

SECTION **GW**

GLASSES, WINDOW SYSTEM & MIRRORS

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PRECAUTIONS

PRECAUTIONS

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

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

WARNING:

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

Precautions for Battery Service

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Before disconnecting the battery, lower both the driver and passenger windows. This will prevent any interference between the window edge and the vehicle when the door is opened/closed. During normal operation, the window slightly raises and lowers automatically to prevent any window to vehicle interference. The automatic window function will not work with the battery disconnected.

Handling for Adhesive and Primer

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

Trouble Diagnosis Precaution

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When you read wiring diagrams, refer to the following:

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

When you perform trouble diagnosis, refer to the following:

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

Check for any service bulletins before servicing the vehicle.

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PREPARATION

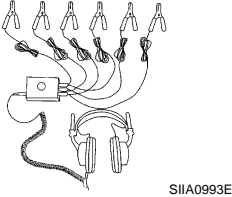
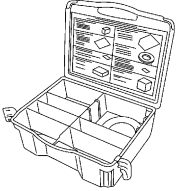
PREPARATION

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Special Service Tools

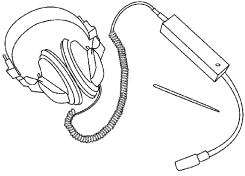
AIS000EY

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
<p>(J-39570) Chassis ear</p>  <p style="text-align: right; margin-right: 50px;">SIIA0993E</p>	<p>Locating the noise</p>
<p>(J-43980) NISSAN Squeak and Rattle Kit</p>  <p style="text-align: right; margin-right: 50px;">SIIA0994E</p>	<p>Repairing the cause of noise</p>

Commercial Service Tools

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Tool name	Description
<p>Engine ear</p>  <p style="text-align: right; margin-right: 50px;">SIIA0995E</p>	<p>Locating the noise</p>

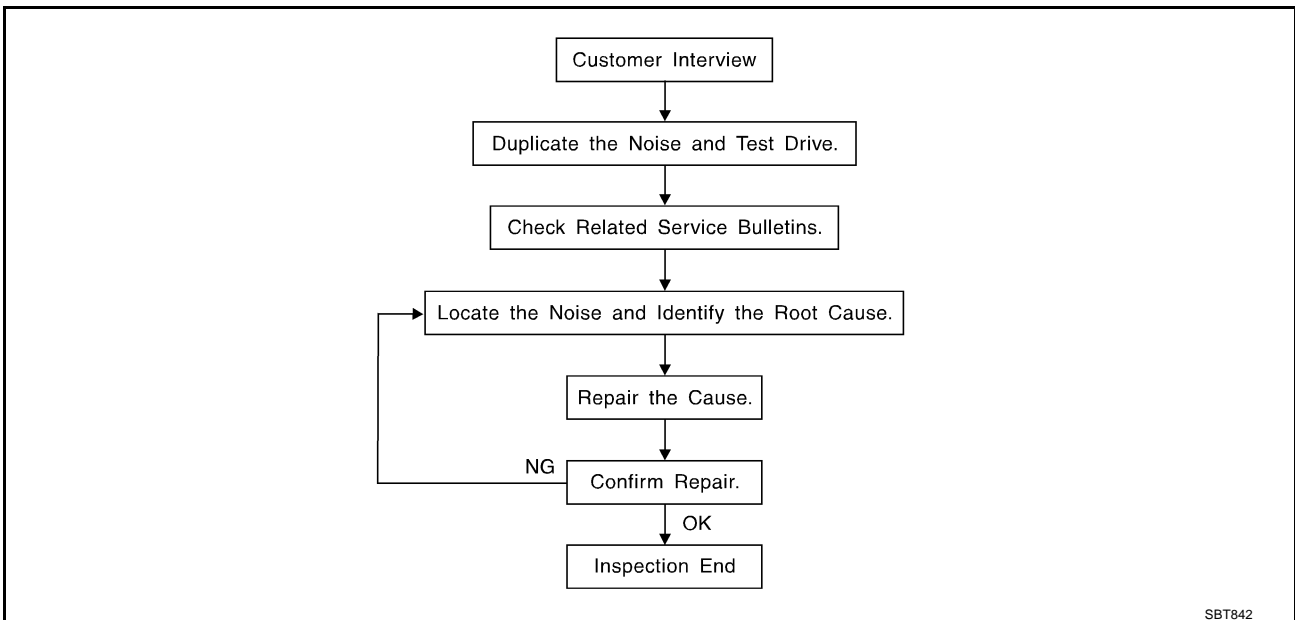
SQUEAK AND RATTLE TROUBLE DIAGNOSES

SQUEAK AND RATTLE TROUBLE DIAGNOSES

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Work Flow

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CUSTOMER INTERVIEW

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

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

SQUEAK AND RATTLE TROUBLE DIAGNOSES

DUPLICATE THE NOISE AND TEST DRIVE

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

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

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

CHECK RELATED SERVICE BULLETINS

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

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

LOCATE THE NOISE AND IDENTIFY THE ROOT CAUSE

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

REPAIR THE CAUSE

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

CAUTION:

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

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

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

URETHANE PADS [1.5 mm (0.059 in) thick]

Insulates connectors, harness, etc.

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

71L02: 15 × 25 mm (0.59 × 0.98 in)

INSULATOR (Foam blocks)

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

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

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

SQUEAK AND RATTLE TROUBLE DIAGNOSES

INSULATOR (Light foam block)

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

FELT CLOTHTAPE

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

68370-4B000: 15 × 25 mm (0.59 × 0.98 in) pad/68239-13E00: 5 mm (0.20 in) wide tape roll. The following materials, not found in the kit, can also be used to repair squeaks and rattles.

UHMW (TEFLON) TAPE

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

SILICONE GREASE

Used in 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

AIS000F1

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

INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

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

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

CAUTION:

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

CENTER CONSOLE

Components to pay attention to include:

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

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

DOORS

Pay attention to the:

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

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

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SQUEAK AND RATTLE TROUBLE DIAGNOSES

TRUNK

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

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

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

SUNROOF/HEADLINER

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

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

SEATS

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

Cause of seat noise include:

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

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

UNDERHOOD

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

Causes of transmitted underhood noise include:

