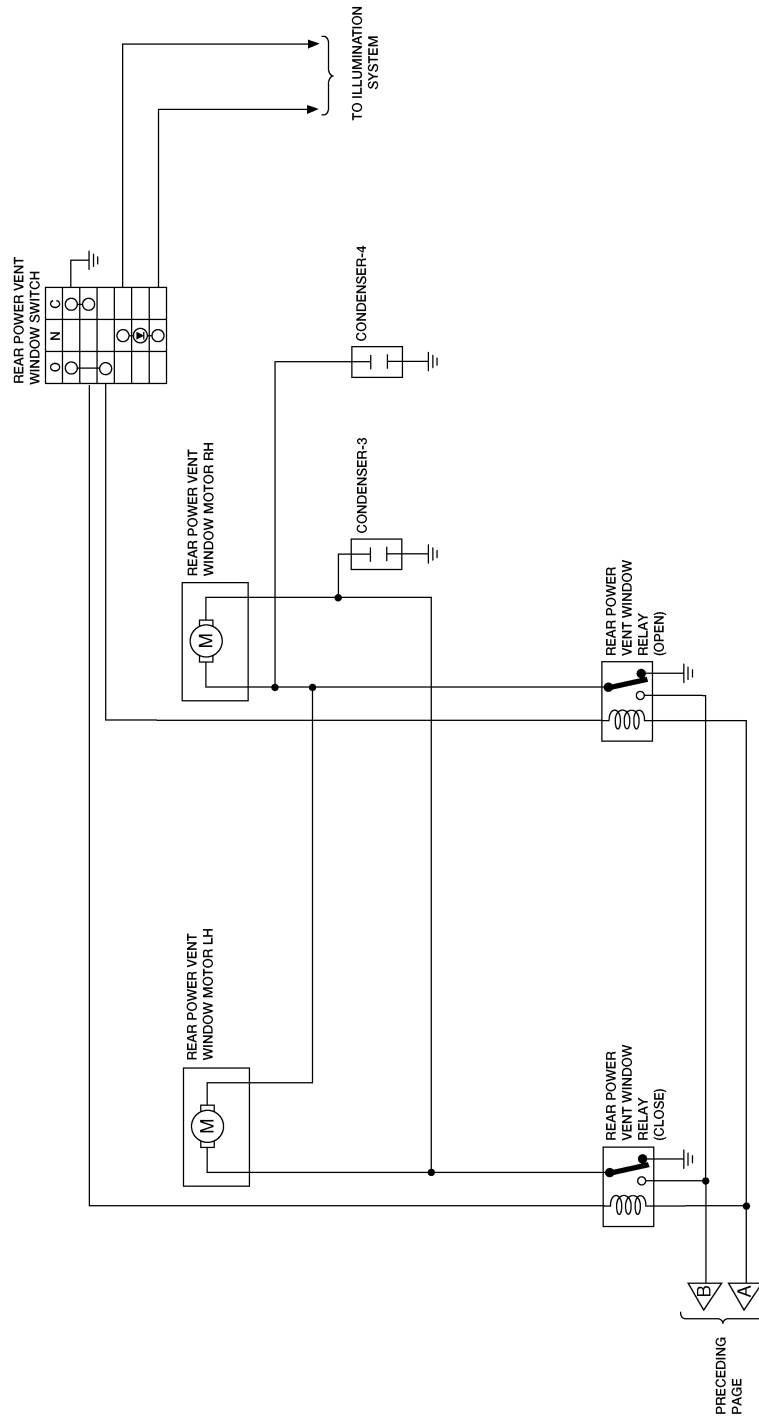
## Schematic

EIS002UP



LIWA0369E

# POWER WINDOW SYSTEM



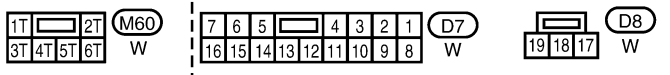
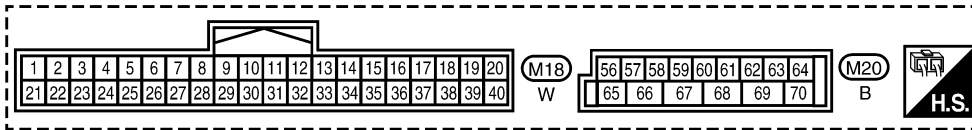
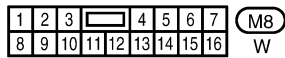
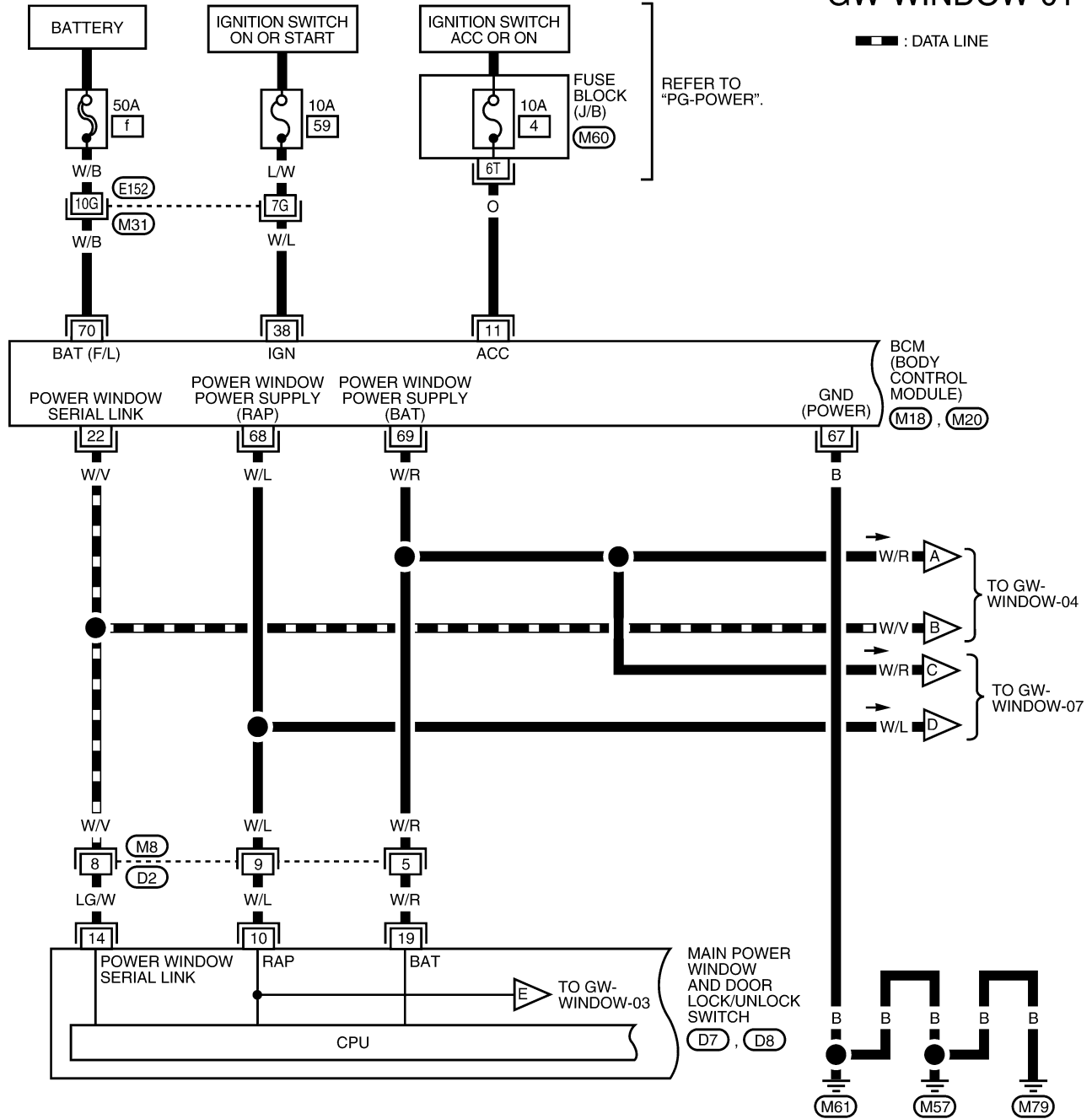
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# POWER WINDOW SYSTEM

## Wiring Diagram — WINDOW —

EIS002U0

### GW-WINDOW-01



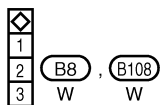
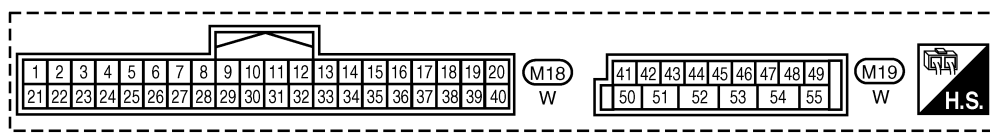
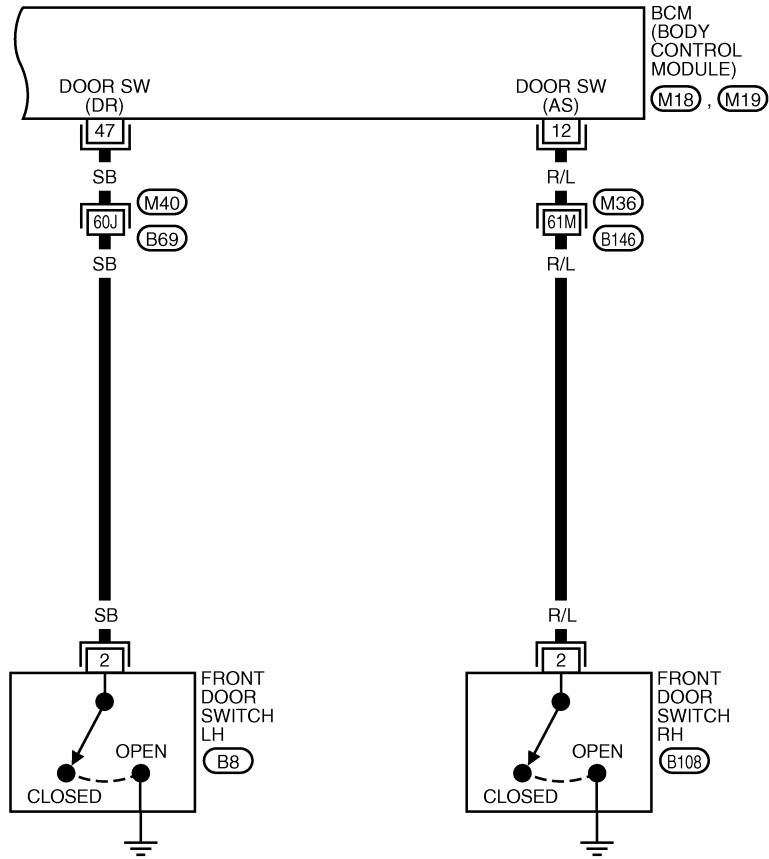
REFER TO THE FOLLOWING.  
M31 - SUPER MULTIPLE JUNCTION (SMJ)

WIWA1095E

# POWER WINDOW SYSTEM

GW-WINDOW-02

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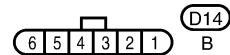
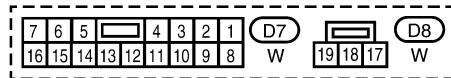
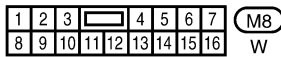
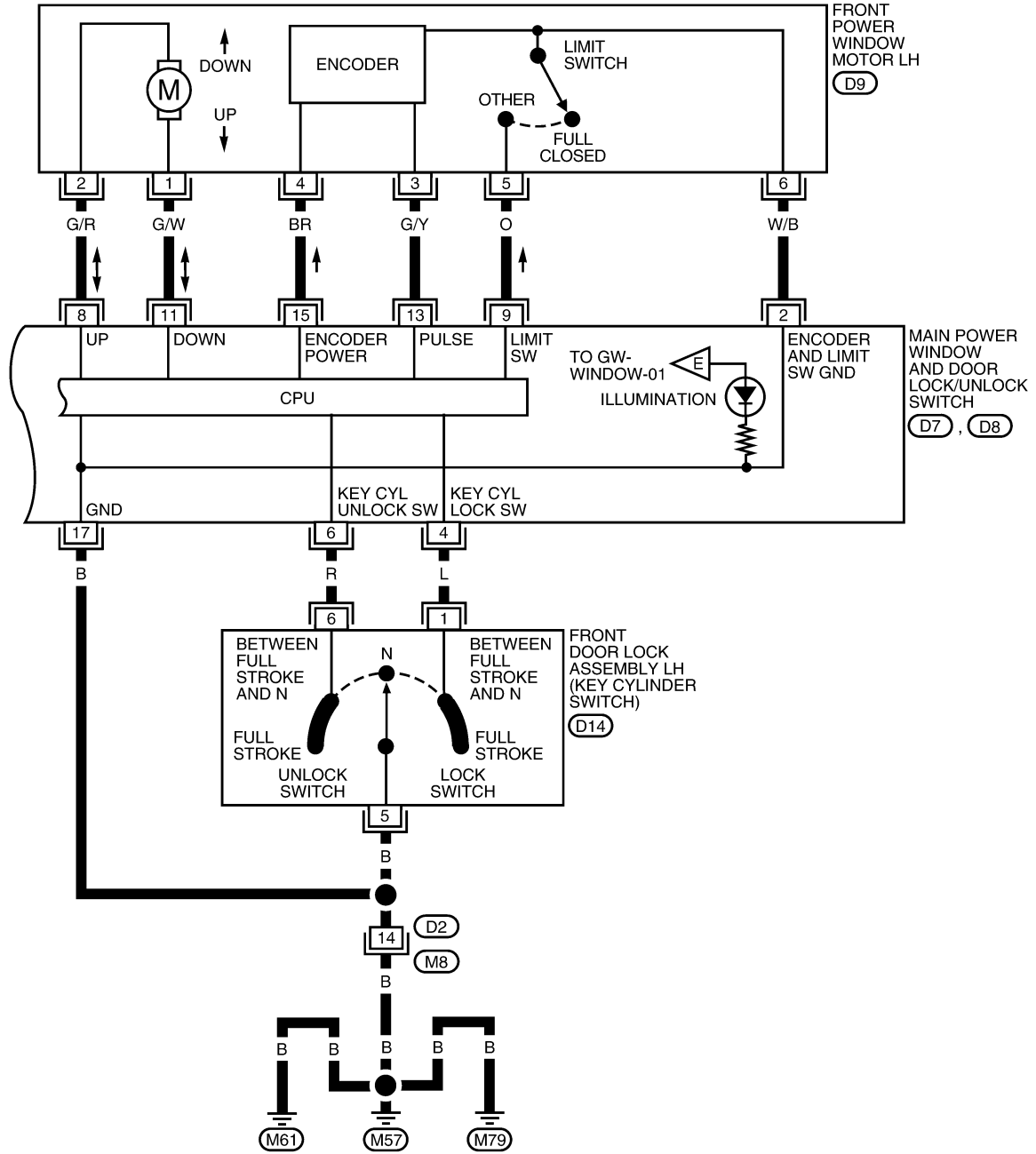


REFER TO THE FOLLOWING.  
 (M36), (M40) - SUPER  
 MULTIPLE JUNCTION (SMJ)

LIWA0372E

# POWER WINDOW SYSTEM

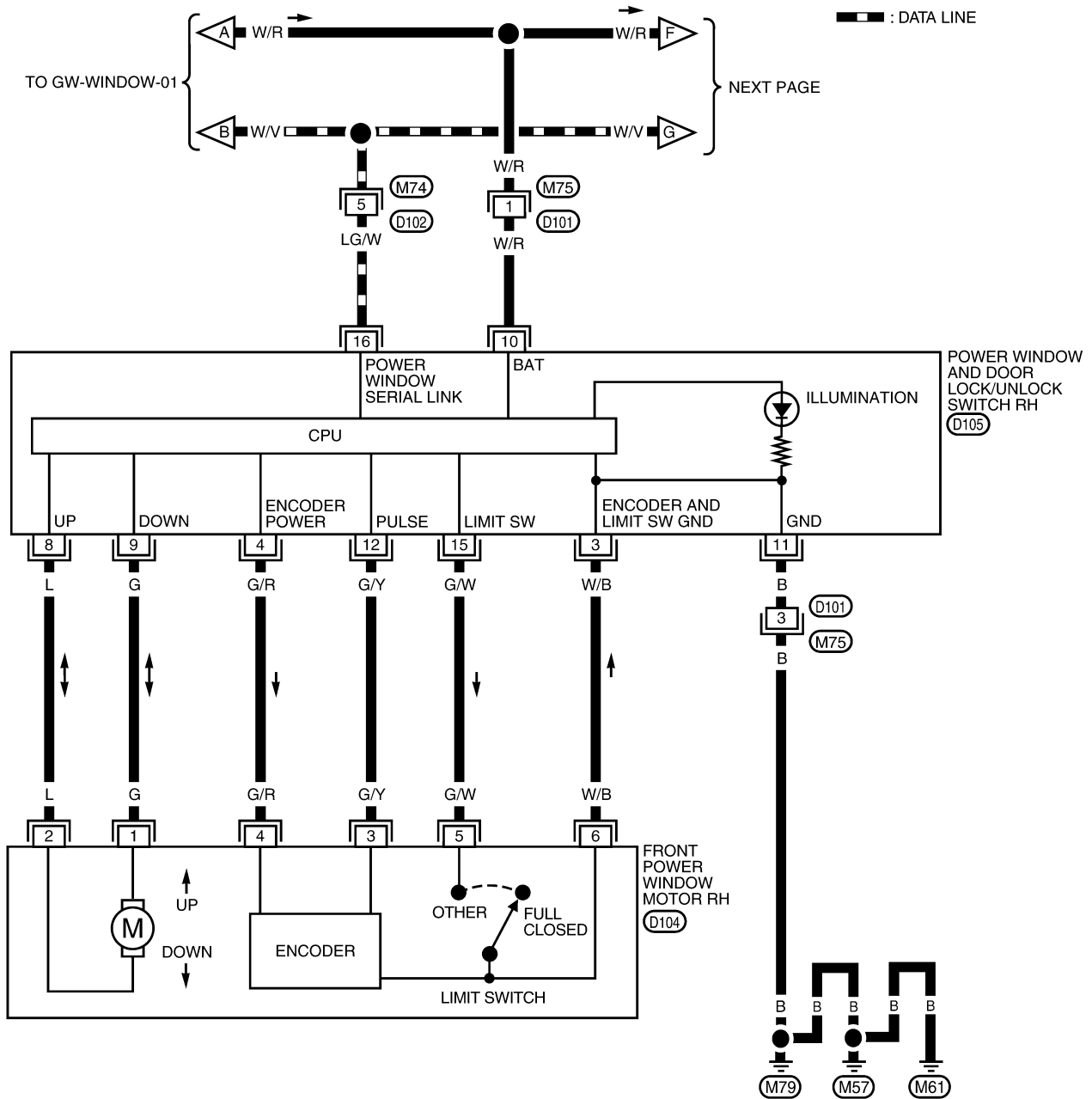
## GW-WINDOW-03





# POWER WINDOW SYSTEM

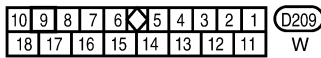
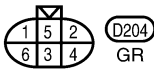
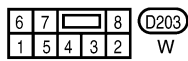
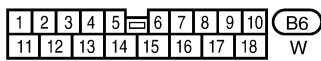
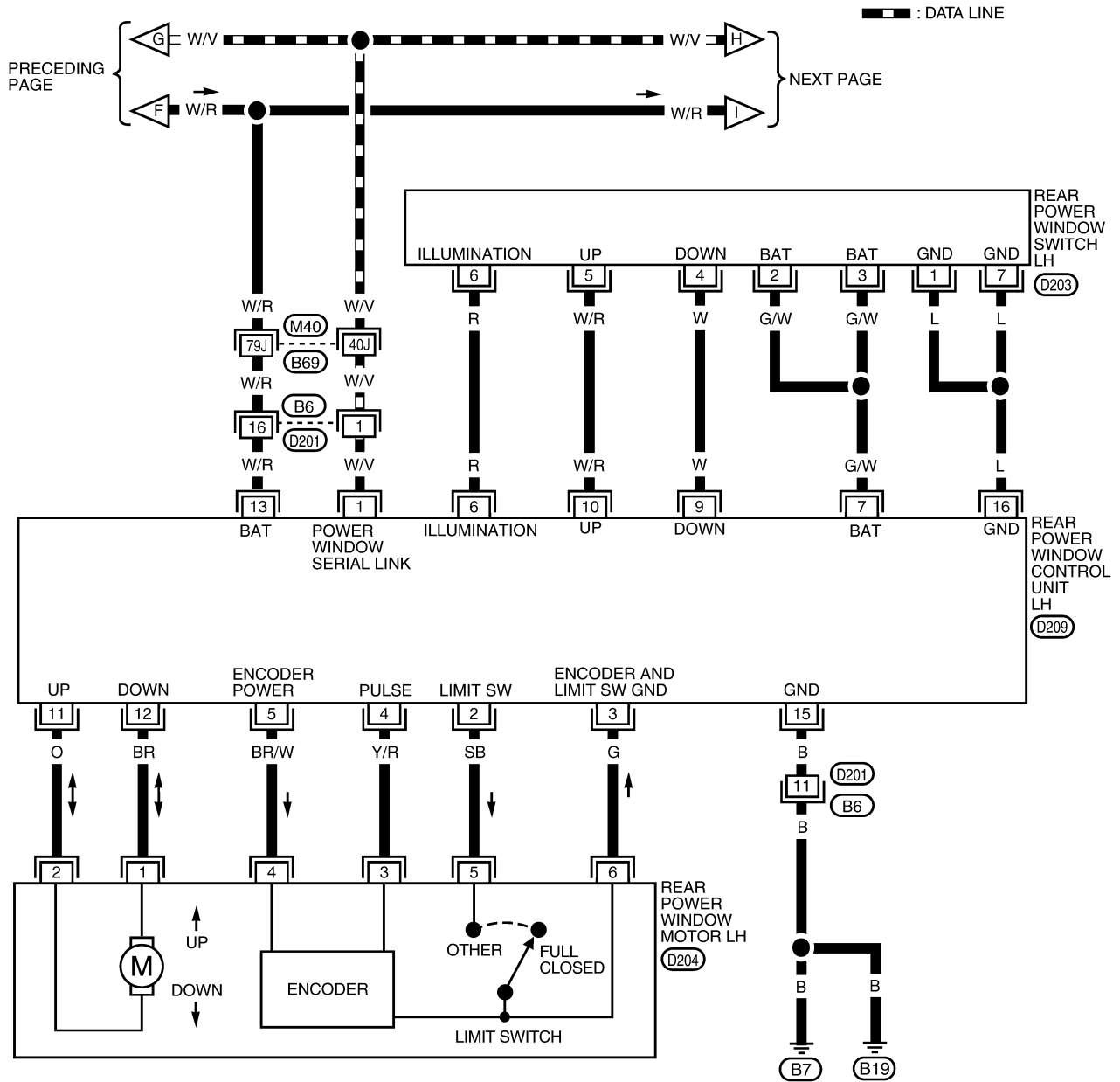
GW-WINDOW-04



WIWA1097E

# POWER WINDOW SYSTEM

GW-WINDOW-05



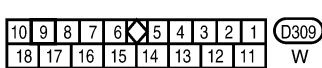
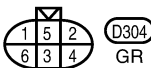
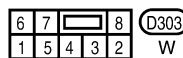
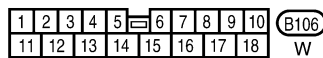
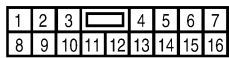
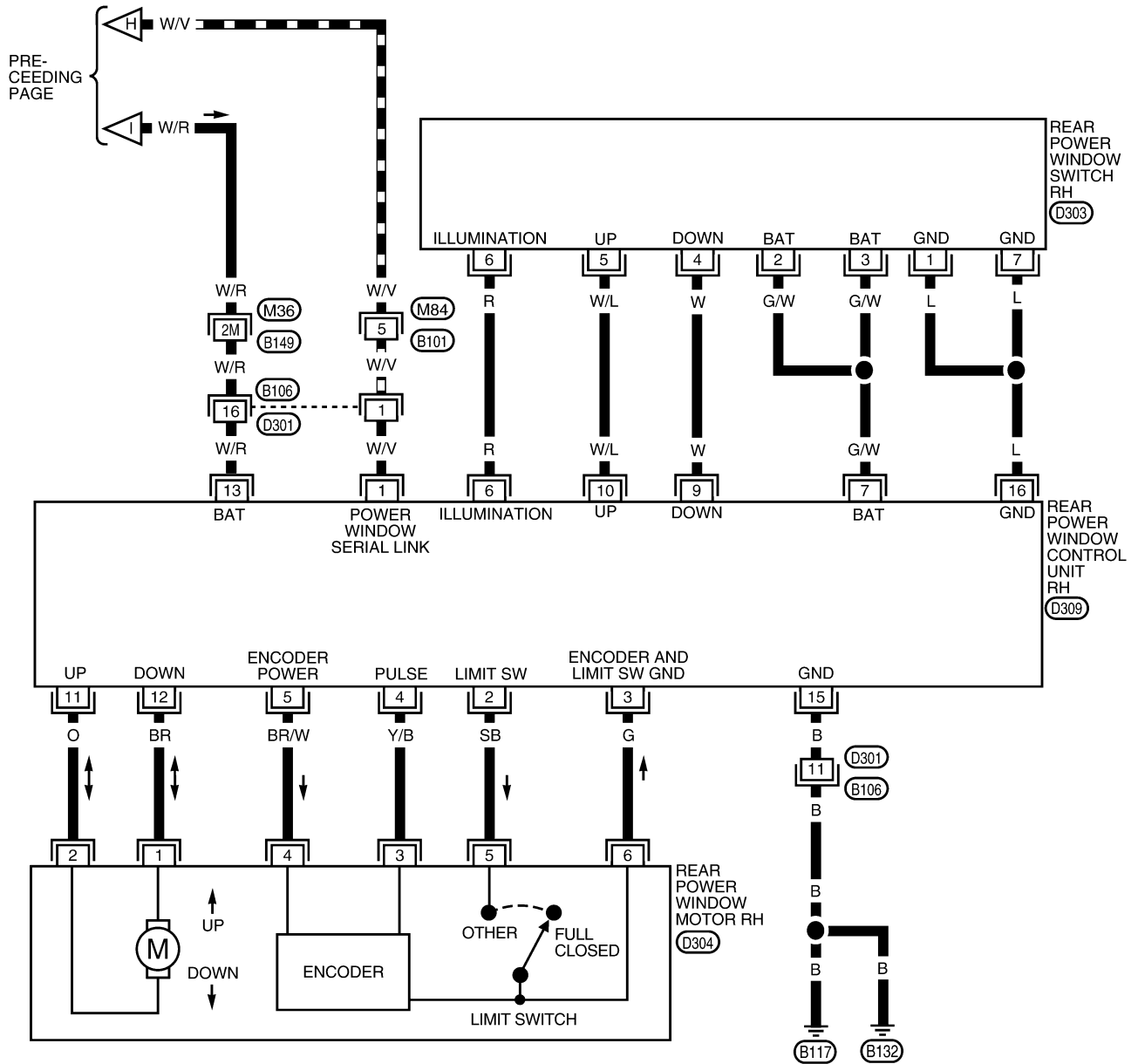
REFER TO THE FOLLOWING.  
 (M40) - SUPER MULTIPLE JUNCTION (SMJ)

