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GLASSES, WINDOW SYSTEM & MIRRORS

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PRECAUTIONS

PRECAUTIONS PFP:00001

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 Man-

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

EIS007R3

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

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PREPARATION

PREPARATION PFP:00002

Special Service Tool

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

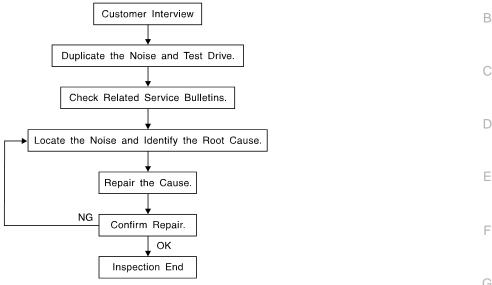
Tool number (Kent-Moore No.) Tool name		Description
— (J-39570) Chassis ear	SIIAO993E	Locating the noise
— (J-43980) NISSAN Squeak and Rat- tle Kit	SIIA0994E	Repairing the cause of noise

Commercial Service Tool

EIS007R6

(Kent-Moore No.) Tool name		Description
(J-39565) Engine ear	SIIA0995E	Locating the noise
(—) Suction Lifter	LIIA1991E	Holding door glass

SQUEAK AND RATTLE TROUBLE DIAGNOSES Work Flow EIS007R7



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.

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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)

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

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
- Instrument panel to windshield
- 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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TRUNK

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

- 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/HEADLINING

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

- 1. Sunroof lid, rail, linkage or seals making a rattle or light knocking noise
- 2. 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:

- Loose harness or harness connectors.
- Front console map/reading lamp lense loose.
- 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:

- Headrest rods and holder
- 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
- 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.

Diagnostic Worksheet

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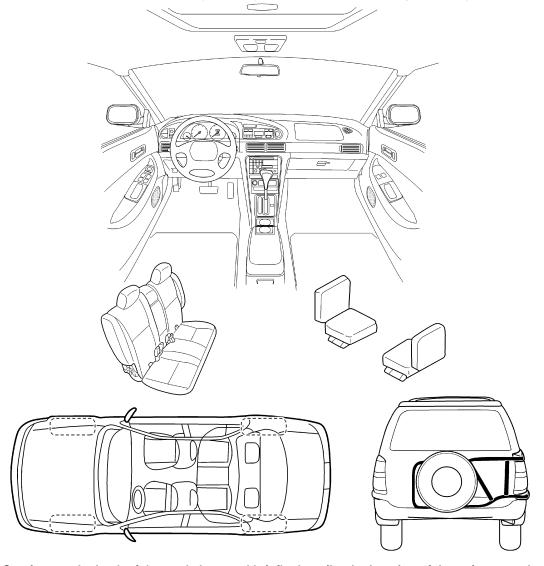
SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

Dear Nissan Customer:

We are concerned about your satisfaction with your Nissan vehicle. Repairing a squeak or rattle sometimes can be very difficult. To help us fix your Nissan 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 DOESTHE 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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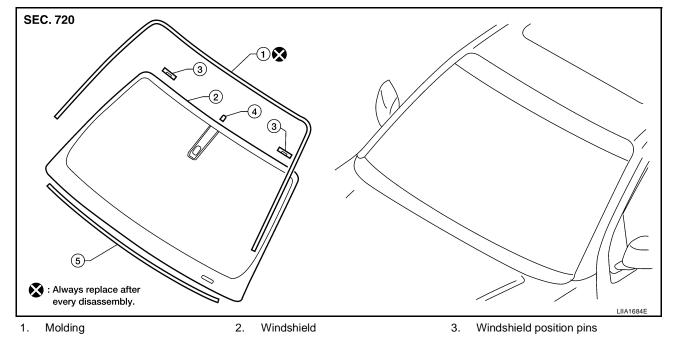
SQUEAK & RATTLE DIAGNOSTIC WORKSHEET- page 2 Briefly describe the location where the noise occurs: II. WHEN DOES IT OCCUR? (check the boxes that apply) □ anytime ☐ after sitting out in the sun ☐ 1st time in the morning □ when it is raining or wet ☐ dry or dusty conditions ☐ only when it is cold outside ☐ only when it is hot outside ☐ other: IV. WHAT TYPE OF NOISE? III. WHEN DRIVING: ☐ through driveways ☐ squeak (like tennis shoes on a clean floor) □ over rough roads ☐ creak (like walking on an old wooden floor) □ over speed bumps ☐ rattle (like shaking a baby rattle) ☐ only at about ____ mph ☐ knock (like a knock on a door) ☐ on acceleration ☐ tick (like a clock second hand) coming to a stop ☐ thump (heavy, muffled knock noise) □ buzz (like a bumble bee) ☐ on turns : left, right or either (circle) ■ with passengers or cargo other: __ ☐ after driving ____ miles or ____ minutes TO BE COMPLETED BY DEALERSHIP PERSONNEL **Test Drive Notes:** Initials of person YES NO performing Vehicle test driven with customer - Noise verified on test drive - Noise source located and repaired - Follow up test drive performed to confirm repair VIN: Customer Name: W.O. #: _____ Date: ____

This form must be attached to Work Order

PFP:72712

Removal and Installation

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REMOVAL

4.

Mirror base

1. Remove inside mirror. Refer to <u>GW-73</u>, "Removal and Installation".

5.

2. Partially remove the headlining (front edge). Refer to El-31, "Removal and Installation".

Insulator

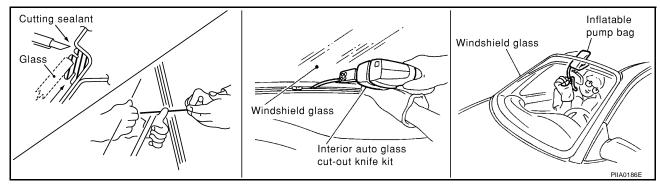
- 3. Remove cowl top cover. Refer to EI-17, "Removal and Installation".
- Apply a protective tape around the windshield glass to protect the painted surface from damage.
- If the windshield glass is to be reused, mark the body and the glass with mating marks.
- Remove glass using piano wire or power cutting tool and an inflatable pump bag.

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.

CALITION.

- When the 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.

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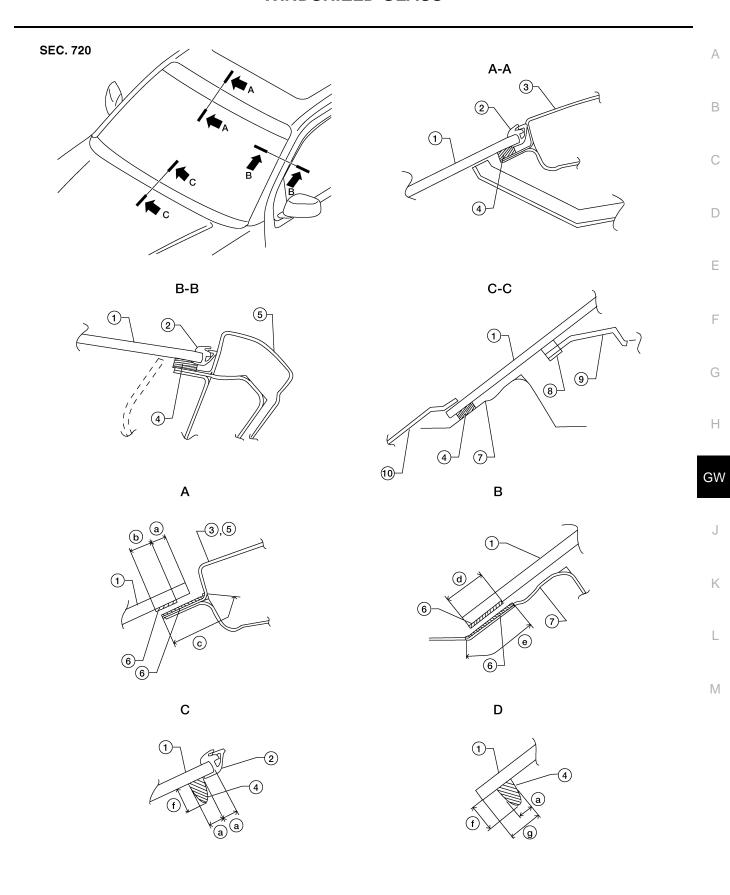
- While the urethane adhesive is curing, open a door window. This will prevent the glass from being forced out by passenger compartment air pressure when a door is closed.
- The molding must be installed securely so that it is in position and leaves no gap.
- Inform the customer that the vehicle should 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 humidities. The curing time will increase under lower temperatures and lower humidities.



1. Windshield glass

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4. Urethane

7. Cowl top panel

2. Molding

5. A-pillar

8. Insulator

3. Roof

6. Primer

9. Instrument panel

WIIA1032E

10.	Cowl top cover	A.	Primer area (top and sides)	B.	Primer area (bottom)
C.	Bond area (top and sides)	D.	Bond area (bottom)	a.	7.0 mm (0.27 in)
b.	10.0 mm (0.39 in)	c.	22.0 mm (0.78 in)	d.	20.0 mm (0.78 in)
e.	28.0 mm (1.10 in)	f.	12.0 mm (0.47 in)	g.	15.0 mm (0.59 in)

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.

PFP:25401

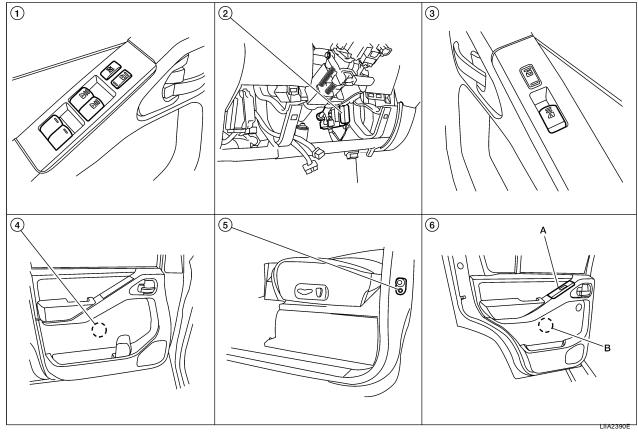
Component Parts and Harness Connector Location

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- Main power window and door lock/ unlock switch D7, D8
- Front power window motor LH D9, **RH D104**
- BCM M18, M19, M20 (view with instrument lower panel LH removed)
- Front door switch LH B8, RH B108
- switch RH D105
- D203, RH D303 B.Rear power window motor LH

System Description

Power is supplied at all times

- from 50A fusible link (letter **g**, 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 and
- 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.1, located in the fuse block (J/B)]
- to BCM terminal 38
- through BCM terminal 68
- to main power window and door lock/unlock switch terminal 10 and
- to rear power window switch LH and RH terminal 8.

With ignition switch in ACC or ON position, power is supplied

- through 10A fuse [No. 4, located in the fuse block (J/B)]
- to BCM terminal 11.

Ground is supplied

to BCM terminal 67

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Power window and door lock/unlock

A. Rear power window switch LH D204, RH D304

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

MANUAL OPERATION

Front Door LH

WINDOW UP

When the front LH switch in the main power window and door lock/unlock switch is pulled to 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 Door RH

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

When the power window and door lock/unlock switch RH is pulled to 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

- though 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 pulled to the up position, power is supplied

through rear power window switch LH or RH terminal 7 Α to rear power window motor LH or RH terminal 2. Ground is supplied through rear power window switch LH or RH terminal 6 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 through rear power window switch LH or RH terminal 6 to rear power window motor LH or RH terminal 1. Ground is supplied through rear power window switch LH or RH terminal 7 to rear power window motor LH or RH terminal 2. Е Then, the motor lowers the window until the switch is released. MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OPERATION WINDOW UP When the main power window and door lock/unlock switch (rear LH) is pressed in the up position, power is supplied through main power window and door lock/unlock switch terminal 1 to rear power window switch LH terminal 4 through rear power window switch LH terminal 7 to rear power window motor LH terminal 2. Н Ground is supplied to main power window and door lock/unlock switch terminal 17 through main power window and door lock/unlock switch terminal 3 GW to rear power window switch LH terminal 5 through rear power window switch LH terminal 6 to rear power window motor LH terminal 1. Then, the motor raises the window until the switch is released. When the main power window and door lock/unlock switch (rear RH) is pulled to the up position, power is supplied through main power window and door lock/unlock switch terminal 7 to rear power window switch RH terminal 4 through rear power window switch RH terminal 7 to rear power window motor RH terminal 2. Ground is supplied M to main power window and door lock/unlock switch terminal 17 through main power window and door lock/unlock switch terminal 5 to rear power window switch LH terminal 5 through rear power window switch LH terminal 6 to rear power window motor LH terminal 1. Then, the motor raises the window until the switch is released. WINDOW DOWN When the main power window and door lock/unlock switch (rear LH) is pressed in the down position, power is

through main power window and door lock/unlock switch terminal 3

- to rear power window switch LH terminal 5
- through rear power window switch LH terminal 6
- to rear power window motor LH terminal 1.

Ground is supplied

to main power window and door lock/unlock switch terminal 17

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- through main power window and door lock/unlock switch terminal 1
- to rear power window switch LH terminal 4
- through rear power window switch LH terminal 7
- to rear power window motor LH terminal 2.

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

When the main power window and door lock/unlock switch (rear RH) is pressed in the down position, power is supplied

- through main power window and door lock/unlock switch terminal 5
- to rear power window switch RH terminal 5
- through rear power window switch RH terminal 6
- to rear power window motor RH terminal 1.

Ground is supplied

- to main power window and door lock/unlock switch terminal 17
- through main power window and door lock/unlock switch terminal 7
- to rear power window switch LH terminal 4
- through rear power window switch LH terminal 7
- to rear power window motor LH terminal 2.

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

AUTO OPERATION

The power window AUTO feature allows the driver to open or close the front window LH or RH and the passenger to open or close the front window RH 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, and BCM transmit and receive the signal by power window serial link.

- 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.

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

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, ground of the rear LH and RH power window switches in the main power window and door lock/unlock switch is disconnected. The power window lock signal is transmitted to front power window switch RH by power window serial link. This prevents the power window motors from operating.

RETAINED POWER OPERATION

When the ignition switch is turned to the OFF position from ON or START position Power is supplied for 45 seconds

- to main power window and door lock/unlock switch terminal 10 and
- to rear power window switch (LH and RH) terminal 8
- 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-28, "CONSULT-II Function (BCM)".

ANTI-PINCH SYSTEM

Main power window and door lock/unlock switch and power window and door lock/unlock switch RH monitor the power window motor operation and the power window position (full closed or other) for front LH and front RH power window by the signals from encoder and limit switch in front power window motor LH and RH. When main power window and door lock/unlock switch or power window and door lock/unlock switch RH 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 or power window and door lock/unlock switch RH controls each front power window motor for open and the power window will be lowered.

POWER WINDOW CONTROL BY THE KEY CYLINDER SWITCH

When ignition 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 1 second.

- Front power windows can be opened as the door key cylinder is kept fully turned to the UNLOCK position.
- Front power windows can be closed as the door key cylinder is kept fully turned to the LOCK position.

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

- While performing open/close operation for the windows, power window is stopped when the door key cylinder is placed in the NEUTRAL position.
- When the ignition switch is turned ON while the power window opening operation is performed.

CAN Communication System Description

Refer to LAN-4, "SYSTEM DESCRIPTION".