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

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

SQUEAK AND RATTLE TROUBLE DIAGNOSES

Diagnostic Worksheet

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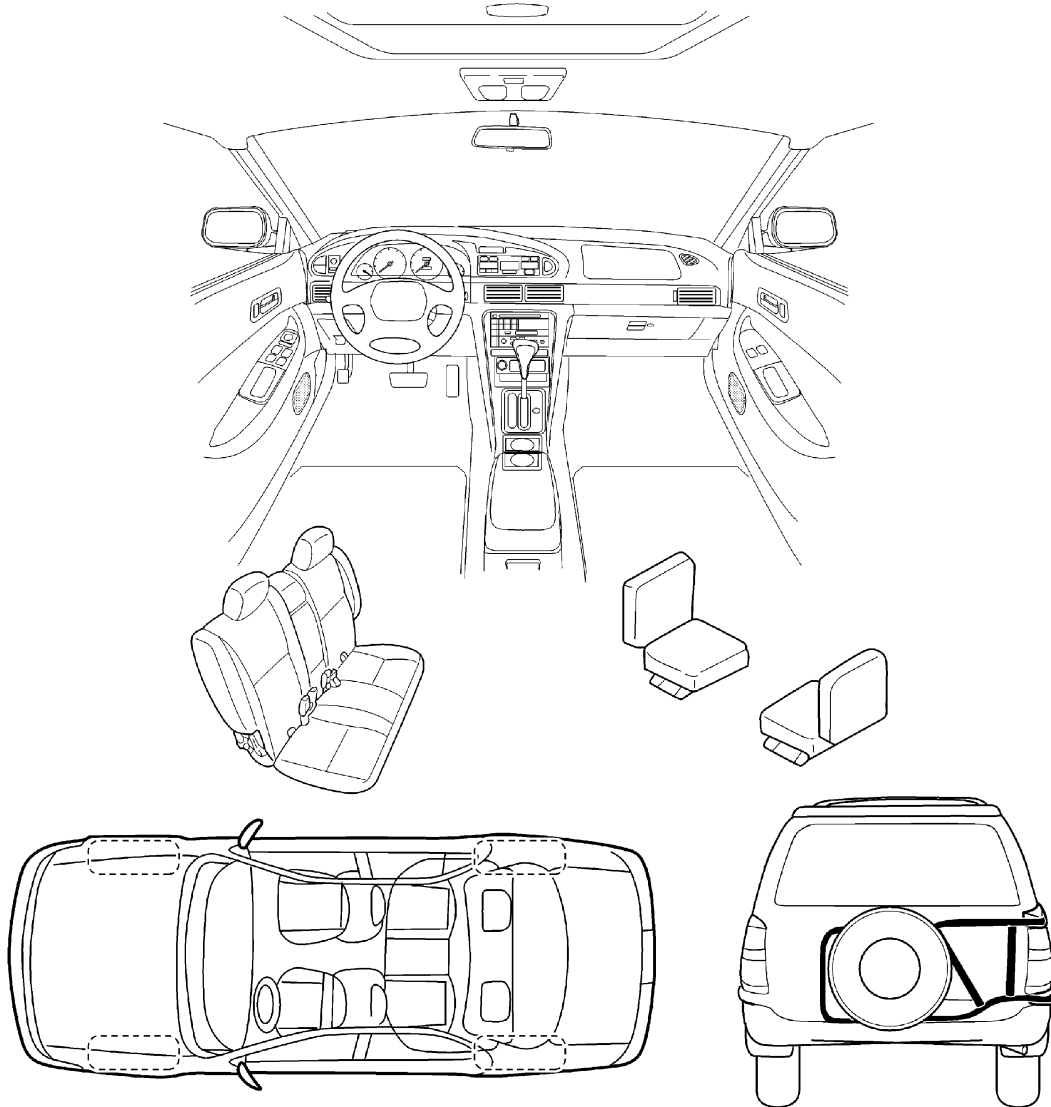
SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

Dear 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 DOES THE NOISE COME FROM? (circle the area of the vehicle)

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



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

PIIB0723E

SQUEAK AND RATTLE TROUBLE DIAGNOSES

SQUEAK & RATTLE DIAGNOSTIC WORKSHEET- page 2

Briefly describe the location where the noise occurs:

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

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

III. WHEN DRIVING:

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

IV. WHAT TYPE OF NOISE?

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

TO BE COMPLETED BY DEALERSHIP PERSONNEL

Test Drive Notes:

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

VIN: _____ Customer Name: _____

W.O. #: _____ Date: _____

SBT844

This form must be attached to Work Order

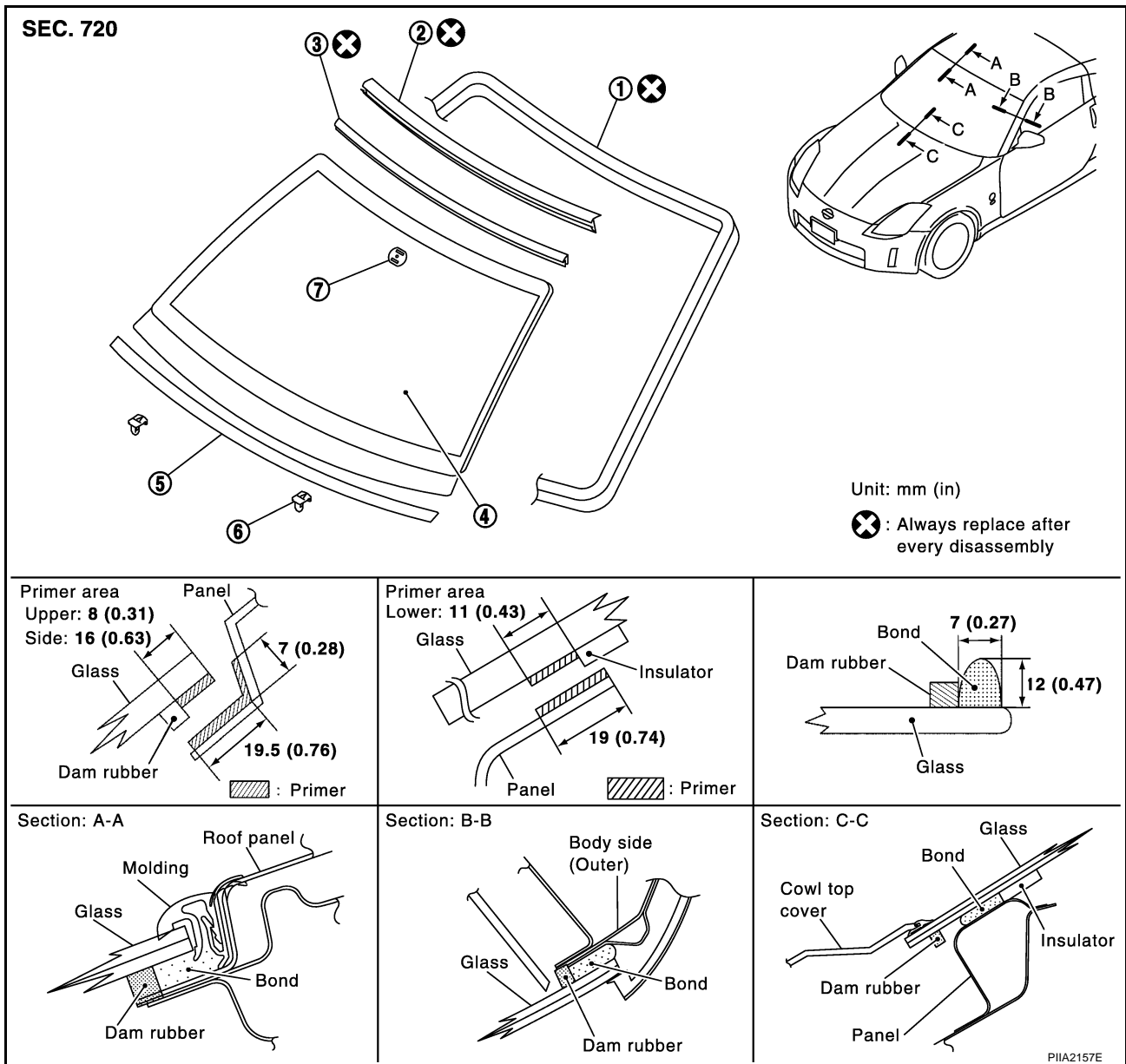
WINDSHIELD GLASS

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WINDSHIELD GLASS

Removal and Installation

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|---------------------|--------------|--------------------|
| 1. Dam rubber | 2. Fastener | 3. Molding (upper) |
| 4. Windshield glass | 5. Insulator | 6. Spacer |
| 7. Mirror base | | |

REMOVAL

- Remove the front pillar finisher. Refer to [EI-29, "ROOF SIDE MOLDING"](#).
- Remove the front pillar garnish. Refer to [EI-32, "BODY SIDE TRIM"](#).
- Partially remove the headlining (front edge). Refer to [EI-37, "HEADLINING"](#).
- Remove the front wiper arms. Refer to [WW-31, "Removal and Installation for Front Wiper Arms, Adjustment for Wiper Arms Stop Location"](#).
- Apply a protective tape around the windshield glass to protect the painted surface from damage. After removing moldings, remove glass using piano wire or power cutting tool and an inflatable pump bag.
 - If a windshield glass is to be reused, mark the body and the glass with mating marks.