WIWA1098E

# POWER WINDOW SYSTEM

## GW-WINDOW-06

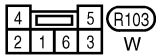
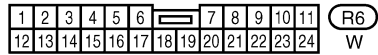
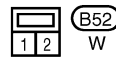
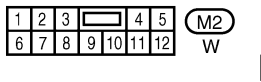
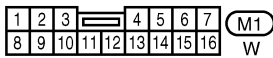
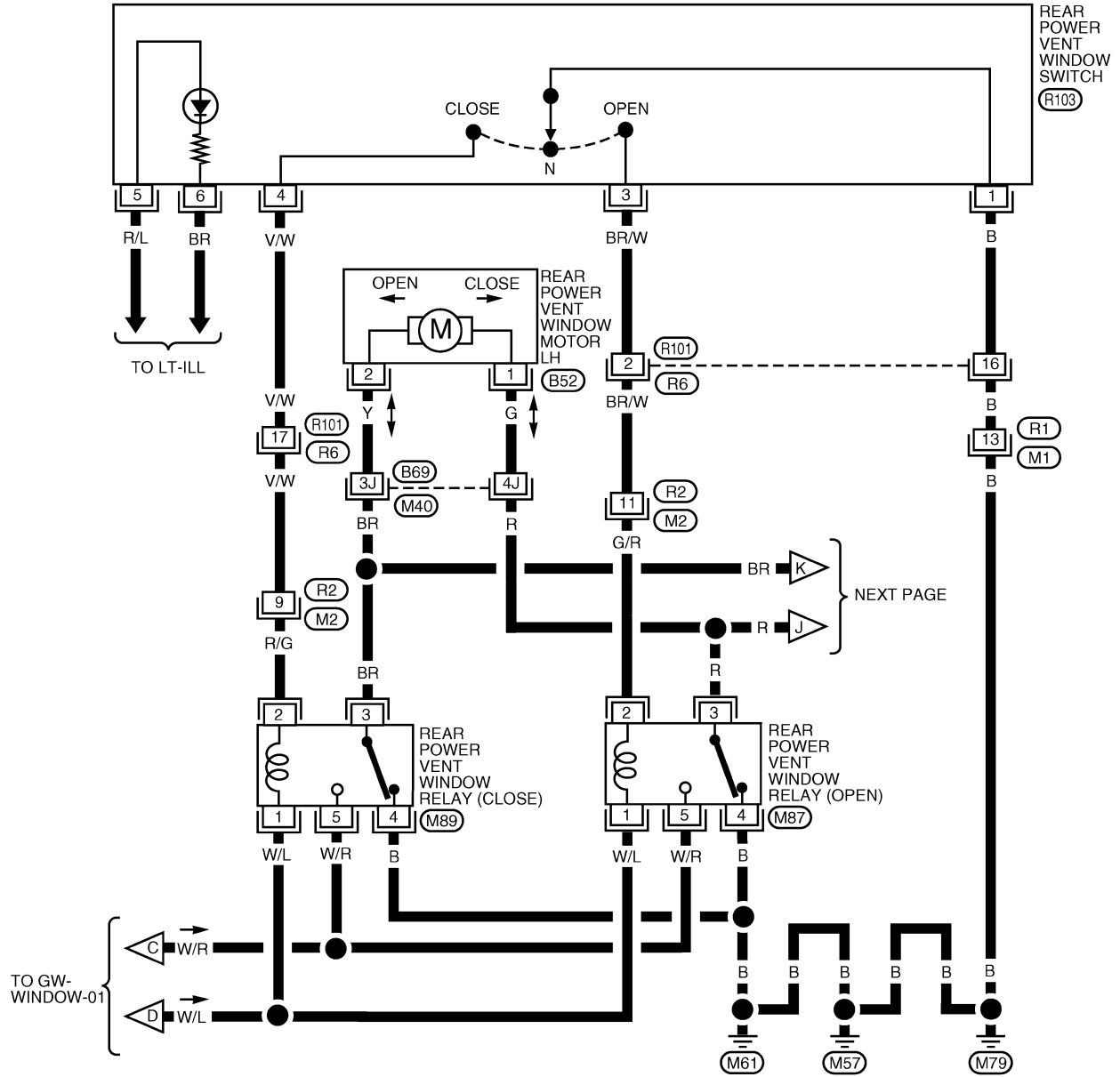
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REFER TO THE FOLLOWING.  
 (M36) - SUPER MULTIPLE JUNCTION (SMJ)

# POWER WINDOW SYSTEM

## GW-WINDOW-07

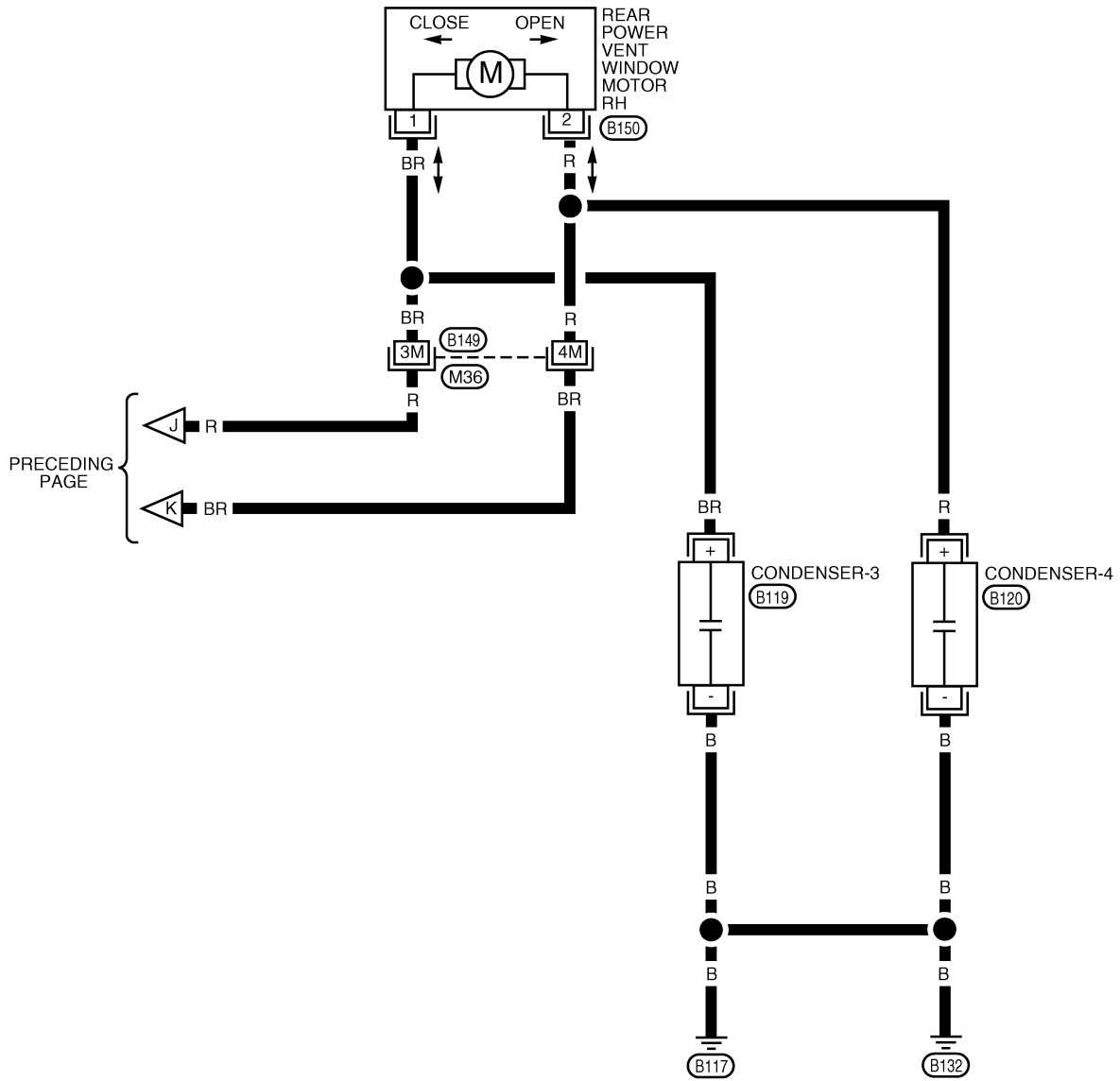


REFER TO THE FOLLOWING.  
 (M36), (M40) - SUPER MULTIPLE JUNCTION (SMJ)

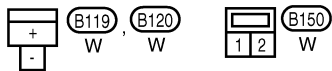
WIWA0217E

# POWER WINDOW SYSTEM

GW-WINDOW-08



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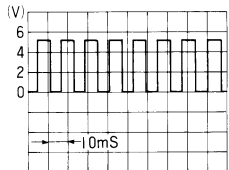
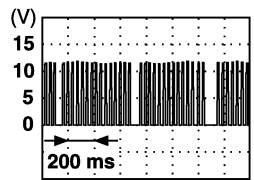
REFER TO THE FOLLOWING.  
**(M36)** - SUPER MULTIPLE JUNCTION (SMJ)

W1WA0218E

# POWER WINDOW SYSTEM

## Terminal and Reference Value for Main Power Window and Door Lock/Unlock Switch

EIS002UR

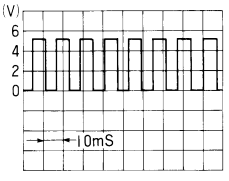
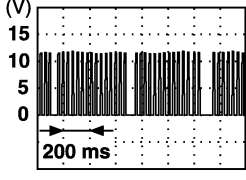
Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
2	W/B	Limit switch and encoder ground	—	0
4	L	Front door key cylinder switch LH lock signal	Key position (Neutral → Unlocked)	5 → 0
6	R	Front door key cylinder LH switch unlock signal	Key position (Neutral → Locked)	5 → 0
8	G/R	Front power window motor LH UP signal	When power window motor is operated UP	Battery voltage
9	O	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	W/L	RAP signal	When ignition switch ON	Battery voltage
			Within 45 seconds after ignition switch is turned to OFF	Battery voltage
			More than 45 seconds after ignition switch is turned to OFF	0
			When front door LH or RH open or power window timer operates	0
11	G/W	Front power window motor LH DOWN signal	When power window motor is operated DOWN	Battery voltage
13	G/Y	Encoder pulse signal	When power window motor operates	 <small>OCC3383D</small>
14	LG/W	Power window serial link	When ignition switch ON or power window timer operates	 <small>PIIA2344J</small>
15	BR	Encoder power supply	When ignition switch ON or power window timer operates	10
17	B	Ground	—	0
19	W/R	BAT power supply	—	Battery voltage

## Terminal and Reference Value for Power Window and Door Lock/Unlock Switch RH

EIS002US

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

# POWER WINDOW SYSTEM

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
8	L	Front power window motor RH UP signal	When power window motor is operated UP	Battery voltage
9	G	Front power window motor RH DOWN signal	When power window motor is operated DOWN	Battery voltage
10	W/R	BAT power supply	—	Battery voltage
11	B	Ground	—	0
12	G/Y	Encoder pulse signal	When power window motor operates	
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	LG/W	Power window serial link	When ignition switch is ON or power window timer operating	

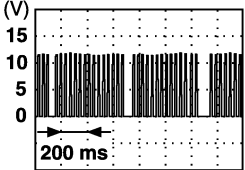
A  
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GW

# POWER WINDOW SYSTEM

## Terminal and Reference Value for BCM

EIS002UT

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
11	O	Ignition switch (ACC or ON)	Ignition switch (ACC or ON position)	Battery voltage
12	R/L	Front door switch RH signal	ON (Open)	Battery voltage
			OFF (Close)	0
22	W/V	Power window serial link	When ignition switch ON or power window timer operates	 PIIA2344J
38	W/L	Ignition switch (ON or START)	Ignition switch (ON or START position)	Battery voltage
47	SB	Front door switch LH signal	ON (Open)	Battery voltage
			OFF (Close)	0
67	B	Ground	—	0
68	W/L	RAP signal	When ignition switch ON	Battery voltage
			Within 45 seconds after ignition switch is turned to OFF	Battery voltage
			More than 45 seconds after igni- tion switch is turned to OFF	0
			When front door LH or RH is open or power window timer operates	0
69	W/R	Power window power supply	—	Battery voltage
70	W/B	BAT power supply	—	Battery voltage



# POWER WINDOW SYSTEM

## Work Flow

EIS002UU

1. Check the symptom and customer's requests.
2. Understand the outline of system. Refer to [GW-15, "System Description"](#) .
3. According to the trouble diagnosis chart, repair or replace the cause of the malfunction.  
Refer to [GW-36, "Trouble Diagnoses Symptom Chart"](#) .
4. Does power window system operate normally? Yes, GO TO 5, If No, GO TO 3.
5. INSPECTION END.

## CONSULT-II Function (BCM)

EIS002UV

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

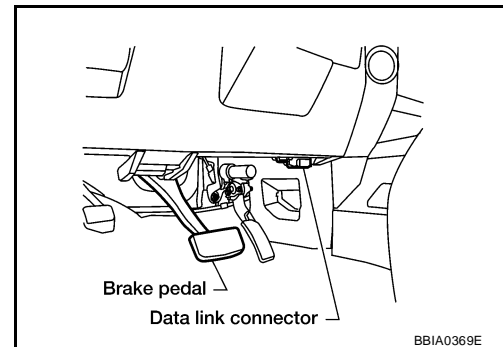
BCM diagnostic test item	Diagnostic mode	Content
Inspection by part	WORK SUPPORT	Changes setting of each function.
	DATA MONITOR	Displays BCM input/output data in real time.
	ACTIVE TEST	Operation of electrical loads can be checked by sending drive signal to them.
	SELF-DIAG RESULTS	Displays BCM self-diagnosis results.
	CAN DIAG SUPPORT MNTR	The results of transmit/receive diagnosis of CAN communication can be read.
	ECU PART NUMBER	BCM part number can be read.
	CONFIGURATION	Performs BCM configuration read/write functions.

## CONSULT-II INSPECTION PROCEDURE

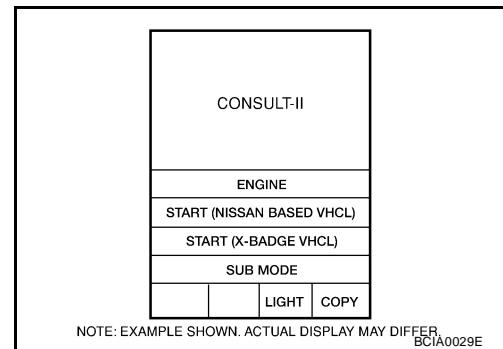
### CAUTION:

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. Connect CONSULT-II and CONSULT-II CONVERTER to the data link connector.

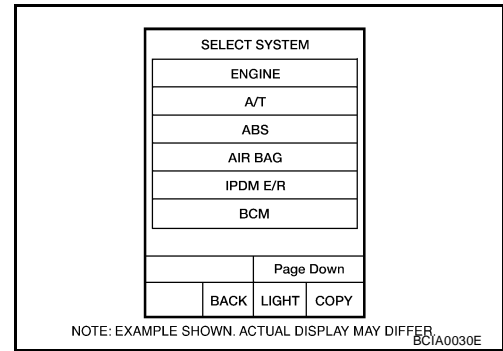


2. Turn ignition switch ON.
3. Touch "START (NISSAN BASED VHCL)".

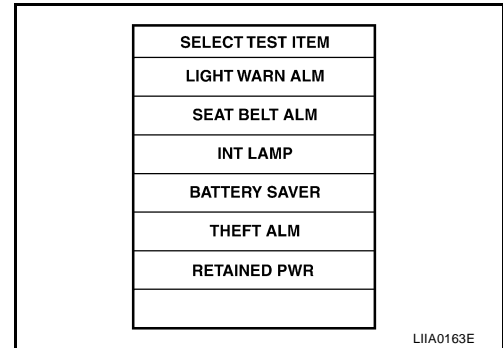


# POWER WINDOW SYSTEM

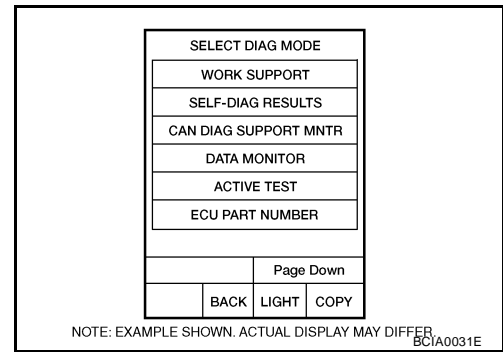
4. Touch "BCM".  
If "BCM" is not indicated, refer to [GI-39, "CONSULT-II Data Link Connector \(DLC\) Circuit"](#) .



5. Touch "RETAINED PWR".



6. Select diagnosis mode.  
"ACTIVE TEST", "WORK SUPPORT" and "DATA MONITOR" 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><b>NOTE:</b> 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"> <li>● MODE1 (45 sec.) / MODE2 (OFF) / MODE 3 (2 min.).</li> </ul>

## DATA MONITOR

Work item	Description
IGN ON SW	Indicates (ON / OFF) condition of ignition switch

# POWER WINDOW SYSTEM

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

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**GW**

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# POWER WINDOW SYSTEM

EIS002UW

## Trouble Diagnoses Symptom Chart

- 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	<a href="#">GW-38</a>
	2. Main power window and door lock/unlock power supply and ground circuit check	<a href="#">GW-39</a>
	3. Power window serial link check front LH and RH	<a href="#">GW-40</a>
Front power window LH alone does not operate	1. Main power window and door lock/unlock power supply and ground circuit check	<a href="#">GW-39</a>
	2. Front power window motor LH circuit check	<a href="#">GW-41</a>
	3. Replace main power window and door lock/unlock switch	<a href="#">EI-31</a>
Front power window RH alone does not operate	1. Power window and door lock/unlock switch RH power supply and ground circuit check	<a href="#">GW-40</a>
	2. Power window serial link check front LH and RH	<a href="#">GW-54</a>
	3. Front power window motor RH circuit check	<a href="#">GW-42</a>
	4. Replace BCM	<a href="#">BCS-19</a>
Rear power window LH alone does not operate	1. Rear power window control unit LH or RH power supply and ground circuit check	<a href="#">GW-56</a>
	2. Rear power window switch LH or RH power supply and ground circuit check	<a href="#">GW-58</a>
	3. Rear power window motor LH circuit check	<a href="#">GW-58</a>
	4. Power window serial link check rear LH and RH	<a href="#">GW-64</a>
	5. Replace BCM	<a href="#">BCS-19</a>
Rear power window RH alone does not operate	1. Rear power window control unit LH or RH power supply and ground circuit check	<a href="#">GW-56</a>
	2. Rear power window switch LH or RH power supply and ground circuit check	<a href="#">GW-58</a>
	3. Rear power window motor RH circuit check	<a href="#">GW-59</a>
	4. Power window serial link check rear LH and RH	<a href="#">GW-64</a>
	5. Replace BCM	<a href="#">BCS-19</a>
Rear power vent windows do not operate	1. Rear power vent window switch circuit check	<a href="#">GW-65</a>
Rear power vent window LH alone does not operate	1. Rear power vent window motor LH circuit check	<a href="#">GW-65</a>
Rear power vent window RH alone does not operate	1. Rear power vent window motor RH circuit check	<a href="#">GW-66</a>
Rear power vent windows do not open	1. Rear power vent window relay (OPEN) check	<a href="#">GW-65</a>
Rear power vent windows do not close	1. Rear power vent window relay (CLOSE) check	<a href="#">GW-65</a>

# POWER WINDOW SYSTEM

Symptom	Repair order	Refer to page	
Anti-pinch system does not operate normally (Front LH)	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 not enough.	—	A B
	2. Limit switch adjusting	<a href="#">GW-71</a>	C
	3. Limit switch circuit check front LH	<a href="#">GW-43</a>	
	4. Encoder circuit check front LH	<a href="#">GW-46</a>	
Anti-pinch system does not operate normally (Front RH)	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 not enough.	—	D E
	2. Limit switch adjusting	<a href="#">GW-71</a>	
	3. Limit switch circuit check front RH	<a href="#">GW-44</a>	F
	4. Encoder circuit check front RH	<a href="#">GW-48</a>	
Anti-pinch system does not operate normally (Rear LH)	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 not enough.	—	G H
	2. Limit switch adjusting	<a href="#">GW-72</a>	
	3. Limit switch circuit check rear LH or RH	<a href="#">GW-60</a>	GW
	4. Encoder circuit check rear LH or RH	<a href="#">GW-62</a>	
Anti-pinch system does not operate normally (Rear RH)	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 not enough.	—	J K
	2. Limit switch adjusting	<a href="#">GW-72</a>	
	3. Limit switch circuit check rear LH or RH	<a href="#">GW-60</a>	L
	4. Encoder circuit check rear LH or RH	<a href="#">GW-62</a>	
Power window retained power operation does not operate properly	1. Check the retained power operation mode setting.	<a href="#">GW-34</a>	M
	2. Door switch check	<a href="#">GW-50</a>	
	3. Replace BCM.	<a href="#">BCS-19</a>	
Power windows do not operate by key cylinder switch LH	1. Door key cylinder switch LH check	<a href="#">GW-52</a>	
	2. Replace main power window and door lock/unlock switch	<a href="#">EI-31</a>	
Power window lock switch does not function	1. Power window lock switch circuit check	<a href="#">GW-54</a>	

# POWER WINDOW SYSTEM

EIS002UX

## BCM Power Supply and Ground Circuit Check

### 1. CHECK FUSE AND FUSIBLE LINK

Check 50A fusible link (letter **f** located in the fuse and fusible link box).  
Check 10A fuse (No. 59, located in the fuse and relay box).

#### NOTE:

Refer to [GW-15, "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, "PRECAUTIONS"](#) .

### 2. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch ON.
2. Check voltage between BCM connector M18, M20 terminals 11, 38, 70 and ground.

**11 (O) - Ground : Battery voltage**

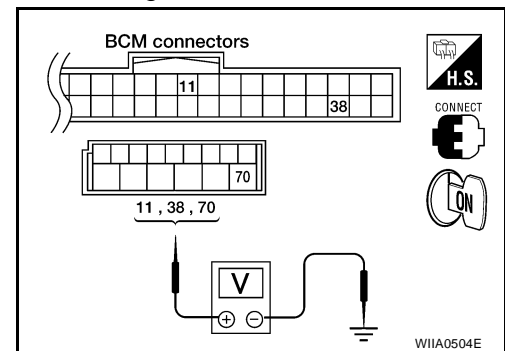
**38 (W/L) - Ground : Battery voltage**

**70 (W/B) - Ground : Battery voltage**

#### OK or NG

OK >> GO TO 3.

NG >> Repair or replace harness.



### 3. CHECK GROUND CIRCUIT

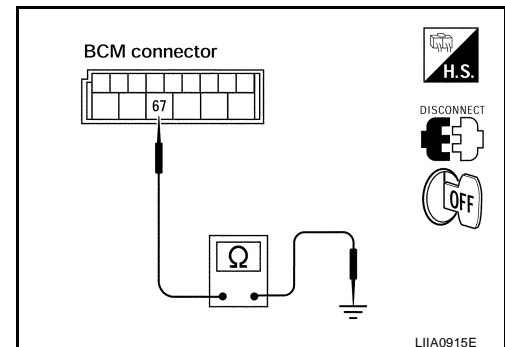
1. Turn ignition switch OFF.
2. Disconnect BCM.
3. Check continuity between BCM connector M20 terminal 67 and ground.

**67 (B) - Ground : Continuity should exist.**

#### OK or NG

OK >> Power supply and ground circuit is OK.

NG >> Repair or replace harness.



# POWER WINDOW SYSTEM

## Main Power Window and Door Lock/Unlock Switch Power Supply and Ground Circuit Check

EIS002UY

### 1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch ON.
2. Check voltage between main power window and door lock/unlock switch connector D7 terminal 10, D8 terminal 19 and ground.

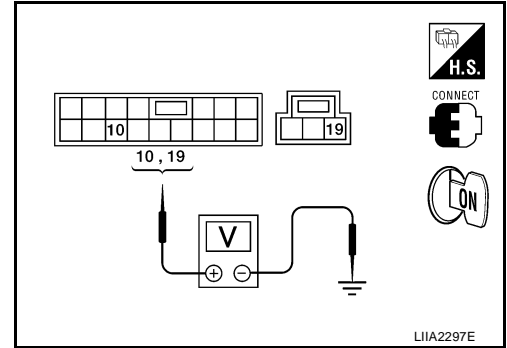
**10 (W/L) - Ground : Battery voltage**

**19 (W/R) - Ground : Battery voltage**

OK or NG

OK >> GO TO 2.

NG >> GO TO 3.



### 2. CHECK GROUND CIRCUIT

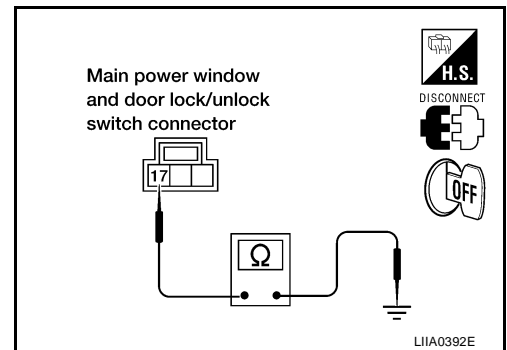
1. Turn ignition switch OFF.
2. Disconnect main power window and door lock/unlock switch.
3. Check continuity between main power window and door lock/unlock switch connector D8 terminal 17 and ground.

**17 (B) - Ground : Continuity should exist.**

OK or NG

OK >> Power supply and ground circuit are OK.

NG >> Repair or replace harness.



### 3. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM.
3. Check continuity between BCM connector M20 terminals 68, 69 and main power window and door lock/unlock switch connector D7 terminal 10 and D8 terminal 19.

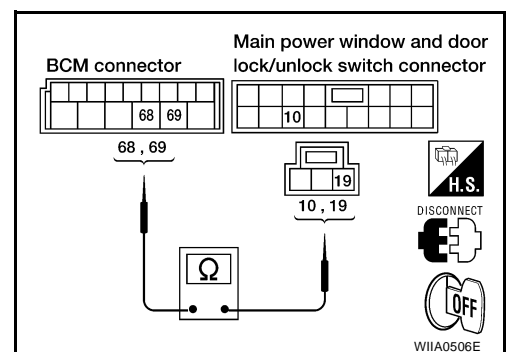
**68 (W/L) - 10 (W/L) : Continuity should exist.**

**69 (W/R) - 19 (W/R) : Continuity should exist.**

OK or NG

OK >> GO TO 4.

NG >> Repair or replace harness.



# POWER WINDOW SYSTEM

## 4. CHECK BCM OUTPUT SIGNAL

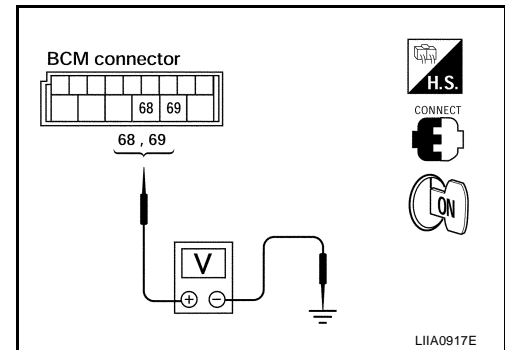
1. Connect BCM.
2. Turn ignition switch ON.
3. Check voltage between BCM connector M20 terminals 68, 69 and ground.

**68 (W/L) - Ground : Battery voltage**

**69 (W/R) - Ground : Battery voltage**

OK or NG

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



## Power Window and Door Lock/Unlock Switch RH Power Supply and Ground Circuit Check

EIS002UZ

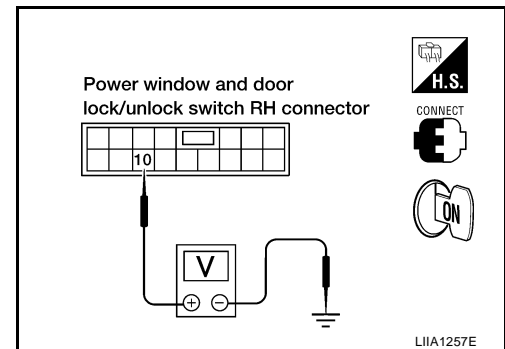
### 1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch ON.
2. Check voltage between power window and door lock/unlock switch RH connector D105 terminal 10 and ground.

**10 (W/R) - Ground : Battery voltage**

OK or NG

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



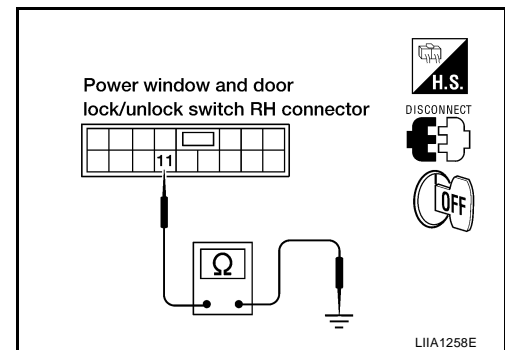
### 2. CHECK GROUND CIRCUIT

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

**11 (B) - Ground : Continuity should exist.**

OK or NG

- OK >> Power supply and ground circuit are OK.  
NG >> Repair or replace harness.





# POWER WINDOW SYSTEM

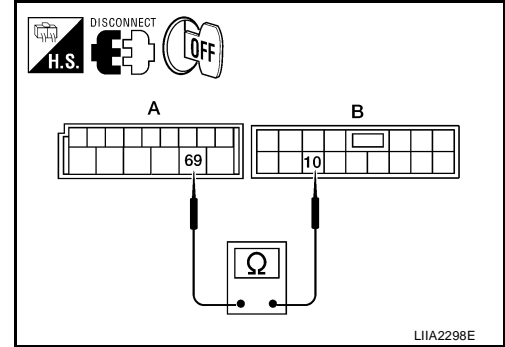
## 3. CHECK POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM.
3. Check continuity between BCM connector (A) M20 terminal 69 and power window and door lock/unlock switch RH connector (B) D105 terminal 10.