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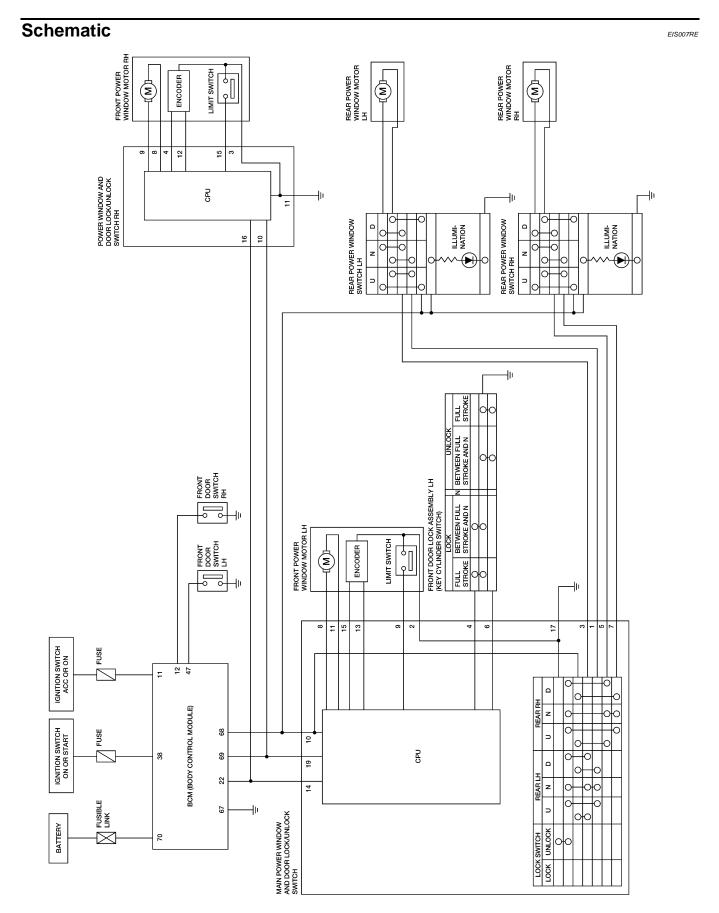
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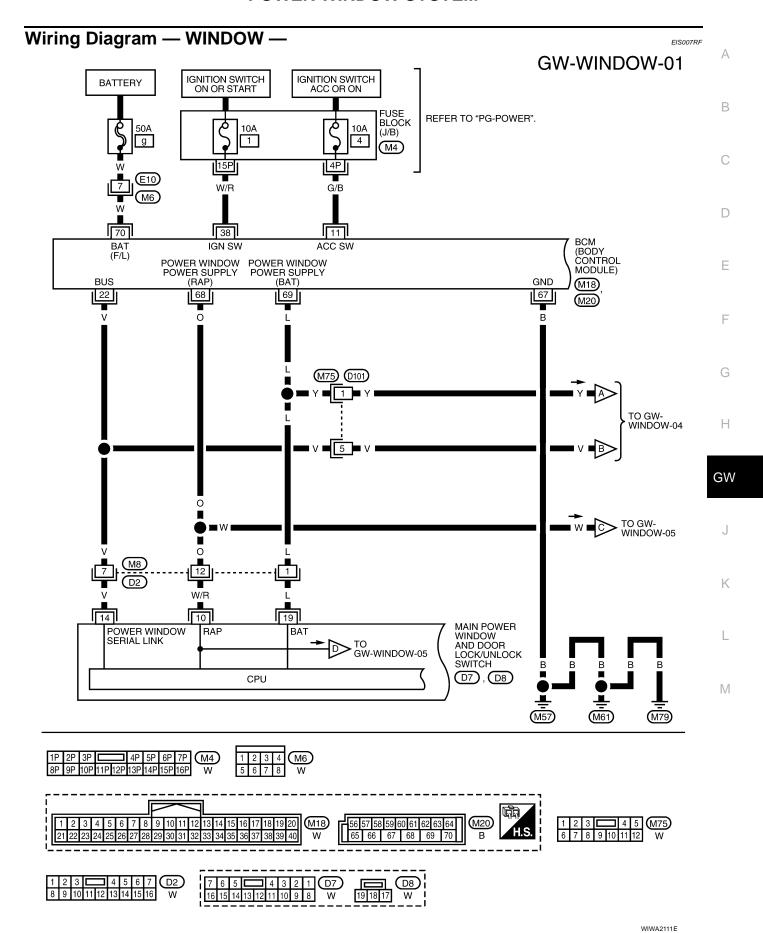
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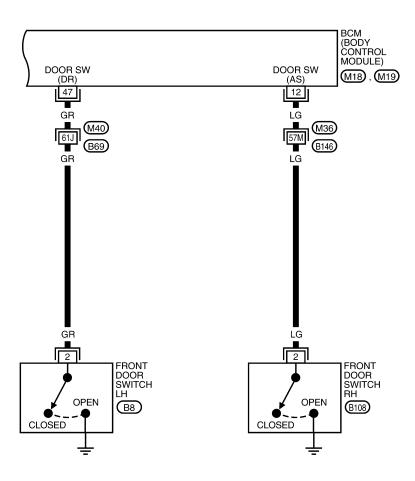
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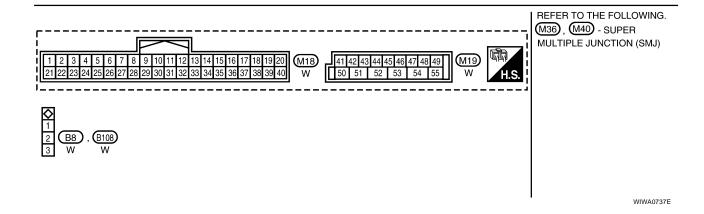


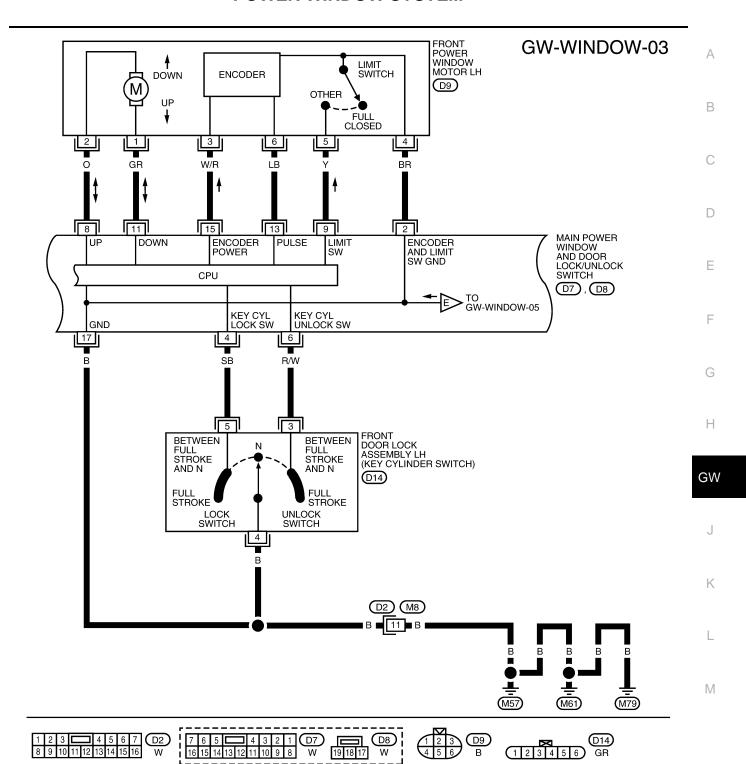
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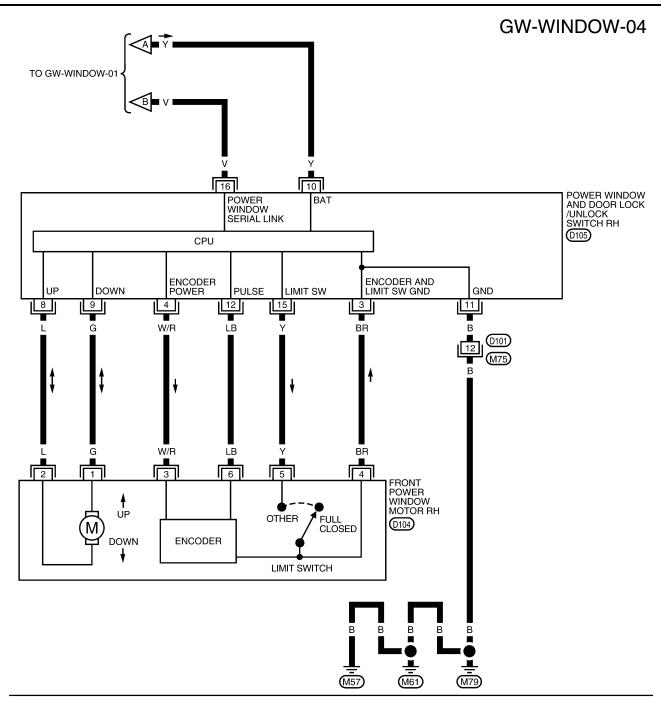
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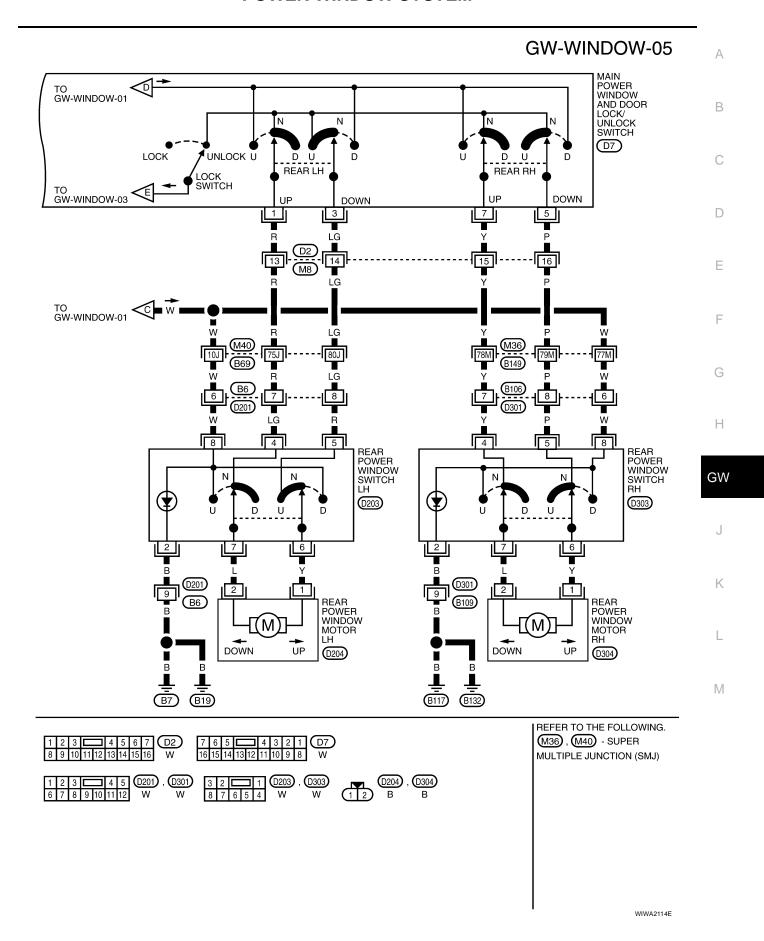


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1 2 3 4 5 W75 W 1 2 3 D104 B 7 6 5 4 3 2 1 D105 W

WIWA2113E



Main Power Window and Door Lock/Unlock Switch Harness Connector Terminal Layout

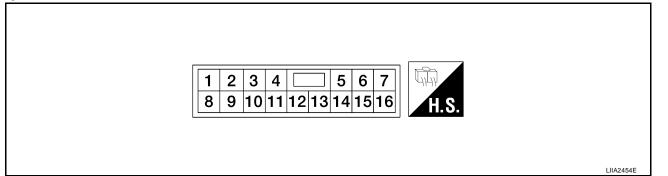
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 H.S.

Terminals and Reference Values for Main Power Window and Door Lock/Unlock Switch

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
1	R	Rear power window LH UP signal	When rear LH switch in main power window and door lock/unlock switch is operated UP	Battery voltage
2	BR	Limit switch and encoder ground	_	0
3	LG	Rear power window LH DOWN signal	When rear LH switch in main power window and door lock/unlock switch is operated DOWN	Battery voltage
4	SB	Front door lock assembly LH (key cylinder switch) lock signal	Key position (Neutral → Locked)	5 → 0
5	Р	Rear power window RH DOWN signal	When rear RH switch in main power window and door lock/unlock switch is operated DOWN	Battery voltage
6	R/W	Front door lock assembly LH (key cylinder switch) unlock signal	Key position (Neutral → Unlocked)	5 → 0
7	Y	Rear power window RH UP signal	When rear RH switch in main power window and door lock/unlock switch is operated UP	Battery voltage
8	0	Front power window motor LH UP signal	When power window motor is operated UP	Battery voltage
9	Y	Limit switch signal	Front door window LH is between fully-open and just before fully-closed position (ON)	0
9	ľ	Littiit Switch Signal	Front door window LH is between just before fully-closed position and fully-closed position (OFF)	5
			When ignition switch ON	Battery voltage
			Within 45 second after ignition switch is turned to OFF	Battery voltage
10	W/R	RAP signal	More than 45 second after ignition switch is turned to OFF	0
			When front door LH or RH open or power window timer operates	0
11	GR	Front power window motor LH DOWN signal	When power window motor is operated DOWN	Battery voltage

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
13	LB	Encoder pulse signal	When power window motor operates.	(V) 6 4 2 0 10mS
14	V	Power window serial link	When ignition switch ON or power window timer operates	(V) 15 10 5 0 200 ms
15	W/R	Encoder power supply	When ignition switch ON or power window timer operates	10
17	В	Ground	_	0
19	L	Battery power supply	_	Battery voltage

Power Window and Door Lock/Unlock Switch RH Harness Connector Terminal Layout



Terminals and Reference Values for Power Window and Door Lock/Unlock Switch RH

witch	KH			ElS003TI
Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
3	BR	Limit switch and encoder ground	_	0
4	W/R	Encoder power supply	When ignition switch ON or power window timer operates	10
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	Y	Battery power supply	_	Battery voltage
11	В	Ground	_	0
12	LB	Encoder pulse signal	When power window motor operates	(V) 6 4 2 0
				OCC3383D

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Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
			Front power window RH is between fully-open and just before fully-closed position (ON)	0
15	Y	Limit switch signal	Front power window RH is between just before fully-closed position and fully-closed position (OFF)	5
16	V	Power window serial link	When ignition switch is ON or power window timer operating	(V) 15 10 5 0 200 ms

Terminals and Reference Values for BCM

FIS007RH

Refer to BCS-12, "Terminals and Reference Values for BCM".

Work Flow

- 1. Check the symptom and customer's requests.
- 2. Understand the outline of system. Refer to LAN-4, "SYSTEM DESCRIPTION".
- 3. According to the trouble diagnosis chart, repair or replace the cause of the malfunction. Refer to <u>GW-29</u>, "<u>Trouble Diagnoses Symptom Chart</u>".
- 4. Does power window system operate normally? If Yes, GO TO 5, If No, GO TO 3.
- 5. Inspection end.

CONSULT-II Function (BCM)

EIS007RJ

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

BCM diagnostic test item	Diagnostic mode	Content
	WORK SUPPORT	Supports inspections and adjustments. Commands are transmitted to the BCM for setting the status suitable for required operation, input/output signals are received from the BCM and received data is displayed.
	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.
Inspection by part	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 START PROCEDURE

Refer to GI-38, "CONSULT-II Start Procedure" .

Test Item	Description
	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.
RETAINED PWR	NOTE: During this test, CONSULT-II can be operated with ignition switch in OFF position. "RETAINED PWR" should be turned "ON" or "OFF" on CONSULT-II screen when ignition switch is ON. Then turn ignition switch OFF to check retained power operation. CONSULT-II might be stuck if "RETAINED PWR" is turned "ON" or "OFF" on CONSULT-II screen when ignition switch is OFF.
WORK SUPPORT	
Work item	Description
RETAINED PWR	RAP signal's power supply period can be changed by mode setting. Selects RAP signal's power supply period between three steps
	• MODE1 (45 sec.)/MODE2 (OFF)/MODE 3 (2 min.).
DATA MONITOR	
Work item	Description
Work item IGN ON SW	Description Indicates (ON/OFF) condition of ignition switch
	·

Trouble Diagnoses Symptom Chart

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

Symptom	Repair order	Refer to page
	1. BCM power supply and ground circuit check	BCS-16
None of the power windows can be operated using any switch	Main power window and door lock/unlock switch power supply and ground circuit check	<u>GW-30</u>
	3. Replace main power window and door lock/ unlock switch	<u>EI-26</u>
	1. Front power window motor LH circuit check	<u>GW-32</u>
Front power window LH alone does not operate	Replace main power window and door lock/ unlock switch	<u>EI-26</u>
	Power window and door lock/unlock switch RH power supply and ground circuit check	<u>GW-33</u>
Front power window RH alone does not operate	2. Power window serial link check	<u>GW-46</u>
,	3. Front power window motor RH circuit check	<u>GW-34</u>
	Rear power window motor LH circuit check	<u>GW-59</u>
Rear power window LH does not operate	Rear power window LH circuit check (rear power window switch LH operation)	<u>GW-48</u>
,	Rear power window LH circuit check (main power window and door lock/unlock switch operation)	<u>GW-52</u>
	Rear power window motor RH circuit check	<u>GW-60</u>
Rear power window RH does not operate	Rear power window RH circuit check (rear power window switch RH operation)	<u>GW-54</u>
	Rear power window RH circuit check (main power window and door lock/unlock switch operation)	<u>GW-57</u>

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Symptom	Repair order	Refer to page
Anti-pinch system does not operate normally (Front LH)	 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. 	_
	2. Limit switch adjusting	<u>GW-64</u>
	Limit switch circuit check front LH	<u>GW-34</u>
	4. Encoder circuit check front LH	<u>GW-38</u>
Anti-pinch system does not operate normally (Front RH)	 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. 	_
	2. Limit switch adjusting	<u>GW-64</u>
	3. Limit switch circuit check front RH	<u>GW-37</u>
	4. Encoder circuit check front RH	<u>GW-41</u>
	Check the retained power operation mode setting.	<u>GW-29</u>
Power window retained power operation does not operate properly	2. Door switch check	<u>GW-43</u>
	3. Replace BCM.	BCS-25
Power windows do not operate by front door lock assembly LH	Front door lock assembly LH (key cylinder switch) check	BL-89
(key cylinder switch)	Replace main power window and door lock/ unlock switch	_
Power window lock switch does not function	Power window lock switch circuit check	<u>GW-46</u>

BCM Power Supply and Ground Circuit Check

EIS007F

Refer to BCS-16, "BCM Power Supply and Ground Circuit Check" .

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

1. CHECK POWER SUPPLY CIRCUIT

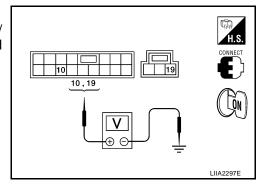
1. Turn ignition switch ON.

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

10 - Ground : Battery voltage19 - Ground : Battery voltage

OK or NG

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



$\overline{2}$. CHECK GROUND CIRCUIT

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

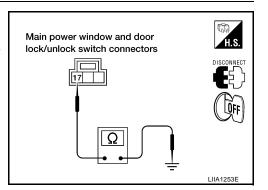
17 - Ground

: Continuity should exist.