WINDSHIELD GLASS

WARNING:

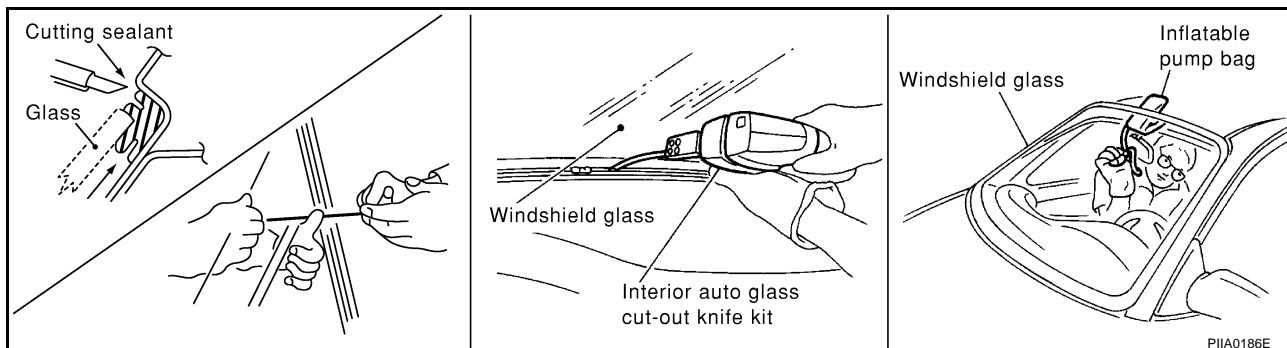
When cutting the glass from the vehicle, always wear safety glasses and heavy gloves to help prevent glass splinters from entering your eyes or cutting your hands.

CAUTION:

When a windshield glass is to be reused, do not use a cutting knife or power cutting tool.

NOTE:

- 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

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

WARNING:

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

CAUTION:

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

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.

BACK DOOR WINDOW GLASS

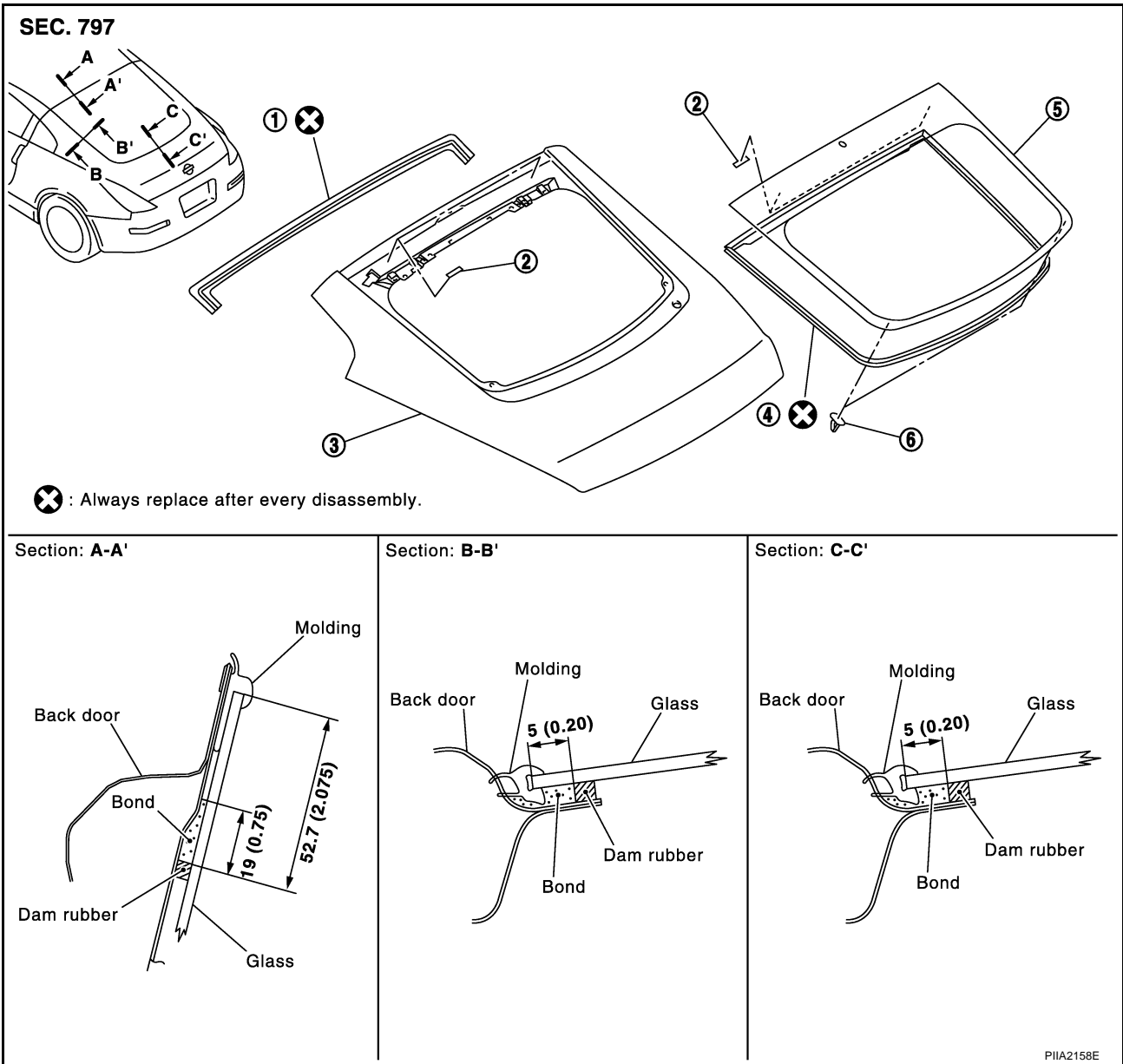
BACK DOOR WINDOW GLASS

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Removal and installation

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| 1. Back door window molding | 2. Dual lock fastener | 3. Back door |
| 4. Dam rubber | 5. Back door window glass | 6. Grommet |

REMOVAL

1. Remove back door finisher. Ref to [EI-39, "BACK DOOR FINISHER"](#) .
2. Remove rear wiper arm. Ref to [WW-49, "Removal and Installation for Rear Wiper Arm, Adjustment for Wiper Arms Stop Location"](#) .
3. Remove connectors and grounds for rear window defogger.
4. Apply a protective tape around the back door window glass to protect the painted surface from damage. remove glass using piano wire or power cutting tool and an inflatable pump bag.
 - If a back door window glass is to be reused, mark the body and the glass with mating marks.

WARNING:

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

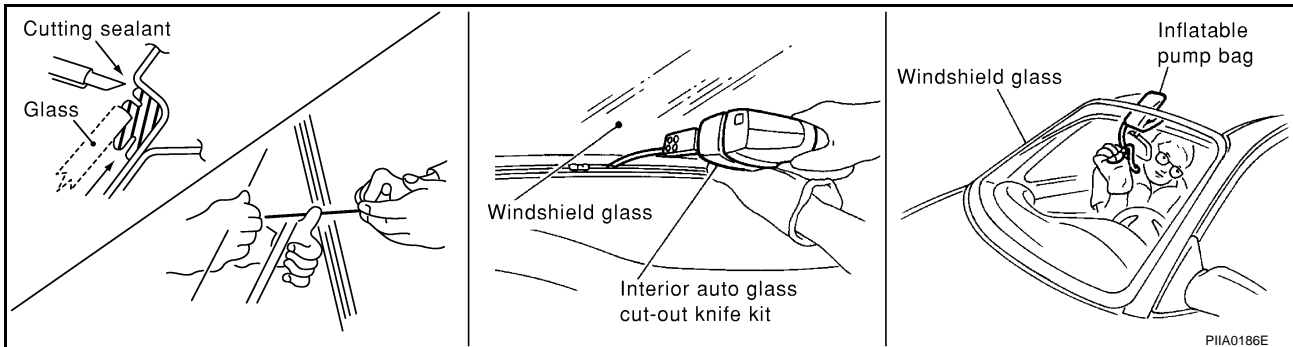
BACK DOOR WINDOW GLASS

CAUTION:

When a back door window glass is to be reused, do not use a cutting knife or power cutting tool.