**69 (W/R) - 10 (W/R) : Continuity should exist.**

OK or NG

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



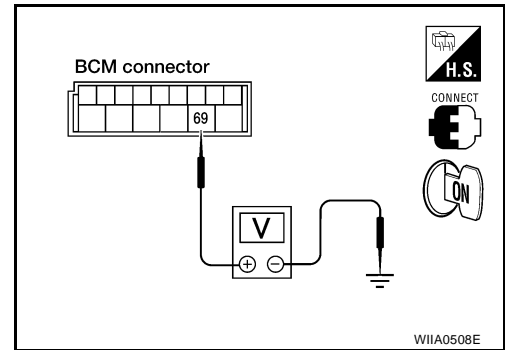
## 4. CHECK BCM OUTPUT SIGNAL

1. Connect BCM.
2. Turn ignition switch ON.
3. Check voltage between BCM connector M20 terminal 69 and ground.

**69 (W/R) - Ground : Battery voltage**

OK or NG

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



## Front Power Window Motor LH Circuit Check

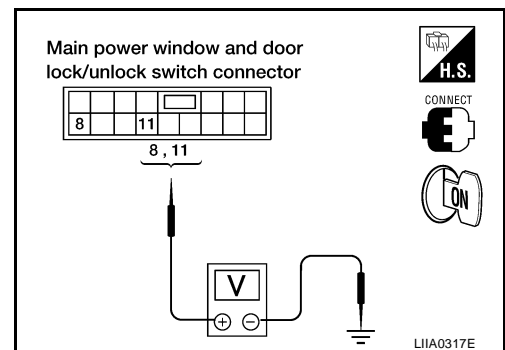
### 1. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL

1. Turn ignition switch ON.
2. Check voltage between main power window and door lock/unlock switch connector D7 terminals 8, 11 and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
D7	8 (G/R)	Ground	UP	Battery voltage
			DOWN	0
	11 (G/W)		UP	0
			DOWN	Battery voltage

OK or NG

- OK >> GO TO 2.  
 NG >> Replace main power window and door lock/unlock switch.



# POWER WINDOW SYSTEM

## 2. CHECK POWER WINDOW MOTOR CIRCUIT

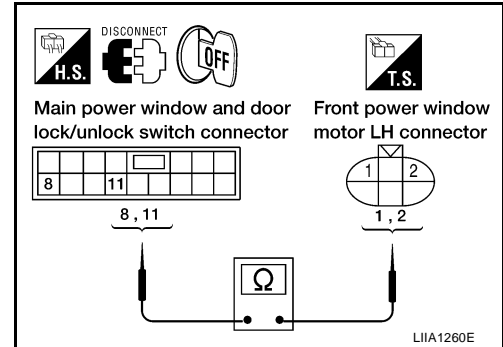
1. Turn ignition switch OFF.
2. Disconnect main power window and door lock/unlock switch and front power window motor LH.
3. Check continuity between main power window and door lock/unlock switch connector D7 terminals 8, 11 and front power window motor LH connector D9 terminal 1, 2.

**8 (G/R) - 2 (G/R) : Continuity should exist.**

**11 (G/W) - 1 (G/W) : Continuity should exist.**

OK or NG

- OK >> Replace front power window motor LH.  
 NG >> Repair or replace harness.



## Front Power Window Motor RH Circuit Check

EIS002V1

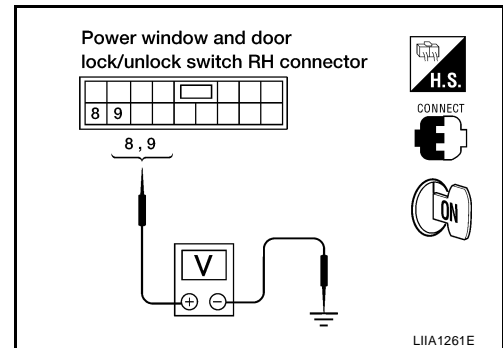
### 1. CHECK POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH OUTPUT SIGNAL

1. Connect power window and door lock/unlock switch RH.
2. Turn ignition switch ON.
3. Check voltage between power window and door lock/unlock switch RH connector D105 terminals 8, 9 and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
D105	9 (G)	Ground	UP	0
			DOWN	Battery voltage
	8 (L)		UP	Battery voltage
			DOWN	0

OK or NG

- OK >> GO TO 2.  
 NG >> Replace power window and door lock/unlock switch RH.



## 2. CHECK FRONT POWER WINDOW MOTOR RH CIRCUIT

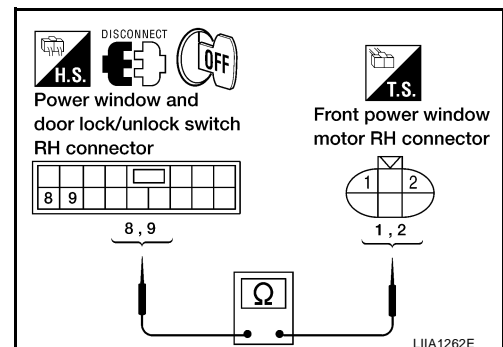
1. Turn ignition switch OFF.
2. Disconnect front power window motor RH and power window and door lock/unlock switch RH.
3. Check continuity between power window and door lock/unlock switch RH connector D105 terminals 8, 9 and front power window motor RH connector D104 terminals 1, 2.

**8 (L) - 2 (L) : Continuity should exist.**

**9 (G) - 1 (G) : Continuity should exist.**

OK or NG

- OK >> Replace front power window motor RH.  
 NG >> Repair or replace harness.



# POWER WINDOW SYSTEM

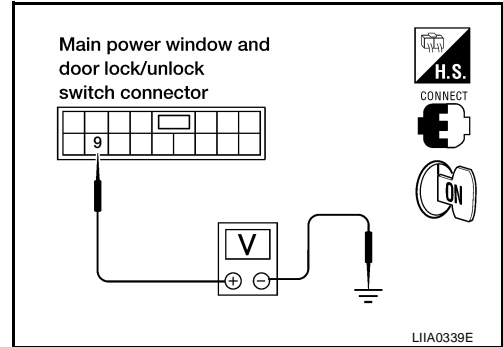
EIS002V2

## Limit Switch Circuit Check Front LH

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

1. Turn ignition switch ON.
2. Check voltage between main power window and door lock/unlock switch connector D7 terminal 9 and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
D7	9 (O)	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 switch circuit is OK.  
 NG >> GO TO 2.

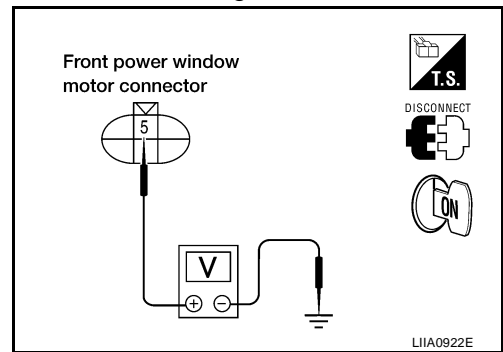
### 2. CHECK FRONT POWER WINDOW MOTOR LH LIMIT SIGNAL

1. Disconnect front power window motor LH.
2. Check voltage between front power window motor LH connector D9 terminal 5 and ground.

**5 (O) - Ground : Approx. 5V**

OK or NG

- OK >> GO TO 3.  
 NG >> GO TO 5.



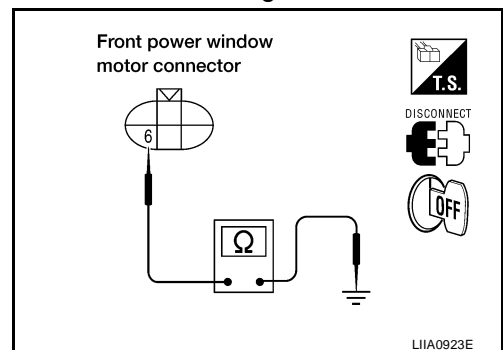
### 3. CHECK LIMIT SWITCH GROUND CIRCUIT

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

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

OK or NG

- OK >> Replace front power window motor LH.  
 NG >> GO TO 4.



# POWER WINDOW SYSTEM

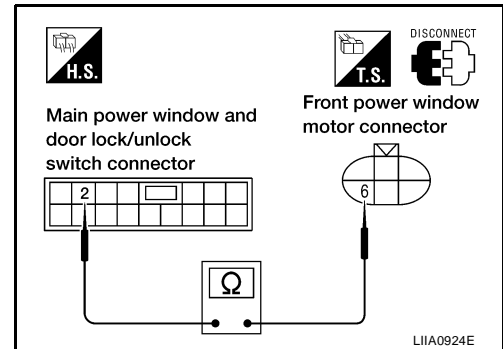
## 4. CHECK HARNESS CONTINUITY

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

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

### OK or NG

- OK >> Replace main power window and door lock/unlock switch.  
 NG >> Repair or replace harness.



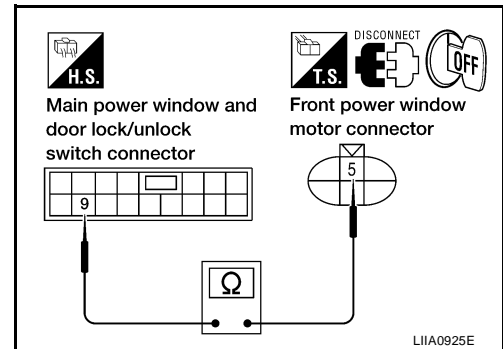
## 5. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect main power window and door lock/unlock switch.
3. Check continuity between front power window motor LH connector D9 terminal 5 and main power window and door lock/unlock switch connector D7 terminal 9.

**5 (O) - 9 (O) : Continuity should exist.**

### OK or NG

- OK >> Replace main power window and door lock/unlock switch.  
 NG >> Repair or replace harness.



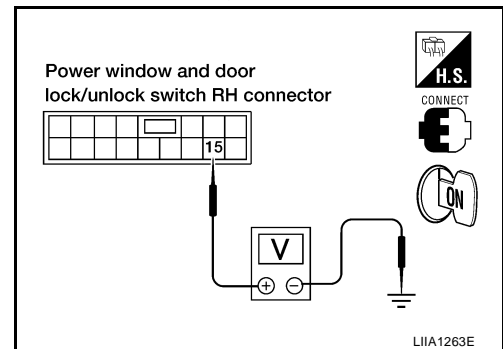
## Limit Switch Circuit Check Front RH

EIS002V3

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

1. Turn ignition switch ON.
2. Check voltage between power window motor RH connector D105 terminal 15 and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
D105	15 (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 switch circuit is OK.  
 NG >> GO TO 2.

# POWER WINDOW SYSTEM

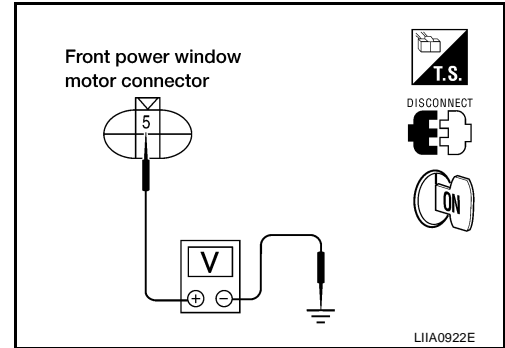
## 2. CHECK FRONT POWER WINDOW MOTOR RH LIMIT SIGNAL

1. Disconnect front power window motor RH.
2. Check voltage between front power window motor RH connector D104 terminal 5 and ground.

**5 (G/W) - Ground : Approx. 5V**

OK or NG

- OK >> GO TO 3.  
NG >> GO TO 5.



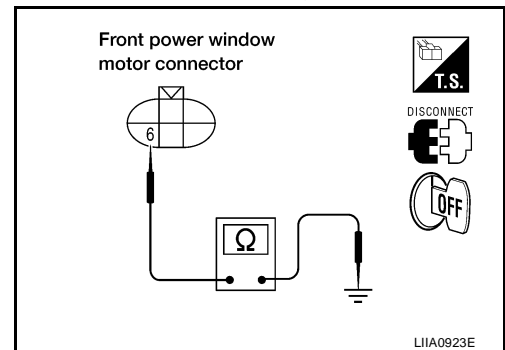
## 3. CHECK LIMIT SWITCH GROUND CIRCUIT

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

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

OK or NG

- OK >> Replace front power window motor RH.  
NG >> GO TO 4.



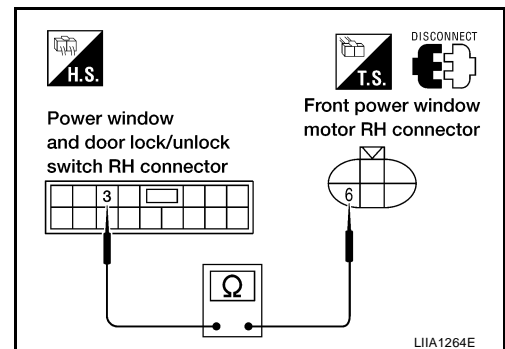
## 4. CHECK HARNESS CONTINUITY

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

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

OK or NG

- OK >> Replace power window and door lock/unlock switch RH.  
NG >> Repair or replace harness.



# POWER WINDOW SYSTEM

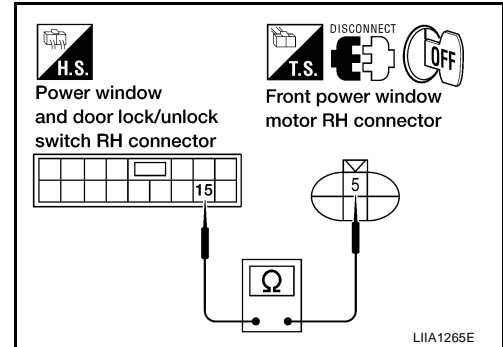
## 5. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect power window and door lock/unlock switch RH.
3. Check continuity between power window and door lock/unlock switch RH connector D105 terminal 15 and front power window motor RH connector D104 terminal 5.

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

### OK or NG

- OK >> Replace power window and door lock/unlock switch RH.  
NG >> Repair or replace harness.



## Encoder Circuit Check Front LH

EIS002V4

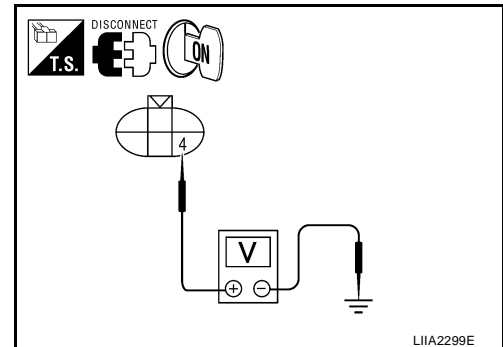
### 1. CHECK FRONT POWER WINDOW MOTOR LH POWER SUPPLY

1. Turn ignition switch OFF.
2. Disconnect front power window motor LH.
3. Turn ignition switch ON.
4. Check voltage between front power window motor LH connector D9 terminal 4 and ground.

**4 (BR) - Ground : Approx. 10V**

### OK or NG

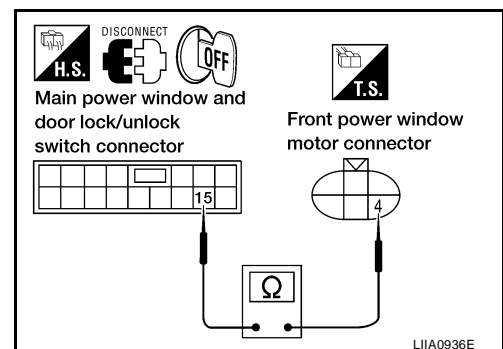
- OK >> GO TO 3.  
NG >> GO TO 2.



### 2. CHECK HARNESS CONTINUITY

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

**4 (BR) - 15 (BR) : Continuity should exist.**



### OK or NG

- OK >> Replace main power window and door lock/unlock switch.  
NG >> Repair or replace harness.

# POWER WINDOW SYSTEM

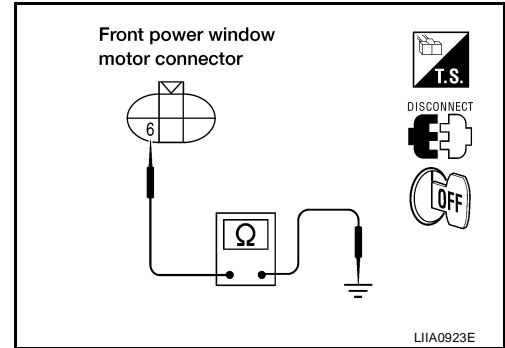
## 3. CHECK ENCODER GROUND

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

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

OK or NG

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



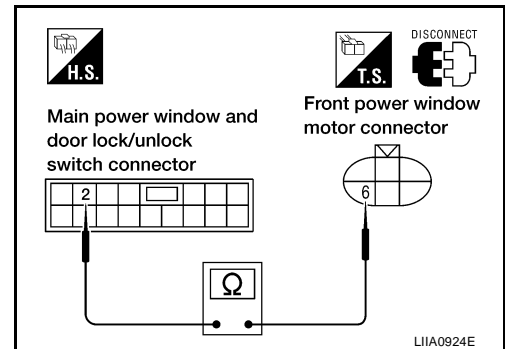
## 4. CHECK ENCODER GROUND CIRCUIT

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

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

OK or NG

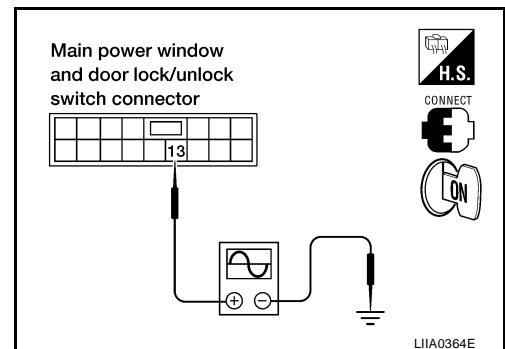
- OK >> Replace main power window and door lock/unlock switch.  
 NG >> Repair or replace harness.



## 5. CHECK ENCODER SIGNAL

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

Connector	Terminals (Wire color)		Condition	Signal
	(+)	(-)		
D7	13 (G/Y)	Ground	Opening	<p>OCC3383D</p>



OK or NG

- OK >> Replace main power window and door lock/unlock switch.  
 NG >> GO TO 6.

# POWER WINDOW SYSTEM

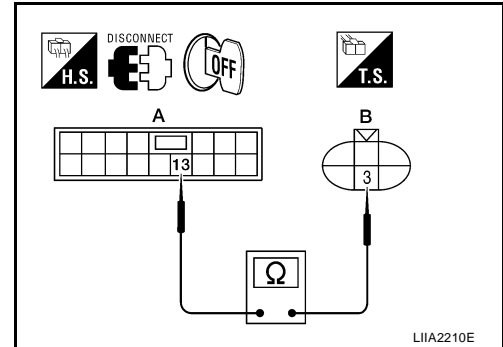
## 6. CHECK ENCODER CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect front power window motor LH and main power window and door lock/unlock switch.
3. Check continuity between front power window motor LH connector (B) D9 terminal 3 and main power window and door lock/unlock switch connector (A) D7 terminal 13.

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

### OK or NG

- OK >> Replace front power window motor LH.  
NG >> Repair or replace harness.



EIS002V5

## Encoder Circuit Check Front RH

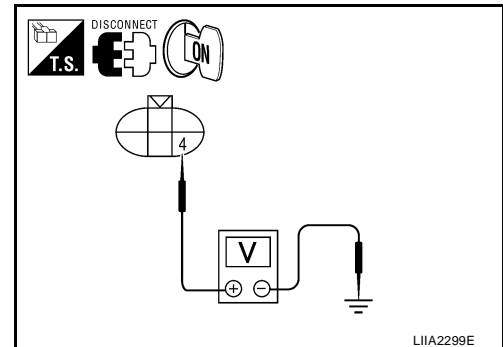
### 1. CHECK POWER WINDOW MOTOR RH POWER SUPPLY

1. Turn ignition switch OFF.
2. Disconnect front power window motor RH.
3. Turn ignition switch ON.
4. Check voltage between front power window motor RH connector D104 terminal 4 and ground.

**4 (G/R) - Ground : Approx. 10V**

### OK or NG

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



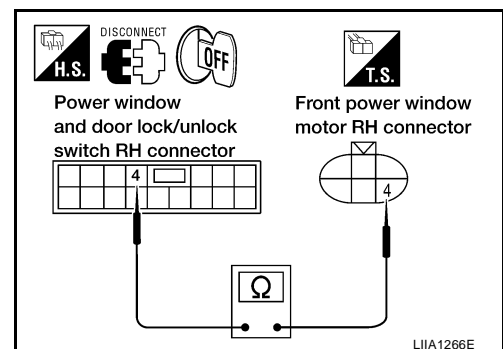
### 2. CHECK HARNESS CONTINUITY

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

**4 (G/R) - 4 (G/R) : Continuity should exist.**

### OK or NG

- OK >> Replace power window and door lock/unlock switch RH.  
NG >> Repair or replace harness.





# POWER WINDOW SYSTEM

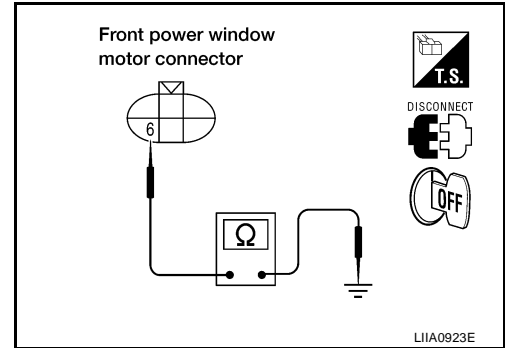
## 3. CHECK ENCODER GROUND

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

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

OK or NG

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



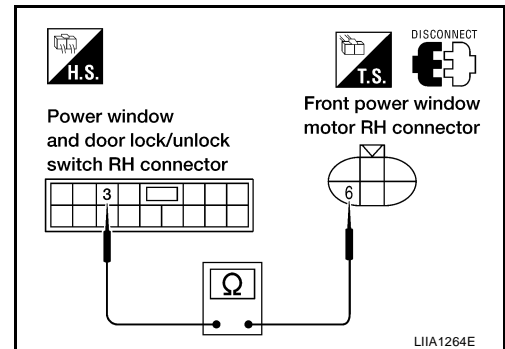
## 4. CHECK ENCODER GROUND CIRCUIT

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

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

OK or NG

- OK >> Replace power window and door lock/unlock switch RH.  
 NG >> Repair or replace harness.



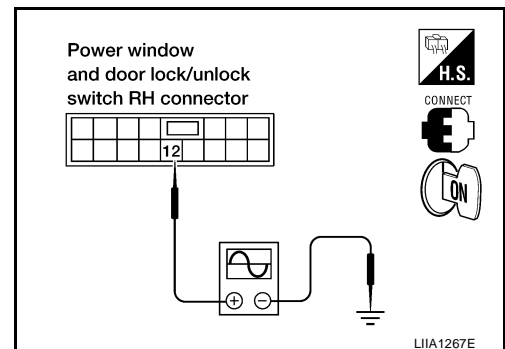
## 5. CHECK ENCODER SIGNAL

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

Connector	Terminals (Wire color)		Condition	Signal
	(+)	(-)		
D105	12 (G/Y)	Ground	Opening	<p>OCC3383D</p>

OK or NG

- OK >> Replace power window and door lock/unlock switch RH.  
 NG >> GO TO 6.



# POWER WINDOW SYSTEM

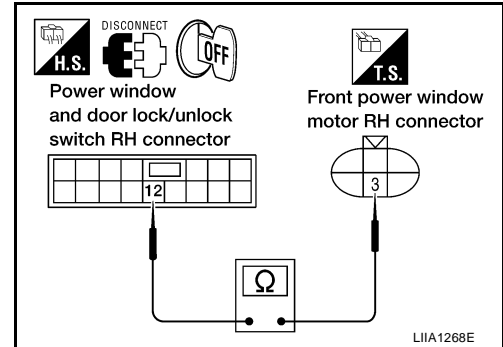
## 6. CHECK ENCODER CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect front power window motor RH and power window and door lock/unlock switch RH.
3. Check continuity between front power window motor RH connector D104 terminal 3 and power window and door lock/unlock switch RH connector D105 terminal 12.

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

OK or NG

- OK >> Replace front power window motor RH.  
 NG >> Repair or replace harness.



EIS002V6

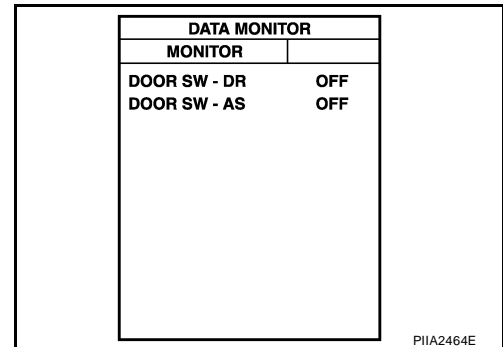
## Door Switch Check

### 1. CHECK FRONT DOOR SWITCH INPUT SIGNAL

**With CONSULT-II**

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

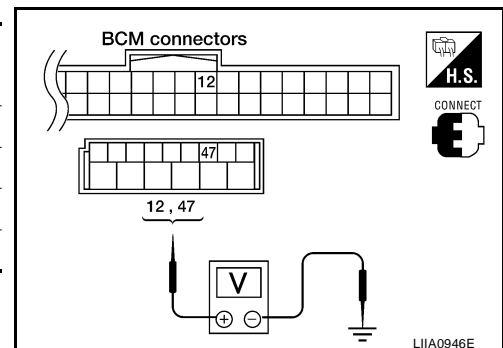
Monitor item	Condition
DOOR SW-DR	OPEN : ON
	CLOSE : OFF
DOOR SW-AS	OPEN : ON
	CLOSE : OFF



**Without CONSULT-II**

Check voltage between BCM connector and ground.

Item	Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
		(+)	(-)		
Front RH	M18	12 (R/L)	Ground	OPEN	0
				CLOSE	Battery voltage
Front LH	M19	47 (SB)	Ground	OPEN	0
				CLOSE	Battery voltage



OK or NG

- OK >> Front door switch is OK.  
 NG >> GO TO 2.

# POWER WINDOW SYSTEM

## 2. CHECK FRONT DOOR SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect front door switch LH or RH and BCM.
3. Check continuity between front door switch connector B8 (LH) or B108 (RH) terminal 2 and BCM connector M19 terminal 47 (LH) or connector M18 terminal 12 (LH).

### Front LH

**2 (SB) - 47 (SB) : Continuity should exist.**

### Front RH

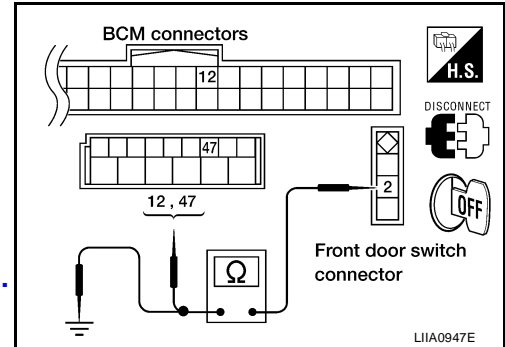
**2 (R/L) - 12 (R/L) : Continuity should exist.**

4. Check continuity between front door switch connector B8 (LH) or B108 (RH) terminal 2 and ground.

**2 (SB or R/L) - Ground : Continuity should not exist.**

### OK or NG

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



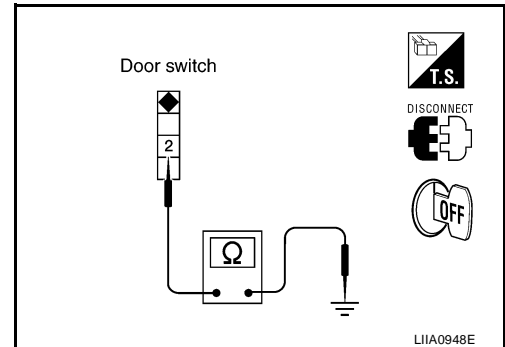
## 3. CHECK DOOR SWITCH

Check continuity between each front door switch terminal 2 and body ground part of front door switch.

Terminal	Body ground part of front door switch	Door switch	Continuity
2		Pushed	No
		Released	Yes

### OK or NG

- OK >> Replace BCM.  
NG >> Replace malfunctioning front door switch.



# POWER WINDOW SYSTEM

EIS002V7

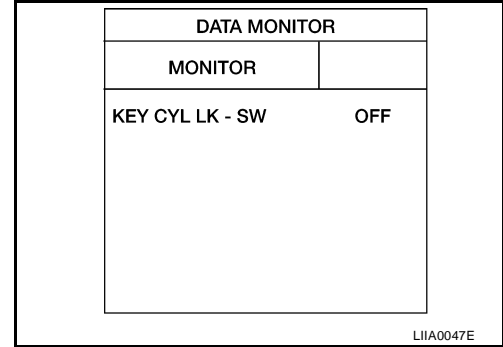
## Front Door Lock Assembly LH (Key Cylinder Switch) Check

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

④ With CONSULT-II

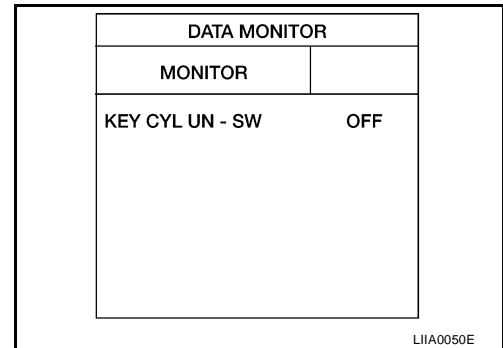
- Check front door lock assembly LH (key cylinder switch) ("KEY CYL LK SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYSTEM" with CONSULT-II. Refer to [GW-34, "DATA MONITOR"](#).