OK or NG

OK >> Power supply and ground circuit are OK.

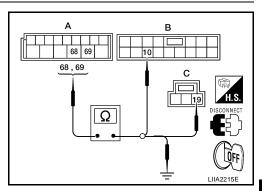
NG >> Repair or replace harness.



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

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

Connector	Terminal	Connector	Terminal	Continuity	
А	Temmai	В	remina		
	68	Main power window and door lock/unlock switch: D7	10	Yes	
BCM: M20		С			
	69	Main power window and door lock/unlock switch: D8	19	Yes	



4. Check continuity between BCM and ground.

Connector	Terminal		Continuity	
А	Terriniai	Ground	Continuity	
BCM: M20	68	Glound	No	
BCIVI. IVIZU	69		No	

OK or NG

OK >> GO TO 4.

NG >> Repair or replace harness.

4. CHECK BCM OUTPUT SIGNAL

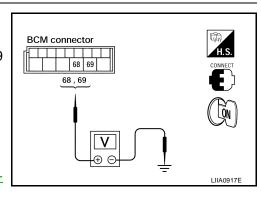
- 1. Connect BCM.
- 2. Turn ignition switch ON.
- 3. Check voltage between BCM connector M20 terminals 68, 69 and ground.

68 - Ground : Battery voltage 69 - Ground : Battery voltage

OK or NG

OK >> Check the condition of the harness and the connector.

NG >> Replace BCM. Refer to BCS-25, "Removal and Installation".



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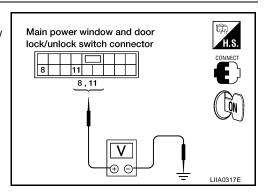
Front Power Window Motor LH Circuit Check

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

- 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		Condition	Voltage (V)	
Commodici	(+)	(-)	Containon	(Approx.)	
	8		UP	Battery voltage	
D7		Ground	DOWN	0	
Di	44		UP	0	
	11 		DOWN	Battery voltage	



OK or NG

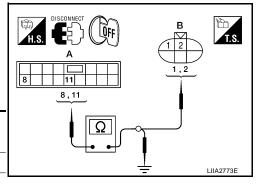
OK >> GO TO 2.

NG >> Replace main power window and door lock/unlock switch. Refer to EI-26, "FRONT DOOR".

2. CHECK FRONT POWER WINDOW MOTOR LH CIRCUIT

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

Connector	Terminal	Connector	Terminal	Continuity	
A	Terrilliai	В	Terrimai	Continuity	
Main power window	8	Front power	2	Yes	
and door lock/unlock switch: D7	11	window motor LH: D9	1	Yes	



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

Connector	- Terminal		Continuity
A		Ground	Continuity
Main power window and	8	Giouna	No
door lock/unlock switch: D7	11		No

OK or NG

OK >> Replace front power window motor LH. Refer to <u>GW-62, "Front Door Glass Regulator"</u>.

NG >> Repair or replace harness.

Power Window and Door Lock/Unlock Switch RH Power Supply and Ground Circuit Check EIS00B71

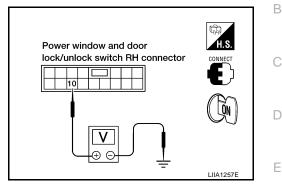
1. CHECK POWER SUPPLY CIRCUIT

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

10 - Ground : Battery voltage

OK or NG

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



2. CHECK GROUND CIRCUIT

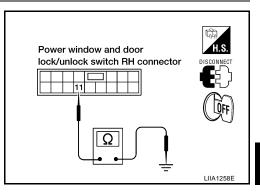
- 1. Turn ignition switch OFF.
- 2. Disconnect power window and door lock/unlock switch RH.
- 3. Check continuity between power window and door lock/unlock switch RH connector D105 terminal 11 and ground.

: Continuity should exist. 11 - Ground

OK or NG

OK >> Power supply and ground circuit are OK.

NG >> Repair or replace harness.



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

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

69 - 10 : Continuity should exist.

OK or NG

OK >> GO TO 4.

NG >> Repair or replace harness.

4. CHECK BCM OUTPUT SIGNAL

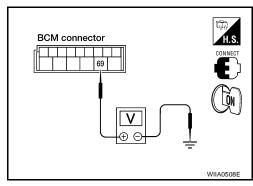
- 1. Connect BCM.
- Turn ignition switch ON. 2.
- Check voltage between BCM connector M20 terminal 69 and ground.

69 - Ground : Battery voltage

OK or NG

OK >> Check the condition of the harness and the connector.

NG >> Replace BCM. Refer to BCS-25, "Removal and Installation".



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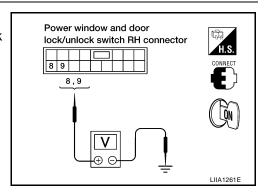
Front Power Window Motor RH Circuit Check

EIS00B72

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

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

Connector	Terminals		Condition	Voltage (V)	
(+)		(-)	Containon	(Approx.)	
	9		UP	0	
D105		Ground	DOWN	Battery voltage	
D103		Giodila	UP	Battery voltage	
	8		DOWN	0	



OK or NG

OK >> GO TO 2.

NG >> Replace power window and door lock/unlock switch RH. Refer to El-26, "Removal and Installation".

2. CHECK FRONT POWER WINDOW MOTOR RH CIRCUIT

- 1. Turn ignition switch OFF.
- 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 (A) terminals 8, 9 and front power window motor RH connector D104 (B) terminals 1, 2.

8 - 2

: Continuity should exist.

9 - 1

: Continuity should exist.

OK or NG

NG

OK >> Replace front power window motor RH. Refer to <u>GW-62</u>,

"Front Door Glass Regulator"...

>> Repair or replace harness.

DISCONNECT OFF T.S. A 1,2 1,2 LIIA2775E

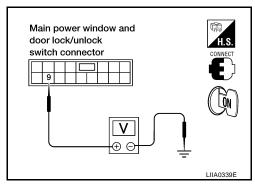
Limit Switch Circuit Check Front LH

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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		ninals	Condition	Condition Voltage (V)	
Connector	(+) (-)		Condition	(Approx.)	
D7		Ground	Front door window LH is between fully-open and just before fully-closed position (ON)	0	
JI	9	Giodila	Front door window LH 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.

$\overline{2}$. CHECK LIMIT SWITCH GROUND CIRCUIT

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

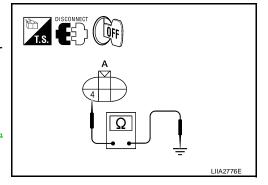
4 - Ground

: Continuity should exist.

OK or NG

OK >> Replace front power window motor LH. Refer to <u>GW-62</u>, "Front Door Glass Regulator" .

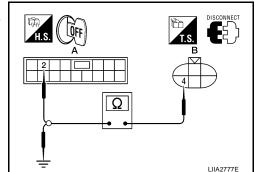
NG >> GO TO 3.



3. CHECK HARNESS CONTINUITY

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

Connector	Terminal	Connector	Terminal	Continuity
A	Terrillia	В	Terrillia	Continuity
Main power window and door lock/unlock switch: D7	2	Front power win- dow motor LH: D9	4	Yes



3. Check continuity between front power window motor LH connector and ground.

Connector	- Terminal		Continuity
В		Ground	Continuity
Front power window motor LH: D9	4		No

OK or NG

OK >> GO TO 4.

NG >> Repair or replace harness.

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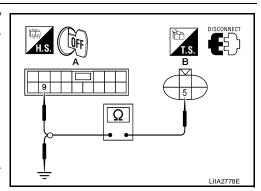
4. CHECK HARNESS CONTINUITY

 Check continuity between main power window and door lock/ unlock switch connector and front power window motor LH connector.

Connector	Terminal	Connector	Terminal	Continuity	
A	B		Terrilliai	Continuity	
Main power window and door lock/unlock switch: D7	9	Front power window motor LH: D9	5	Yes	

Check continuity between front power window motor LH connector and ground.

Connector	Terminal	Ground	Continuity
В			
Front power window motor LH: D9	5		No



OK or NG

OK >> GO TO 5.

NG >> Repair or replace harness.

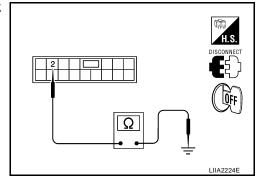
5. CHECK LIMIT SWITCH GROUND

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

Connector	Terminal	Ground	Continuity
Main power window door lock/unlock switch: D7	2		Yes

OK or NG

OK >> GO TO 7. NG >> GO TO 6.



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

Check continuity between main power window and door lock/unlock switch connector D8 terminal 17 and ground.

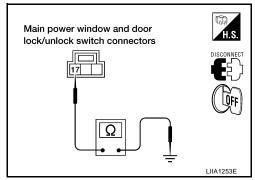
17 - Ground

: Continuity should exist.

OK or NG

OK >> Replace main power window and door lock/unlock switch. Refer to <u>EI-26</u>, "<u>FRONT DOOR</u>".

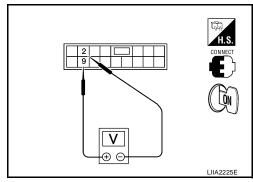
NG >> Repair or replace harness.



$7.\,$ check front power window motor LH limit signal

- Connect main power window and door lock/unlock switch and front power window motor LH.
- 2. Turn ignition switch ON.
- Check voltage between main power window and door lock/ unlock switch connector.

Connector	Terminals		Condition	Voltage (V)	
Connector	(+)	(-)	Condition	(Approx.)	
Main power win- dow and	9	2	Front power window LH is between fully-open and just before fully-closed position (ON)	0	
door lock/ unlock switch: D7	9	2	Front power window LH is between just before fully- closed position and fully- closed position (OFF)	5	



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OK or NG

OK >> Check the condition of the harness and connector.

NG >> Replace front power window motor LH. Refer to <u>GW-62</u>, "Front <u>Door Glass Regulator"</u>.

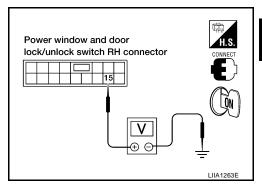
Limit Switch Circuit Check Front RH

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		Condition	Voltage (V)
	(+)	(-)	Condition	(Approx.)
D105	15	Ground	Front power window RH is between fully-open and just before fully-closed position (ON)	0
D103	13	Ground	Front power window RH 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 RH LIMIT SIGNAL

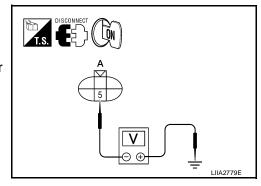
- 1. Turn ignition switch OFF.
- 2. Disconnect front power window motor RH.
- 3. Turn ignition switch ON.
- 4. Check voltage between front power window motor RH connector D104 terminal 5 and ground.

5 - Ground

: Approx. 5V

OK or NG

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



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3. CHECK LIMIT SWITCH GROUND CIRCUIT

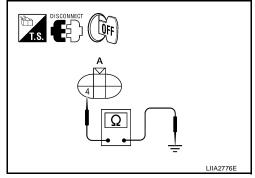
- 1. Turn ignition switch OFF.
- 2. Check continuity between front power window motor RH connector D104 terminal 4 and ground.

4 - Ground : Continuity should exist.

OK or NG

OK >> Replace front power window motor RH. Refer to <u>GW-62</u>, "Front Door Glass Regulator" .

NG >> GO TO 4.



4. CHECK HARNESS CONTINUITY

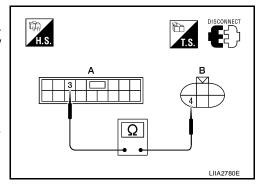
- 1. Disconnect power window and door lock/unlock switch RH.
- Check continuity between front power window motor RH connector D104 (A) terminal 4 and power window and door lock/ unlock switch RH connector D105 (B) terminal 3.

4 - 3 : Continuity should exist.

OK or NG

OK >> Replace power window and door lock/unlock switch RH. Refer to EI-26, "FRONT DOOR".

NG >> Repair or replace harness.



5. CHECK HARNESS CONTINUITY

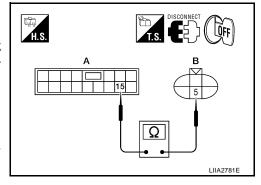
- 1. Turn ignition switch OFF.
- 2. Disconnect power window and door lock/unlock switch RH.
- 3. Check continuity between power window and door lock/unlock switch RH connector D105 (A) terminal 15 and front power window motor RH connector D104 (B) terminal 5.

15 - 5 : Continuity should exist.

OK or NG

OK >> Replace power window and door lock/unlock switch RH. Refer to EI-26, "FRONT DOOR".

NG >> Repair or replace harness.



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Encoder Circuit Check Front LH

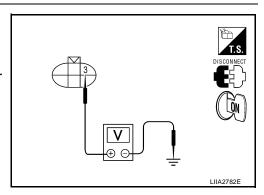
1. CHECK FRONT POWER WINDOW MOTOR LH POWER SUPPLY

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

3 - Ground : Approx. 10V

OK or NG

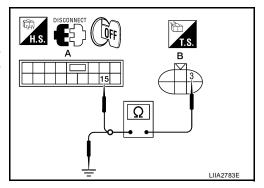
OK >> GO TO 3. NG >> GO TO 2.



2. CHECK HARNESS CONTINUITY

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

Connector	Terminal		Terminal	Continuity
A	Terrillia	В	Terrilliai	Continuity
Main power window and door lock/unlock switch: D7	15	Front power win- dow motor LH: D9	3	Yes



4. Check continuity between front power window motor LH connector and ground.

Connector	Terminal		Continuity	
В	Terriniai	Ground	Continuity	
Front power window motor LH: D9	3		No	

OK or NG

OK >> Replace main power window and door lock/unlock switch. Refer to EI-26, "FRONT DOOR".

NG >> Repair or replace harness.

3. CHECK ENCODER GROUND

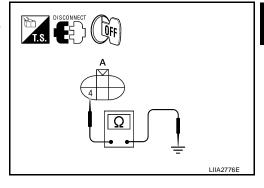
- 1. Turn ignition switch OFF.
- 2. Check continuity between front power window motor LH connector D9 terminal 4 and ground.

4 - 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.
- Check continuity between front power window motor LH connector D9 (B) terminal 4 and main power window and door lock/ unlock switch connector D7 (A) terminal 2.

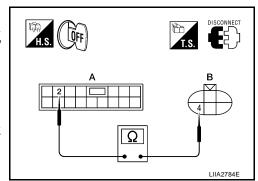
4 - 2

: Continuity should exist.

OK or NG

OK >> Replace main power window and door lock/unlock switch. Refer to <u>EI-26</u>, "<u>FRONT DOOR</u>".

NG >> Repair or replace harness.



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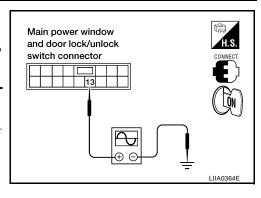
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5. CHECK ENCODER SIGNAL

- 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.

Connec- tor	_	ninals	Condition	Signal
	(+)	(-)		
D7	13	Ground	Opening	(V) 6 4 2 0



OK or NG

OK >> Replace main power window and door lock/unlock switch. Refer to EI-26, "FRONT DOOR".

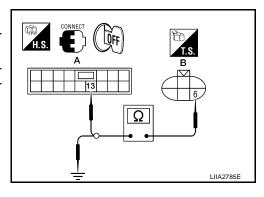
NG >> GO TO 6.

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.
- Check continuity between front power window motor LH connector and main power window and door lock/unlock switch connector.

Connector	Terminal	Connector	Terminal	Continuity
А	Terrima	В	Terrillia	Continuity
Main power win- dow and door lock/ unlock switch: D7	13	Front power win- dow motor LH: D9	6	Yes



4. Check continuity between front power window motor LH connector and ground.

Connector	Terminal		Continuity
В	Terrinia	Ground	Continuity
Front power window motor LH: D9	6		No

OK or NG

OK >> Replace front power window motor LH. Refer to <u>GW-62</u>, "Front Door Glass Regulator".

NG >> Repair or replace harness.

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 3 and ground.

3 - Ground : Approx. 10V

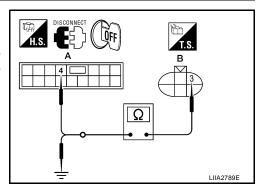
OK or NG

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.
- Check continuity between front power window motor RH connector and power window and door lock/unlock switch RH connector.

Connector	Terminal	Connector	Terminal	Continuity
A	Terrillia	В	Terrilliai	Continuity
Power window and door lock/unlock switch RH: D105	4	Front power win- dow motor RH: D104	3	Yes



4. Check continuity between front power window motor RH connector and ground.

Connector	Terminal		Continuity	
В	Terrimai	Ground	Continuity	
Front power window motor RH: D104	3		No	

OK or NG

OK >> Replace main power window and door lock/unlock switch. Refer to EI-26, "FRONT DOOR".

NG >> Repair or replace harness.

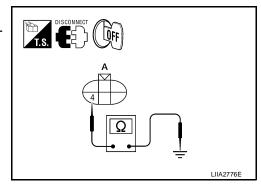
3. CHECK ENCODER GROUND

- Turn ignition switch OFF.
- 2. Check continuity between front power window motor RH connector D104 terminal 4 and ground.

4 - Ground : Continuity should exist.