NOTE:

- 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

- Use a genuine Nissan Urethane Adhesive Kit 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.
- Inform the customer that the vehicle should remain stationary until the urethane adhesive has completely cured (preferably 24 hours). Curing time varies with temperature and humidity.

WARNING:

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

CAUTION:

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

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.

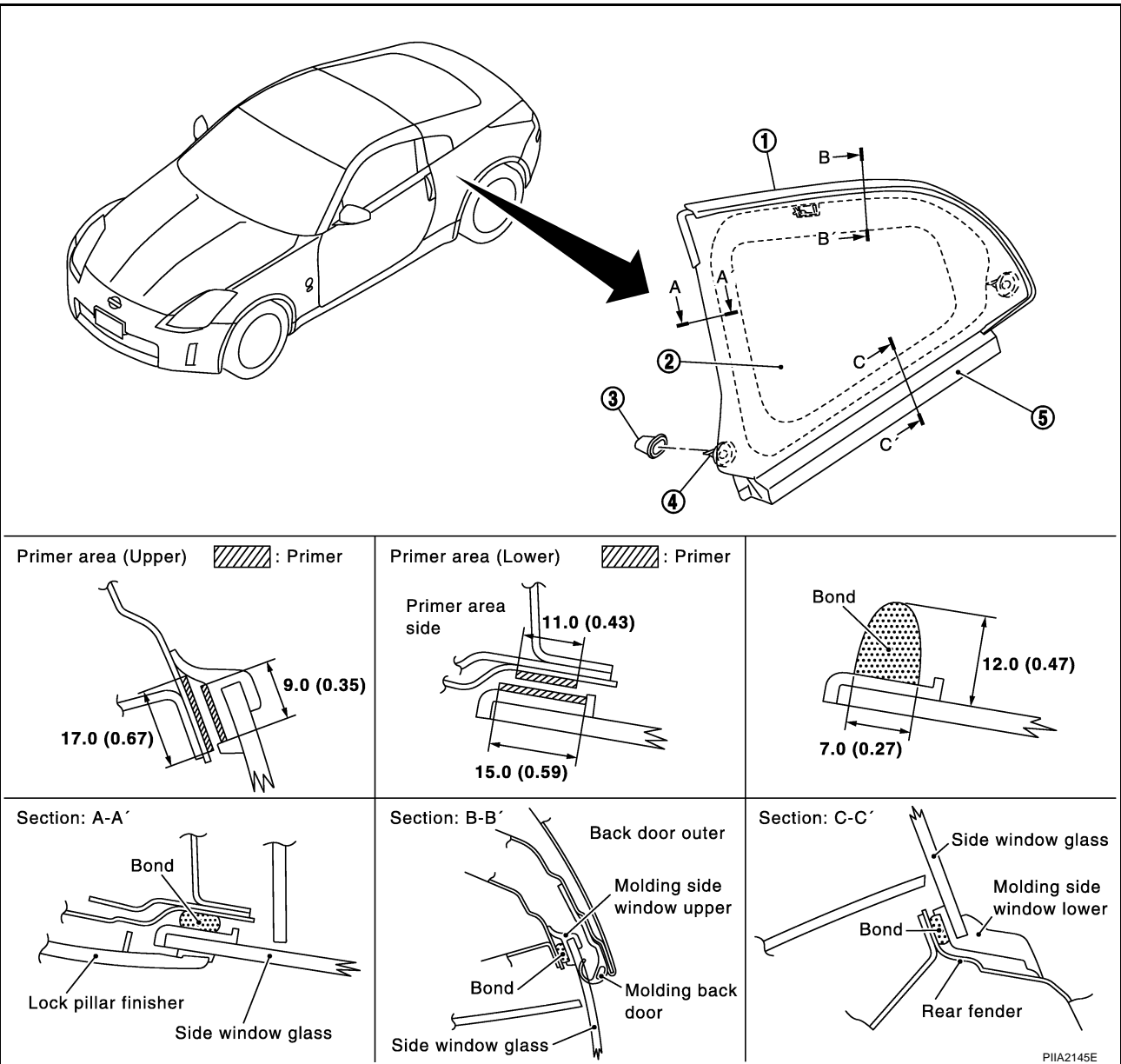
SIDE WINDOW GLASS

SIDE WINDOW GLASS

PF:83300

Removal and Installation

AIS001NV



- | | | |
|------------------------------------|------------------------------------|------------|
| 1. Side window glass molding (UPR) | 2. Side window glass | 3. Grommet |
| 4. Clip | 5. Side window glass molding (LWR) | |

REMOVAL

1. Remove rear side finisher. Refer to [EI-32, "BODY SIDE TRIM"](#).
 2. Remove rear pillar finisher. Refer to [EI-32, "BODY SIDE TRIM"](#).
 3. Remove headlining. Refer to [EI-37, "HEADLINING"](#).
 4. Remove rock pillar finisher. Refer to [EI-29, "ROOF SIDE MOLDING"](#).
- If a windshield glass is to be reused, mark the body and the glass with mating marks.

WARNING:

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

CAUTION:

When a Side window is to be reused, do not use a cutting knife or power cutting tool.

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SIDE WINDOW GLASS

NOTE:

- 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

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

WARNING:

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

CAUTION:

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

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.