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



- Check front door lock assembly LH (key cylinder switch) ("KEY CYL UN-SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYSTEM" with CONSULT-II. Refer to [GW-34, "DATA MONITOR"](#).

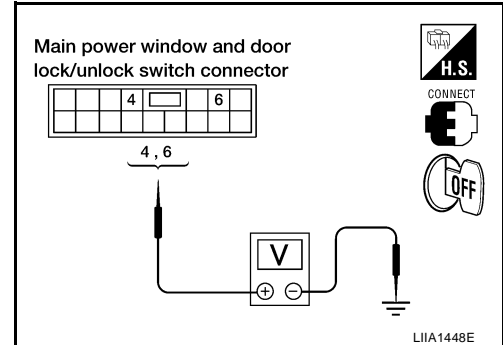
**"KEY CYL UN-SW" should be "ON" when key inserted in door key cylinder is turned to unlock.**



⊗ Without CONSULT-II

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

Connector	Terminals (Wire color)		Key position	Voltage (V) (Approx.)
	(+)	(-)		
D7	6 (R)	Ground	Neutral / Unlock	5
			Lock	0
	4 (L)		Neutral / Lock	5
			Unlock	0



OK or NG

- OK >> Front door lock assembly LH (key cylinder switch) is OK.
- NG >> GO TO 2.

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

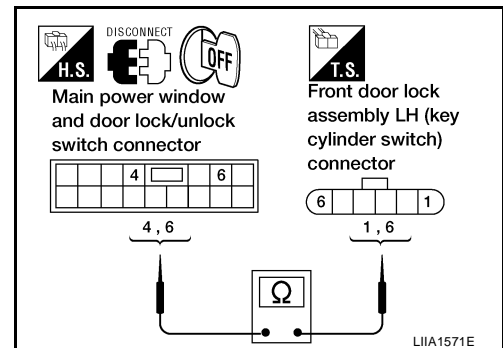
- Turn ignition switch OFF.
- Disconnect main power window and door lock/unlock switch and front door lock assembly (key cylinder switch).
- Check continuity between main power window and door lock/unlock switch connector D7 terminals 4, 6 and front door lock assembly LH (key cylinder switch) connector D14 terminals 1, 6.

**6 (R) - 6 (R) : Continuity should exist.**

**4 (L) - 1 (L) : Continuity should exist.**

OK or NG

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



# POWER WINDOW SYSTEM

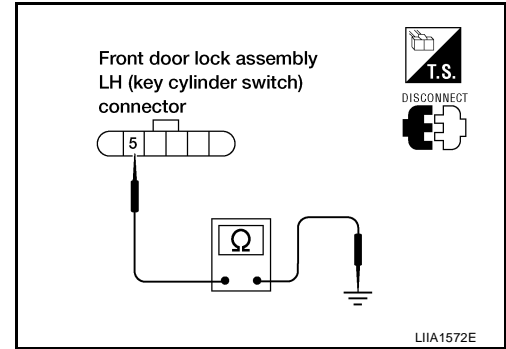
## 3. CHECK FRONT DOOR LOCK ASSEMBLY LH (KEY CYLINDER SWITCH) GROUND

Check continuity between front door lock assembly LH (key cylinder switch) connector D14 terminal 5 and ground.

**5 (B) - Ground : Continuity should exist.**

OK or NG

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



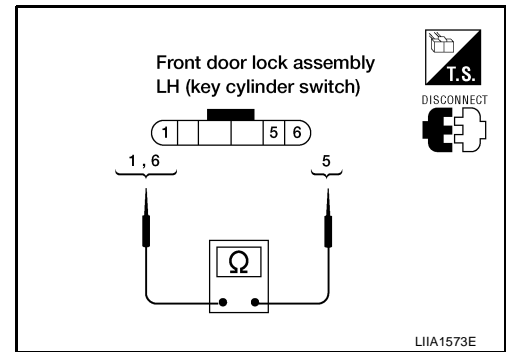
## 4. CHECK FRONT DOOR LOCK ASSEMBLY LH (KEY CYLINDER SWITCH)

Check continuity between front door lock assembly LH (key cylinder switch) terminals 1, 6 and 5.

Terminals	Key position	Continuity
6	Neutral / Unlock	No
	Lock	Yes
1	Neutral / Lock	No
	Unlock	Yes

OK or NG

- OK >> Replace main power window and door lock/unlock switch.
- NG >> Replace front door lock assembly LH (key cylinder switch).



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

GW

# POWER WINDOW SYSTEM

EIS002 V8

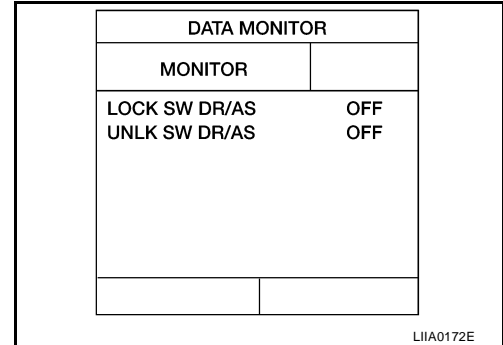
## Power Window Serial Link Check Front LH and RH

### 1. CHECK SERIAL LINK OUTPUT SIGNAL

#### With CONSULT-II

Check door lock and unlock switch ("LOCK SW DR/AS", "UNLK SW DR/AS") in DATA MONITOR mode for "MULTI REMOTE ENT" with CONSULT-II. Refer to [GW-34, "DATA MONITOR"](#) .

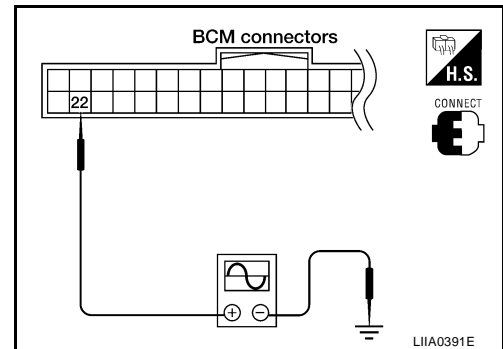
- When door lock and unlock switch is turned to LOCK  
**LOCK SW DR/AS : ON**
- When door lock and unlock switch is turned to UNLOCK  
**UNLK SW DR/AS : ON**



#### 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 (front LH and front RH) 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 (front LH and front RH) is turned "LOCK" or "UNLOCK".

Connector	Terminals (Wire color)		Signal
	(+)	(-)	
M18	22 (W/V)	Ground	<p>PIIA2344E</p>



OK or NG

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

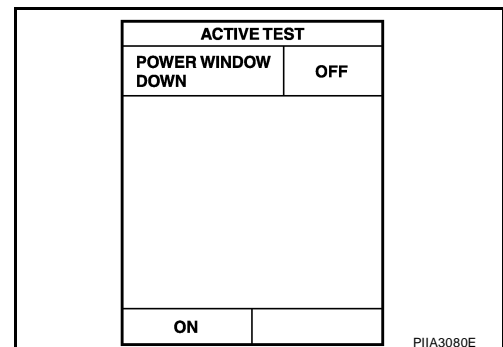
### 2. CHECK BCM OUTPUT SIGNAL

Check power window serial link ("POWER WINDOW DOWN") in "ACTIVE TEST" mode with CONSULT-II. Refer to [GW-34, "ACTIVE TEST"](#) .

When "ACTIVE TEST" is executed, is the window of driver side and passenger side lowered?

YES or NO

- YES >> Further inspection is necessary. Refer to [GW-36, "Trouble Diagnoses Symptom Chart"](#) .
- NO >> Replace BCM.

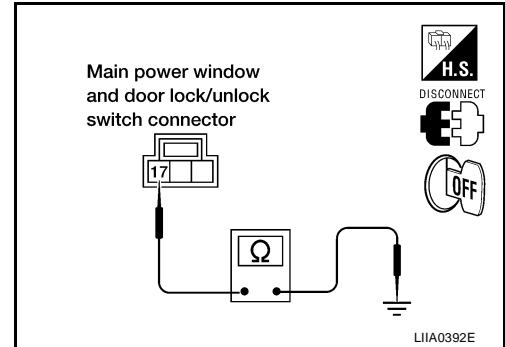


# POWER WINDOW SYSTEM

## 3. CHECK POWER WINDOW SWITCH GROUND

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

**17 (B) - Ground : Continuity should exist.**

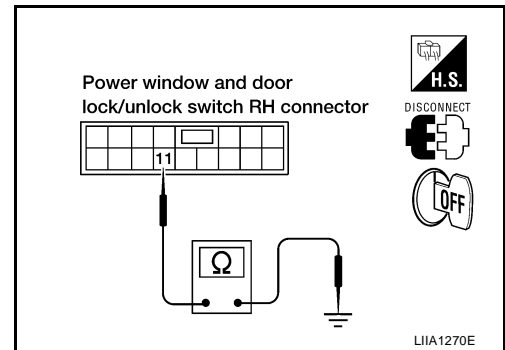


4. Check continuity between power window and door lock/unlock switch RH connector D105 terminal 11 and ground.

**11 (B) - Ground : Continuity should exist.**

OK or NG

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

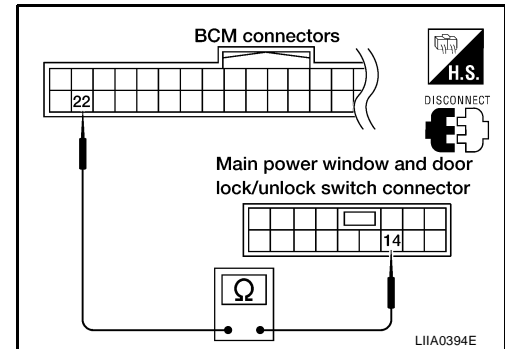


# POWER WINDOW SYSTEM

## 4. CHECK POWER WINDOW SERIAL LINK CIRCUIT

1. Disconnect BCM.
2. Check continuity between BCM connector M18 terminal 22 and main power window and door lock/unlock switch connector D7 terminal 14.

**22 (W/V) - 14 (LG/W) : Continuity should exist.**



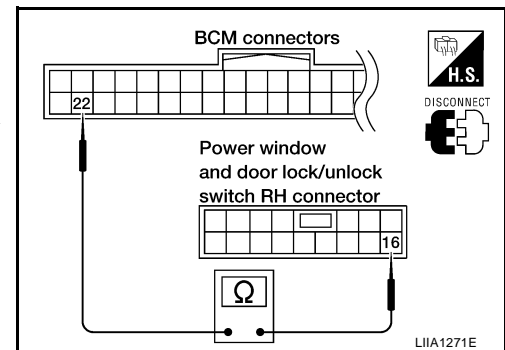
3. Check continuity between BCM connector M18 terminal 22 and power window and door lock/unlock switch RH connector D105 terminal 16.

**22 (W/V) - 16 (LG/W) : Continuity should exist.**

OK or NG

OK >> Replace main power window and door lock/unlock switch or power window and door lock/unlock switch RH.

NG >> Repair or replace harness.



## Rear Power Window Control Unit LH or RH Power Supply and Ground Circuit Check

EIS0038W

### 1. CHECK POWER WINDOW POWER SUPPLY CIRCUIT

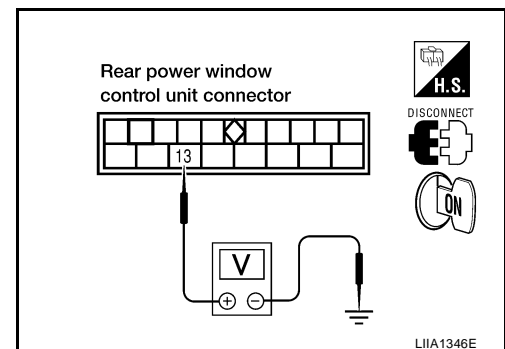
1. Disconnect rear power window control unit LH or RH.
2. Turn ignition switch ON.
3. Check voltage between rear power window control unit LH or RH connector D209 (LH), D309 (RH) terminal 13 and ground.

**13 (W/R) - Ground : Battery voltage**

OK or NG

OK >> GO TO 2

NG >> GO TO 3





# POWER WINDOW SYSTEM

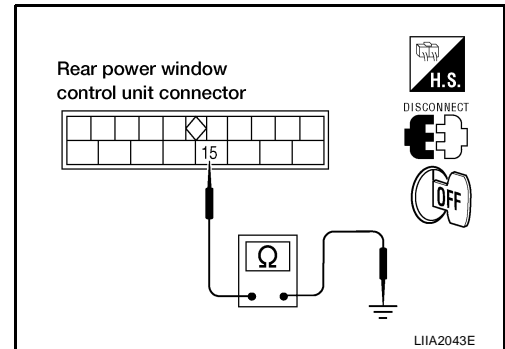
## 2. CHECK POWER WINDOW GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between rear power window control unit LH or RH connector D209 (LH), D309 (RH) terminal 15 and ground.

**15 (B) - Ground : Continuity should exist.**

### OK or NG

- OK >> Rear power window control unit LH or RH power supply and ground circuit is OK. Refer to [GW-36, "Trouble Diagnoses Symptom Chart"](#) .
- NG >> Repair or replace harness.



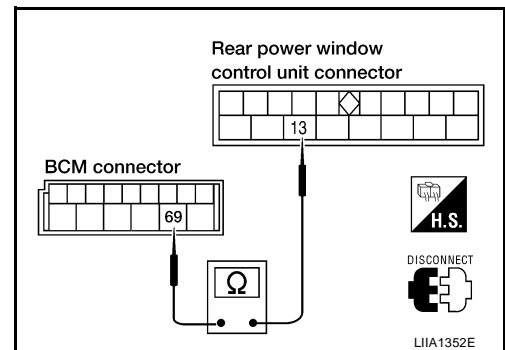
## 3. CHECK REAR POWER WINDOW CONTROL UNIT LH OR RH POWER SUPPLY CIRCUIT

1. Disconnect BCM.
2. Check continuity between BCM connector M20 terminal 69 and rear power window control unit LH or RH connector D209 (LH), D309 (RH) terminal 13.

**69 (W/R) - 13 (W/R) : Continuity should exist.**

### OK or NG

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



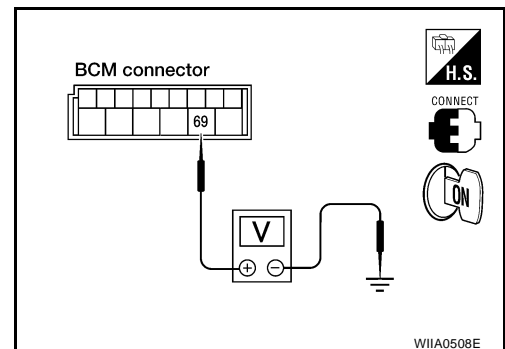
## 4. CHECK BCM OUTPUT SIGNAL

1. Connect BCM.
2. Turn ignition switch ON.
3. Check voltage between BCM connector M20 terminal 69 and ground.

**69 (W/R) - Ground : Battery voltage**

### OK or NG

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



# POWER WINDOW SYSTEM

## Rear Power Window Switch LH or RH Power Supply and Ground Circuit Check

EIS0038X

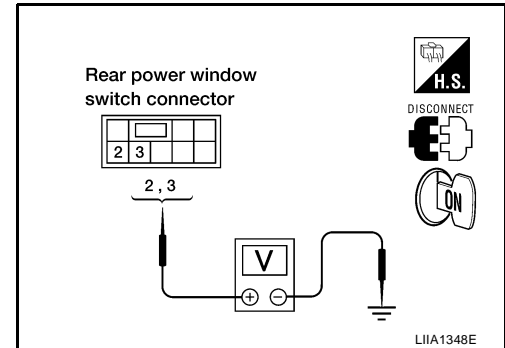
### 1. CHECK POWER WINDOW POWER SUPPLY CIRCUIT

1. Disconnect rear power window switch LH or RH.
2. Turn ignition switch ON.
3. Check voltage between rear power window switch LH or RH connector D203 (LH), D303 (RH) terminals 2, 3 and ground.

**2, 3 (G/W) - Ground : Battery voltage**

OK or NG

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



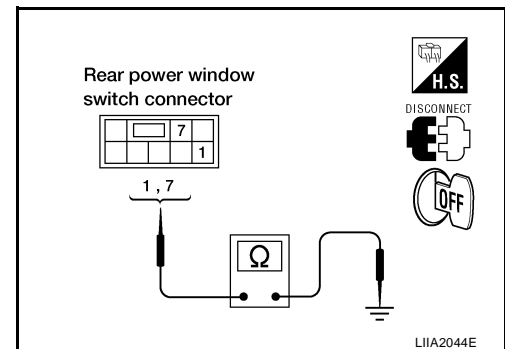
### 2. CHECK POWER WINDOW GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between rear power window switch LH or RH connector D203 (LH), D303 (RH) terminals 1, 7 and ground.

**1, 7 (L) - Ground : Continuity should exist.**

OK or NG

- OK >> Rear power window switch LH or RH power supply and ground circuit is OK. Refer to [GW-36. "Trouble Diagnoses Symptom Chart"](#).
- NG >> Repair or replace harness.



## Rear Power Window Motor LH Circuit Check

EIS0038Y

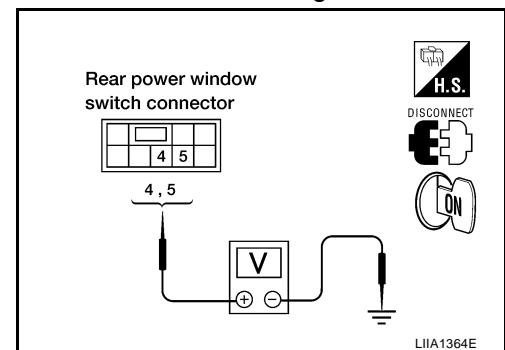
### 1. CHECK REAR POWER WINDOW SWITCH LH OUTPUT SIGNAL

1. Disconnect rear power window switch LH.
2. Turn ignition switch ON.
3. Check voltage between rear power window switch LH connector D203 terminals 4, 5 and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
D203	4 (W)	Ground	Closing	0
			Opening	Battery voltage
	5 (W/R)		Closing	Battery voltage
			Opening	0

OK or NG

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



# POWER WINDOW SYSTEM

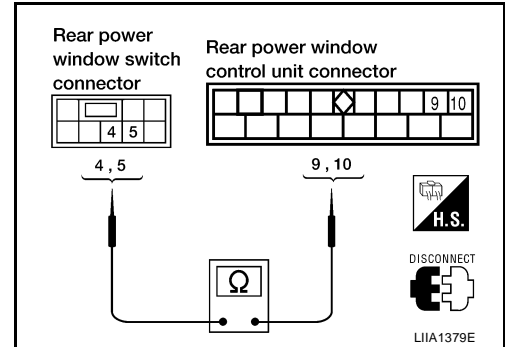
## 2. CHECK REAR POWER WINDOW SWITCH LH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect rear power window control unit LH.
3. Check continuity between rear power window switch LH connector D203 terminals 4, 5 and rear power window control unit LH connector D209 terminals 9, 10.

**4 (W) - 9 (W) : Continuity should exist.**  
**5 (W/R) - 10 (W/R) : Continuity should exist.**

OK or NG

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



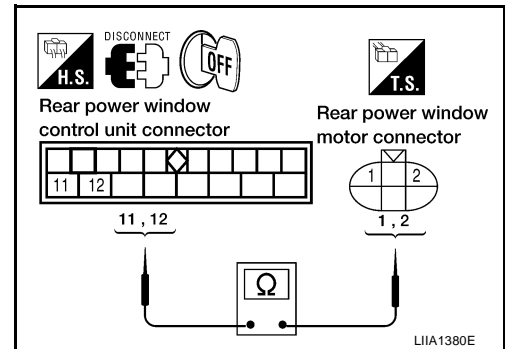
## 3. CHECK REAR POWER WINDOW MOTOR LH CIRCUIT

1. Disconnect rear power window motor LH.
2. Check continuity between rear power window control unit LH connector D209 terminals 11, 12 and rear power window motor LH connector D204 terminals 1, 2.

**11 (O) - 2 (O) : Continuity should exist.**  
**12 (BR) - 1 (BR) : Continuity should exist.**

OK or NG

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



## Rear Power Window Motor RH Circuit Check

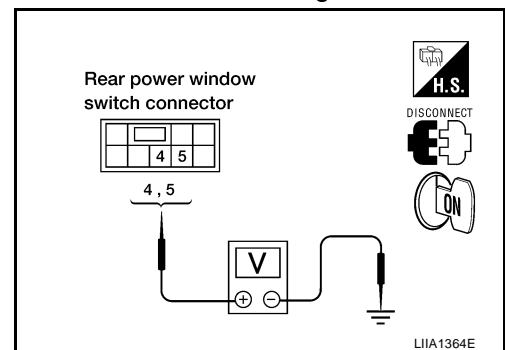
### 1. CHECK REAR POWER WINDOW SWITCH RH OUTPUT SIGNAL

1. Disconnect rear power window switch RH.
2. Turn ignition switch ON.
3. Check voltage between rear power window switch RH connector D303 terminals 4, 5 and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
D303	4 (W)	Ground	Closing	0
			Opening	Battery voltage
	5 (W/L)		Closing	Battery voltage
			Opening	0

OK or NG

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



# POWER WINDOW SYSTEM

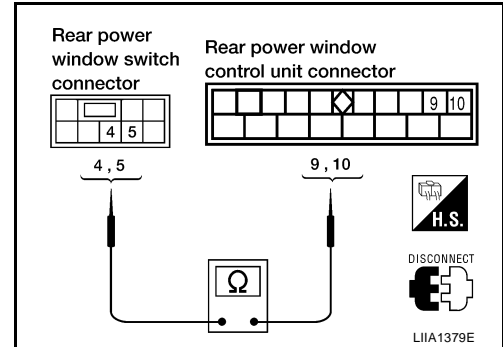
## 2. CHECK REAR POWER WINDOW SWITCH RH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect rear power window control unit RH.
3. Check continuity between rear power window switch RH connector D303 terminals 4, 5 and rear power window control unit RH connector D309 terminals 9, 10.

**4 (W) - 9 (W) : Continuity should exist.**  
**5 (W/L) - 10 (W/L) : Continuity should exist.**

OK or NG

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



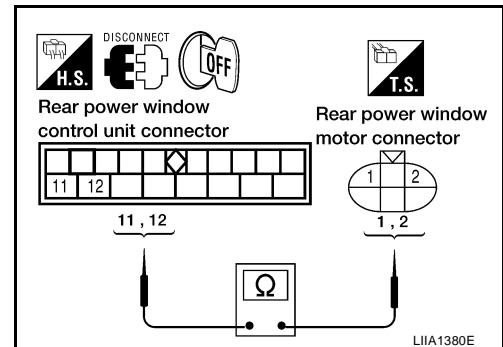
## 3. CHECK REAR POWER WINDOW MOTOR RH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect rear power window motor RH.
3. Check continuity between rear power window control unit RH connector D309 terminals 11, 12 and rear power window motor RH connector D304 terminals 1, 2.

**11 (O) - 2 (O) : Continuity should exist.**  
**12 (BR) - 1 (BR) : Continuity should exist.**

OK or NG

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



## Limit Switch Circuit Check Rear LH and RH

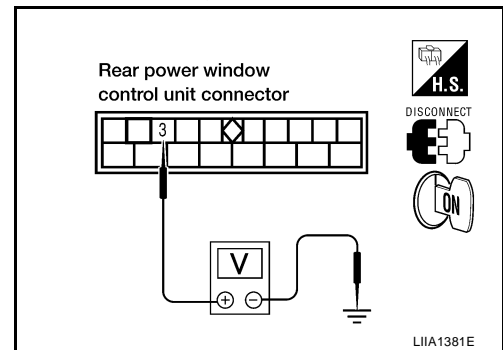
### 1. CHECK REAR POWER WINDOW MOTOR LH AND RH LIMIT SWITCH SIGNAL

1. Disconnect rear power window control unit LH or RH.
2. Turn ignition switch ON.
3. Check voltage between rear power window control unit LH or RH connector and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
D209 (LH) D309 (RH)	3 (G)	Ground	Rear LH or RH door window is between fully-open and just before fully-closed position (ON)	0
			Rear LH or RH door window is between just before fully-closed position and fully-closed position (OFF)	5

OK or NG

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



# POWER WINDOW SYSTEM

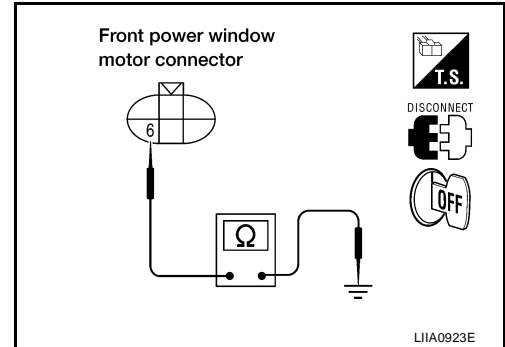
## 2. CHECK LIMIT SWITCH GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect rear power window motor LH or RH.
3. Check continuity between rear power window motor LH or RH connector D204 (LH), D304 (RH) terminal 6 and ground.

**6 (G) - Ground : Continuity should exist.**

OK or NG

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



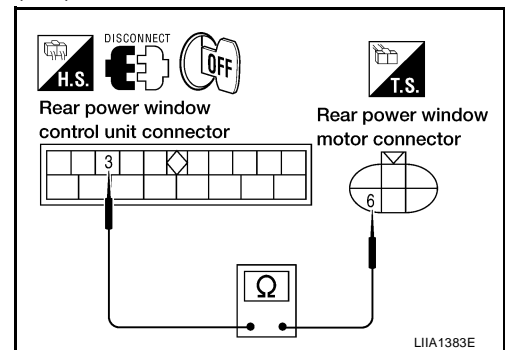
## 3. CHECK HARNESS CONTINUITY

Check continuity between rear power window motor LH or RH connector D204 (LH), D304 (RH) terminal 6 and rear power window control unit LH or RH connector D209 (LH), D309 (RH) terminal 3.

**6 (G) - 3 (G) : Continuity should exist.**

OK or NG

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



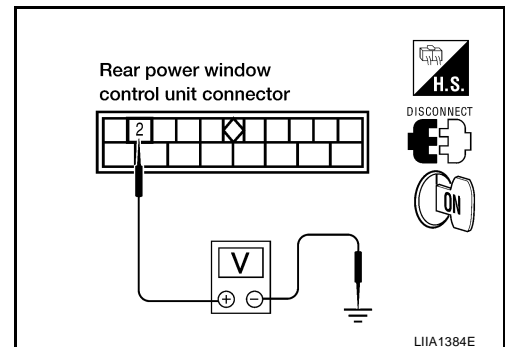
## 4. CHECK REAR POWER WINDOW SWITCH LH OR RH OUTPUT SIGNAL

1. Turn ignition switch OFF.
2. Check voltage between rear power window control unit LH or RH harness connector D209 (LH) or D309 (RH) terminal 2 (SB) and ground.

**2 (SB) - Ground : Approx. 5V**

OK or NG

- OK >> GO TO 5.  
NG >> Replace rear power window control unit LH or RH.



# POWER WINDOW SYSTEM

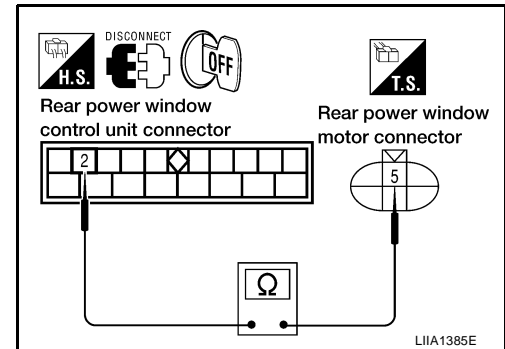
## 5. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Check continuity between rear power window control unit LH or RH connector D209 (LH), D309 (RH) terminal 2 and rear power window motor LH or RH connector D204 (LH), D304 (RH) terminal 5.