OK or NG

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



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4. CHECK ENCODER GROUND CIRCUIT

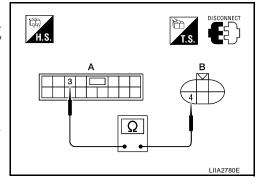
- 1. Disconnect power window and door lock/unlock switch RH.
- 2. Check continuity between front power window motor RH connector D104 (B) terminal 4 and power window and door lock/unlock switch RH connector D105 (A) terminal 3.

4 - 3 : Continuity should exist.

OK or NG

OK >> Replace power window and door lock/unlock switch RH. Refer to EI-26, "FRONT DOOR" .

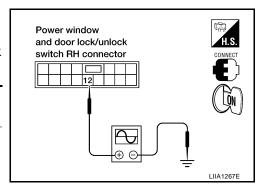
NG >> Repair or replace harness.



5. CHECK ENCODER SIGNAL

- 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.

Connec-	Term	inals	Condition	Signal
tor	(+)	(-)	Condition	Sigilal
D105	12	Ground	Opening	(V) 6 4 2 0



OK or NG

OK >> Replace power window and door lock/unlock switch RH. Refer to El-26, "FRONT DOOR" .

NG >> GO TO 6.

6. CHECK ENCODER CIRCUIT

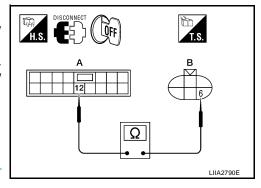
- 1. Turn ignition switch OFF.
- 2. Disconnect front power window motor RH and power window and door lock/unlock switch RH.
- 3. Check continuity between front power window motor RH connector D104 (B) terminal 6 and power window and door lock/unlock switch RH connector D105 (A) terminal 12.

6 - 12 : Continuity should exist.

OK or NG

OK >> Replace front power window motor RH. Refer to <u>GW-61</u>, <u>"FRONT DOOR GLASS AND REGULATOR"</u>.

NG >> Repair or replace harness.



Door Switch Check

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1. CHECK FRONT DOOR SWITCH INPUT SIGNAL

(II) With CONSULT-II

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

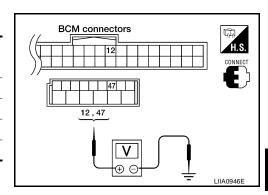
Monitor item	Condition
DOOR SW-DR	OPEN: ON
DOOK SW-DK	CLOSE: OFF
DOOR SW-AS	OPEN: ON
DOOK SW-AS	CLOSE: OFF

DATA MONI	DATA MONITOR			
MONITOR				
DOOR SW - DR	OFF			
DOOR SW - AS	OFF			
		PIIA2464E		

Without CONSULT-II

Check voltage between BCM connector and ground.

Item	Item Connector		Terminals		Voltage (V)			
item	Connector	(+) (-)				Condition	(Approx.)	
Front RH	M18	12		OPEN	0			
I IOIILIXII	IVITO	12	12	WIO	Ground	CLOSE	Battery voltage	
Front LH	M19	47	Ground	OPEN	0			
FIORI LA	IVITS	47		CLOSE	Battery voltage			



OK or NG

OK >> Front door switch is OK.

NG >> GO TO 2.

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 (RH).

Front LH

2 - 47 : Continuity should exist.

Front RH

2 - 12 : Continuity should exist.

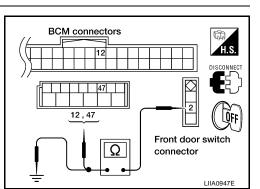
4. Check continuity between front door switch connector B8 (LH) or B108 (RH) terminal 2 and ground.

2 - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 3.

NG >> Repair or replace harness.



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3. CHECK DOOR SWITCH

- 1. Disconnect front door switch LH or RH.
- 2. Check continuity between each front door switch terminal 2 and body ground part of front door switch.

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

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OK or NG

OK >> Replace BCM. Refer to <u>BCS-25</u>, "Removal and Installation".

NG >> Replace malfunctioning front door switch.

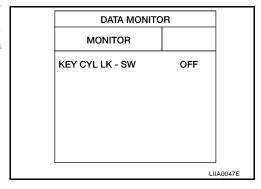
Front Door Lock Assembly LH (Key Cylinder Switch) Check

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

(I) With CONSULT-II

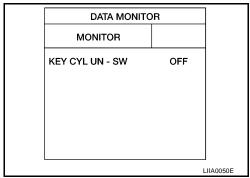
 Check front door lock assembly LH (key cylinder switch) ("KEY CYL LK SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYSTEM" with CONSULT-II. Refer to <u>GW-29</u>, "<u>DATA MONITOR</u>".

"KEY CYL LK-SW" should be "ON" when key inserted and 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 <u>GW-29</u>, "<u>DATA MONITOR</u>".

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



Without CONSULT-II

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

Connector		inals	Key position	Voltage (V) (Approx.)
	(+)	(-)		(дрргох.)
	6		Neutral / Unlock	5
D7		Ground	Lock	0
D1			Neutral / Lock	5
	4		Unlock	0

Main power window and door lock/unlock switch connector 4,6 LIIA1448E

OK or NG

OK >> Front door lock assembly LH (key cylinder switch) is OK.

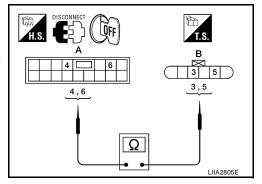
NG >> GO TO 2.

$\overline{2}$. CHECK FRONT DOOR LOCK ASSEMBLY LH (KEY CYLINDER SWITCH) CIRCUIT

- 1. Turn ignition switch OFF.
- 2. 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 (A) terminals 4, 6 and front door lock assembly LH (key cylinder switch) connector D14 (B) terminals 3, 5.

6 - 3 : Continuity should exist.

4 - 5 : Continuity should exist.



OK or NG

OK >> GO TO 3.

NG >> Repair or replace harness.

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

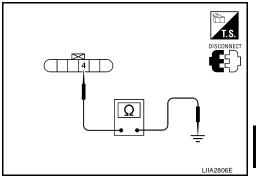
Check continuity between front door lock assembly LH (key cylinder switch) connector D14 terminal 4 and ground.

4 - 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 3, 4 and 5.

Term	ninals	Key position	Continuity
5		Neutral/Unlock	No
5	4	Lock	Yes
3	4	Neutral/Lock	No
ა 		Unlock	Yes

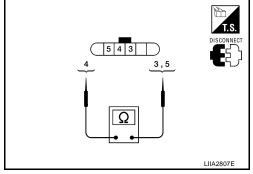
OK or NG

OK

NG

>> Replace main power window and door lock/unlock switch.Refer to <u>EI-26</u>, "FRONT DOOR".

>> Replace front door lock assembly LH (key cylinder switch). Refer to <u>BL-89, "Removal and Installation"</u> .



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Power Window Serial Link Check

1. CHECK BUS OUTPUT SIGNAL

(P)With CONSULT-II

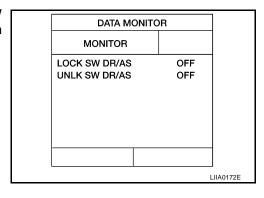
Check door lock and unlock switch ("LOCK SW DR/AS", "UNLK SW DR/AS") in DATA MONITOR mode for "MULTI REMOTE ENT" with CONSULT-II. Refer to GW-29, "DATA MONITOR".

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

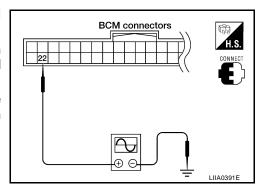


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Without CONSULT-II

- Remove key from ignition switch, and the front door LH and RH is closed.
- 2. 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	Term	ninals	Signal
Connector	(+)	(-)	- Signai
M18	22	Ground	(V) 15 10 5 0 200 ms



OK or NG

OK >> GO TO 2.

NG >> GO TO 3.

2. CHECK BCM BUS OUTPUT SIGNAL

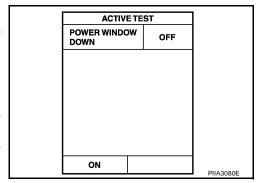
Check power window serial link ("POWER WINDOW DOWN") in "ACTIVE TEST" mode with CONSULT-II. Refer to GW-29, "ACTIVE

When "ACTIVE TEST" is executed, is the front window LH and RH lowered.

OK or NG

OK >> Further inspection is necessary. Refer to GW-29, "Trou-

<u>ble Diagnoses Symptom Chart"</u> . >> Replace BCM. Refer to <u>BCS-25</u>, "Removal and Installa-NG tion" .

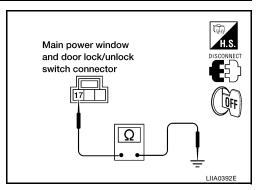


3. CHECK POWER WINDOW SWITCH GROUND

- 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 - Ground

: Continuity should exist.



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

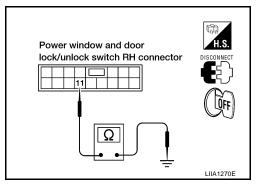
11 - Ground

: Continuity should exist.

OK or NG

OK >> GO TO 4.

NG >> Repair or replace harness.

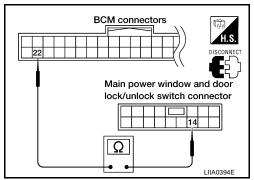


4. CHECK POWER WINDOW SERIAL LINK CIRCUIT

- 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 - 14

: 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 - 16

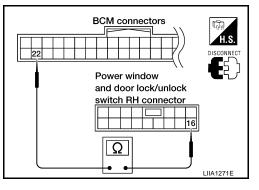
: Continuity should exist.

OK or NG

OK

>> Replace main power window and door lock/unlock switch or power window and door lock/unlock switch RH. Refer to EI-26, "FRONT DOOR"

NG >> Repair or replace harness.



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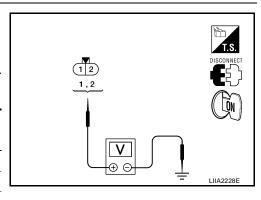
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Rear Power Window LH Circuit Check (Rear Power Window Switch LH Operation)

1. CHECK REAR POWER WINDOW SWITCH LH OUTPUT SIGNAL

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

Connector	Term	ninals	Condition	Voltage (V)	
Connector	(+)	(-)	Condition	(Approx.)	
Rear power window motor LH: D204	1		UP	0	
	'	Ground	DOWN	Battery voltage	
	2	Ground	UP	Battery voltage	
	2		DOWN	0	



OK or NG

OK >> Replace rear power window motor LH. Refer to GW-66, "Rear Door Glass Regulator".

NG >> GO TO 2.

2. CHECK REAR POWER WINDOW MOTOR LH CIRCUIT

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

Connector	Terminal	Connector	Terminal	Continuity	
A	Terrinia	В	Terrima	Continuity	
Rear power window	6	Rear power window	1	Yes	
switch LH: D203	7	motor LH: D204	2	Yes	

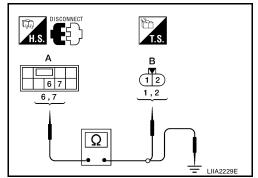
Check continuity between rear power window switch LH connector and ground.

Connector	Terminal		Continuity	
Α	Tomman	Ground	Continuity	
Rear power window switch	6	Ground	No	
LH: D203	7		No	

OK or NG

OK >> GO TO 3.

NG >> Repair or replace harness.



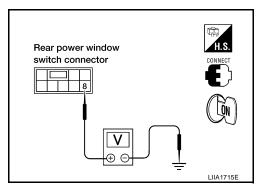
3. CHECK POWER SUPPLY

- 1. Connect rear power window switch LH.
- 2. Turn ignition switch ON.
- 3. Check voltage between rear power window switch LH connector D203 terminal 8 and ground.

8 - Ground : Battery voltage

OK or NG

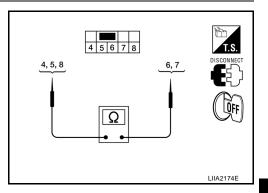
OK >> GO TO 4. NG >> GO TO 5.



4. CHECK REAR POWER WINDOW SWITCH LH

- 1. Turn ignition switch OFF.
- 2. Disconnect rear power window switch LH.
- 3. Check continuity between rear power window switch LH terminals.

	Tern	ninals	Condition	Continuity		
Rear power win- dow switch LH		_	DOWN	No		
	6	5	NEUTRAL or UP	Yes		
	O	8	NEUTRAL or UP No			
		DOWN	Yes			
			UP	No		
	7		NEUTRAL or DOWN	Yes		
	,	8	NEUTRAL or UP No DOWN Yes UP No			
		0	UP	Yes		



OK or NG

OK >> GO TO 6.

NG >> Replace rear power window switch LH. Refer to E1-27, "REAR DOOR".

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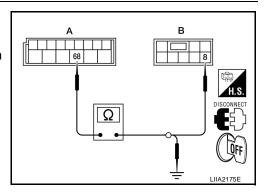
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5. CHECK REAR POWER WINDOW SWITCH LH POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM and rear powe window switch LH.
- Check continuity between BCM and rear power window switch LH.

Connector	Terminal	Connector	Terminal	Continuity
А	Terrilliai	В	Terrinia	Continuity
BCM: M20	68	Rear power window switch LH: D203	8	Yes



4. Check continuity between BCM and ground.

Connector	Terminal		Continuity
А	reminal	Ground	Continuity
BCM: M20	68		No

OK or NG

OK >> Check the condition of the harness and the connector.

NG >> Repair or replace harness.

6. CHECK REAR POWER WINDOW SWITCH LH GROUND

- 1. Turn power window lock switch to UNLOCK.
- 2. Check continuity between rear power window switch LH and ground.

Connector	Terminals		Continuity
Rear power window switch LH: D203	4	Ground	Yes
	5	Giodila	Yes

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OK or NG

OK >> Check the condition of the harness and the connector.

NG >> GO TO 7.

7. CHECK GROUND SUPPLY CIRCUIT

- 1. Disconnect main power window and door lock/unlock switch.
- Check continuity between main power window and door lock/ unlock switch connector and rear power window switch LH connector.

Connector	Terminal	Connector	Terminal	Continuity	
A	Terriiriai	В	Terrillia	Continuity	
Main power win-	1	Rear power win-	4	Yes	
dow and door lock/ unlock switch: D7	3	dow switch LH: D203	5	Yes	

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

Connector	Terminal		Continuity	
A	Terrinia	Ground	Continuity	
Main power window and door lock/unlock switch: D7	1	Giodila	No	
	3	1	No	

OK or NG

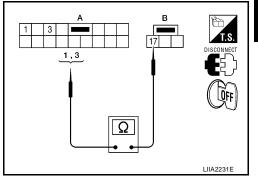
OK >> GO TO 8.

NG >> Repair or replace harness.

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

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

Main power win- dow and door lock/ unlock switch 17	Terminals		Condition	Continuity
		1	Power window lock switch UNLOCK	Yes
	17		Power window lock switch LOCK	No
	17	3	Power window lock switch UNLOCK	Yes
			Power window lock switch LOCK	No



OK or NG

OK >> Repair or replace harness.
NG >> Replace main power windo

>> Replace main power window and door lock/unlock switch. Refer to EI-26, "FRONT DOOR".

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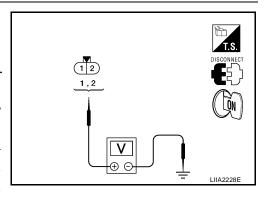
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Rear Power Window LH Circuit Check (Main Power Window and Door Lock/ Unlock Switch Operation)

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

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

Connector (+)		ninals	Condition	Voltage (V)
		(-)	Condition	(Approx.)
Rear power	1		UP	0
window	I I	- Ground -	DOWN	Battery voltage
motor LH:	2		UP	Battery voltage
D204 2		DOWN	0	



OK or NG

OK >> Replace rear power window motor LH. Refer to GW-66, "Rear Door Glass Regulator".

NG >> GO TO 2.

2. CHECK REAR POWER WINDOW MOTOR LH CIRCUIT

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

Connector	Terminal	Connector	Terminal	Continuity	
A	Terrinia	В	Terrima	Continuity	
Rear power window	6	Rear power window	1	Yes	
switch LH: D203	7	motor LH: D204	2	Yes	

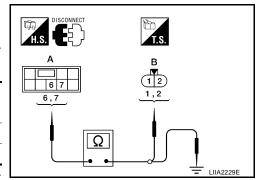
Check continuity between rear power window switch LH connector and ground.

Connector	Terminal		Continuity
A	Temmai	Ground	Continuity
Rear power window switch	6	Giodila	No
LH: D203	7		No

OK or NG

OK >> GO TO 3.

NG >> Repair or replace harness.



3. CHECK REAR POWER WINDOW SWITCH LH

Check continuity between rear power window switch LH terminals.

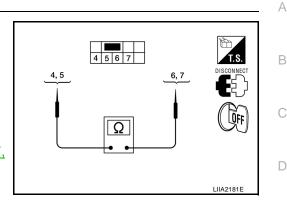
Rear power window switch LH	Terr	Continuity	
	4	7	Yes
	5	6	Yes

OK or NG

OK >> GO TO 4.

NG >> Replace rear power window switch LH. Refer to EI-27,

"REAR DOOR".



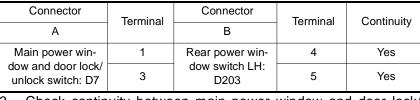
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4. CHECK GROUND SUPPLY CIRCUIT

- 1. Disconnect main power window and door lock/unlock switch.
- 2. Check continuity between main power window and door lock/ unlock switch connector and rear power window switch LH connector.