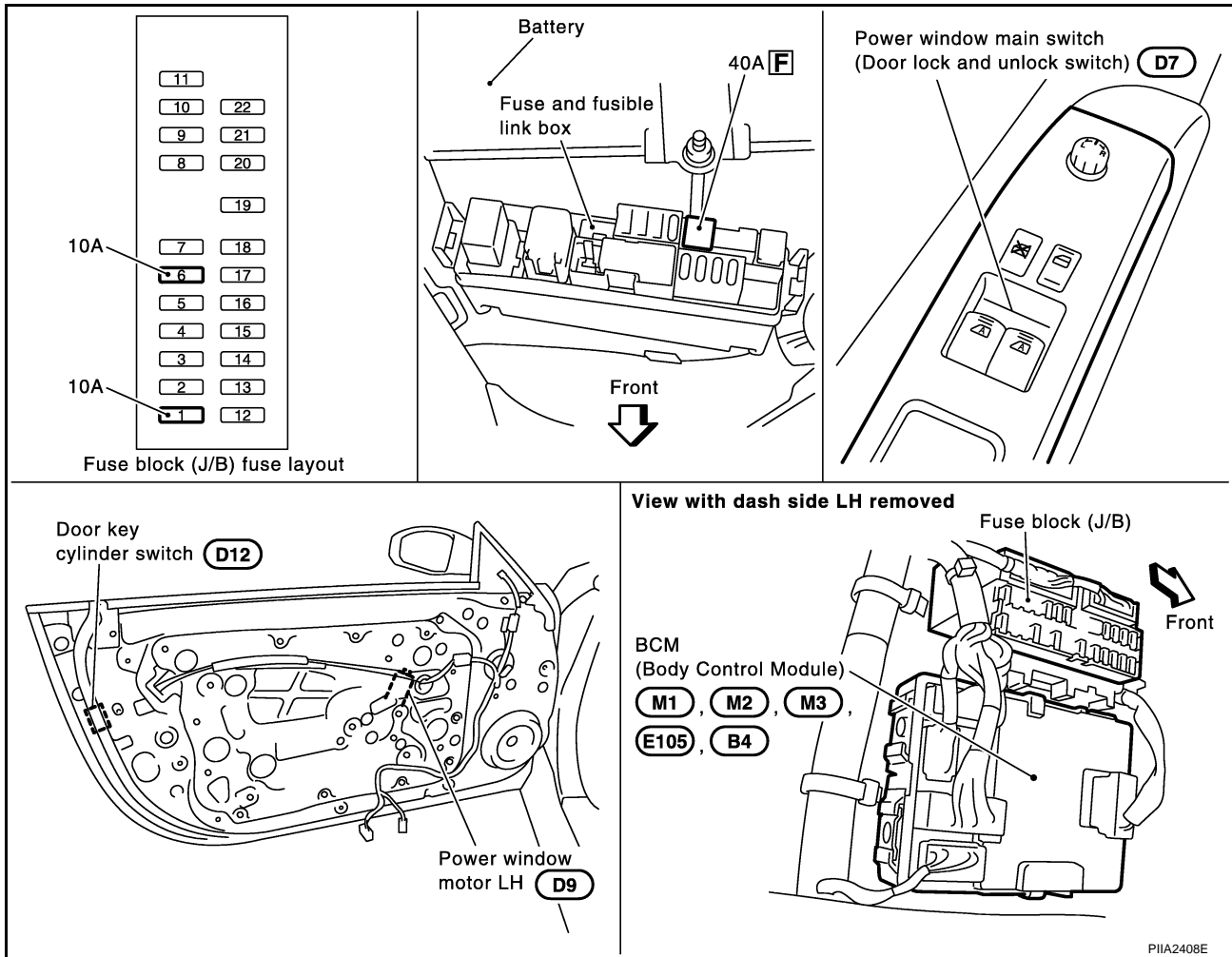
POWER WINDOW SYSTEM

POWER WINDOW SYSTEM

PF25401

Component Parts and Harness Connector Location

AIS000F5



System Description

AIS000F6

Power is supplied at all time

- through 40A fusible link (letter F , located in the fuse and fusible link box)
- to BCM terminal 7
- through BCM terminal 28
- to power window main switch terminal 1
- to power window sub-switch 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 35
- through BCM terminal 29
- to power window main switch terminal 10

Ground supplied

- to BCM terminal 8
- through body grounds E17, E43 and F152.
- to power window main switch terminal 15
- through body grounds M30 and M66.
- to power window sub-switch terminal 11
- through body grounds M30 and M66.

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POWER WINDOW SYSTEM

MANUAL OPERATION

Driver Side Door

Ground is supplied

- to power window main switch terminal 15
- through body grounds M30 and M66.

WINDOW UP

When the driver side window switch in the power window main switch is pressed in the up position, Power is supplied

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

Ground is supplied

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

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

WINDOW DOWN

When the driver side window switch in the power window main switch is pressed in the down position Power is supplied

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

Ground is supplied

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

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

Passenger Side Door

POWER WINDOW SUB-SWITCH OPERATION

Ground is supplied

- to power window sub-switch terminal 11
- through body grounds M30 and M66.

WINDOW UP

When the power window sub-switch is pressed in the up position Power is supplied

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

Ground is supplied

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

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

WINDOW DOWN

When the power window sub-switch is pressed in the down position Power is supplied

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

Ground is supplied

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

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

POWER WINDOW MAIN SWITCH OPERATION

Signal is sent

- to power window sub-switch terminal 16
- through power window main switch terminal 12.

POWER WINDOW SYSTEM

The operation of power window after receiving the signal is as same as for operating the power window with sub-switch.

POWER WINDOW SERIAL LINK

Power window main switch, power window sub-switch and BCM transmit and receive the signal by power window serial link.

The under mentioned signal is transmitted from BCM to power window main switch.

- Driver side door switch signal.

The under mentioned signal is transmitted from BCM to power window sub-switch.

- Passenger side door switch signal.

The under mentioned signal is transmitted from power window main switch to power window sub-switch

- Passenger side door window operation signal.
- Power window control by key cylinder switch signal.
- Power window lock signal.

AUTO OPERATION

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

POWER WINDOW LOCK

The power window lock is designed to lock operation of passenger side door window.

When the lock position, power window lock signal is sent by using power window serial link from power window main switch to power window sub-switch.

Power window sub-switch by which the signal is received, prohibits the operation of passenger side power window by power window sub-switch.

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 power window main switch terminal 10.
- from BCM terminal 29.

Ground is always supplied

- to BCM terminal 8
- through body grounds E17, E43 and F152.

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

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

RAP signal period can be changed by CONSULT-II. Refer to [GW-29, "CONSULT-II Inspection Procedure"](#).

ANTI-PINCH SYSTEM

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

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

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

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

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POWER WINDOW SYSTEM

POWER WINDOW CONTROL BY THE KEY CYLINDER SWITCH

When ignition key switch is OFF, power window can be opened or closed by turning the door key cylinder UNLOCK / LOCK position more than 1.5 second over condition.

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

The power window control operation by the key cylinder switch stops when the following operations are carried out.

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

AUTOMATIC WINDOW ADJUSTING FUNCTION

When the driver's / passenger's door(s) is opened, the window of the opened door is lowered approx. 10 mm (0.39in).

When the door is closed, the window is raised to fully-closed positions.

Automatic window adjusting function system (opening operation) does not operate when the following.

- The window is 10 mm (0.39 in) or more open from fully-closed positions.

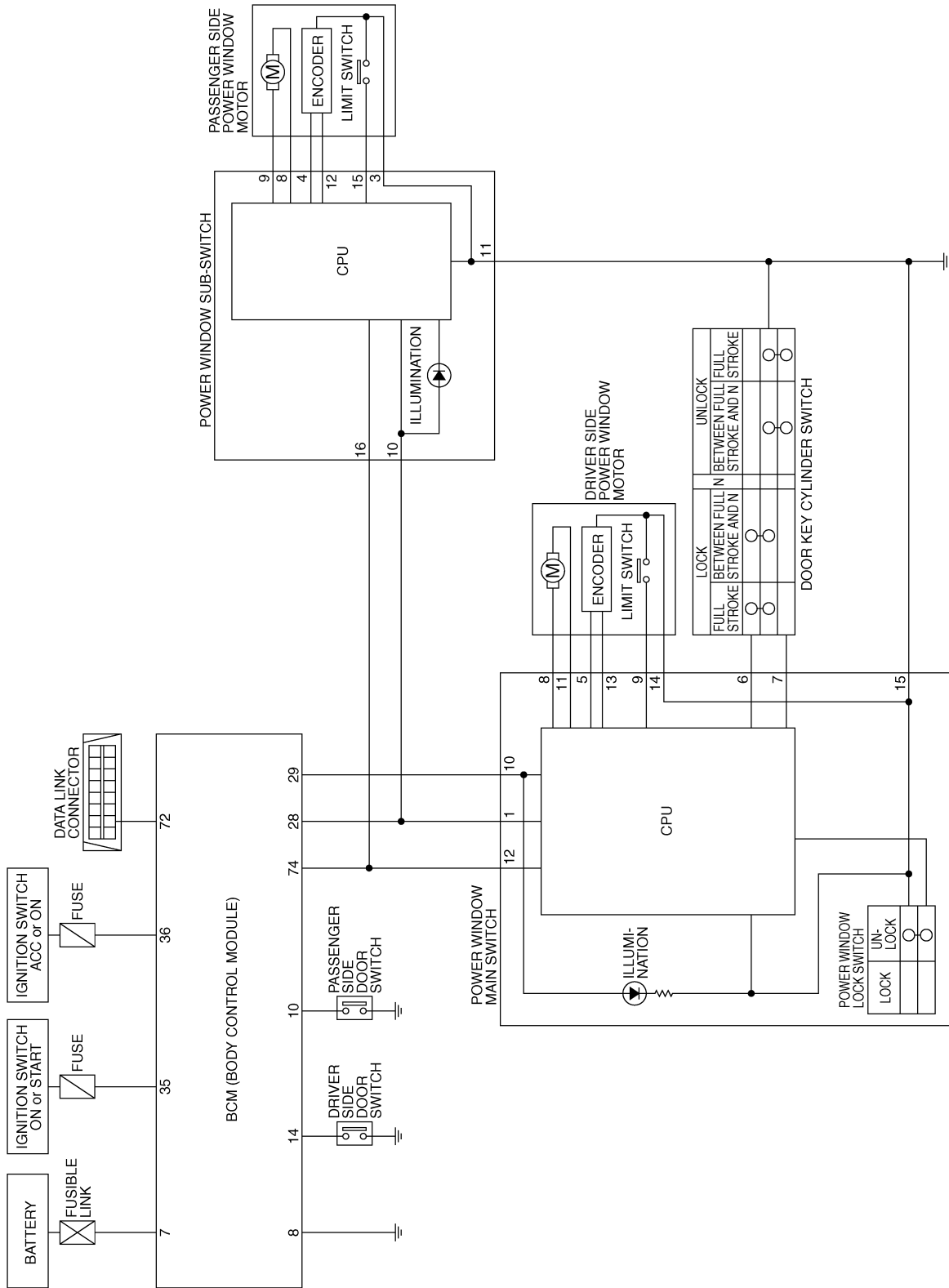
Automatic window adjusting function system (closing operation) does not operate when the following.