**2 (SB) - 5 (SB) : Continuity should exist.**

### OK or NG

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



## Encoder Circuit Check Rear LH or RH

EIS00391

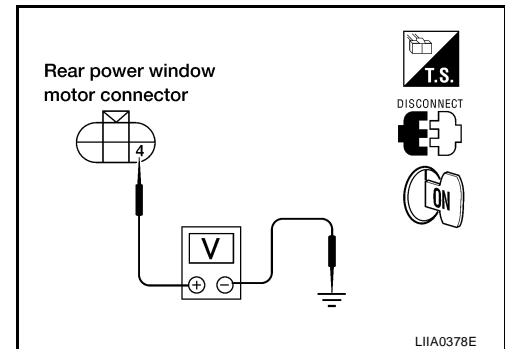
### 1. CHECK REAR POWER WINDOW MOTOR LH OR RH POWER SUPPLY

1. Disconnect rear power window motor LH or RH.
2. Turn ignition switch ON.
3. Check voltage between rear power window motor LH or RH connector D204 (LH) or D304 (RH) terminal 4 and ground.

**4 (BR/W) - Ground : Approx. 10V**

### OK or NG

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



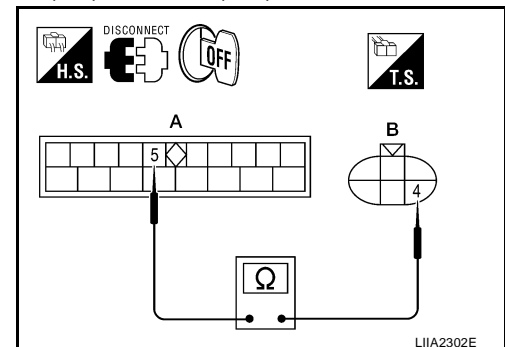
### 2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect rear power window control unit LH or RH.
3. Check continuity between rear power window motor LH or RH connector D204 (LH) or D304 (RH) terminal 5 and rear power window control unit LH or RH connector D209 (LH) or D309 (RH) terminal 4.

**4 (BR/W) - 5 (BR/W) : Continuity should exist.**

### OK or NG

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



# POWER WINDOW SYSTEM

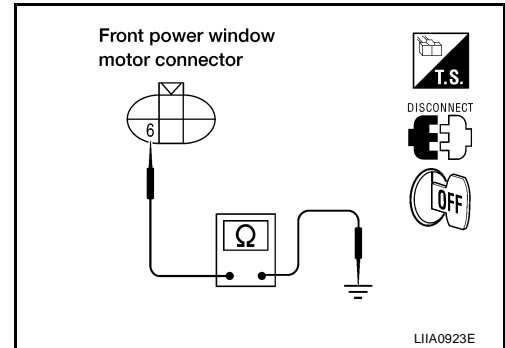
## 3. CHECK ENCODER GROUND

1. Turn ignition switch OFF.
2. Check continuity between rear power window motor LH or RH connector D204 (LH) or D304 (RH) terminal 6 and ground.

**6 (G) - Ground : Continuity should exist.**

OK or NG

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



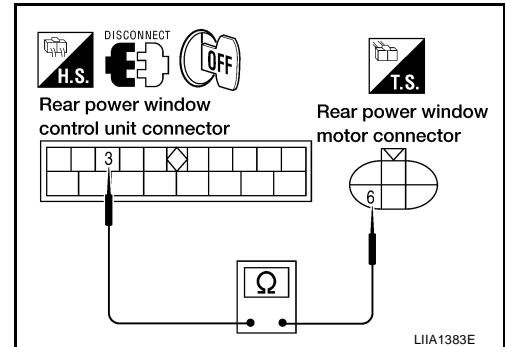
## 4. CHECK ENCODER GROUND CIRCUIT

Check continuity between rear power window motor LH or RH connector D204 (LH) or D304 (RH) terminal 6 and rear power window control unit LH or RH connector D209 (LH), D309 (RH) terminal 3.

**6 (G) - 3 (G) : Continuity should exist.**

OK or NG

- OK >> Replace rear power window control unit LH or RH.  
 NG >> Repair or replace harness.

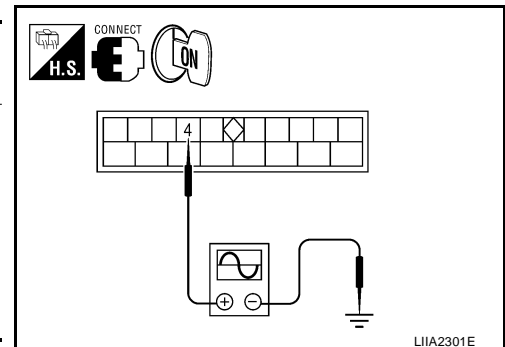


## 5. CHECK ENCODER SIGNAL

1. Connect rear power window motor LH or RH.
2. Turn ignition switch ON.
3. Check the signal between rear power window control unit LH or RH connector D209 (LH) or D309 (RH) terminal 4 and ground with oscilloscope.

Connector	Terminals (Wire color)		Condition	Signal
	(+)	(-)		
D209 (LH)	4 (Y/R)	Ground	Opening	
D309 (RH)	4 (Y/B)			

OCC3383D



OK or NG

- OK >> GO TO 6.  
 NG >> Replace rear power window control unit LH or RH.

# POWER WINDOW SYSTEM

## 6. CHECK HARNESS CONTINUITY

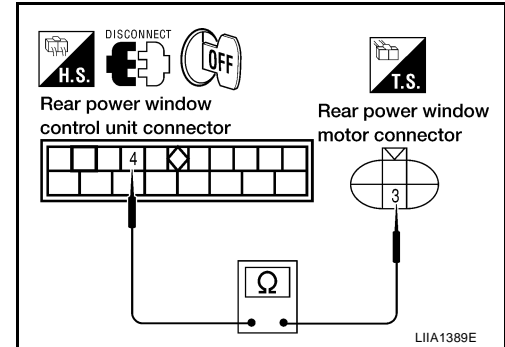
1. Turn ignition switch OFF.
2. Disconnect rear power window control unit LH or RH and rear power window motor LH or RH.
3. Check continuity between rear power window control unit LH or RH connector D209 (LH) or D309 (RH) terminal 4 and rear power window motor LH or RH connector D204 (LH), D304 (RH) terminal 3.

### Rear LH

4 (Y/R) - 3 (Y/R) : Continuity should exist.

### Rear RH

4 (Y/B) - 3 (Y/B) : Continuity should exist.



### OK or NG

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

## Power Window Serial Link Check Rear LH or RH

EIS00392

### 1. CHECK REAR POWER WINDOW SWITCH LH OR RH

1. Replace with operative rear power window control unit LH or RH.
2. Does window operate normally?

### OK or NG

- OK >> Replace rear power window control unit LH or RH.
- NG >> GO TO 2.

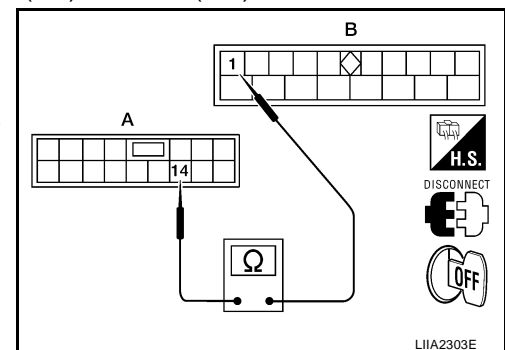
### 2. CHECK POWER WINDOW SERIAL LINK CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect main power window and door lock/unlock switch and rear power window control unit LH or RH.
3. Check continuity between main power window and door lock/unlock switch connector (A) D7 terminal 14 and rear power window control unit LH or RH connector (B) D209 (LH) or D309 (RH) terminal 1.

14 (LG/W) - 1 (W/V) : Continuity should exist.

### OK or NG

- OK >> Replace main power window and door lock/unlock switch.
- NG >> Repair or replace harness.





# POWER WINDOW SYSTEM

## Rear Power Vent Window Switch Circuit Check

EIS002VB

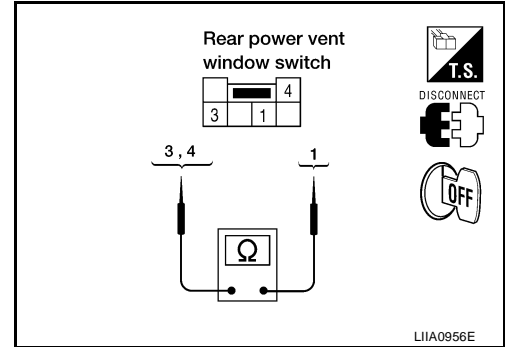
### 1. CHECK REAR POWER VENT WINDOW SWITCH OPERATION

1. Turn ignition switch OFF.
2. Disconnect rear power vent window switch.
3. Check continuity between rear power vent window switch terminals 1, 3 and 4.

Terminal		Condition	Continuity
(+)	(-)		
3	1	Rear power vent window switch is pressed OPEN.	Yes
4	1	Rear power vent window switch is pressed CLOSE.	Yes

OK or NG

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



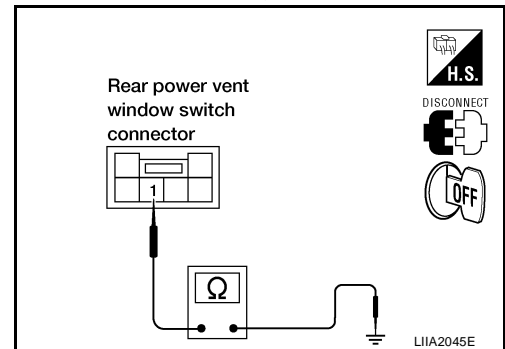
### 2. CHECK REAR POWER VENT WINDOW SWITCH CIRCUIT HARNESS CONTINUITY

Check continuity between rear power vent window switch connector R103 terminal 1 and ground.

**1 (B) - Ground : Continuity should exist.**

OK or NG

- OK >> Rear power vent window switch circuit harness OK.  
 NG >> Repair or replace harness.



## Rear Power Vent Window Motor LH Circuit Check

EIS002VC

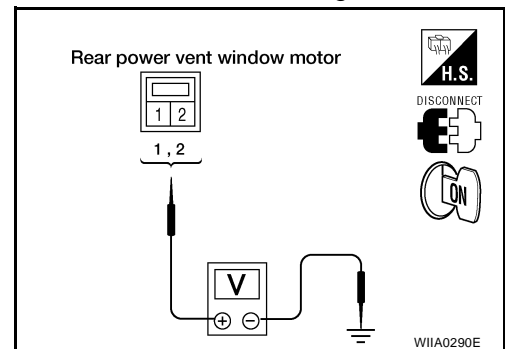
### 1. CHECK REAR POWER VENT WINDOW LH SIGNAL

1. Turn ignition switch OFF.
2. Disconnect rear power vent window motor LH.
3. Turn ignition switch ON.
4. Check voltage between rear power vent window motor LH connector B52 terminal 1, 2 and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
B52	1 (G)	Ground	Opening	Battery voltage
			Closing	0
	2 (Y)		Opening	0
			Closing	Battery voltage

OK or NG

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



# POWER WINDOW SYSTEM

EIS002VD

## Rear Power Vent Window Motor RH Circuit Check

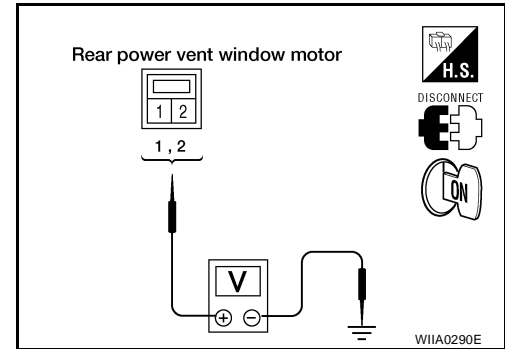
### 1. CHECK REAR POWER VENT WINDOW SWITCH RH SIGNAL

1. Turn ignition switch OFF.
2. Disconnect rear power vent window motor RH.
3. Turn ignition switch ON.
4. Check voltage between rear power vent window motor RH connector B150 terminal 1, 2 and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
B150	1 (BR)	Ground	Opening	Battery voltage
			Closing	0
	2 (R)		Opening	0
			Closing	Battery voltage

OK or NG

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



## Rear Power Vent Window Relay (OPEN) Check

EIS002VE

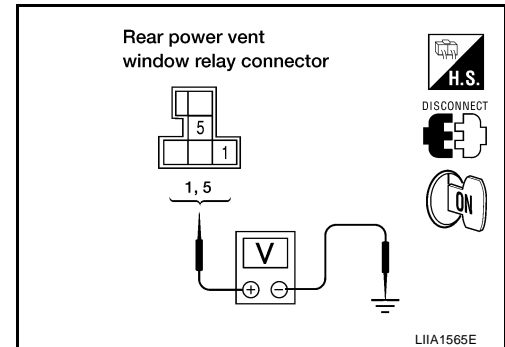
### 1. CHECK REAR POWER VENT WINDOW RELAY (OPEN) POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect rear power vent window relay (OPEN).
3. Turn ignition switch ON.
4. Check voltage between rear power vent window relay (OPEN) connector and ground.

Connector	Terminals (Wire color)		Voltage (V) (Approx.)
	(+)	(-)	
M87	1 (W/L)	Ground	Battery voltage
	5 (W/R)		

OK or NG

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



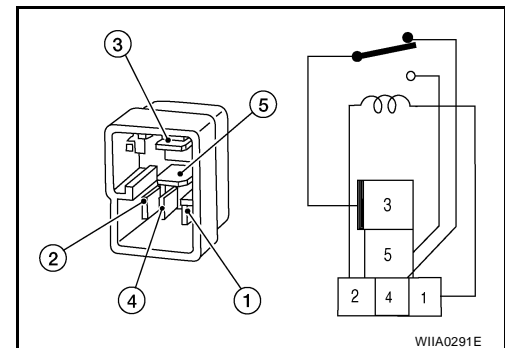
## 2. CHECK REAR POWER VENT WINDOW RELAY (OPEN)

Check continuity between rear power vent window relay (OPEN) terminals 3 and 4, 3 and 5.

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

OK or NG

- OK >> GO TO 3.  
 NG >> Replace rear power vent window relay (OPEN).



# POWER WINDOW SYSTEM

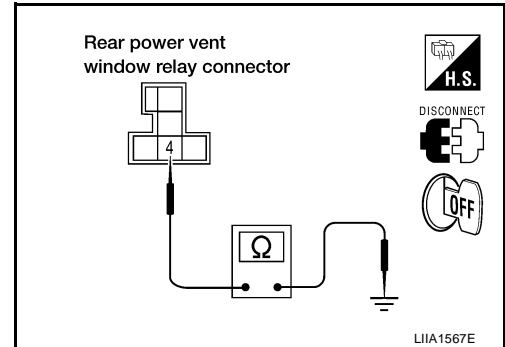
## 3. CHECK REAR POWER VENT WINDOW RELAY (OPEN) GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between rear power vent window relay (OPEN) connector M87 terminal 4 and ground.

**4 (B) - Ground : Continuity should exist.**

OK or NG

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



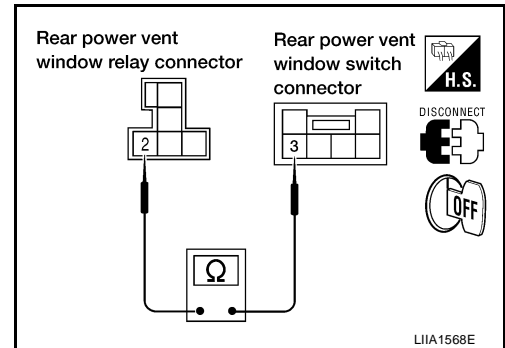
## 4. CHECK REAR POWER VENT WINDOW RELAY (OPEN) CIRCUIT

1. Disconnect rear power vent window switch.
2. Check continuity between rear power vent window relay (OPEN) connector M87 terminal 2 and rear power vent window switch connector R103 terminal 3.

**2 (G/R) - 3 (BR/W) : Continuity should exist.**

OK or NG

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



## Rear Power Vent Window Relay (CLOSE) Check

EIS002VF

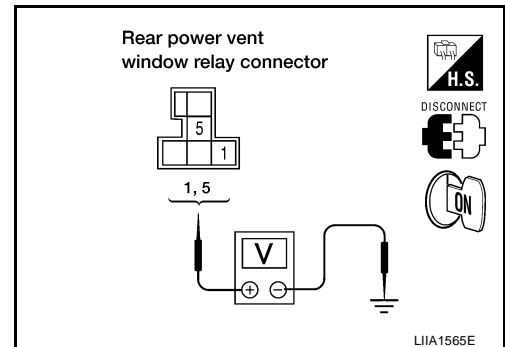
### 1. CHECK REAR POWER VENT WINDOW RELAY (CLOSE) POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect rear power vent window relay (CLOSE).
3. Turn ignition switch ON.
4. Check voltage between rear power vent window relay (CLOSE) connector and ground.

Connector	Terminals (Wire color)		Voltage (V) (Approx.)
	(+)	(-)	
M89	1 (W/L)	Ground	Battery voltage
	5 (W/R)		

OK or NG

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



# POWER WINDOW SYSTEM

## 2. CHECK REAR POWER VENT WINDOW RELAY (CLOSE)

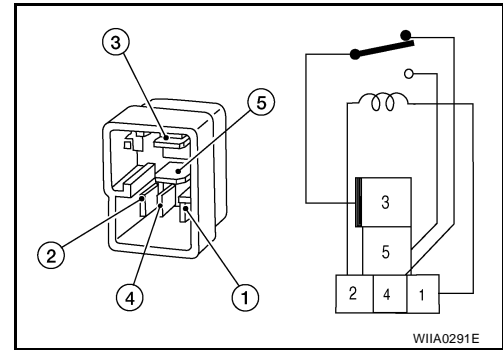
Check continuity between rear power vent window relay (CLOSE) terminals 3 and 4, 3 and 5.

Terminal	Condition	Continuity	
3	4	12V direct current supply between terminals 1 and 2	No
		No current supply	Yes
3	5	12V direct current supply between terminals 1 and 2	Yes
		No current supply	No

OK or NG

OK >> GO TO 3.

NG >> Replace rear power vent window relay (CLOSE).



## 3. CHECK REAR POWER VENT WINDOW RELAY (CLOSE) GROUND CIRCUIT

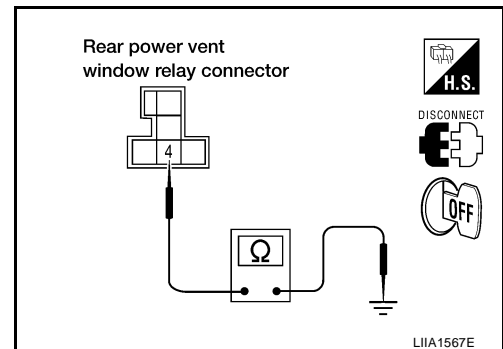
1. Turn ignition switch OFF.
2. Check continuity between rear power vent window relay (CLOSE) connector M89 terminal 4 and ground.

**4 (B) - Ground : Continuity should exist.**

OK or NG

OK >> GO TO 4.

NG >> Repair or replace harness.



## 4. CHECK REAR POWER VENT WINDOW RELAY (CLOSE) CIRCUIT

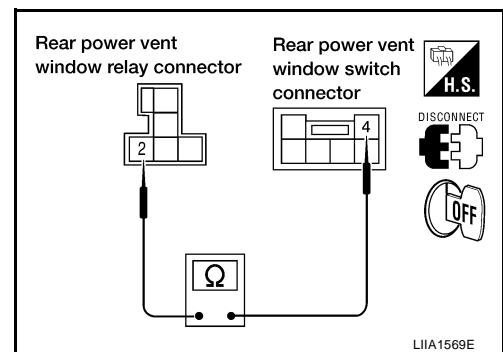
1. Disconnect rear power vent window switch.
2. Check continuity between rear power vent window relay (CLOSE) connector M89 terminal 2 and rear power vent window switch R103 terminal 4.

**2 (R/G) - 4 (V/W) : Continuity should exist.**

OK or NG

OK >> Replace rear power vent window switch.

NG >> Repair or replace harness.



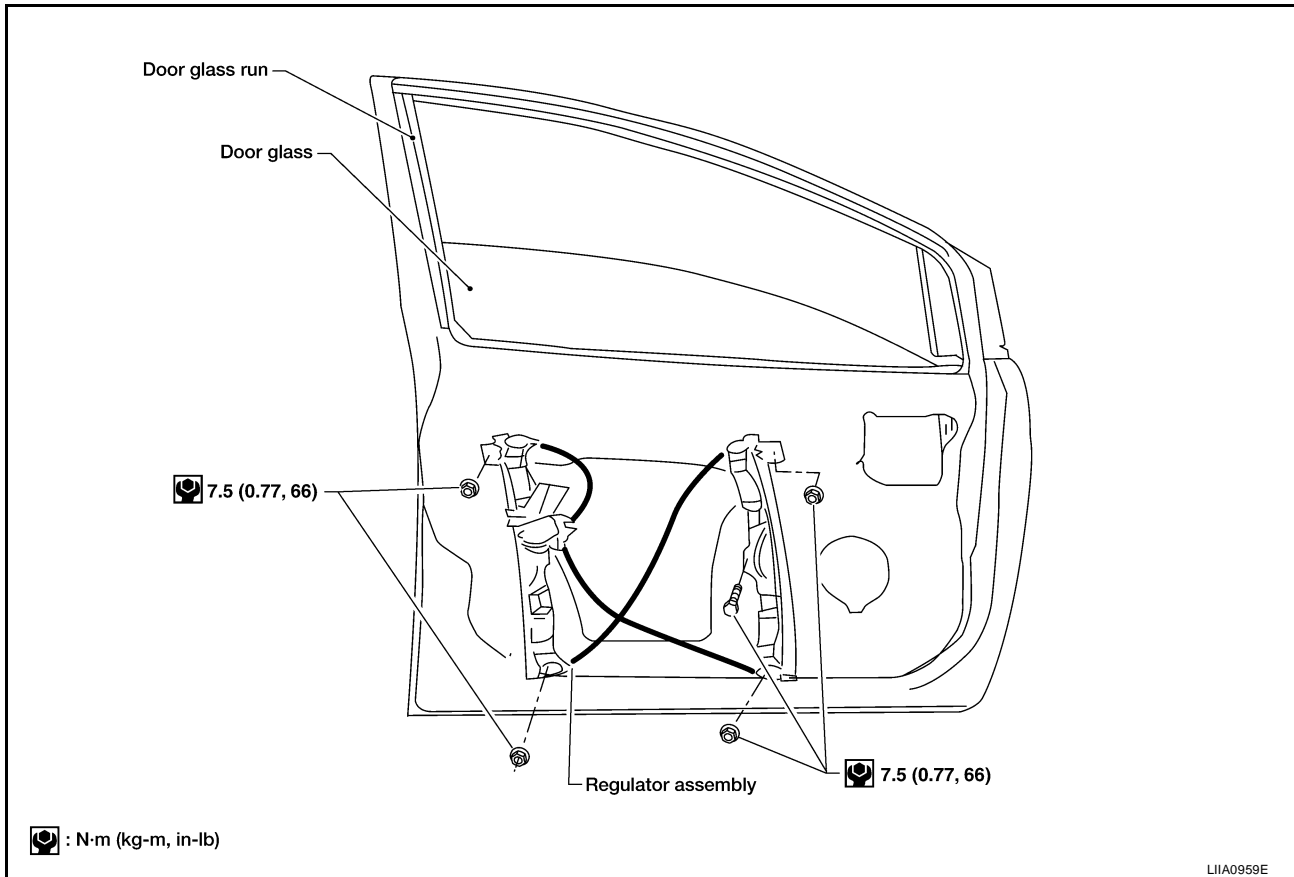
# FRONT DOOR GLASS AND REGULATOR

## FRONT DOOR GLASS AND REGULATOR

PF:80300

### Removal and Installation

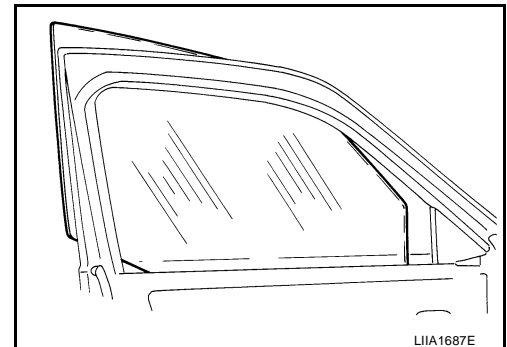
E/S00623



## FRONT DOOR GLASS

### Removal

1. Remove the front door speaker. Refer to [AV-45, "Removal and Installation of Front Door Speaker"](#) .
2. Remove the hole cover over rear door glass bolt.
3. Temporarily reconnect the power window switch to the door harness.
4. Operate the power window main switch to raise/lower the door glass until the door glass bolts can be seen.
5. Remove the inside seal.
6. Remove the door glass bolts.
7. While holding the front door glass, raise it at the rear end and pull the door glass out of the sash toward the outside of the door.



### Installation

Installation is in the reverse order of removal.

**Door glass bolts : 6.1 N·m (0.62 kg-m, 54 in-lb)**

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

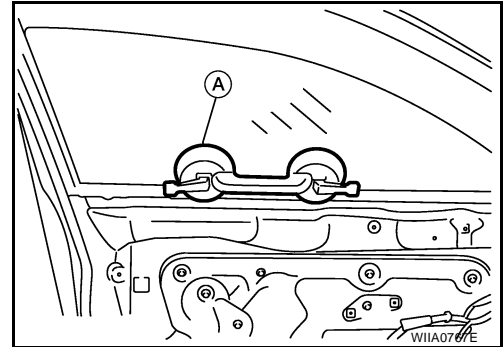
GW

# FRONT DOOR GLASS AND REGULATOR

## FRONT DOOR GLASS REGULATOR

### Removal

1. Remove the front door speaker. Refer to [AV-45, "Removal and Installation of Front Door Speaker"](#) .
2. Remove the hole cover over rear door glass bolt.
3. Temporarily reconnect the power window switch to the door harness.
4. Operate the power window main switch to raise/lower the door glass until the door glass bolts can be seen.
5. Remove the inside seal.
6. Remove the door glass bolts.
7. Raise the front door glass and hold it in place with suitable tool (A).



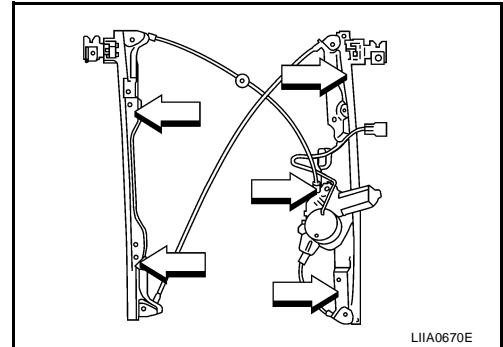
8. Disconnect the harness connector from the regulator assembly.
9. Remove the bolts and the regulator assembly.

### 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 body grease.



### Disassembly

Remove the regulator motor from the regulator assembly.

### Installation

1. Install the regulator assembly. Refer to [GW-69, "Removal and Installation"](#) .
2. Connect the harness connector to the regulator assembly.
3. Align the door glass and install the door glass bolts.

**Door glass bolts : 6.1 N-m (0.62 kg-m, 54 in-lb)**

4. Reset the limit switch. Refer to [GW-71, "Setting of Limit Switch"](#) .
5. Install front door speaker. Refer to [AV-45, "Removal and Installation of Front Door Speaker"](#) .

## FITTING INSPECTION AND SETTING AFTER INSTALLATION

### Fitting

- Check that the door glass is securely fit into the door glass run groove.
- Lower the door glass slightly [approximately 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 bolts, guide rail bolts, and door glass and guide rail bolts to correct the door glass position.

# FRONT DOOR GLASS AND REGULATOR

## Setting of Limit Switch

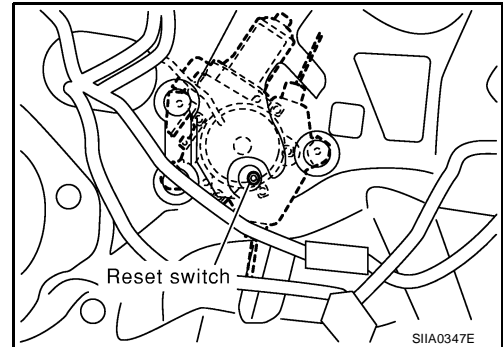
If any of the following work has been done, set the limit switch (integrated in the motor).

- Removal and installation of the regulator.
- Removal and installation of the motor from the regulator.
- Removal and installation of the door glass.
- Removal and installation of the door glass run.

## Resetting

After installing each component, perform the following procedure to reset the limit switch.

1. Raise the door glass to the top position.
2. While pressing and holding the reset switch, lower the door glass to the bottom position.



3. Release the reset switch. Verify that the reset switch returns to the original position, if not, pull the switch using suitable tool.
4. Raise the door glass to the top position.