Connector	Terminal	Connector	Terminal	Continuity	
A	Terrimai	В	Terrinia	Continuity	
Main power win-	1	Rear power win-	4	Yes	
dow and door lock/ unlock switch: D7	3	dow switch LH: D203	5	Yes	



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

Connector	Terminal		Continuity	
А	Terrima	Ground	Continuity	
Main power window and door lock/unlock switch: D7	1	Ground	No	
	3		No	

OK or NG

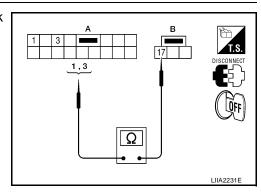
OK >> GO TO 5.

NG >> Repair or replace harness.

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

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

Main power window and door lock/unlock switch	Term	inals	Condition	Continuity
		4	Power window lock switch UNLOCK	Yes
	17	1	Power window lock switch LOCK	No
		2	Power window lock switch UNLOCK	Yes
		3	Power window lock switch LOCK	No



OK or NG

OK >> Repair or replace harness.

NG >> Replace main power window and door lock/unlock switch. Refer to EI-26, "FRONT DOOR". GW

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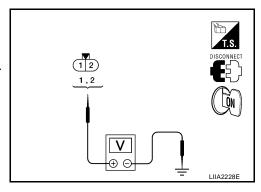
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Rear Power Window RH Circuit Check (Rear Power Window Switch RH Operation)

1. CHECK REAR POWER WINDOW SWITCH RH OUTPUT SIGNAL

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

Connector	Terminals		Condition	Voltage (V)	
(+)		(-)	Contamon	(Approx.)	
Rear power	1		UP	0	
window	'	Ground	DOWN	Battery voltage	
motor RH:	2	Ground	UP	Battery voltage	
D304 2		DOWN	0		



OK or NG

OK >> Replace rear power window motor RH. Refer to GW-66, "Rear Door Glass Regulator".

NG >> GO TO 2.

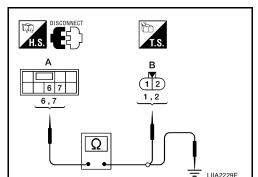
2. CHECK REAR POWER WINDOW MOTOR RH CIRCUIT

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

Connector	Terminal	Connector	Terminal	Continuity	
A	Terrillia	В	Terrima	Continuity	
Rear power window	6	Rear power window	1	Yes	
switch RH: D303	7	motor RH: D304	2	Yes	

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

Connector	- Terminal		Continuity
A		Ground	Continuity
Rear power window switch	6	Ground	No
RH: D303	7		No



OK or NG

OK >> GO TO 3.

NG >> Repair or replace harness.

3. CHECK POWER SUPPLY

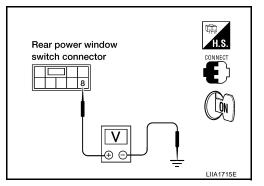
- 1. Connect rear power window switch RH.
- 2. Turn ignition switch ON.
- Check voltage between rear power window switch RH connector D303 terminal 8 and ground.

8 - Ground

: Battery voltage

OK or NG

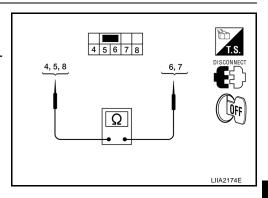
>> GO TO 4. OK NG >> GO TO 5.



4. CHECK REAR POWER WINDOW SWITCH RH

- Turn ignition switch OFF. 1.
- 2. Disconnect rear power window switch RH.
- Check continuity between rear power window switch RH terminals.

	Terminals		Condition	Continuity
6		5	DOWN	No
	6		NEUTRAL or UP	Yes
	O	8	NEUTRAL or UP	No
Rear power win- dow switch RH	8	DOWN	Yes	
		4	UP	No
	7		NEUTRAL or DOWN	Yes
	8	NEUTRAL or DOWN	No	
		UP	Yes	



OK or NG

OK >> GO TO 6.

NG >> Replace rear power window switch RH. Refer to EI-27, "REAR DOOR".

$5.\,$ check rear power window switch RH power supply circuit

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

Connector	Terminal	Connector	Terminal	Continuity
A	Terrilliai	В	Tenninai	Continuity
BCM: M20	68	Rear power window switch RH: D303	8	Yes

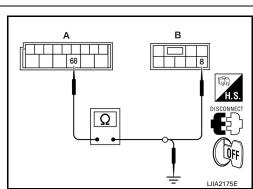
Check continuity between BCM and ground.

Connector	Terminal		Continuity	
Α	Terriiriai	Ground	Continuity	
BCM: M20	68		No	

OK or NG

OK >> Check condition of harness and connector.

NG >> Repair or replace harness.



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6. CHECK REAR POWER WINDOW SWITCH RH GROUND SUPPLY

- 1. Turn power window lock switch to UNLOCK.
- 2. Check continuity between rear power window switch RH connector and ground.

Connector	Terminals		Continuity
Rear power window switch RH: D303	4	Ground	Yes
	5	Giodila	Yes

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OK or NG

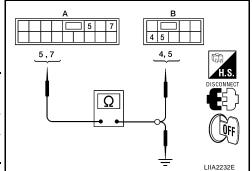
OK >> Check the condition of the harness and the connector.

NG >> GO TO 7.

7. CHECK GROUND SUPPLY CIRCUIT

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

Connector	Terminal	Connector	Terminal	Continuity	
A	Terriniai	В	Terrillia	Continuity	
Main power window	5	Rear power win-	5	Yes	
and door lock/unlock switch: D7	7	dow switch RH: D303	4	Yes	



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

Connector	- Terminal		Continuity
A		Ground	Continuity
Main power window and door	5	Giodila	No
lock/unlock switch: D7	7	_	No

OK or NG

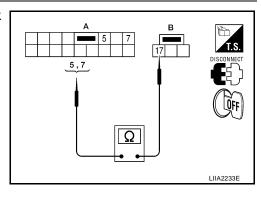
OK >> GO TO 8.

NG >> Repair or replace harness.

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

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

	Terminals		Condition	Continuity
	5	Power window lock switch UNLOCK	Yes	
Main power win- dow and door lock/unlock	17 _		Power window lock switch LOCK	No
switch		7	Power window lock switch UNLOCK	Yes
	,	Power window lock switch LOCK	No	



OK or NG

OK >> Repair or replace harness.

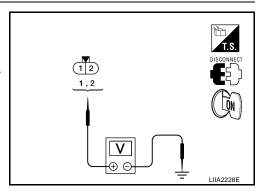
NG >> Replace main power window and door lock/unlock switch. refer to EI-26, "FRONT DOOR" .

Rear Power Window RH Circuit Check (Main Power Window and Door Lock/ Unlock Switch Operation)

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

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

Connector		inals	Condition	Voltage (V)
(+)	(-)	(Approx.)		
Rear power	1		UP	0
window	'	Ground	DOWN	Battery voltage
motor RH:	2		UP	Battery voltage
D304 2		DOWN	0	



OK or NG

OK >> Replace rear power window motor RH. Refer to <u>GW-66</u>, "Rear <u>Door Glass Regulator"</u>.

NG >> GO TO 2.

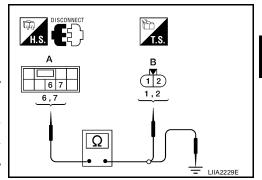
2. CHECK REAR POWER WINDOW MOTOR RH CIRCUIT

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

Connector	Terminal	Connector		Continuity	
A	Temmai	В	Terminal	Continuity	
Rear power window	6	Rear power window	1	Yes	
switch RH: D303 7	motor RH: D304	2	Yes		

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

Connector	Terminal		Continuity	
A	Terrinia	Ground	Continuity	
Rear power window switch	6	Giodila	No	
RH: D303	7	•	No	



OK or NG

OK >> GO TO 3.

NG >> Repair or replace harness.

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3. CHECK REAR POWER WINDOW SWITCH RH

Check continuity between rear power window switch RH terminals.

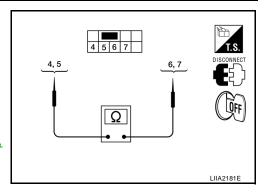
	Terr	Continuity	
Rear power window switch RH	4	7	Yes
	5	6	Yes

OK or NG

OK >> GO TO 4.

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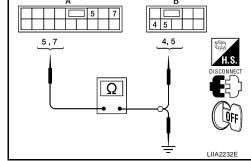
>> Replace rear power window switch RH. Refer to El-27, "REAR DOOR" .



4. CHECK GROUND SUPPLY CIRCUIT

- Disconnect main power window and door lock/unlock switch.
- Check continuity between main power window and door lock/ unlock switch connector and rear power window switch RH connector.

Connector	Terminal	Connector	Terminal	Continuity	
A	Terrilliai	В	Terrilliai	Continuity	
Main power window and door lock/unlock switch: D7	5	Rear power win-	5	Yes	
	7	dow switch RH: D303	4	Yes	



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

Connector	Terminal	Ground	Continuity
A	Temmai		Continuity
Main power window and door lock/unlock switch: D7	5	Giodila	No
	7		No

OK or NG

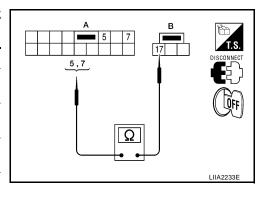
OK >> GO TO 5.

NG >> Repair or replace harness.

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

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

Main power window and door lock/unlock switch	Terminals		Condition	Continuity
	17	5	Power window lock switch UNLOCK	Yes
			Power window lock switch LOCK	No
		7	Power window lock switch UNLOCK	Yes
			Power window lock switch LOCK	No



OK or NG

OK >> Repair or replace harness.

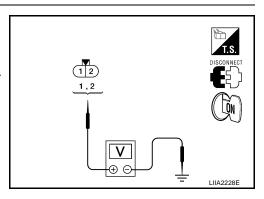
NG >> Replace main power window and door lock/unlock switch. Refer to EI-26, "FRONT DOOR".

Rear Power Window Motor LH Circuit Check

1. CHECK REAR POWER WINDOW SWITCH LH OUTPUT SIGNAL

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

Connector	Terminals		Condition	Voltage (V)
	(+)	(-)	Condition	(Approx.)
Rear power window motor LH: D204	1		UP	0
		Ground	DOWN	Battery voltage
	2	Giodila	UP	Battery voltage
			DOWN	0



OK or NG

>> Replace rear power window motor LH. Refer to GW-66, "Rear Door Glass Regulator". OK

NG >> GO TO 2.

2. check rear power window motor LH circuit

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

: Continuity should exist. 6 - 1

7 - 2 : Continuity should exist.

OK or NG

OK >> GO TO 3.

NG >> Repair or replace harness.

3. CHECK POWER SUPPLY

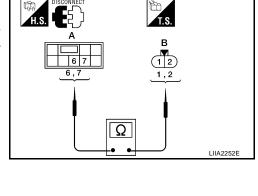
- 1. Connect rear power window switch LH.
- 2. Turn ignition switch ON.
- Check voltage between rear power window switch LH connector D203 terminal 8 and ground.

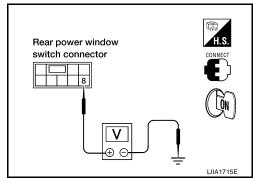
8 - Ground : Battery voltage

OK or NG

OK >> Replace rear power window switch LH. Refer to El-27, "REAR DOOR"

NG >> Repair or replace harness.





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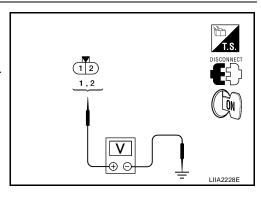
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Rear Power Window Motor RH Circuit Check

1. CHECK REAR POWER WINDOW SWITCH RH OUTPUT SIGNAL

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

Connector -	Terminals		Condition	Voltage (V)
	(+)	(-)	Condition	(Approx.)
Rear power window motor RH: D304	1		UP	0
		Ground	DOWN	Battery voltage
	2	Giodila	UP	Battery voltage
			DOWN	0



OK or NG

OK >> Replace rear power window motor RH. Refer to <u>GW-66, "Rear Door Glass Regulator"</u>.

NG >> GO TO 2.

2. CHECK REAR POWER WINDOW MOTOR RH CIRCUIT

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

6 - 1 : Continuity should exist.

7 - 2 : Continuity should exist.

OK or NG

OK >> GO TO 3.

NG >> Repair or replace harness.

3. CHECK POWER SUPPLY

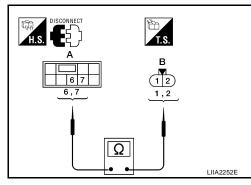
- 1. Connect rear power window switch RH.
- 2. Turn ignition switch ON.
- 3. Check voltage between rear power window switch RH connector D303 terminal 8 and ground.

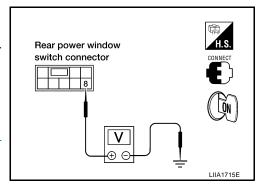
8 - Ground : Battery voltage

OK or NG

OK >> Replace rear power window switch RH. Refer to <u>EI-27</u>, "REAR DOOR".

NG >> Repair or replace harness.





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FRONT DOOR GLASS AND REGULATOR

PFP:80300

Front Door Glass REMOVAL

EIS007S0

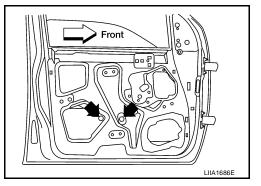
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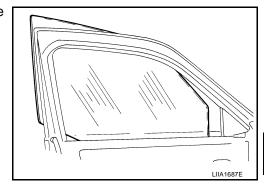
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- 1. Remove the front door finisher. Refer to EI-26, "FRONT DOOR".
- 2. Temporarily reconnect the power window switch.
- 3. Operate the power window main switch to raise/lower the door window until the glass bolts can be seen.
- 4. Remove the inside seal.
- 5. Remove the glass bolts.



6. While holding the door window, raise it at the rear and pull the glass out of the sash toward the outside of the door.



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INSTALLATION

Installation is in the reverse order of removal.

Glass bolts : 6.1 N·m (0.62 kg-m, 54 in-lb)

• Check the glass for proper fit. Refer to <u>GW-61</u>, "<u>FITTING INSPECTION</u>".

On the drivers door, reset the motor. Refer to <u>GW-64, "SETTING AFTER INSTALLATION"</u>.

FITTING INSPECTION

- Check that the glass is securely fit into the glass run groove.
- Lower the 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 guide rail bolts to correct the glass position.

GW-61

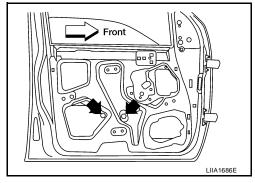
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2007 Pathfinder

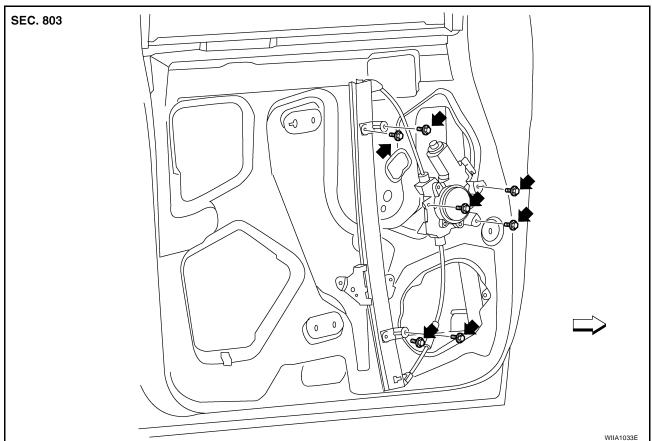
Front Door Glass Regulator REMOVAL

EIS007S1

- 1. Remove the front door finisher. Refer to EI-26, "FRONT DOOR".
- 2. Temporarily reconnect the power window switch.
- Operate the power window main switch to raise/lower the door window until the glass bolts can be seen.
- 4. Remove the inside seal.
- 5. Remove the glass bolts.



- 6. Raise the front door glass and hold it in place with suitable tool.
- 7. Disconnect the harness connector from the regulator assembly.
- Remove the bolts and the regulator assembly.



DISASSEMBLY AND ASSEMBLY

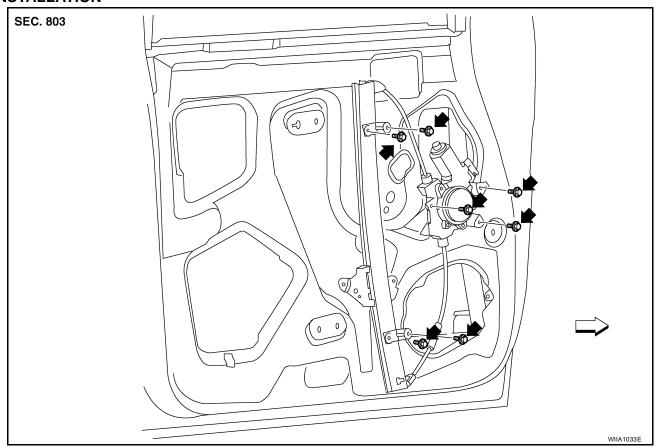
Remove the regulator motor from the regulator assembly.

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

INSTALLATION

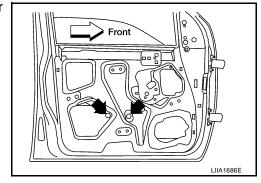


- 1. Install the regulator assembly.
- Loosely install the top rear regulator bolt to use along with the temporary holds on the window motor to
 install the assembly in the door.
- b. Install the top front regulator bolt.
- c. Install the bottom front regulator bolt.
- d. Install the bottom rear regulator bolt.
- e. Tighten the top rear regulator bolt.
- f. Install the top window motor bolt.
- g. Install the lower window motor bolt
- h. Install the rear window motor bolt.