- The automatic window adjusting function system (opening operation) operation.
- The keyless power window operation.
- The power window control by the key cylinder switch operation.

POWER WINDOW SYSTEM

Schematic

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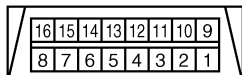
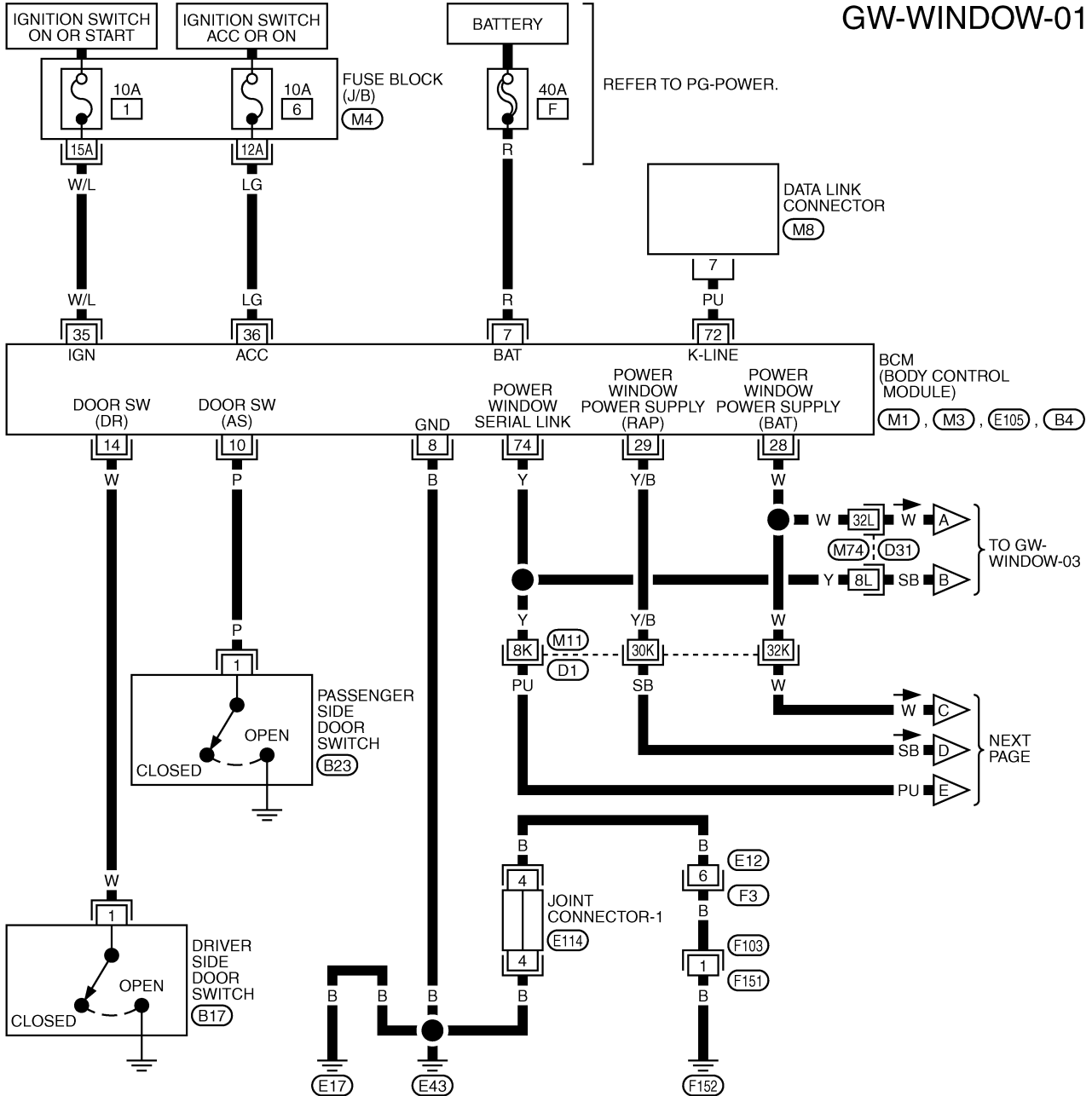
TIWT0579E

POWER WINDOW SYSTEM

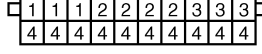
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Wiring Diagram – WINDOW –

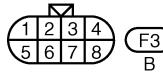
GW-WINDOW-01



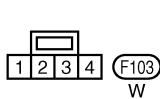
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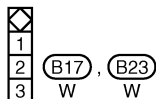
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(F3)
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(F103)
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(B17), (B23)
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REFER TO THE FOLLOWING.