### **CAUTION:**

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

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**GW**

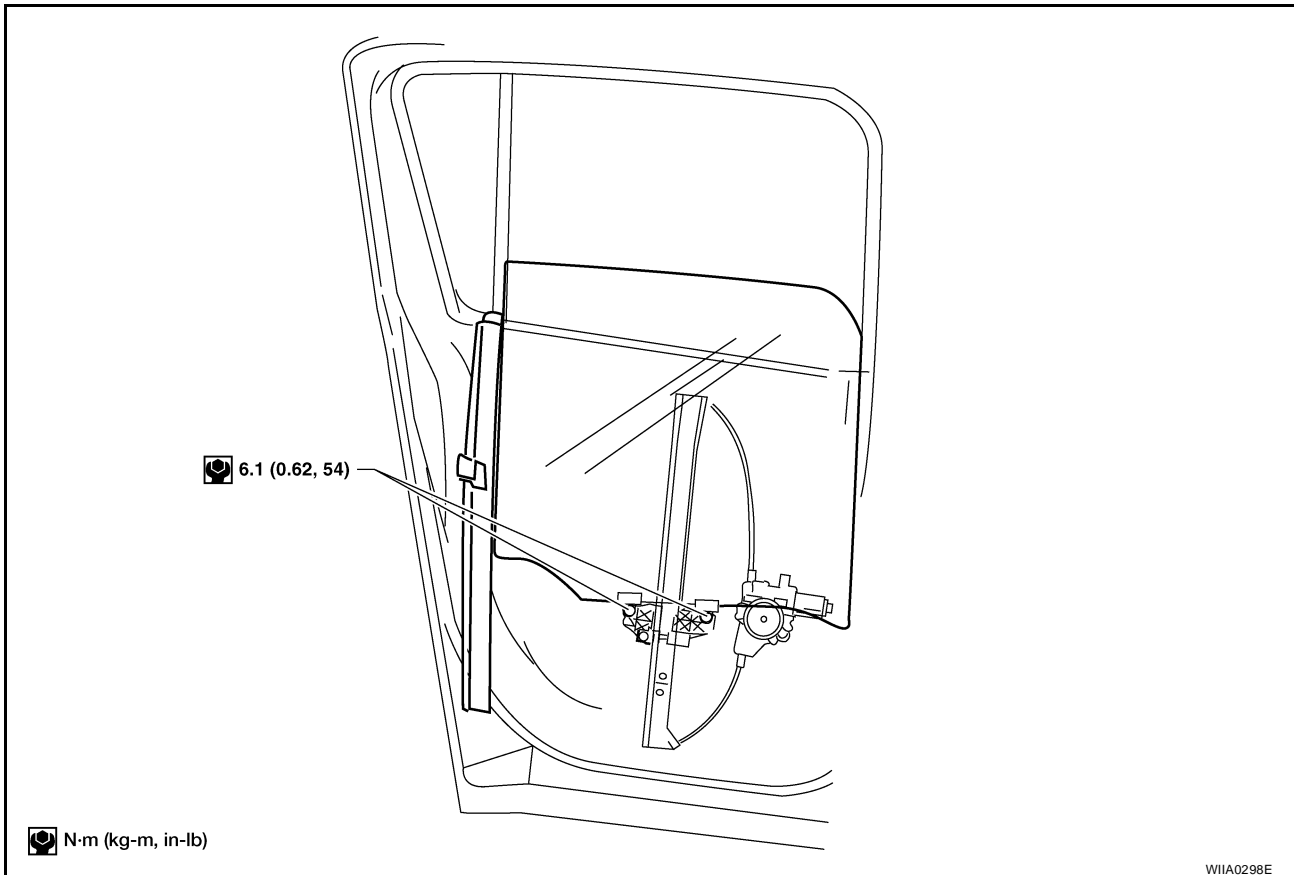
# REAR DOOR GLASS AND REGULATOR

## REAR DOOR GLASS AND REGULATOR

PFP:82300

### Removal and Installation

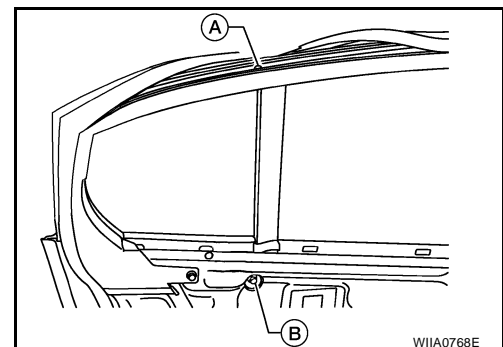
EIS0062N



## REAR DOOR GLASS

### Removal

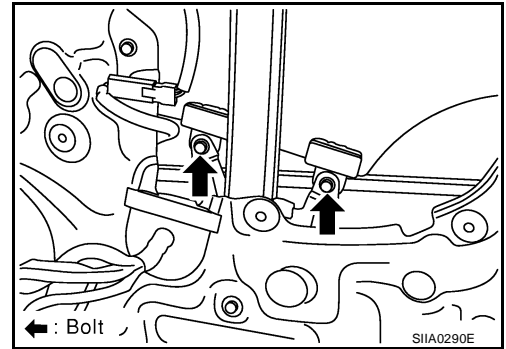
1. Remove the rear door finisher. Refer to [EI-32, "Rear Door"](#) .
2. Temporarily reconnect the power window switch to the door harness.
3. Operate the power window switch to raise/lower the door glass until the door glass bolts can be seen.
4. Remove inside seal.
5. Remove glass run from partition glass.
6. Remove partition sash bolt (B) and screw (A) to remove the sash.





# REAR DOOR GLASS AND REGULATOR

7. Remove door glass bolts and door glass.



8. Remove door glass.

## Installation

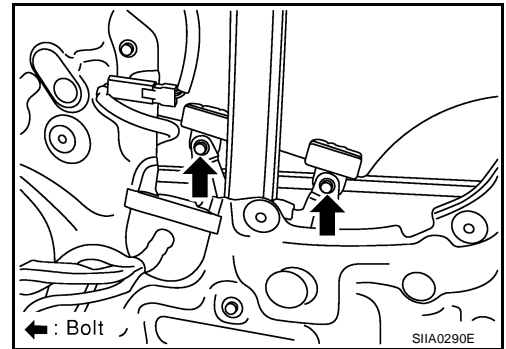
Installation is in the reverse order of removal.

**Door glass bolts : 6.1 N·m (0.62 Kg·m, 54 in·lb)**

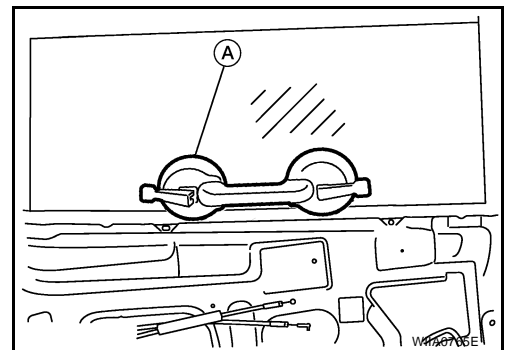
## REAR DOOR GLASS REGULATOR

### Removal

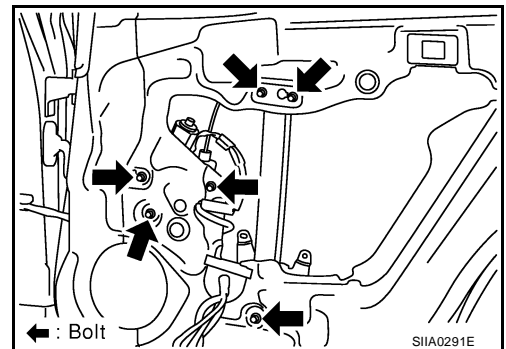
1. Remove the rear door finisher. Refer to [EI-32, "Rear Door"](#).
2. Operate the power window switch to raise/lower the door glass until the door glass bolts can be seen.
3. Remove the inside seal.
4. Remove the door glass bolts.



5. Raise the rear door glass and hold it in place with suitable tool (A).



6. Remove the bolts, and the regulator and guide channel.
7. Disconnect the connector from the regulator assembly.



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# REAR DOOR GLASS AND REGULATOR

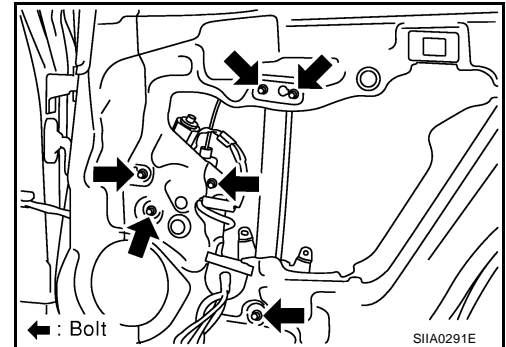
## Inspection after removal

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

## Installation

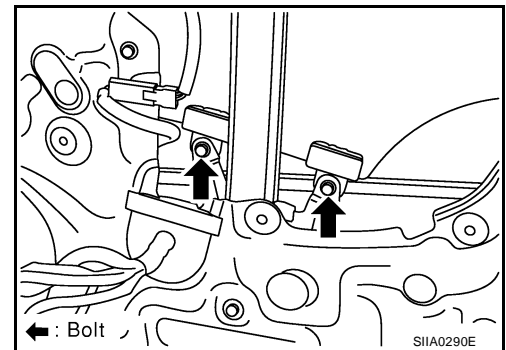
1. Connect the harness connector to the regulator assembly and install the regulator and guide channel.



2. Install the door glass from outside to ensure that it is in both the front and rear glass channels. Tighten door glass bolts to the specified torque.

**Door glass bolts : 6.1 N·m (0.62 kg·m, 54 in-lb)**

3. Install the inside seal.
4. Install the rear door finisher. Refer to [EI-32, "Rear Door"](#).



## Fitting Inspection After Installation

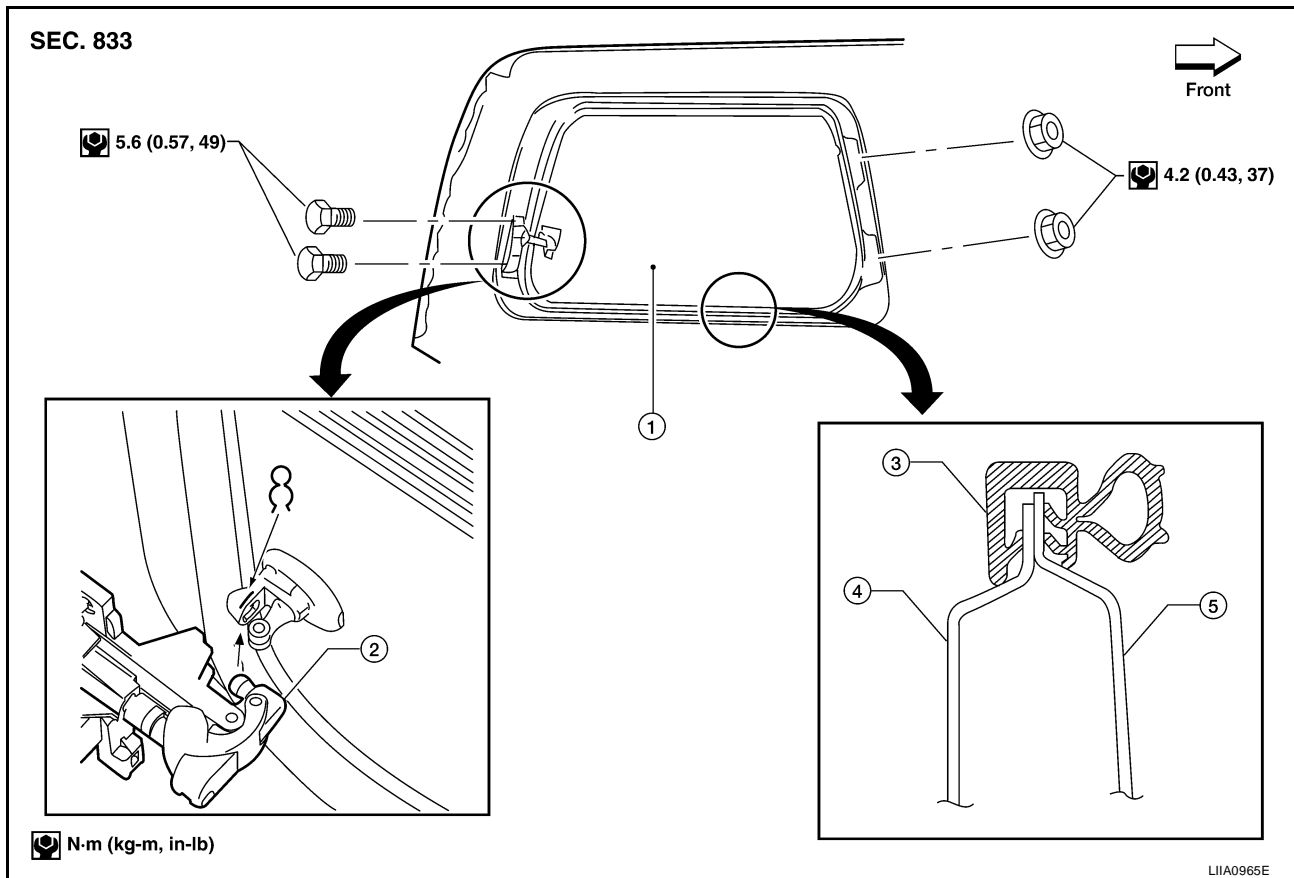
- Check that the door glass is securely fit into the glass run groove.
- Lower the door glass slightly [approximately 10 to 20 mm (0.39 to 0.79 in)], and check that the clearance to the sash is parallel. If the clearance between the glass and sash is not parallel, loosen the regulator bolts, guide rail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

# SIDE WINDOW GLASS

PFP:83300

EIS002VJ

## SIDE WINDOW GLASS Removal and Installation



1. Rear side window glass
2. Rear side window motor
3. Weatherstrip
4. Inner panel
5. Outer panel

### REMOVAL

1. Remove the rear upper finisher. Refer to [EI-34, "BODY SIDE TRIM"](#) .
2. Disconnect the rear side window motor harness.
3. Remove the rear side window motor bolts.
4. Remove the rear side window front nuts and the glass.

### INSTALLATION

1. Install the glass from outside to insure that it is even with the top and bottom of the opening. Tighten rear side window front nuts to the specified torque.

**Glass nuts** : 4.2 N-m (0.43 kg-m, 37 in-lb)

2. Install rear side window motor bolts. Tighten rear side window latch bolts to the specified torque.

**Motor bolts** : 5.6 N-m (0.57 kg-m, 49 in-lb)

3. Connect the rear side window motor harness.
4. Install rear pillar lower finisher. Refer to [EI-34, "BODY SIDE TRIM"](#) .

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# INSIDE MIRROR

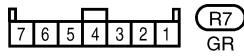
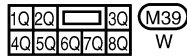
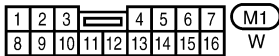
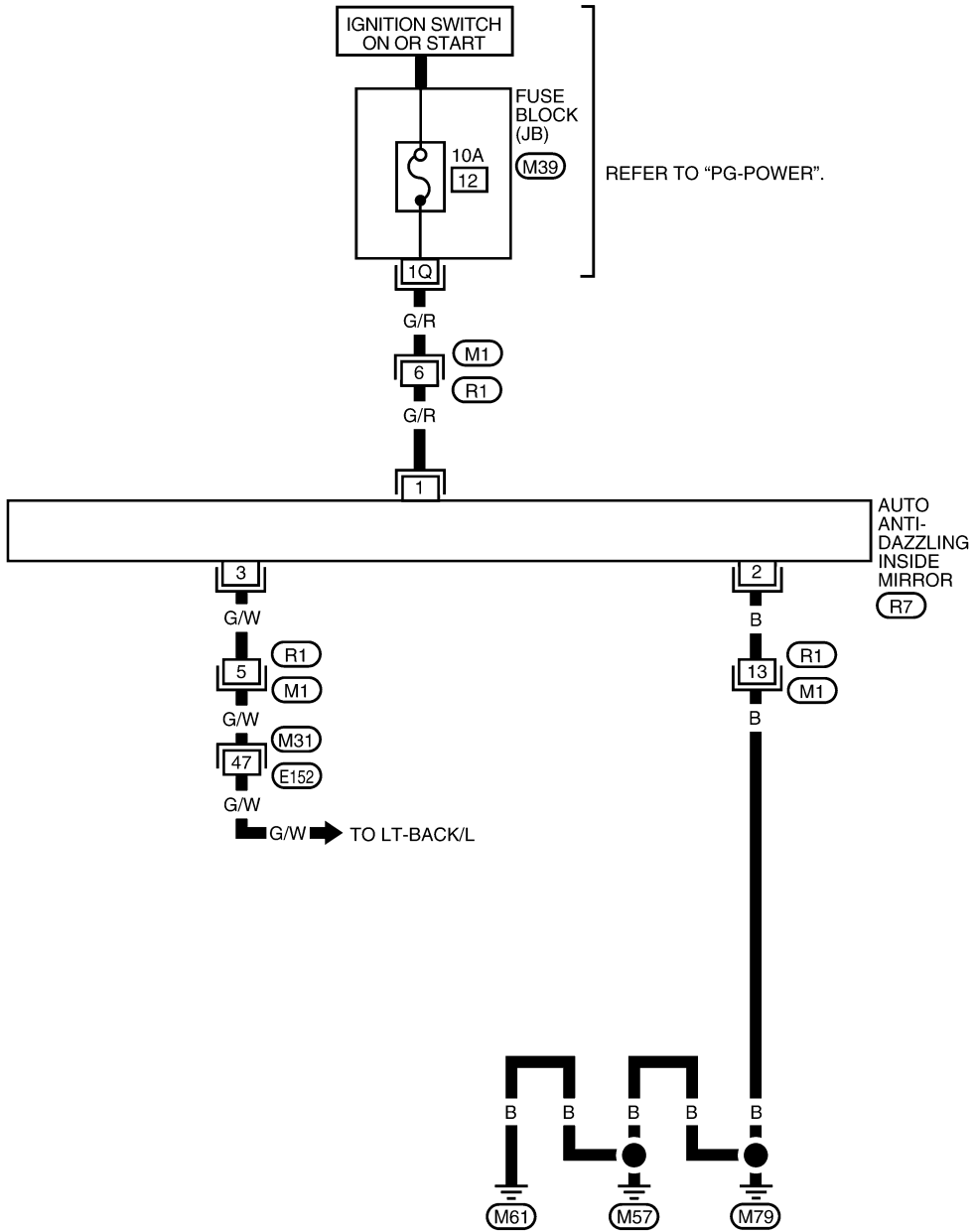
PF9:96321

## INSIDE MIRROR

### Wiring Diagram — I/MIRR —

EIS002VK

## GW-I/MIRR-01



REFER TO THE FOLLOWING.  
 (M31) - SUPER MULTIPLE JUNCTION (SMJ)

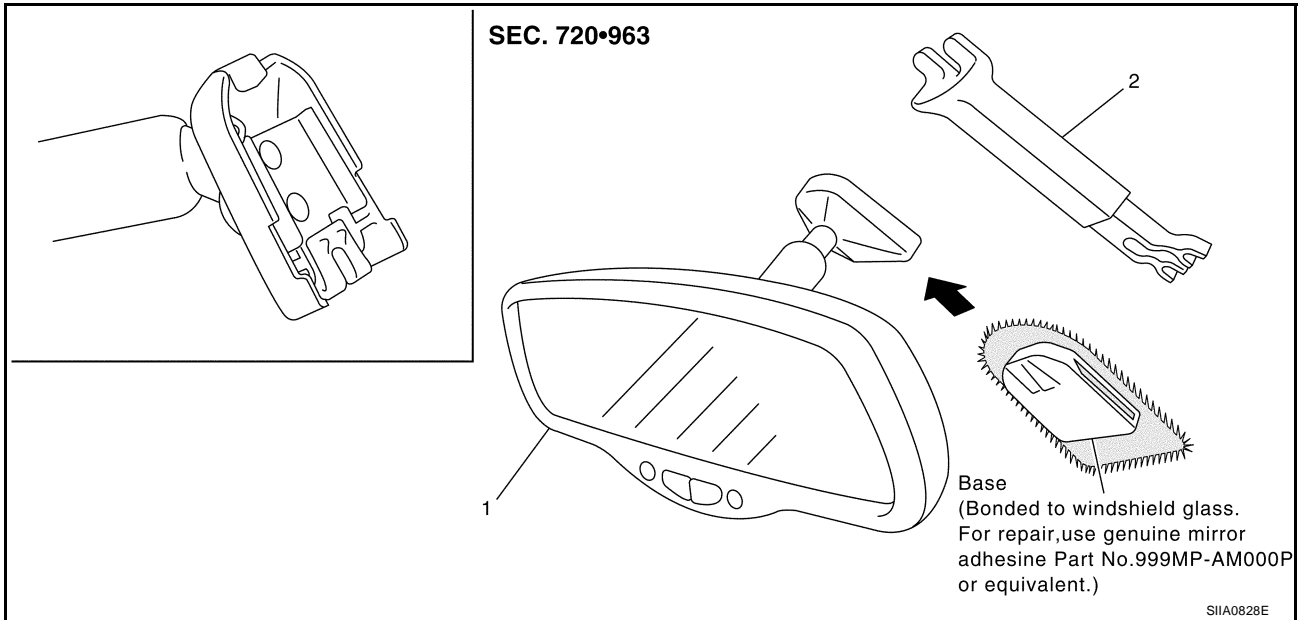
WIWA1146E

# INSIDE MIRROR

EIS002VL

## Removal and Installation INSIDE MIRROR

1. Remove inside mirror finisher.
2. Slide the mirror upward to remove.
3. Disconnect the connector.



1. Inside mirror

2. Inside mirror finisher

Installation is in the reverse order of removal.

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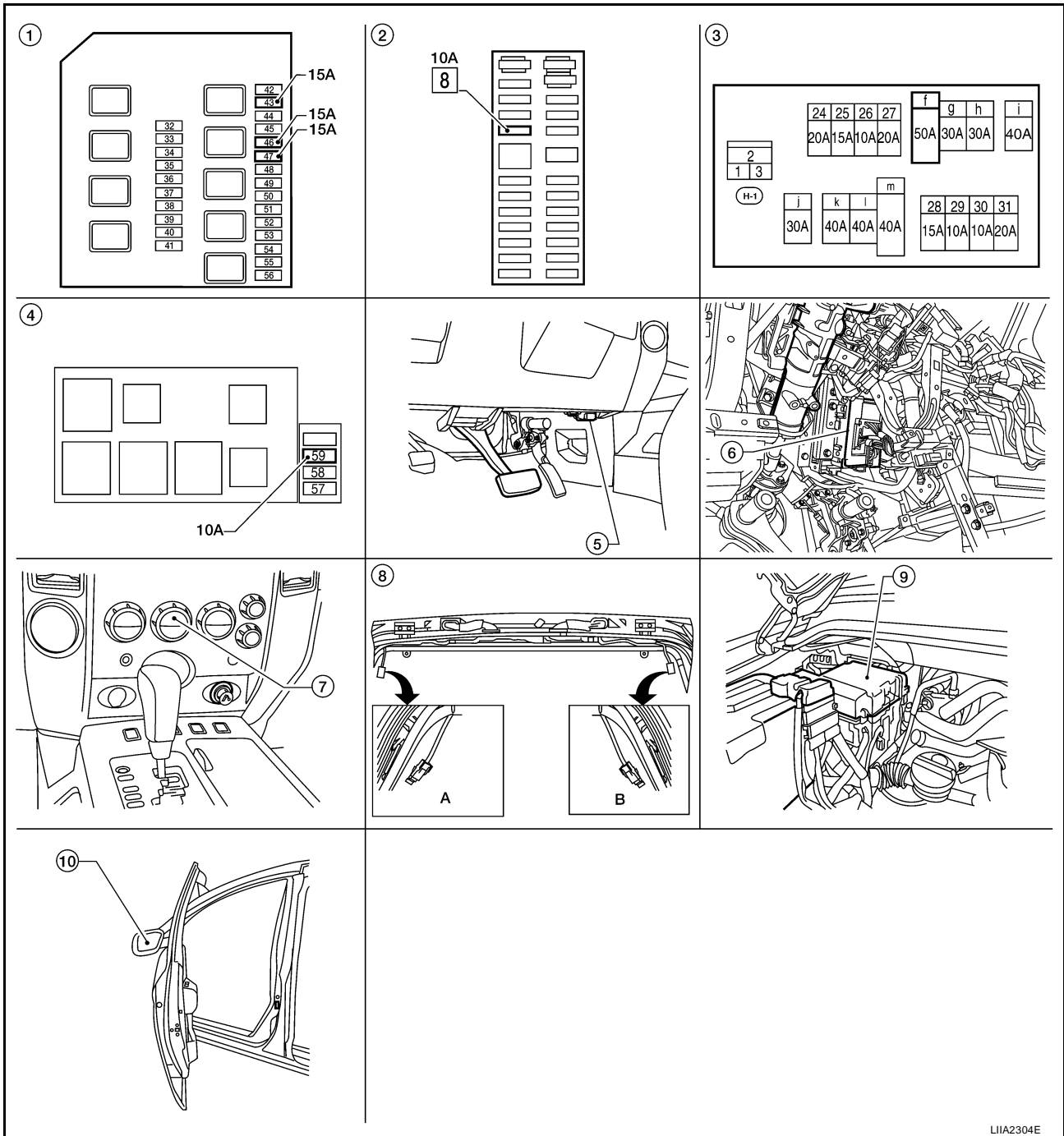
# REAR WINDOW DEFOGGER

## REAR WINDOW DEFOGGER

PF2:25350

### Component Parts and Harness Connector Location

EIS002VM



LIA2304E

- |  |  |                                    |
|--|--|------------------------------------|
| 1. IPDM E/R fuse layout                    | 2. Fuse block (J/B)  | 3. Fuse and fusible link box       |
| 4. Fuse and relay box                      | 5. Data link connector M22   | 6. BCM M18, M20                    |
| 7. Front air control M49, M50              | 8. A. Rear window defogger ground connector D504<br>B. Rear window defogger connector D406 | 9. IPDM E/R E118, E120, E122, E124 |
| 10. Door mirror LH D4, door mirror RH D107 |  |                                    |

# REAR WINDOW DEFOGGER

EIS002VN

## System Description

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 supplied at all times

- through 15A fuses (No. 43, 46, and 47, located in the IPDM E/R)
- to rear window defogger relay terminals 3 and 6 (located in the IPDM E/R)
- through 50A fusible link (letter f , located in the fuse and fusible link box)
- to BCM terminal 70.

With the ignition switch turned to ON or START position,

Power is supplied

- through ignition switch
- to rear window defogger relay (located in the IPDM E/R)
- through 10A fuse (No. 59, located in the fuse and relay box)
- to BCM terminal 38
- through 10A fuse [No. 8, located in the fuse block (J/B)]
- to front air control terminal 14.

Ground is supplied

- to BCM terminal 67
- to front air control terminal 1
- through body grounds M57, M61 and M79
- to IPDM E/R terminals 38 and 59
- through body grounds E9, E15 and E24.

When front air control (rear window defogger switch) is turned to ON,

Ground is supplied

- to BCM terminal 9
- through front air control terminal 11
- through front air control terminal 1
- through body grounds M57, M61 and M79.

Then rear window defogger switch is illuminated.

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

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

When display control unit receives rear window defogger switch signals, and displays on the screen.

When IPDM E/R receives rear window defogger switch signals,

Ground is supplied

- to rear window defogger relay (located in the IPDM E/R)
- through IPDM E/R terminal 38
- through IPDM E/R terminal 59
- through body grounds E9, E15 and E24.

Then rear window defogger relay is energized.

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 heated mirror relay (located in the IPDM E/R)
- through IPDM E/R terminal 23
- to door mirror defogger (LH and RH) terminal 10.

Door mirror defogger (LH and RH) is grounded through body grounds M57, M61 and M79.