Regulator and motor bolts : 5.7 N-m (0.58 kg-m, 50 in-lb)

- 2. Connect the harness connector to the regulator assembly.
- 3. Lower the glass and ensure that it is in both the front and rear glass channels. Tighten glass bolts.

Glass mounting bolts : 6.1 N·m (0.62 kg-m, 54 in-lb)



- Check the glass for proper fit. Refer to <u>GW-61, "FITTING INSPECTION"</u>.
- 5. On the drivers door, reset the motor. Refer to GW-64, "SETTING AFTER INSTALLATION".
- Install the inside seal.

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Revision: September 2006 **GW-63** 2007 Pathfinder

7. Install front door finisher. Refer to EI-26, "FRONT DOOR".

SETTING AFTER INSTALLATION

Setting of Limit Switch

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

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

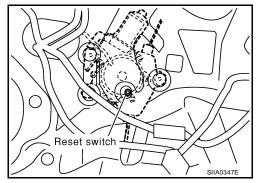
Resetting

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

- 1. Raise the glass to the top position.
- 2. While pressing and holding the reset switch, lower the glass to the bottom position.
- 3. Release the reset switch. Verify that the reset switch returns to the original position, if not, pull the switch using suitable tool.
- 4. Raise the glass to the top position.

CAUTION:

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



REAR DOOR GLASS AND REGULATOR

REAR DOOR GLASS AND REGULATOR

PFP:82300

Rear Door Glass

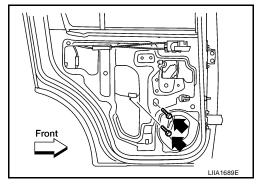
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- 1. Remove the rear door finisher. Refer to EI-26, "DOOR FINISHER".
- 2. Remove the inside seal.
- 3. Temporarily reconnect the power window switch.
- 4. Remove the glass run from the partition glass.
- 5. Operate the power window switch to raise/lower the door window until the glass bolts can be seen.
- 6. Remove the partition sash bolt (lower) and screw (upper) to remove the sash.
- 7. Remove the bolts and the glass.



INSTALLATION

Installation is in the reverse order of removal.

Glass bolts

: 5.7 N·m (0.58 kg-m, 50 in-lb)

Check the glass alignment. Refer to <u>GW-65</u>, "<u>FITTING INSPECTION</u>".

FITTING INSPECTION

- Check that the glass is securely fit into the glass run groove.
- Lower the 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 carrier plate bolts to correct the glass position.

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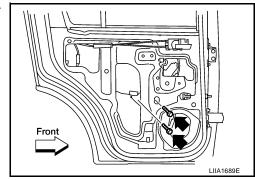
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REAR DOOR GLASS AND REGULATOR

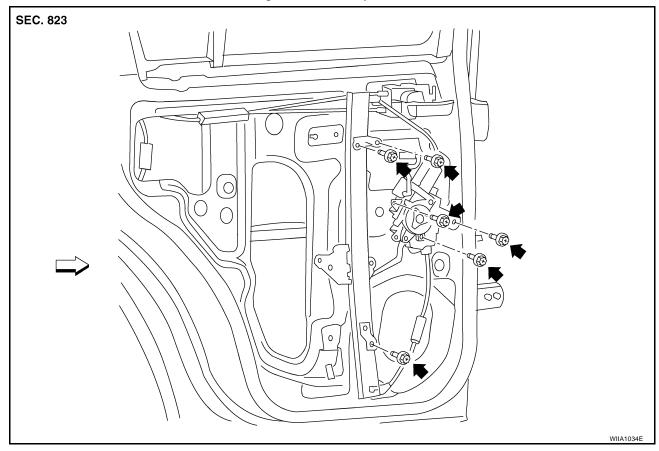
Rear Door Glass Regulator REMOVAL

EIS007S3

- 1. Remove the rear door finisher. Refer to EI-26, "DOOR FINISHER" .
- 2. Remove the inside seal.
- 3. Temporarily reconnect the power window switch.
- 4. Operate the power window switch to raise/lower the door window until the glass bolts can be seen.



- 5. Raise the rear door glass and hold it in place with suitable tool.
- 6. Remove the bolts and the regulator assembly.
 - Disconnect the connector from the regulator assembly.



INSPECTION AFTER REMOVAL

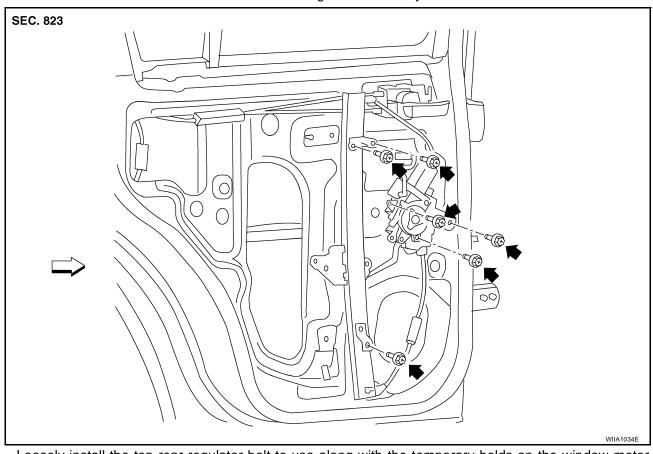
Check the regulator assembly for the following items. If a malfunction is detected, replace or grease it.

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

REAR DOOR GLASS AND REGULATOR

INSTALLATION

Connect the harness connector and install the regulator assembly.

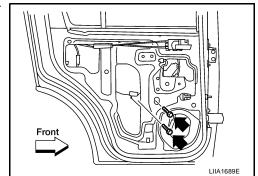


- Loosely install the top rear regulator bolt to use along with the temporary holds on the window motor to a. install the assembly in the door.
- Install the top front regulator bolt. b.
- Install the bottom regulator bolt.
- d. Tighten the top rear regulator bolt.
- Install the top window motor bolt. e.
- f. Install the lower window motor bolt.
- Install the front window motor bolt.

: 7.5 N·m (0.77 kg-m, 66 in-lb) Regulator assembly

2. Lower the glass and ensure that it is in both the front and rear glass channels. Tighten the bolts.

> **Glass bolts** : 5.7 N·m (0.58 kg-m, 50 in-lb)



- 3. Install the partition sash
- 4. Check the glass alignment. Refer to GW-65, "FITTING INSPECTION".
- 5. Install the inside seal.
- Install the rear door finisher. Refer to EI-26, "DOOR FINISHER".

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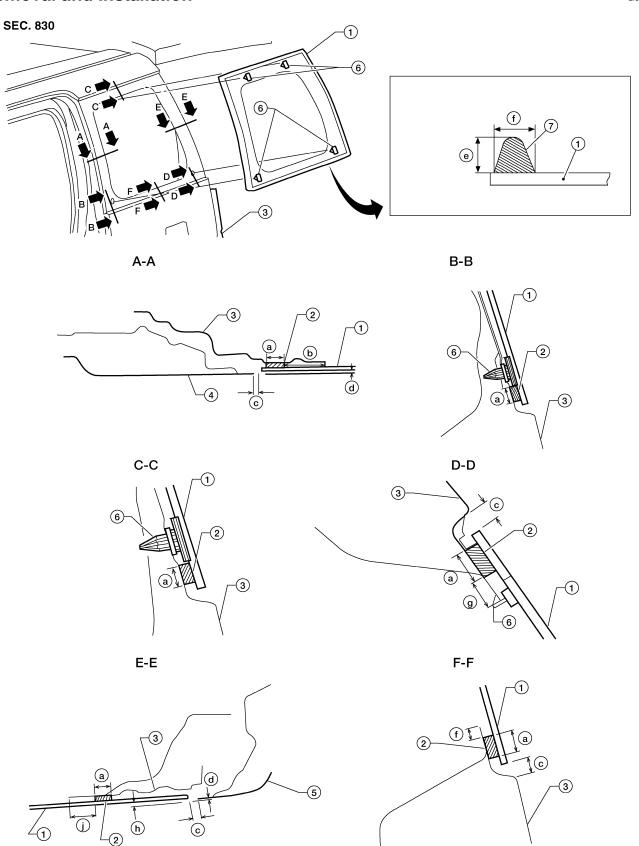
SIDE WINDOW GLASS

SIDE WINDOW GLASS

PFP:83300

Removal and Installation

EIS007S4



WIIA1035E

SIDE WINDOW GLASS

	S	IDE WINDOW GL	ASS		
1. Glass	2.	Primer area	3.	Body side outer	A
· · · · · · · · · · · · · · · · · · ·	5.	Back door assembly	6.	Locating clips	
	a.		b.	,	
				, ,	В
	g.	11.5 11111 (0.45 111)	11.	3.3 ((11))	
=	per finis	her. Refer to El-28. "BC	DY SIDE T	RIM" .	C
Disconnect the antenna.		<u>=,</u>			
If the window glass is to be re	eused, r	nark the body and the g	lass with m	ating marks.	
<u> </u>		•		•	
en cutting the glass from the ss splinters from entering y				nd heavy gloves to help prevent	Е
	s is to	be reused, do not use	a cutting k	knife or power cutting tool.	F
Be careful not to scratch th	e glass	when removing.			
Do not set or stand the glas	ss on it	s edge. Small chips ma	ay develop	into cracks.	
STALLATION					G
Use a genuine NISSAN Uret nished with it.	hane A	dhesive Kit (if available)	or equivale	ent and follow the instructions fur-	H
				event the glass from being forced	
.		•			G۷
cured (preferably 24 hours).					
•					J
	e away e	e primare and adhasis	vo aro flam	amable	
The materials contained in	the kit	•			K
					ı
			completel	y cured may affect the perfor-	_
					N
Keep primers and adhesive	in a co	ool, dry place. Ideally, t	hey shoul	d be stored in a refrigerator.	
Do not leave primers or ad	hesive	cartridge unattended v	vith their c	aps open or off.	
pletely cured. Curing time	varies	depending on temper	rature and		
	4. Rear door assembly 7. Urethane c. 3.0 mm (0.12 in) f. 7.0 mm (0.28 in) j. 30 mm (1.2 in) MOVAL Remove the luggage side up Disconnect the antenna. If the window glass is to be re Remove the glass using piant RNING: The cutting the glass from the selection of the selection	1. Glass 2. 4. Rear door assembly 5. 7. Urethane a. c. 3.0 mm (0.12 in) d. f. 7.0 mm (0.28 in) g. j. 30 mm (1.2 in) MOVAL Remove the luggage side upper finist Disconnect the antenna. If the window glass is to be reused, recommendate the glass using piano wire of the cutting the glass from the vehics seplinters from entering your eye ution: When the side window glass is to Be careful not to scratch the glass Do not set or stand the glass on its to Be careful not to scratch the glass Do not set or stand the glass on its to Be careful not to scratch the glass Do not set or stand the glass on its to Be careful not to scratch the glass Do not set or stand the glass on its to Be careful not to scratch the glass Do not set or stand the glass on its to Be careful not to scratch the glass Do not set or stand the glass on its to Be careful not to scratch the glass Do not set or stand the glass on its to Be careful not to scratch the glass on its to Be careful not to scratch the glass on its to Be careful not to scratch the glass on its to Be careful not to scratch the glass on its to Be careful not to scratch the glass on its to Be careful not to scratch the glass on its to Be careful not to scratch the glass on its to Be careful not be glass in case of an aution the kit contact with the skin and eyes. Keep heat and open flames away and the materials contained in the kit contact with the skin and eyes. Use in an open, well ventilated inhaled. If affected by vapor inhala Driving the vehicle before the under the date of manufa printed on the box. Keep primers and adhesive which is months after the date of manufa printed on the box. Keep primers and adhesive in a contact with the skin and eyes. The vehicle should not be driven pletely cured. Curing time varies	1. Glass 2. Primer area 4. Rear door assembly 5. Back door assembly 7. Urethane a. 15 mm (0.59 in) 6. 3.0 mm (0.12 in) d. 2.5 mm (0.1 in) 6. 7.0 mm (0.28 in) g. 11.5 mm (0.45 in) 9. 11.5 mm (0.45 in) 1. 30 mm (1.2 in) MOVAL Remove the luggage side upper finisher. Refer to El-28. "BOD Disconnect the antenna. If the window glass is to be reused, mark the body and the granning Remove the glass using piano wire or power cutting tool and tarning. Remove the glass from the vehicle, always wear safety se splinters from entering your eyes or cutting your hand UTION: When the side window glass is to be reused, do not use Be careful not to scratch the glass when removing. Do not set or stand the glass on its edge. Small chips mass table with it. While the urethane adhesive is curing, open a door window, out by passenger compartment air pressure when a door is concerned (preferably 24 hours). Curing time varies with tempera Install parts removed. IRNING: Keep heat and open flames away as primers and adhesive The materials contained in the kit are harmful if swallow contact with the skin and eyes. Use in an open, well ventilated location. Avoid breath inhaled. If affected by vapor inhalation, immediately move Driving the vehicle before the urethane adhesive has mance of the glass in case of an accident. UTION: Do not use an adhesive which is past its usable term. months after the date of manufacture. Carefully adher printed on the box. Keep primers and adhesive in a cool, dry place. Ideally, to Do not leave primers or adhesive cartridge unattended with the vehicle should not be driven for at least 24 hours pletely cured. Curing time varies depending on temper	1. Glass 2. Primer area 3. 4. Rear door assembly 5. Back door assembly 6. 7. Urethane a. 15 mm (0.59 in) b. 6. 3.0 mm (0.12 in) d. 2.5 mm (0.1 in) e. 7. Journ (0.28 in) g. 11.5 mm (0.45 in) h. 8. 30 mm (1.2 in) MOVAL Remove the luggage side upper finisher. Refer to EI-28, "BODY SIDE T Disconnect the antenna. If the window glass is to be reused, mark the body and the glass with m Remove the glass using piano wire or power cutting tool and an inflatable ren cutting the glass from the vehicle, always wear safety glasses at as splinters from entering your eyes or cutting your hands. UTION: When the side window glass is to be reused, do not use a cutting be acreful not to scratch the glass when removing. Do not set or stand the glass on its edge. Small chips may develop STALLATION Use a genuine NISSAN Urethane Adhesive Kit (if available) or equivalentated with it. While the urethane adhesive is curing, open a door window. This will prout by passenger compartment air pressure when a door is closed. Check gap along bottom to confirm that glass does not contact sheet m Inform the customer that the vehicle should remain stationary until the cured (preferably 24 hours). Curing time varies with temperature and hunstall parts removed. IRNING: Keep heat and open flames away as primers and adhesive are flam The materials contained in the kit are harmful if swallowed, and m contact with the skin and eyes. Use in an open, well ventilated location. Avoid breathing the ventilated by vapor inhalation, immediately move to an arround the ventilated by vapor inhalation, immediately move to an arround the safter the date of manufacture. Carefully adhere to the continuation of the box. Keep primers and adhesive which is past its usable term. Shelf life months after the date of manufacture. Carefully adhere to the continuation of the box. Keep primers and adhesive which is past its usable term. Shelf life months after the date of manufacture. Carefully adhere to the continuation of the box.	1. Glass 2. Primer area 3. Body side outer 4. Rear door assembly 5. Back door assembly 6. Locating clips 7. Urethane a. 15 mm (0.59 in) b. 42.5 mm (1.67 in) 6. 3.0 mm (0.12 in) d. 2.5 mm (0.11 in) e. 12 mm (0.47 in) 1. 7.0 mm (0.28 in) g. 11.5 mm (0.45 in) h. 3.3 mm (0.13 in) i. 3.0 mm (0.12 in) d. 2.5 mm (0.11 in) e. 12 mm (0.47 in) i. 3.3 mm (0.13 in) i. 30 mm (1.2 in) MOVAL Remove the luggage side upper finisher. Refer to El-28, "BODY SIDE TRIM". Disconnect the antenna. If the window glass is to be reused, mark the body and the glass with mating marks. Remove the glass using piano wire or power cutting tool and an inflatable pump bag. Interest from entering your eyes or cutting tool and an inflatable pump bag. Interest from entering your eyes or cutting your hands. UTION: When the side window glass is to be reused, do not use a cutting knife or power cutting tool. Be careful not to scratch the glass when removing. Do not set or stand the glass on its edge. Small chips may develop into cracks. STALLATION 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. Check gap along bottom to confirm that glass does not contact sheet metal. 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. RNING: 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

Repairing Water Leaks for Side Window Glass

Leaks can be repaired without removing or reinstalling glass. If water is leaking between urethane adhesive material and body or glass, determine the extent of leakage.

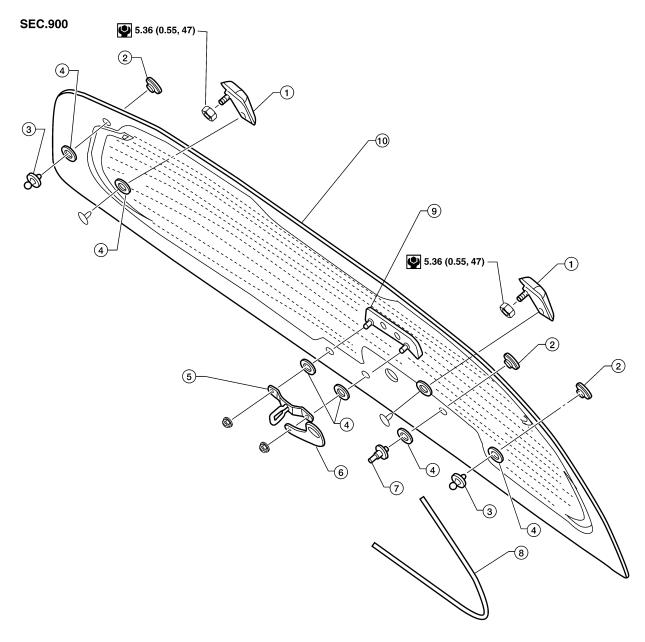
This can be done by applying water to the side window area while pushing glass outward.