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

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

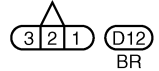
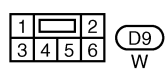
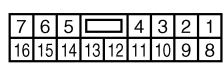
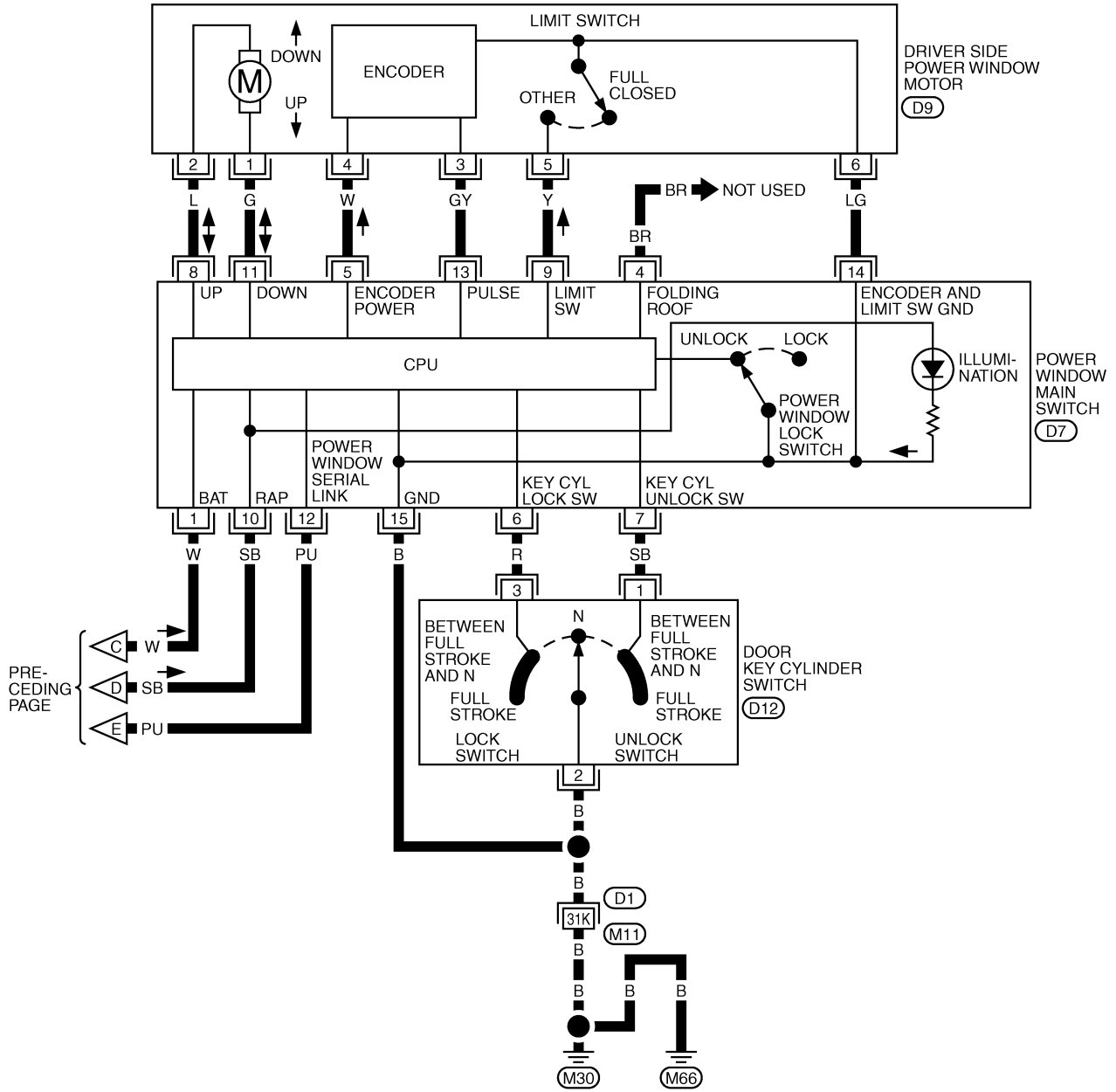
(M1), (M3), (E105), (B4)

-ELECTRICAL UNITS

TIWT0254E

POWER WINDOW SYSTEM

GW-WINDOW-02



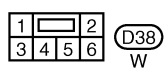
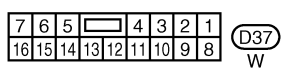
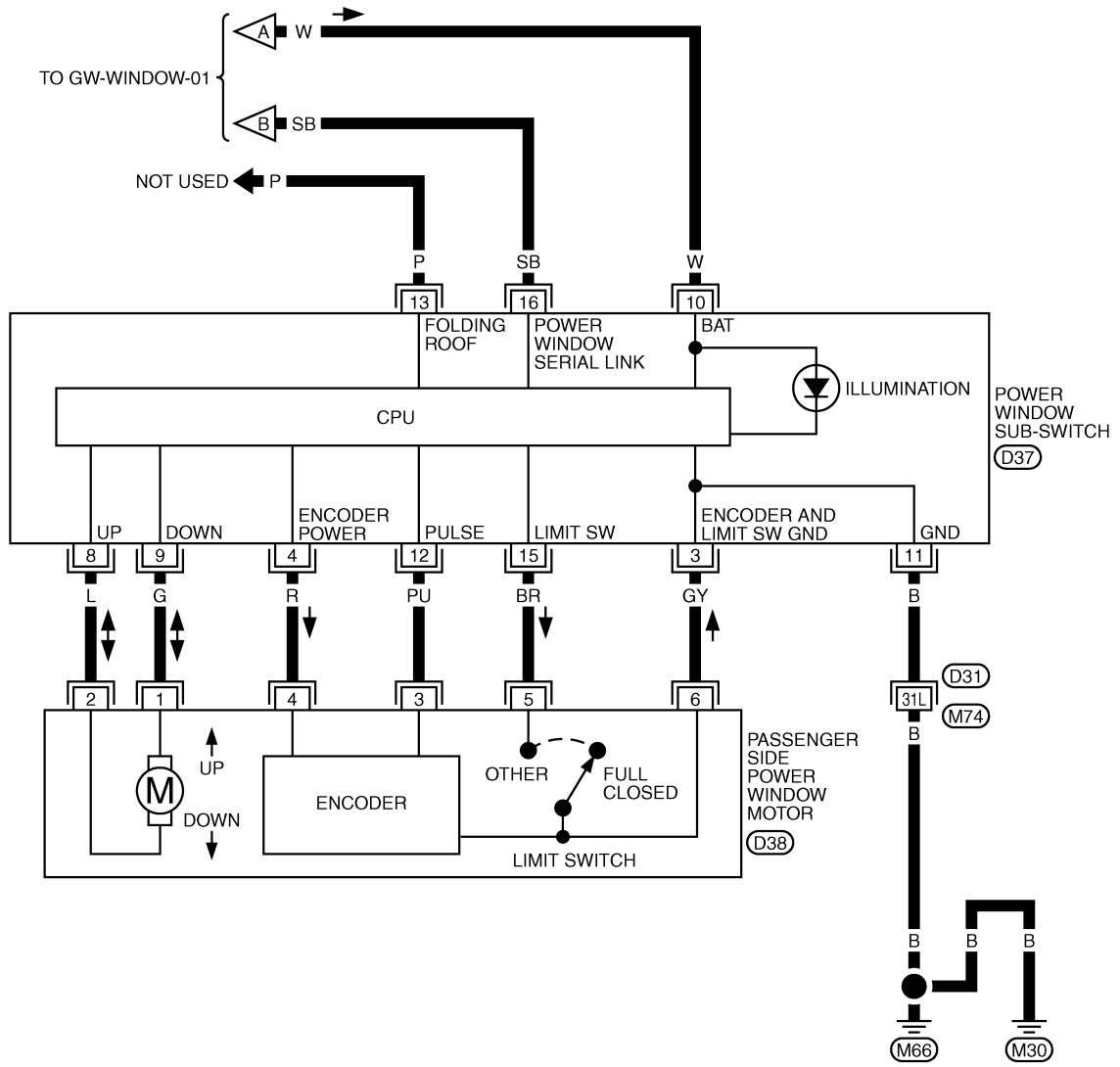
REFER TO THE FOLLOWING.
 (D1) -SUPER MULTIPLE JUNCTION (SMJ)

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POWER WINDOW SYSTEM

GW-WINDOW-03



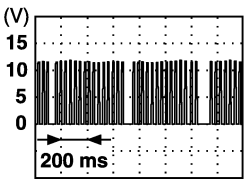
REFER TO THE FOLLOWING.
 (D31) -SUPER MULTIPLE JUNCTION (SMJ)