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

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# REAR WINDOW DEFOGGER

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## CAN Communication System Description

EIS002VO

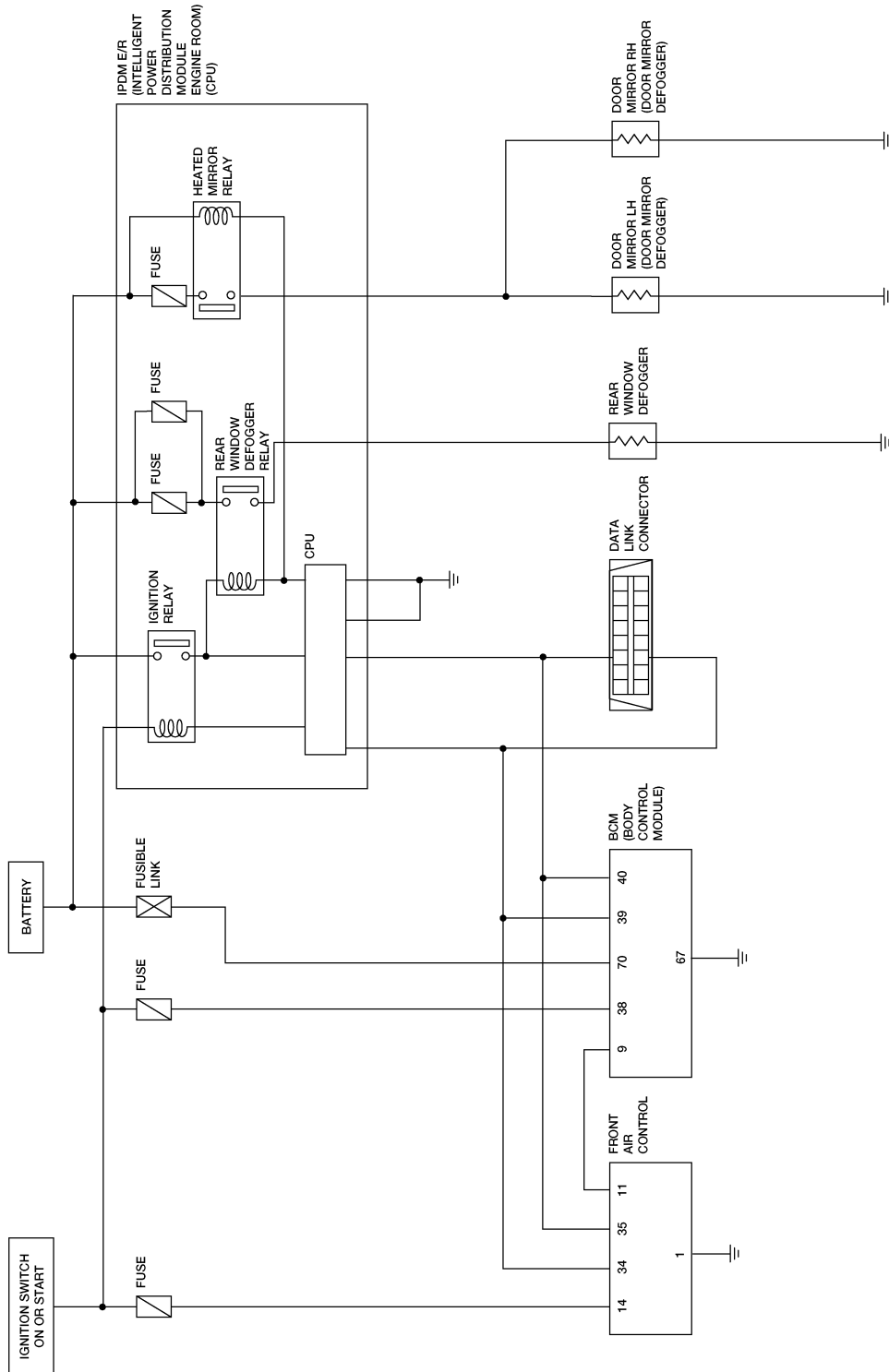
Refer to [LAN-5, "CAN COMMUNICATION"](#) .



# REAR WINDOW DEFOGGER

## Schematic

EIS002VP



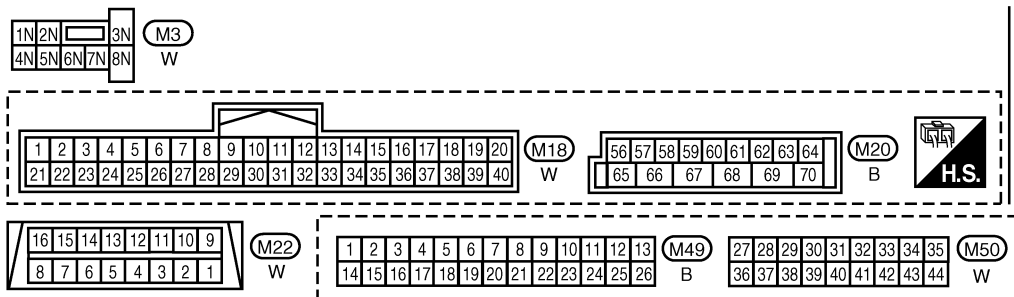
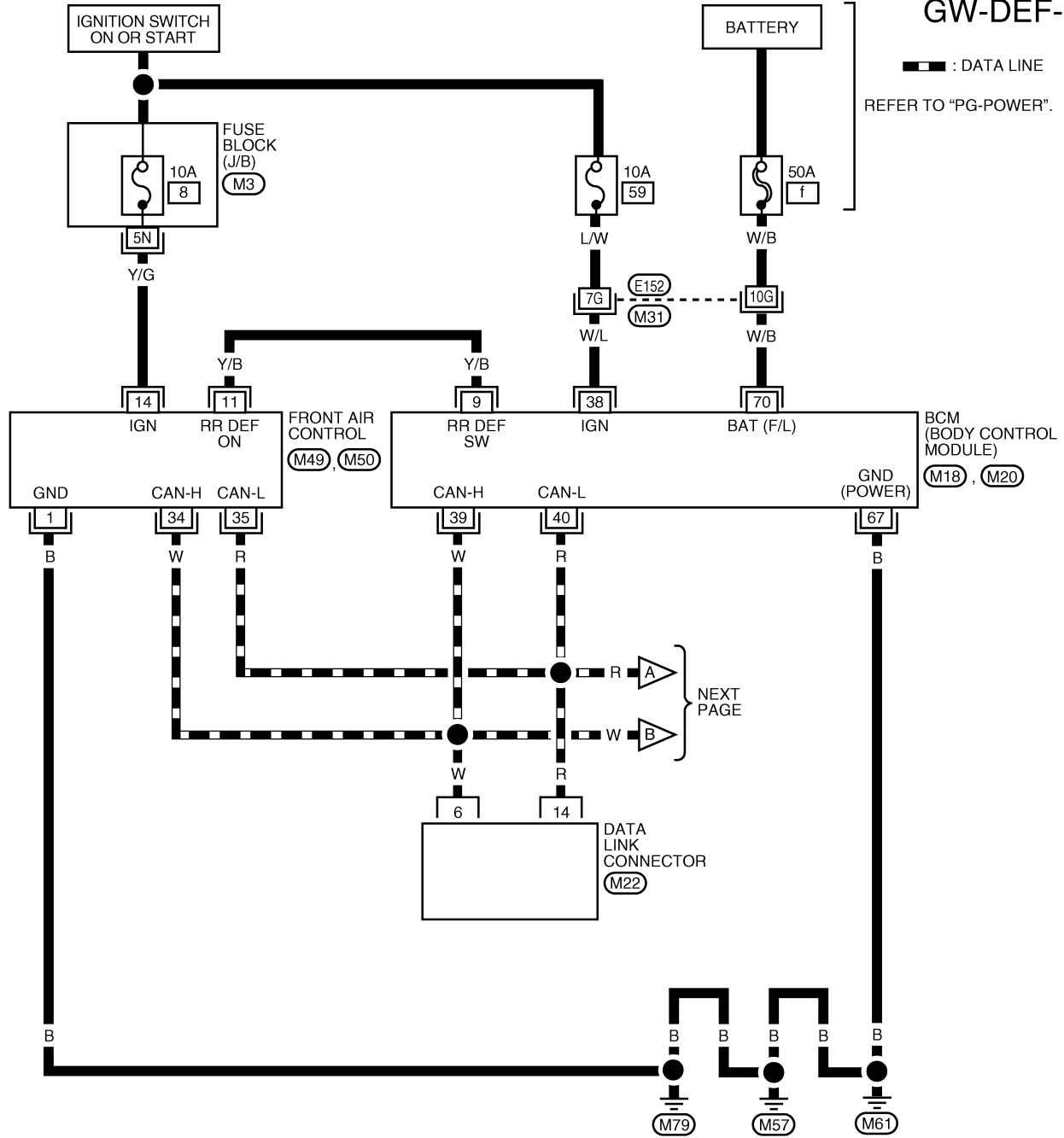
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# REAR WINDOW DEFOGGER

EIS002VQ

## Wiring Diagram — DEF —

GW-DEF-01



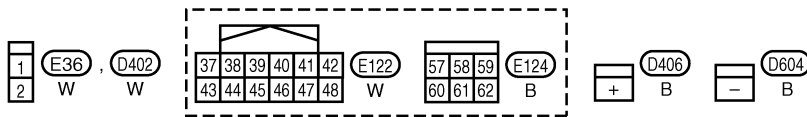
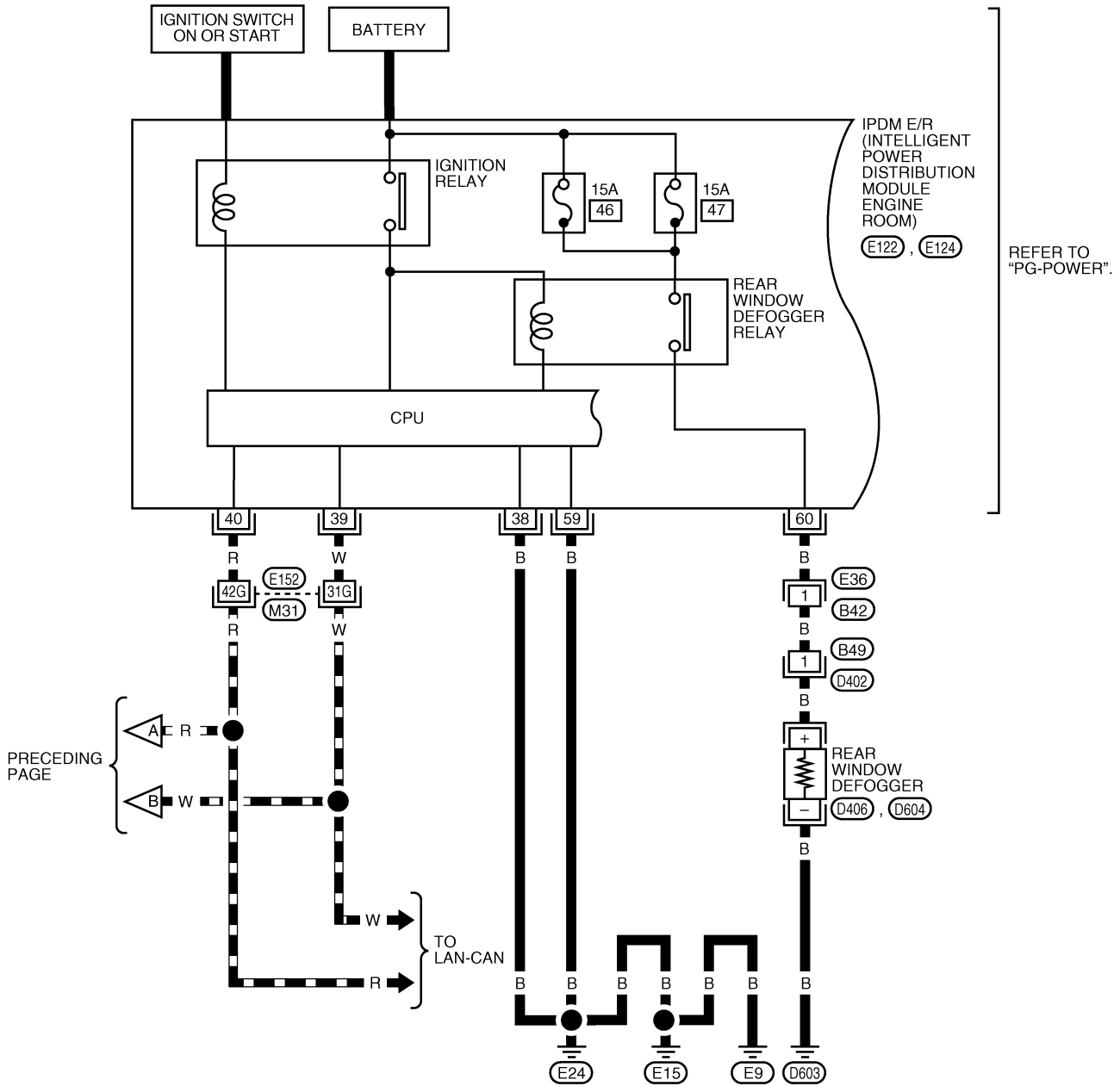
REFER TO THE FOLLOWING.  
 (M31) - SUPER MULTIPLE JUNCTION (SMJ)

LIWA0380E

# REAR WINDOW DEFOGGER

GW-DEF-02

— : DATA LINE



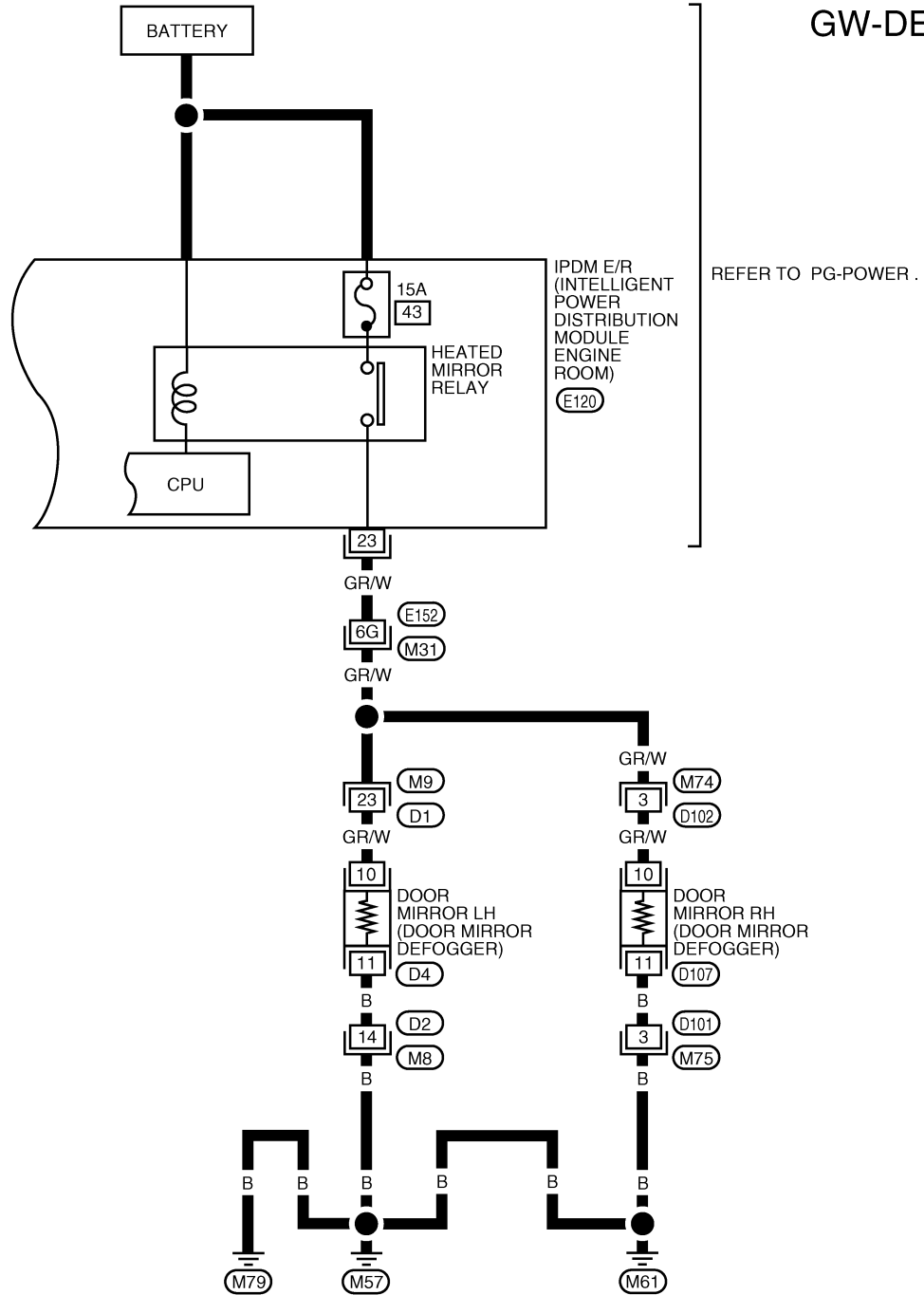
REFER TO THE FOLLOWING.

(M31) - SUPER MULTIPLE JUNCTION (SMJ)

LIWA0381E

# REAR WINDOW DEFOGGER

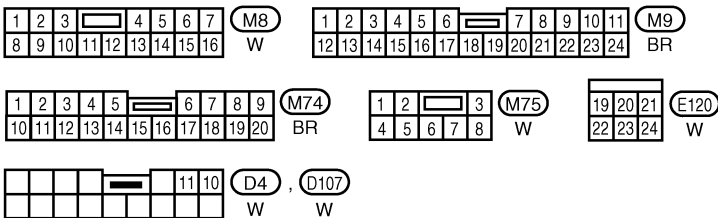
GW-DEF-03



REFER TO PG-POWER .

REFER TO THE FOLLOWING.

(M31) - SUPER MULTIPLE JUNCTION (SMJ)



LIWA0382E

# REAR WINDOW DEFOGGER

## Terminal and Reference Value for BCM

EIS002VR

Terminal	Wire color	Item	Condition	Voltage (V) (Approx.)
9	Y/B	Rear window defogger switch signal	When rear window defogger switch is pressed.	0
			When rear window defogger switch is OFF.	5
38	W/L	Ignition switch ON or START	Ignition switch (ON or START position)	Battery voltage
39	W	CAN-H	—	—
40	R	CAN-L	—	—
67	B	Ground	—	0
70	W/B	Battery power supply	—	Battery voltage

## Terminal and Reference Value for IPDM E/R

EIS002VS

Terminal	Wire color	Item	Condition	Voltage (V) (Approx.)
38	B	Ground (Power)	—	0
39	W	CAN-H	—	—
40	R	CAN-L	—	—
59	B	Ground (Signal)	—	0
60	B	Rear window defogger output signal	When rear window defogger switch is ON.	Battery voltage
			When rear window defogger switch is OFF.	0

## Work Flow

EIS002VT

1. Check the symptom and customer's requests.
2. Understand the outline of system. Refer to [GW-79, "System Description"](#) .
3. According to the trouble diagnosis chart, repair or replace the cause of the malfunction. Refer to [GW-87, "Trouble Diagnoses Symptom Chart"](#) .
4. Does rear window defogger operate normally? YES: GO TO 5, NO: GO TO 3.
5. Inspection end.

GW

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# REAR WINDOW DEFOGGER

EIS002VU

## CONSULT-II Function (BCM)

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

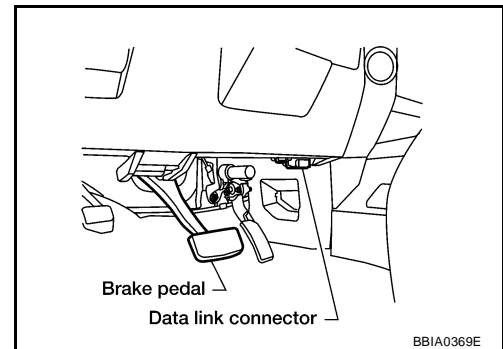
BCM diagnostic test item	Diagnostic mode	Content
Inspection by part	WORK SUPPORT	Changes setting of each function.
	DATA MONITOR	Displays BCM input/output data in real time.
	ACTIVE TEST	Operation of electrical loads can be checked by sending drive signal to them.
	SELF-DIAG RESULTS	Displays BCM self-diagnosis results.
	CAN DIAG SUPPORT MNTR	The results of transmit/receive diagnosis of CAN communication can be read.
	ECU PART NUMBER	BCM part number can be read.
	CONFIGURATION	Performs BCM configuration read/write functions.

## CONSULT-II BASIC OPERATION PROCEDURE

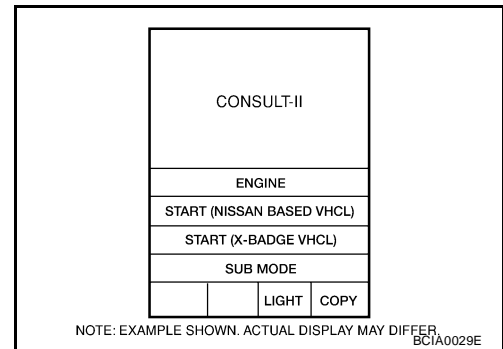
### CAUTION:

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

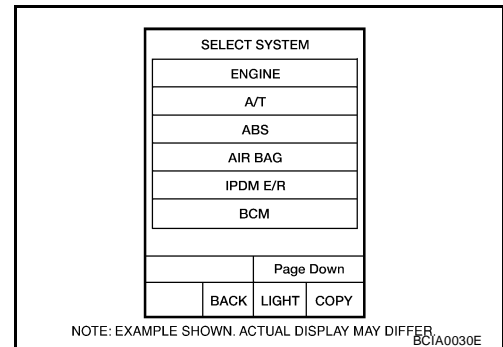
1. Turn ignition switch OFF.
2. Connect CONSULT-II and CONSULT-II CONVERTER to data link connector.
3. Turn ignition switch ON.



4. Touch "START (NISSAN BASED VHCL)".

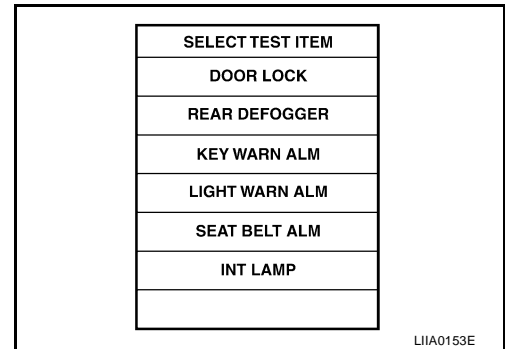


5. Touch "BCM".  
If "BCM" is not indicated, go to [GI-39, "CONSULT-II Data Link Connector \(DLC\) Circuit"](#).

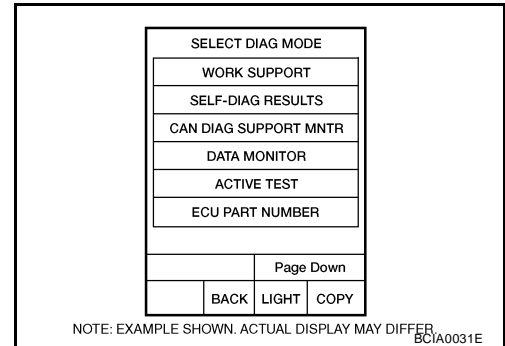


# REAR WINDOW DEFOGGER

6. Touch "REAR DEFOGGER".



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



## 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 WINDOW DEFOGGER	Gives a drive signal to the rear window defogger to activate it.

## Trouble Diagnoses Symptom Chart

EIS002VV

- Make sure other systems using the signal of the following systems operate normally.

Symptom	Diagnoses / Service procedure	Refer to page
Rear window defogger and door mirror defoggers do not operate.	1. BCM power supply and ground circuit check	<a href="#">GW-89</a>
	2. IPDM E/R auto active test check	<a href="#">PG-23</a>
	3. Rear window defogger switch circuit check	<a href="#">GW-90</a>
	4. Rear window defogger power supply circuit check	<a href="#">GW-91</a>
	5. Replace IPDM E/ R	<a href="#">PG-29</a>
Rear window defogger does not operate but both of door mirror defoggers operate.	1. Rear window defogger power supply circuit check	<a href="#">GW-91</a>
	2. Rear window defogger circuit check	<a href="#">GW-92</a>
	3. Filament check	<a href="#">GW-96</a>
	4. Replace IPDM E/R	<a href="#">PG-29</a>
Both door mirror defoggers do not operate but rear window defogger operates.	1. Door mirror defogger power supply circuit check	<a href="#">GW-92</a>
	2. Replace IPDM E/R	<a href="#">PG-29</a>
Driver side door mirror defogger does not operate.	1. Driver side door mirror defogger circuit check	<a href="#">GW-94</a>

## REAR WINDOW DEFOGGER

Symptom	Diagnoses / Service procedure	Refer to page
Passenger side door mirror defogger does not operate.	1. Passenger side door mirror defogger circuit check	<a href="#">GW-95</a>
Rear window defogger switch does not light, and rear window defogger is not displayed on the display. But rear window defogger operates.	1. Rear window defogger signal check	<a href="#">GW-96</a>



# REAR WINDOW DEFOGGER

EIS002VW

## BCM Power Supply and Ground Circuit Check

### 1. CHECK FUSES AND FUSIBLE LINK

- Check 10A fuse (No. 8, located in the fuse block (J/B])
- Check 10A fuse (No. 59, located in the fuse and relay box)
- Check 50A fusible link (letter f , located in the fuse and fusible link box)

#### NOTE:

Refer to [GW-78, "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-4, "POWER SUPPLY ROUTING CIRCUIT"](#) .

### 2. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch ON.
2. Check voltage between BCM connector M18, M20 terminals 38, 70 and ground.

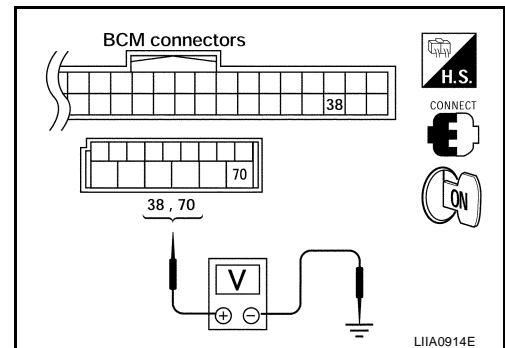
**70 (W/B) - Ground : Battery voltage**

**38 (W/L) - Ground : Battery voltage**

#### OK or NG

OK >> GO TO 3.

NG >> Repair or replace harness.



### 3. CHECK GROUND CIRCUIT

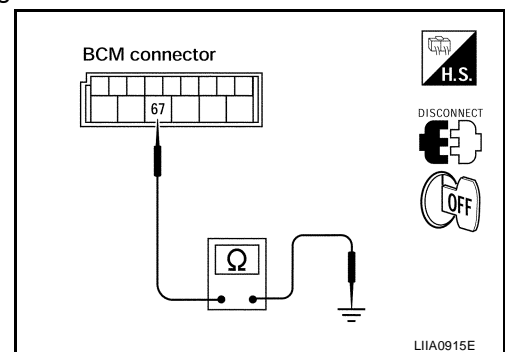
1. Turn ignition switch OFF.
2. Disconnect BCM.
3. Check continuity between BCM connector M20 terminal 67 and ground.

**67 (B) - Ground : Continuity should exist.**

#### OK or NG

OK >> BCM power supply and ground circuit is OK.

NG >> Repair or replace harness.



# REAR WINDOW DEFOGGER

EIS002VX

## Rear Window Defogger Switch Circuit Check

### 1. CHECK REAR WINDOW DEFOGGER SWITCH OPERATION

#### With CONSULT-II

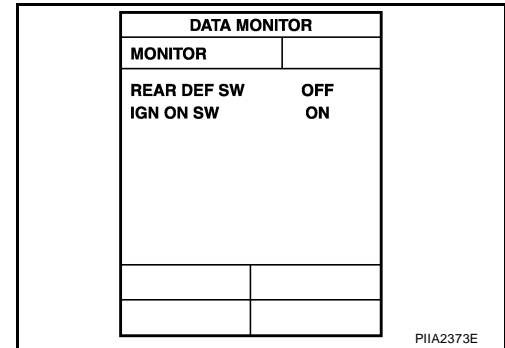
Check ("REAR DEF SW", "IGN ON SW") in DATA MONITOR mode with CONSULT-II.

**When rear window defogger switch is turned to ON**

**REAR DEF SW : ON**

**When ignition switch is turned to ON**

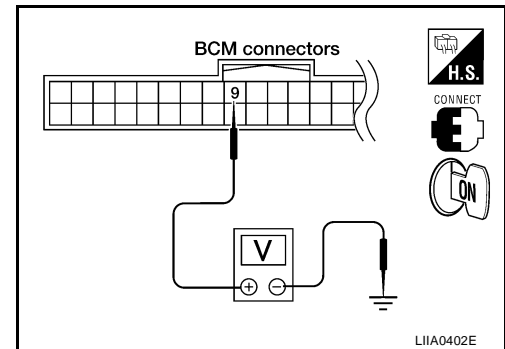
**IGN ON SW : ON**



#### Without CONSULT-II

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

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M18	9 (Y/B)	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 front air control.
3. Check continuity between BCM connector M18 terminal 9 and front air control connector M49 terminal 11.

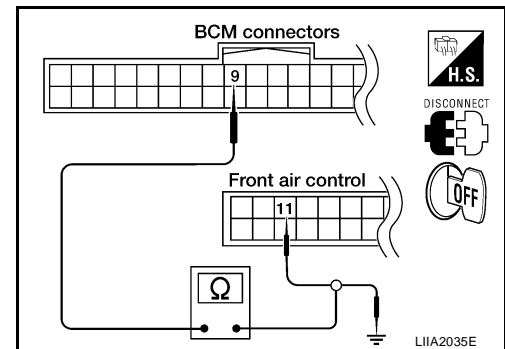
**9 (Y/B) - 11 (Y/B) : Continuity should exist.**

4. Check continuity between BCM connector M18 terminal 9 and ground

**9 (Y/B) - Ground : Continuity should not exist.**

#### OK or NG

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



# REAR WINDOW DEFOGGER

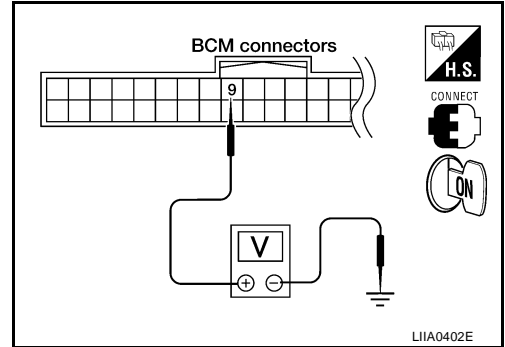
## 3. CHECK BCM OUTPUT SIGNAL

1. Connect BCM.
2. Turn ignition switch ON.
3. Check voltage between BCM connector M18 terminal 9 and ground.

**9 (Y/B) - Ground : Approx. 5**

OK or NG

- OK >> Replace front air control.  
 NG >> Replace BCM.