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

GLASS HATCH PFP:90550

Removal and Installation

EIS007S5



: N·m (kg-m, in-lb)

WIIA0743E

- Bushing 4.
- Wiper motor stud 7.
- 10. Glass hatch handle assembly

Glass hatch hinge RH/LH

- Glass hatch stud
- 5. Glass hatch striker
- 8. Harness protector
- Gas stay ball stud RH/LH
- 6. Wiper motor bracket
- 9. Glass hatch
- 1. Remove the rear wiper motor assembly. Refer to WW-39, "REAR WIPER MOTOR".
- 2. Disconnect the rear defroster electrical connectors.
- 3. Remove the back door top garnish assembly. Refer to EI-36, "BACK DOOR TRIM" .
- 4. Remove the glass hatch stays.
- 5. Remove the glass hatch assembly.

GLASS HATCH

CAUTION:

- Be careful not to scratch the glass when removing.
- Do not set or stand the glass on its edge. Small chips may develop into cracks.

Installation is in the reverse order of removal.

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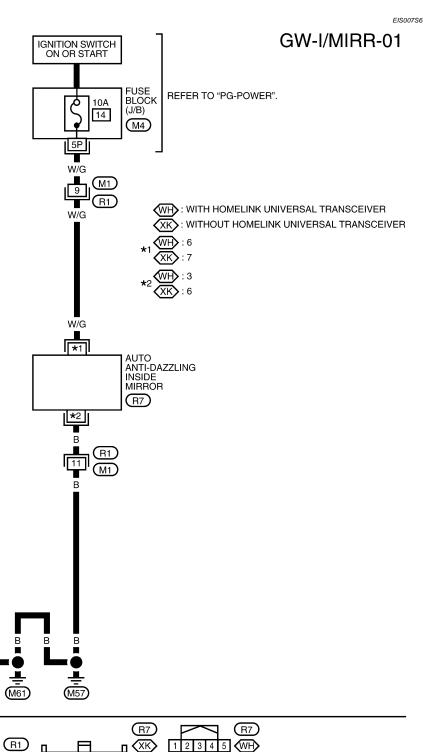
INSIDE MIRROR

PFP:96321

Wiring Diagram — I/MIRR —

(M4)

1 2 3 4 5 6



WIWA1040E

INSIDE MIRROR

Removal and Installation INSIDE MIRROR

EIS007S7

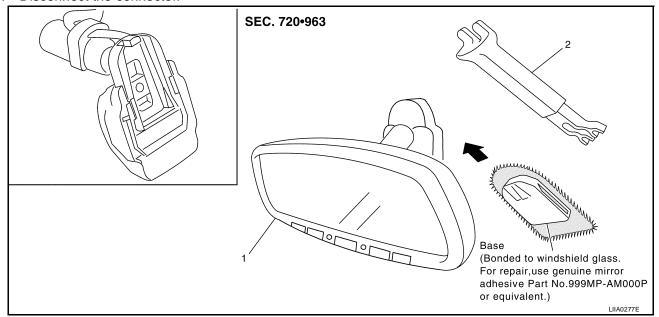
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- 1. Remove inside mirror finisher.
- 2. Slide the mirror upward to remove.
- 3. Disconnect the connector.



1. Inside mirror

2. Inside mirror finisher

Installation is in the reverse order of removal.

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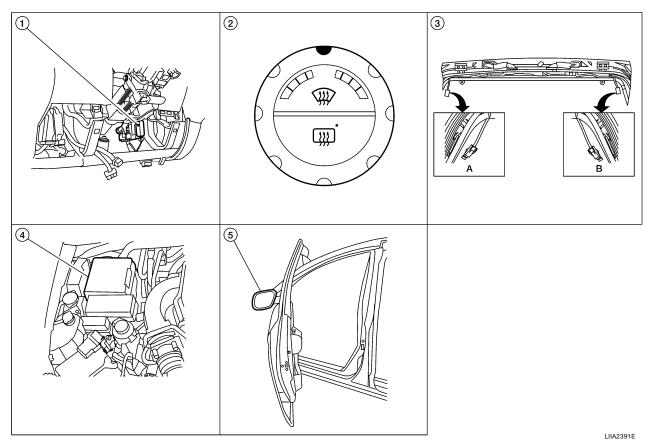
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PFP:25350

Component Parts and Harness Connector Location

FIS007S8



- BCM M18, M20 (view with lower instrument panel LH removed)
- Front air control M49, M50
- A. Rear window defogger ground connector D604
 B. Rear window defogger connector D651

- 4. IPDM E/R E120, E122, E124
- Door mirror LH (door mirror defogger) D4, RH D107

System Description

EIS007S

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 only operates for approximately 15 minutes.

Power is supplied at all times

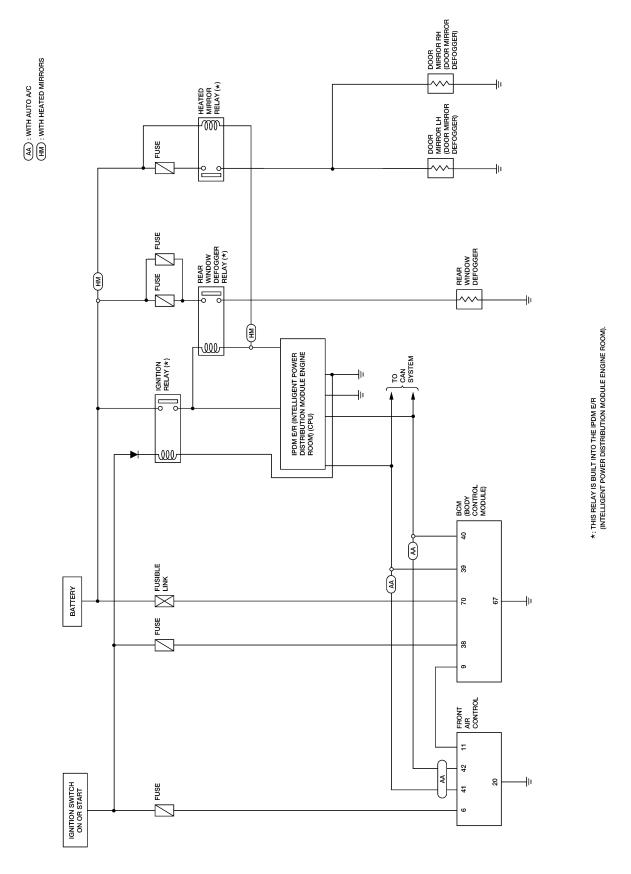
- through 15A fuses (No. 46 and 47, located in the IPDM E/R)
- to rear window defogger relay
- through 15A fuse [No. 43 (with heated mirrors), located in the IPDM E/R]
- to heated mirror relay
- through 50A fusible link (letter g, located in the fuse and fusible link box)
- to BCM terminal 70.

With the ignition switch turned to ON or START position, power is supplied

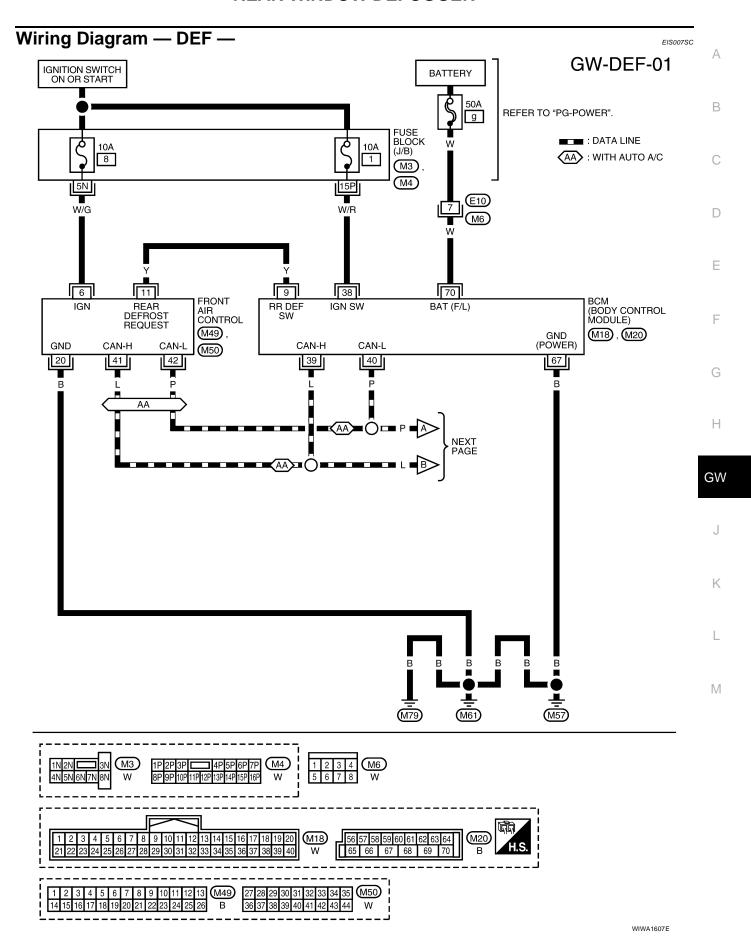
- through ignition relay
- to rear window defogger relay (located in the IPDM E/R)
- through 10A fuse [No. 1, located in the fuse block (J/B)]
- to BCM terminal 38
- through 10A fuse [No. 8, located in the fuse block (J/B)]
- to front air control terminal 6.

Gro	ound is supplied	
•	to BCM terminal 67	
•	to front air control terminal 20	
•	through body grounds M57, M61 and M79	
•	to IPDM E/R terminals 38 and 59	
	through body grounds E9, E15 and E24.	
Wh	nen 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 20	
	through body grounds M57, M61 and M79.	
	en rear window defogger switch is illuminated.	
	en BCM recognizes that rear window defogger switch is turned to ON. en it sends rear window defogger switch signals to IPDM E/R via CAN communication (CAN-H, CAN-L).	
Wh	nen 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 terminals 38 and 59	
•	through body grounds E9, E15 and E24	
The	en rear window defogger relay is energized.	
Wit	th power and ground supplied, rear window defogger filaments heat and defog the rear window.	
Wh	nen rear window defogger relay is turned to ON (with heated mirrors), 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 1.	(
	or mirror defogger (LH and RH) is grounded through body grounds M57, M61 and M79. th power and ground supplied, rear window defogger filaments heat and defog the rear window and door	
	ror defogger filaments heat and defog the mirrors.	
	AN Communication System Description	
	fer to LAN-4, "SYSTEM DESCRIPTION".	
	ion to <u>that it, or or that be dotted that the te</u> .	

Schematic

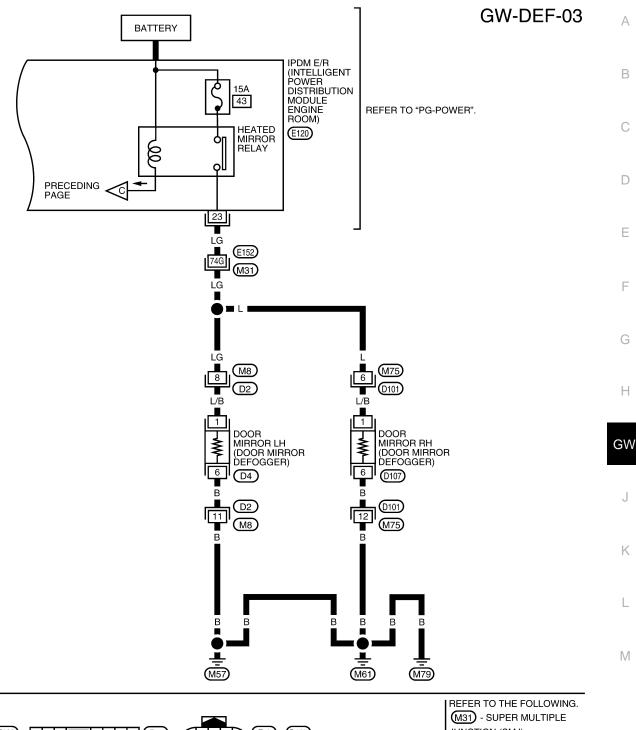


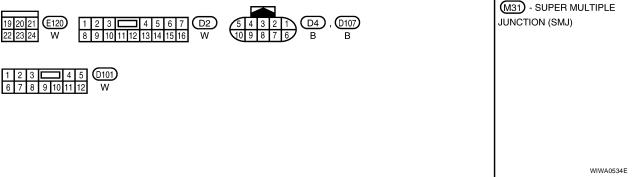
WIWA1606E



GW-DEF-02 ■□■ : DATA LINE (HM): WITH HEATED MIRRORS IGNITION SWITCH ON OR START BATTERY IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE IGNITION RELAY 15A 46 47 ROOM) E122), E124) REFER TO "PG-POWER". REAR WINDOW DEFOGGER RELAY (HM) RR DEF RLY GND GND (SIGNAL) (POWER) CPU CAN-H NEXT PAGE 38 59 ■ R → TO MTC-A/C,M PRECEDING PAGE D409 REAR WINDOW DEFOGGER D604), D651) ┻ ᆂ E24) Ē9 **E**15 (D603) (M91) (E122) (E124) W

WIWA2115E





Terminals and Reference Values for BCM

EIS007SD

Refer to BCS-12, "Terminals and Reference Values for BCM".

Terminals and Reference Values for IPDM E/R

EIS007SE

Refer to PG-27, "Terminals and Reference Values for IPDM E/R".

Work Flow

- 1. Check the symptom and customer's requests.
- 2. Understand the outline of system. Refer to GW-74, "System Description".
- 3. According to the trouble diagnosis chart, repair or replace the cause of the malfunction. Refer to <u>GW-80</u>, <u>"Trouble Diagnoses Symptom Chart"</u>.
- 4. Does rear window defogger operate normally? YES: GO TO 5, NO: GO TO 3.
- 5. Inspection End.

CONSULT-II Function (BCM)

EIS007SG

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

BCM diagnostic test item	Diagnostic mode	Content	
	WORK SUPPORT	Supports inspections and adjustments. Commands are transmitted to the BCM for setting the status suitable for required operation, input/output signals are received from the BCM and received data is displayed.	
	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.	
Inspection by part	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 START PROCEDURE

Refer to GI-38, "CONSULT-II Start Procedure".

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

EIS007SH

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

Symptom	Diagnoses / Service procedure	Refer to page
	BCM power supply and ground circuit check	BCS-16
Rear window defogger and door mirror defoggers do not	2. IPDM E/R auto active test check	PG-23
operate. (With heated mirrors)	3. Rear window defogger switch circuit check	<u>GW-81</u>
	4. Replace IPDM E/R	PG-32

Symptom	Diagnoses / Service procedure	Refer to page
	1. BCM power supply and ground circuit check	BCS-16
	2. IPDM E/R auto active test check	PG-23
Rear window defogger does not operate.	3. Rear window defogger switch circuit check	<u>GW-81</u>
(Without heated mirrors)	4. Rear window defogger circuit check	<u>GW-82</u>
	5. Filament check	<u>GW-87</u>
	7. Replace IPDM E/R	PG-32
	Rear window defogger circuit check	<u>GW-82</u>
Rear window defogger does not operate but both door mir- ror defoggers operate. (With heated mirrors)	2. Filament check	<u>GW-87</u>
Tor dologgoro oporato. (With heated Hillioto)	3. Replace IPDM E/R	PG-32
Both door mirror defoggers do not operate but rear window	Door mirror defogger power supply circuit check	<u>GW-83</u>
defogger operates. (With heated mirrors)	2. Replace IPDM E/R	PG-32
Door mirror LH defogger does not operate.	Door mirror LH defogger circuit check	<u>GW-85</u>
Door mirror RH defogger does not operate.	Door mirror RH defogger circuit check	<u>GW-86</u>
Rear window defogger switch does not light, but rear window defogger operates.	Rear window defogger signal check	<u>GW-87</u>

BCM Power Supply and Ground Circuit Check

Refer to BCS-16, "BCM Power Supply and Ground Circuit Check" .

Rear Window Defogger Switch Circuit Check

1. CHECK REAR WINDOW DEFOGGER SWITCH OPERATION

(II) 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

DATA MON	DATA MONITOR		
MONITOR		_	
REAR DEF SW IGN ON SW	OFF ON		
		_	
		-	
		■ PIIA2373E	

⋈ Without CONSULT-II

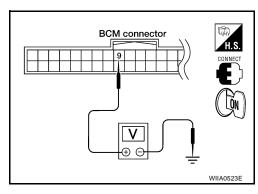
- 1. Turn ignition switch ON.
- 2. Check voltage between BCM connector and ground.

Connector	Terminals		Condition	Voltage (V)	
Comicolor	(+)	(-)	Condition	(Approx.)	
M18	9	Ground	Rear window defogger switch is pressed.	0	
IVITO	9 Ground	Rear window defogger switch is OFF.	5		

OK or NG

OK >> Rear window defogger switch check is OK.