## Rear Window Defogger Power Supply Circuit Check

EIS002VY

### 1. CHECK FUSE

Check if any of the following fuses in IPDM E/R are blown.

COMPONENT PARTS	AMPERE	FUSE NO.
IPDM E/R	15A	46
	15A	47

**NOTE:**

Refer to [GW-78, "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 [GW-78, "Component Parts and Harness Connector Location"](#) .

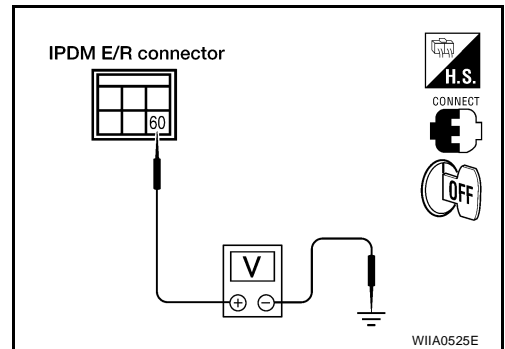
### 2. CHECK REAR WINDOW DEFOGGER RELAY OUTPUT SIGNAL

Check voltage between IPDM E/R connector E124 terminal 60 and ground.

**60 (B) - Ground : Battery voltage**

OK or NG

- OK >> Replace IPDM E/R.  
 NG >> Repair or replace harness.



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GW

# REAR WINDOW DEFOGGER

EIS002VZ

## Rear Window Defogger Circuit Check

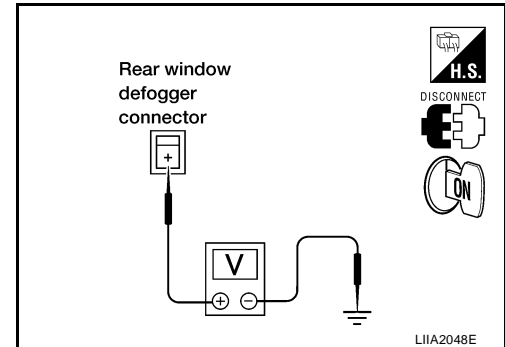
### 1. CHECK REAR WINDOW DEFOGGER POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect rear window defogger.
3. Turn ignition switch ON.
4. Check voltage between rear window defogger connector D406 terminal + and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
D406	+ (B)	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.



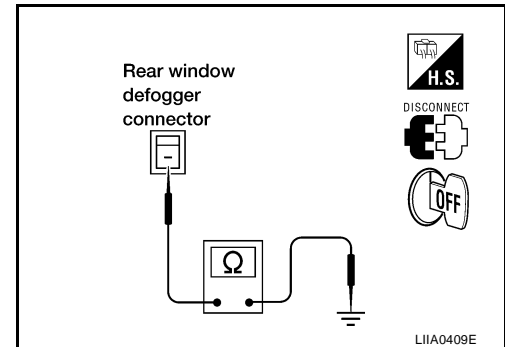
### 2. CHECK REAR WINDOW DEFOGGER GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between rear window defogger connector D604 terminal - and ground.

**- (B) - Ground : Continuity should exist.**

OK or NG

- OK >> Check filament. Refer to [GW-96, "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.



## Door Mirror Defogger Power Supply Circuit Check

EIS002W1

### 1. CHECK FUSE

Check if the following fuse in the IPDM E/R is blown.

COMPONENT PARTS	AMPERE	FUSE NO.
IPDM E/R	15A	43

**NOTE:**

Refer to [GW-78, "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 [GW-78, "Component Parts and Harness Connector Location"](#) .

# REAR WINDOW DEFOGGER

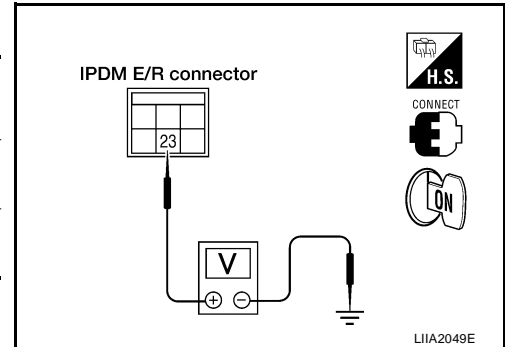
## 2. CHECK DOOR MIRROR DEFOGGER POWER SUPPLY CIRCUIT 2

1. Turn ignition switch ON.
2. Check voltage between IPDM E/R connector and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
E120	23 (GR/W)	Ground	Rear window defogger switch ON	Battery voltage
			Rear window defogger switch OFF	0

OK or NG

- OK >> GO TO 3.  
 NG >> Replace IPDM E/R.



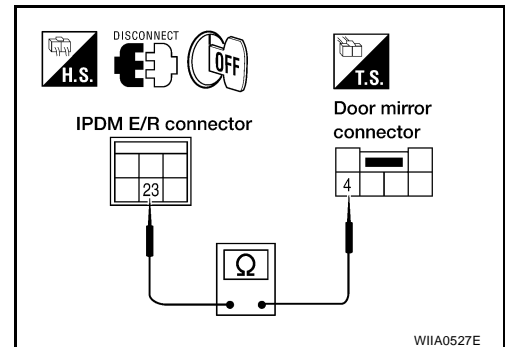
## 3. CHECK DOOR MIRROR DEFOGGER CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R and door mirror LH or RH.
3. Check continuity between IPDM E/R connector E120 terminal 23 and door mirror connector D4 (LH) or D107 (RH) terminal 10.

**23 (GR/W) - 10 (GR/W) : Continuity should exist.**

OK or NG

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



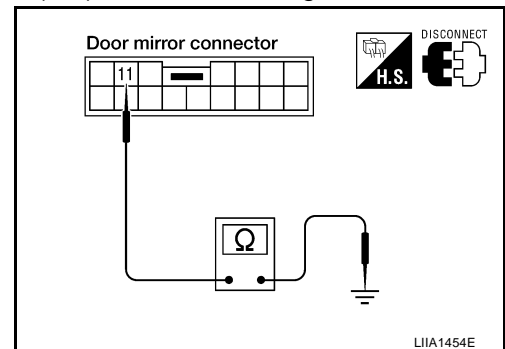
## 4. CHECK DOOR MIRROR DEFOGGER GROUND CIRCUIT

Check continuity between each door mirror connector D4 (LH) or D107 (RH) terminal 11 and ground.

**11 (B) - Ground : Continuity should exist.**

OK or NG

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



# REAR WINDOW DEFOGGER

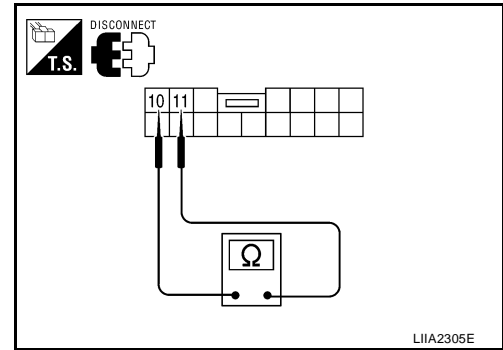
## 5. CHECK DOOR MIRROR DEFOGGER

Check continuity between each door mirror terminals 10 and 11.

**10 - 11 : Continuity should exist.**

OK or NG

- OK >> Check the condition of the harness and the connector.
- NG >> Replace malfunctioning door mirror LH or RH.



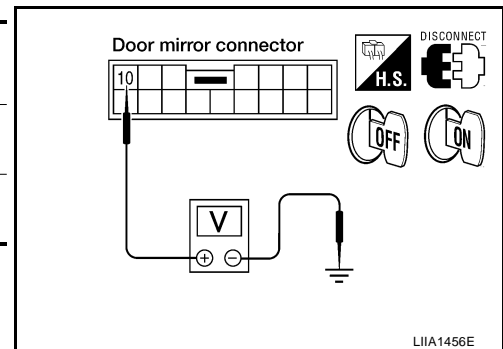
## Door Mirror LH Defogger Circuit Check

EIS002W3

### 1. CHECK DOOR MIRROR DEFOGGER POWER SUPPLY CIRCUIT

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

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
D4	10 (GR/W)	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.

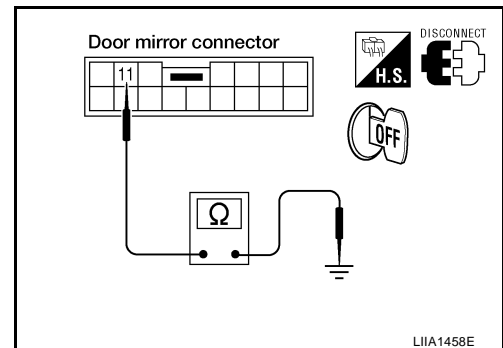
### 2. CHECK DOOR MIRROR DEFOGGER GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between door mirror LH connector D4 terminal 11 and ground.

**11 (B) - Ground : Continuity should exist.**

OK or NG

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



# REAR WINDOW DEFOGGER

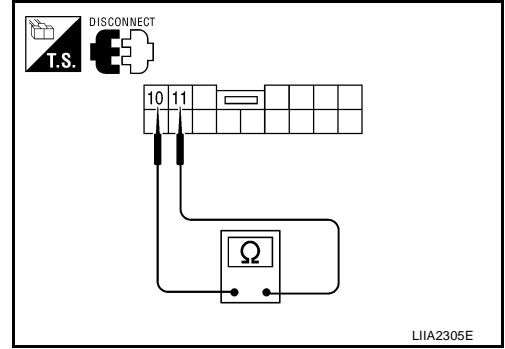
## 3. CHECK DOOR MIRROR DEFOGGER

Check continuity between door mirror LH terminals 10 and 11.

**10 - 11 : Continuity should exist.**

OK or NG

- OK >> Repair or replace harness.
- NG >> Replace door mirror LH.



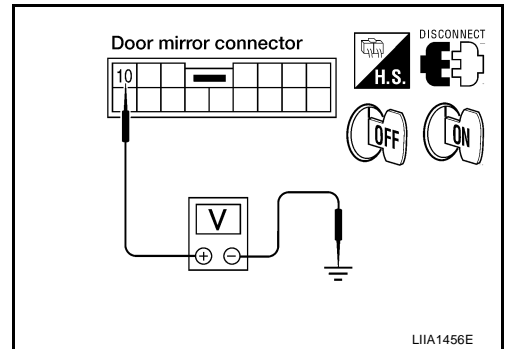
## Door Mirror RH Defogger Circuit Check

EIS002W5

### 1. CHECK DOOR MIRROR DEFOGGER POWER SUPPLY CIRCUIT

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

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
D107	10 (GR/W)	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.

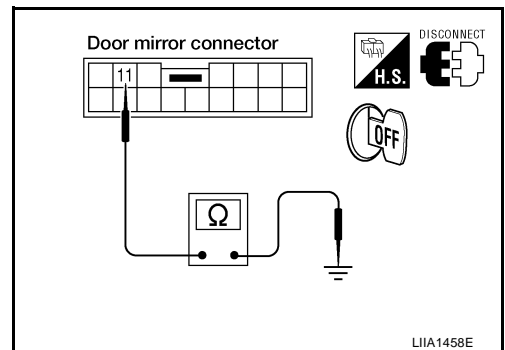
### 2. CHECK DOOR MIRROR DEFOGGER GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between door mirror RH connector D107 terminal 11 and ground.

**11 (B) - Ground : Continuity should exist.**

OK or NG

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



# REAR WINDOW DEFOGGER

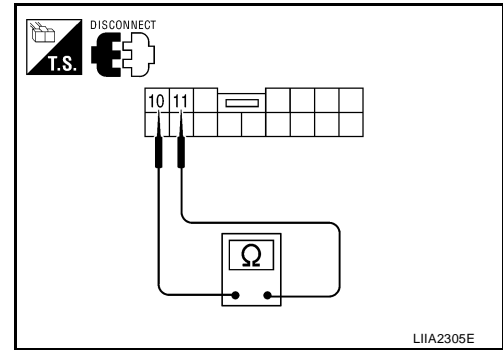
## 3. CHECK DOOR MIRROR DEFOGGER

Check continuity between door mirror RH terminals 10 and 11.

**10 - 11 : Continuity should exist.**

OK or NG

- OK >> Repair or replace harness.
- NG >> Replace door mirror RH.



## Rear Window Defogger Signal Check

### 1. CHECK AV COMMUNICATION LINE

AV communication line check is executed. Refer to [ATC-32, "CAN Communication System Description"](#) .

**Is rear window defogger displayed on the display?**

OK or NG

- OK >> GO TO 2.
- NG >> Replace display control unit.

### 2. CHECK CAN COMMUNICATION LINE

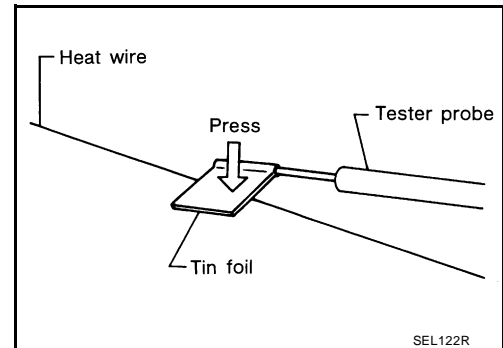
CAN communication line check is executed. Refer to [LAN-5, "CAN COMMUNICATION"](#) .

OK or NG

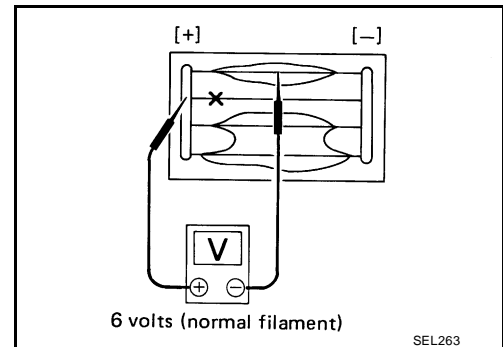
- OK >> Check the condition of the harness and the connector.
- NG >> In addition, it is necessary to check CAN communication line. Refer to [LAN-5, "CAN COMMUNICATION"](#) .

## Filament Check

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



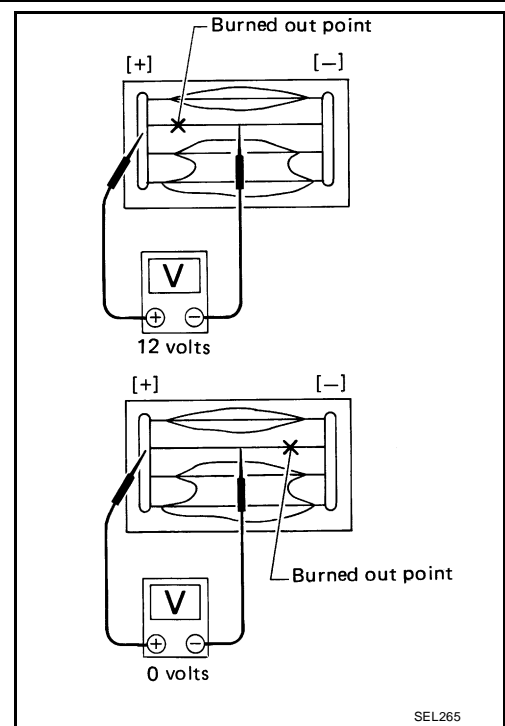
2. Attach probe circuit tester (in Volt range) to middle portion of each filament.





# REAR WINDOW DEFOGGER

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



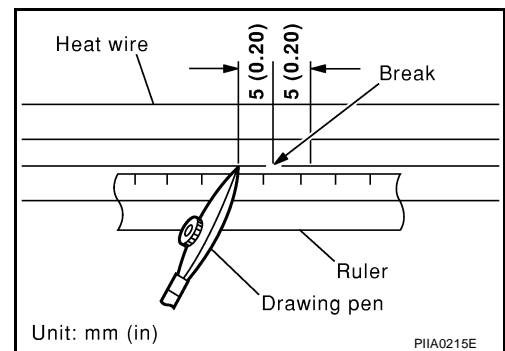
EIS002W8

## Filament Repair REPAIR EQUIPMENT

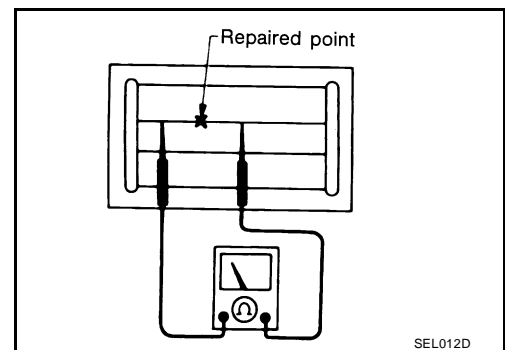
- Conductive silver composition (DuPont No. 4817 or equivalent)
- Ruler 30 cm (11.8 in) long
- Drawing pen
- Heat gun
- Alcohol
- Cloth

## REPAIRING PROCEDURE

- Wipe broken heat wire and its surrounding area clean with a cloth dampened in alcohol.
- Apply a small amount of conductive silver composition to tip of drawing pen. Shake silver composition container before use.
- 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.

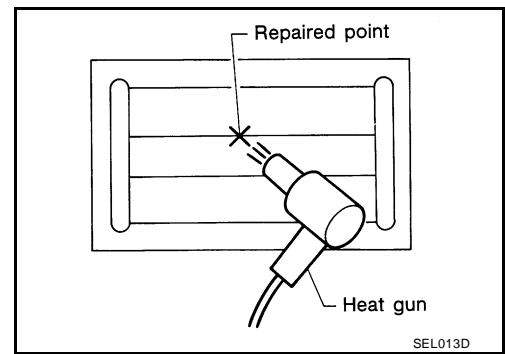


- After repair has been completed, check repaired wire for continuity. This check should be conducted 10 minutes after silver composition is deposited. Do not touch repaired area while test is being conducted.



## REAR WINDOW DEFOGGER

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.



# DOOR MIRROR

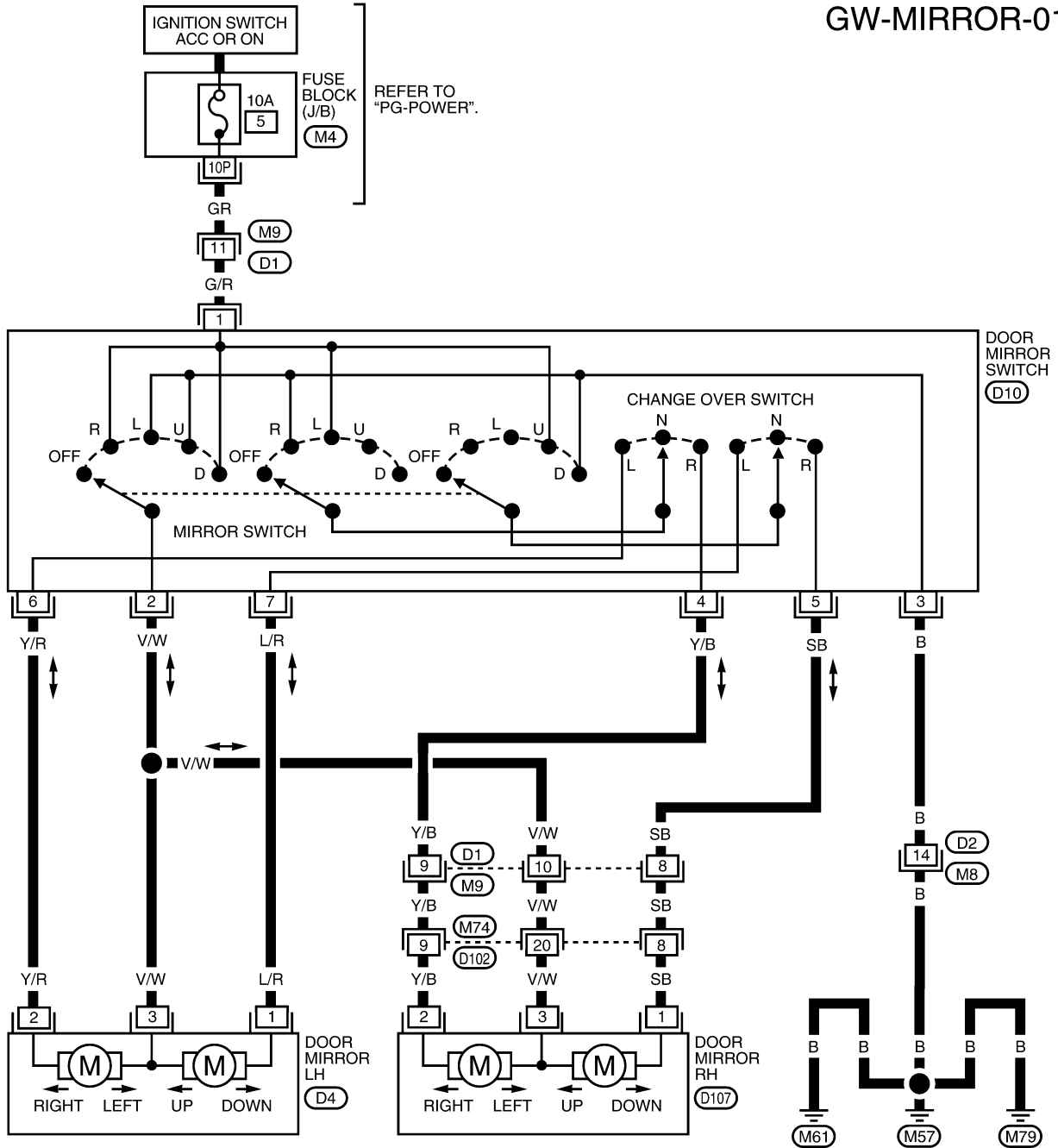
## DOOR MIRROR

### Wiring Diagram — MIRROR —

PF9:96301

EIS002W9

## GW-MIRROR-01



1P	2P	3P	4P	5P	6P	7P	M4		
8P	9P	10P	11P	12P	13P	14P	15P	16P	W

1	2	3	4	5	6	7	M8		
8	9	10	11	12	13	14	15	16	W

1	2	3	4	5	6	7	8	9	10	11	M9		
12	13	14	15	16	17	18	19	20	21	22	23	24	BR

1	2	3	4	5	6	7	8	9	M74		
10	11	12	13	14	15	16	17	18	19	20	BR

3	2	1	D4
			W

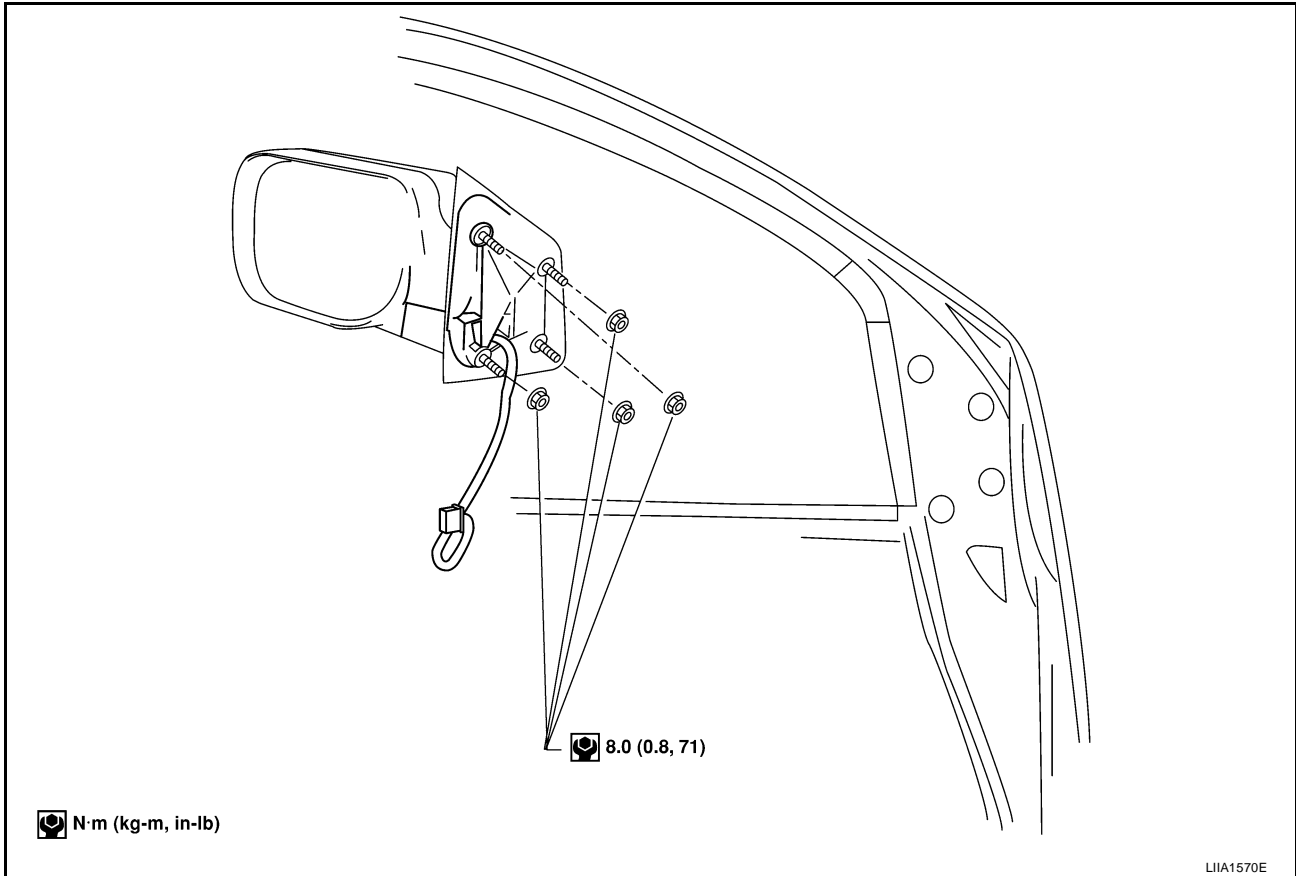
2				D107		
6	1	4	3	7	5	W

W1WA0641E

# DOOR MIRROR

## Door Mirror Assembly

EIS002WA



### REMOVAL

#### NOTE:

Be careful not to damage the mirror bodies.

1. Remove the front door sash cover. Refer to [AV-46, "Removal and Installation of Front Tweeter"](#) .
2. Remove the door mirror harness connector.
3. Remove the door mirror mounting nuts and the mirror assembly.

### INSTALLATION

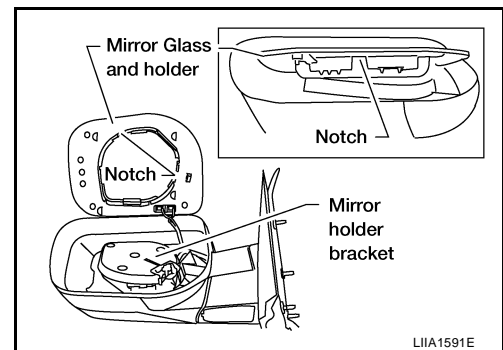
Installation is in the reverse order of removal.

### Door Mirror Glass

#### REMOVAL

1. Set mirror assembly mirror glass upward.
2. Apply protective tape to mirror housing.
3. Insert a screwdriver at notch and gently pry mirror glass and holder from mirror holder bracket.
4. Disconnect two electrical connectors from mirror glass and holder.

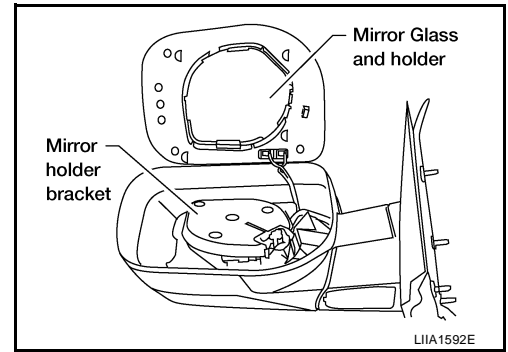
EIS002WB



# DOOR MIRROR

## INSTALLATION

1. Set mirror holder bracket and mirror glass and holder in the horizontal position.
2. Connect two electrical connectors to the back of the mirror holder.
3. Align mirror glass and holder with mirror holder bracket and push mirror glass and holder onto mirror holder bracket.
4. Rotate mirror to ensure proper installation.



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# DOOR MIRROR

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