NG >> GO TO 2.



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2. CHECK REAR WINDOW DEFOGGER SWITCH CIRCUIT HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM and front air control.
- Check continuity between BCM connector M18 terminal 9 and front air control connector M49 terminal 11.

: Continuity should exist.

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

: Continuity should not exist.

9 - Ground OK or NG

OK >> GO TO 3.

NG >> Repair or replace harness.

3. CHECK BCM OUTPUT SIGNAL

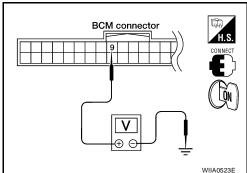
- 1. Connect BCM.
- Turn ignition switch ON.
- 3. Check voltage between BCM connector M18 terminal 9 and ground.

9 - Ground : Approx. 5V

OK or NG

OK >> Replace front air control. Refer to ATC-25, "AIR CONDI-TIONER CONTROL".

NG >> Replace BCM. Refer to BCS-25, "Removal and Installa-



BCM connector

Front air control

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Rear Window Defogger Circuit Check

1. CHECK FUSES

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

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

OK or NG

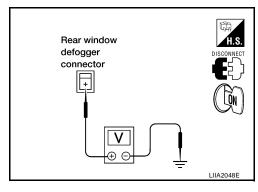
OK >> GO TO 2.

NG >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

$\overline{2}$. check rear window defogger power supply circuit

- 1. Turn ignition switch OFF.
- 2. Disconnect rear window defogger.
- 3. Turn ignition switch ON.
- Check voltage between rear window defogger connector D651 terminal + and ground.

Connector	Terminals		Condition	Voltage (V)
Connector	(+)	(-)	Condition	(Approx.)
D651	_	Ground	Rear window defogger switch ON.	Battery voltage
	+ Ground	Rear window defogger switch OFF.	0	



Rear window

defogger

connector

OK or NG

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

3. CHECK REAR WINDOW DEFOGGER GROUND CIRCUIT

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

- - Ground

: Continuity should exist.

OK or NG

OK >> Check filament. Refer to GW-87, "Filament Check" .

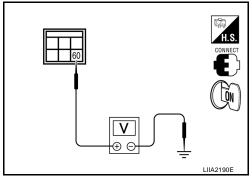
- If filament is OK. Check the condition of the harness and the connector.
- If filament is NG. Repair filament.

NG >> Repair or replace harness.

4. CHECK REAR WINDOW DEFOGGER RELAY OUTPUT SIGNAL

- 1. Turn ignition switch OFF.
- Check voltage between IPDM E/R connector E124 terminal 60 and ground.

Connector	Terminals		Condition	Voltage (V)
Connector	(+)	(-)	Condition	(Approx.)
F124	60 Ground	Ground	Rear window defogger switch ON.	Battery voltage
		Rear window defogger switch OFF.	0	



OK or NG

OK >> Repair or replace harness.

>> Replace IPDM E/R. Refer to PG-32, "Removal and Installation of IPDM E/R". NG

Door Mirror Defogger Power Supply Circuit Check

1. CHECK FUSE

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

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

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OK or NG

OK >> GO TO 2.

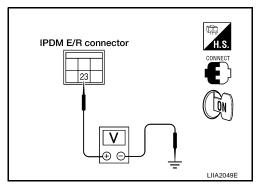
NG >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

2. CHECK DOOR MIRROR DEFOGGER POWER SUPPLY CIRCUIT

1. Turn ignition switch ON.

2. Check voltage between IPDM E/R connector and ground.

Connector	Terminals		Condition	Voltage (V)
	(+)	(-)	Condition	(Approx.)
E120	23	Ground	Rear window defogger switch ON	Battery voltage
			Rear window defogger switch OFF	0



OK or NG

OK >> GO TO 3.

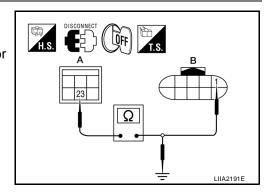
NG >> Replace IPDM E/R. Refer to PG-32, "Removal and Installation of IPDM E/R".

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 and door mirror LH or RH connector.

Connector	Terminal	Connector	Terminal	Continuity	
Α	Terrillia	В	reminal	Continuity	
IPDM E/R: E120	23	Door mirror: D4 (LH) or D107 (RH)	1	Yes	



4. Check continuity between IPDM E/R and ground.

А			Continuity	
Connector	Terminal	Ground	Continuity	
IPDM E/R: E120	23		No	

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 6 and ground.

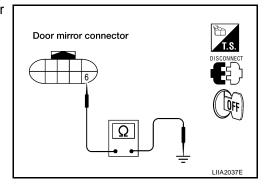
6 - Ground

: Continuity should exist.

OK or NG

OK >> GO TO 5.

NG >> Repair or replace harness.



5. CHECK DOOR MIRROR DEFOGGER

Check continuity between each door mirror LH or RH terminals 1 and 6.

1 - 6

: Continuity should exist.

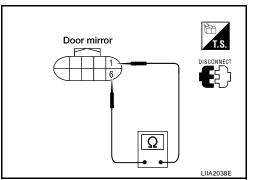
OK or NG

OK

>> Repair or replace harness.

NG

>> Replace malfunctioning door mirror LH or RH. Refer to <u>GW-92, "Door Mirror Assembly"</u>.

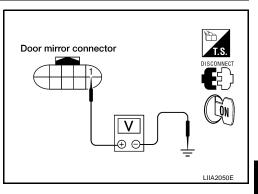


Door Mirror LH Defogger Circuit Check

1. CHECK DOOR MIRROR LH 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	Terminals		Condition	Voltage (V)
	(+)	(-)	Condition	(Approx.)
D4	1	Ground	Rear window defogger switch ON	Battery voltage
			Rear window defogger switch OFF	0



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OK or NG

OK >> GO TO 2.

NG >> Repair or replace harness.

2. CHECK DOOR MIRROR LH DEFOGGER GROUND CIRCUIT

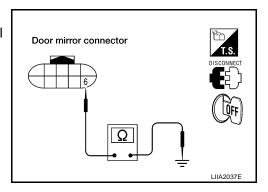
- 1. Turn ignition switch OFF.
- 2. Check continuity between door mirror LH connector D4 terminal 6 and ground.
 - 6 Ground

: Continuity should exist.

OK or NG

OK >> GO TO 3.

NG >> Repair or replace harness.



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3. CHECK DOOR MIRROR LH DEFOGGER

Check continuity between door mirror LH terminals 1 and 6.

1 - 6

: Continuity should exist.

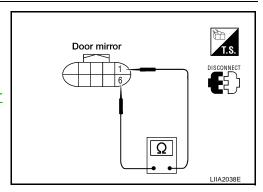
OK or NG

OK

>> Repair or replace harness.

NG

>> Replace door mirror LH. Refer to <u>GW-92</u>, "<u>Door Mirror</u> Assembly".



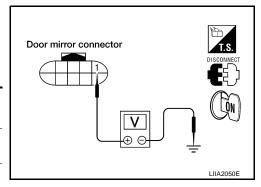
Door Mirror RH Defogger Circuit Check

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1. CHECK DOOR MIRROR RH 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	Terminals		Condition	Voltage (V)
	(+)	(-)	Condition	(Approx.)
D107	1 (Ground	Rear window defogger switch ON	Battery voltage
		Ground	Rear window defogger switch OFF	0



OK or NG

OK >> GO TO 2.

NG >> Repair or replace harness.

$2. \ \mathsf{CHECK} \ \mathsf{DOOR} \ \mathsf{MIRROR} \ \mathsf{RH} \ \mathsf{DEFOGGER} \ \mathsf{GROUND} \ \mathsf{CIRCUIT}$

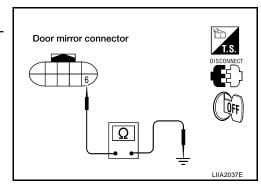
- Turn ignition switch OFF.
- 2. Check continuity between door mirror RH connector D107 terminal 6 and ground.
 - 6 Ground

: Continuity should exist.

OK or NG

OK >> GO TO 3.

NG >> Repair or replace harness.



3. CHECK DOOR MIRROR RH DEFOGGER

Check continuity between each door mirror RH terminals 1 and 6.

1 - 6 : Continuity should exist.

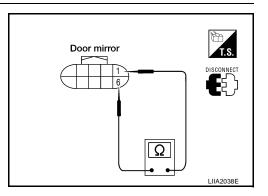
OK or NG

OK

>> Repair or replace harness.

NG

>> Replace door mirror RH. Refer to <u>GW-92</u>, "<u>Door Mirror</u> Assembly".



Rear Window Defogger Signal Check (With NAVI)

1. CHECK AV COMMUNICATION LINE

AV communication line check is executed. Refer to AV-130, "CAN Communication Line Check".

Is rear window defogger displayed on the display?

OK or NG

OK >> GO TO 2.

NG >> Replace display control unit. Refer to AV-152, "DISPLAY UNIT" .

2. CHECK CAN COMMUNICATION LINE

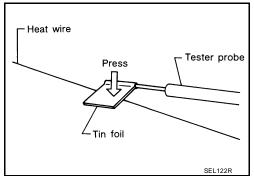
CAN communication line check is executed. Refer to <u>AV-130, "CAN Communication Line Check"</u> OK or NG

OK >> Check the condition of the harness and the connector.

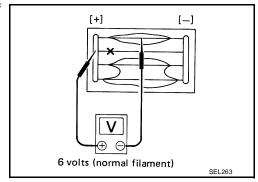
NG >> In addition, it is necessary to check CAN communication line. Refer to <u>LAN-7</u>, "TROUBLE DIAGNOSIS".

Filament Check EISO07SP

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



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



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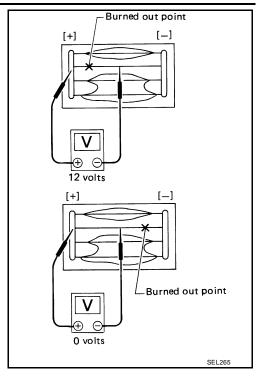
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- 3. If a filament is burned out, circuit tester registers 0 or battery voltage.
- 4. To locate burned out point, move probe to left and right along filament. Test needle will swing abruptly when probe passes the point.



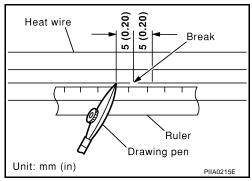
Filament Repair REPAIR EQUIPMENT

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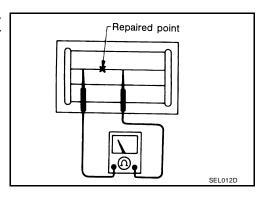
- Conductive silver composition (DuPont No. 4817 or equivalent)
- Ruler 30 cm (11.8 in) long
- Drawing pen
- Heat gun
- Alcohol
- Cloth

REPAIRING PROCEDURE

- 1. Wipe broken heat wire and its surrounding area clean with a cloth dampened in alcohol.
- 2. Apply a small amount of conductive silver composition to tip of drawing pen.
 - Shake silver composition container before use.
- Place ruler on glass along broken line. Deposit conductive silver composition on break with drawing pen. Slightly overlap existing heat wire on both sides [preferably 5 mm (0.20 in)] of the break.

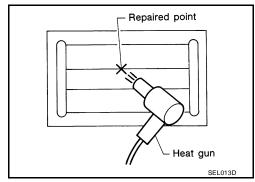


- 4. After repair has been completed, check repaired wire for continuity. This check should be conducted 10 minutes after silver composition is deposited.
 - Do not touch repaired area while test is being conducted.



 Apply a constant stream of hot air directly to the repaired area for approximately 20 minutes with a heat gun. A minimum distance of 3 cm (1.2 in) should be kept between repaired area and hot air outlet.

If a heat gun is not available, let the repaired area dry for 24 hours.



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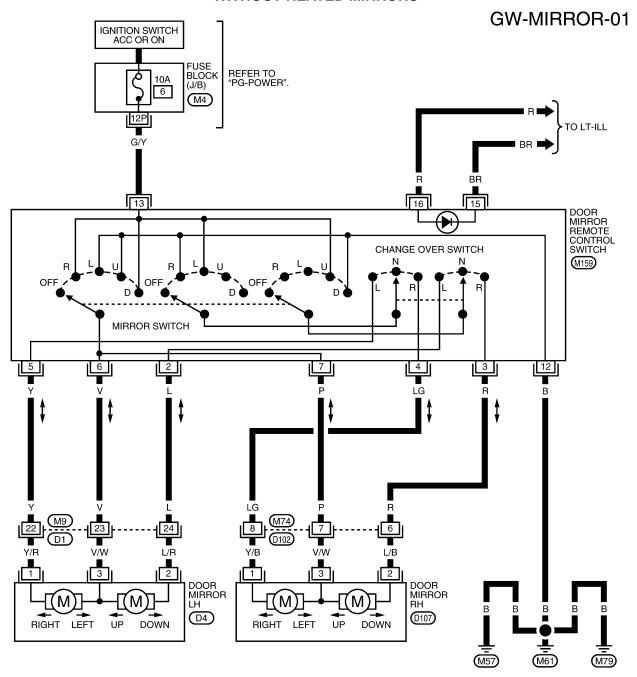
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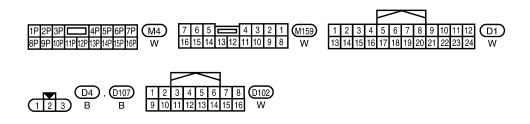
DOOR MIRROR
PFP:96301

Wiring Diagram — MIRROR —

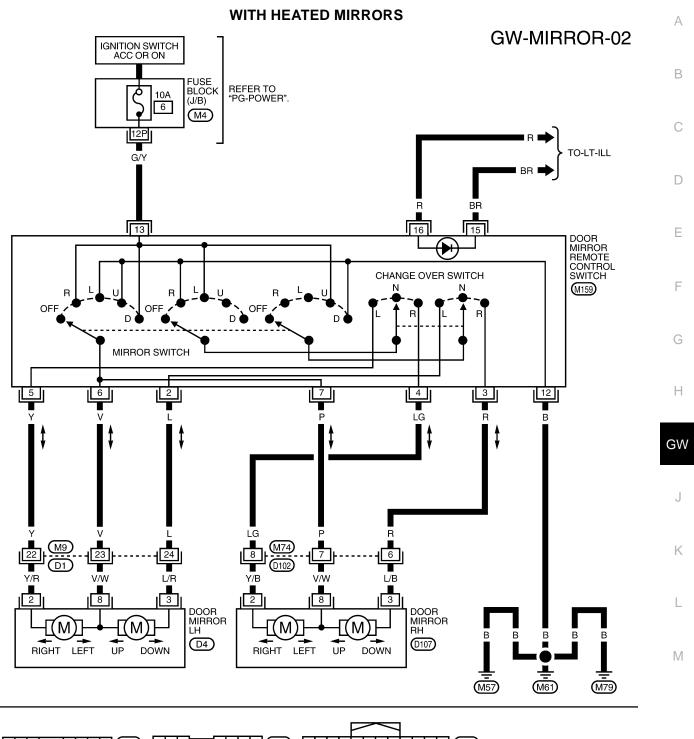
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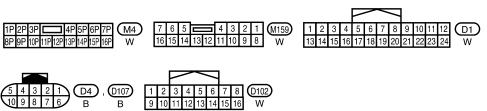
WITHOUT HEATED MIRRORS





DOOR MIRROR

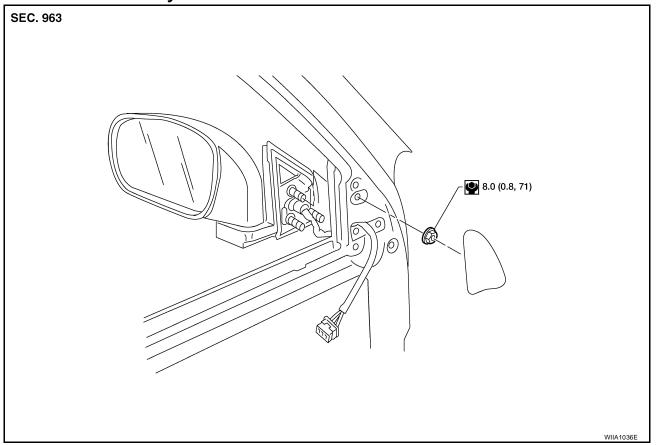




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Door Mirror Assembly





REMOVAL

NOTE:

Be careful not to damage the mirror bodies.

- 1. Remove the adhesive front door sash cover.
- 2. Remove the front door finisher. Refer to EI-26, "FRONT DOOR".
- 3. Position the front door seal aside.
- 4. Disconnect the door mirror harness connector.
- 5. Remove the nuts and the door mirror assembly.

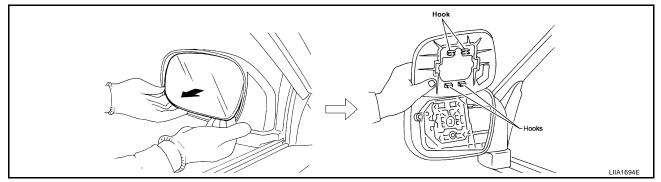
INSTALLATION

Installation is in the reverse order of removal.

DOOR MIRROR

Door Mirror Glass REMOVAL AND INSTALLATION

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- 1. Angle the mirror fully up.
- 2. Remove the mirror.
 - Pull from the bottom to disengage the clips.
 - Continue to pivot the mirror upward from the bottom to separate the hooks.

Installation is in the reverse order of removal.

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