TIWT0581E

POWER WINDOW SYSTEM

Terminal and Reference Value for BCM

AIS000FC

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (Approx.)
7	R	BAT power supply	—	Battery voltage
8	B	Ground	—	0
10	P	Passenger side door switch	ON (open)	0
			OFF (closed)	5
14	W	Driver side door switch	ON (open)	0
			OFF (closed)	5
28	W	Power window switch power supply	—	Battery voltage
29	Y/B	Rap signal	IGN SW ON	Battery voltage
			More then 45 second after ignition switch is turned to OFF	0
			When driver side door is open, (IGN OFF)	0
35	W/L	Ignition switch ON or START	Ignition switch (ON or START position)	Battery voltage
36	LG	Ignition switch ACC or ON	Ignition switch (ACC or ON position)	Battery voltage
74	Y	Power window serial link	—	 <p>(V) 15 10 5 0 200 ms</p> <p>PIIA2344J</p>

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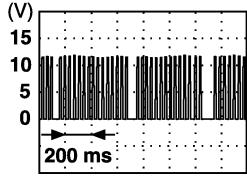
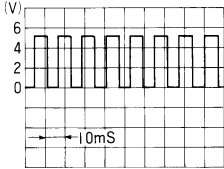
Terminal and Reference Value for Power Window Main Switch

AIS000FD

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (Approx.)
1	W	BAT power supply	—	Battery voltage
5	W	Encoder power supply	—	10
6	R	Key cylinder switch lock	Key position (Neutral → Locked)	5 → 0
7	SB	Key cylinder switch unlock	Key position (Neutral → Unlocked)	5 → 0
8	L	Driver side power window motor UPsignal	When power window motor UP operation.	Battery voltage
9	Y	Limit switch signal	Driver side door window is between fully-open and just before fully-closed position (ON).	0
			Driver side door window is between just before fully-closed position and fully-closed position (OFF).	5

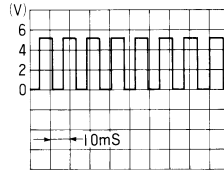
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POWER WINDOW SYSTEM

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (Approx.)
10	SB	Rap signal	IGN SW ON	Battery voltage
			More then 45 second after ignition switch is turned to OFF	0
			When front door LH and RH is open	0
11	G	Driver side power window motor DOWN signal	When power window motor DOWN operation.	Battery voltage
12	PU	Power window serial link	—	 PIIA2344J
13	GY	Encoder pulse signal	When power window motor operates.	 OCC3383D
14	LG	Limit switch and encoder ground	—	0
15	B	Ground	—	0

Terminal and Reference Value for Power Window Sub-Switch

AIS000FE

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (Approx)
3	GY	Limit switch and encoder ground	—	0
4	R	Encoder power supply	—	10
8	L	Passenger side power window motor UP signal	When power window motor UP operation.	Battery voltage
9	G	Passenger side power window motor DOWN signal	When power window motor DOWN operation.	Battery voltage
10	W	BAT power supply	—	Battery voltage
11	B	Ground	—	0
12	PU	Encoder pulse signal	When power window motor operates.	 OCC3383D

POWER WINDOW SYSTEM

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (Approx)
15	BR	Limit switch signal	Passenger side door window is between fully-open and just before fully-closed position (ON).	0
			Passenger side door window is between just before fully-closed position and fully-closed position (OFF).	5
16	SB	Power window serial link	—	<p style="text-align: right; font-size: small;">PIIA2344J</p>

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POWER WINDOW SYSTEM

AIS001MK

Work Flow

1. Check the symptom and customer's requests.
2. Understand the outline of system. Refer to [GW-17, "System Description"](#) .
3. Perform the preliminary check. Refer to [GW-28, "Preliminary Check"](#) .
4. According to the trouble diagnosis chart, repair or replace the cause of the malfunction. Refer to [GW-31, "Trouble Diagnoses Symptom Chart"](#) .
5. Does power window system operate normally? If Yes, GO TO 6, If No, GO TO 4.
6. INSPECTION END.

Preliminary Check FUSE CHECK

AIS001ML

1. FUSE INSPECTION

- Check 40A fusible link (letter **F** located in the fuse and fusible link box).

NOTE:

Refer to [GW-17, "Component Parts and Harness Connector Location"](#) .

OK or NG

OK >> GO TO 2

NG >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse. Refer to [PG-4, "POWER SUPPLY ROUTING CIRCUIT"](#) .

2. CHECK POWER SUPPLY CIRCUIT

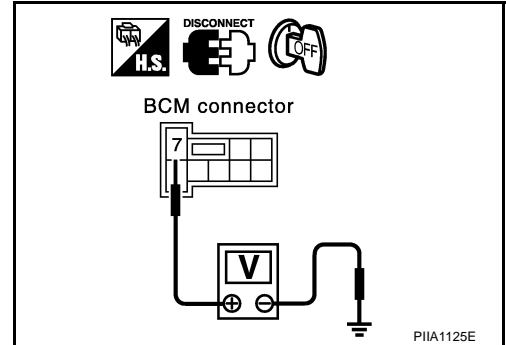
1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check voltage between BCM connector E105 terminal 7 and ground.

7 (R) – Ground **:Battery voltage.**

OK or NG

OK >> GO TO 3

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



3. CHECK GROUND CIRCUIT

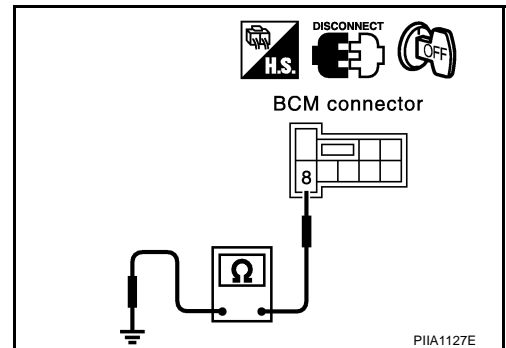
Check continuity between BCM connector E105 terminal 8 and ground.

8 (B) – Ground **:Continuity should exist.**

OK or NG

OK >> Power supply and ground circuit is OK.

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



POWER WINDOW SYSTEM

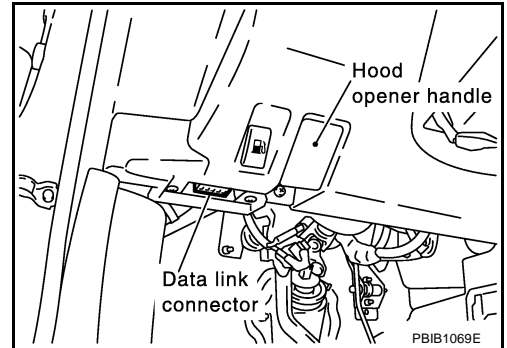
CONSULT-II Inspection Procedure

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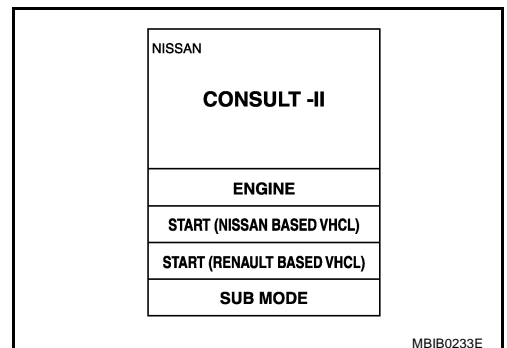
CAUTION:

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

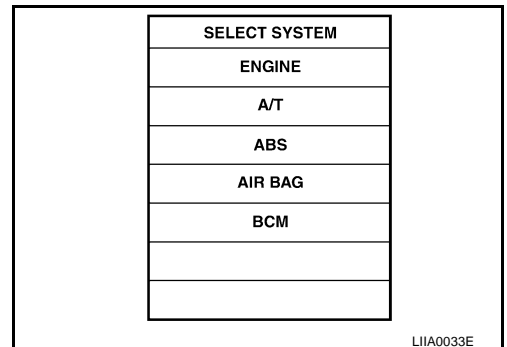
1. Turn ignition switch "OFF".
2. Connect "CONSULT-II" and CONSULT-II CONVERTER to the data link connector.



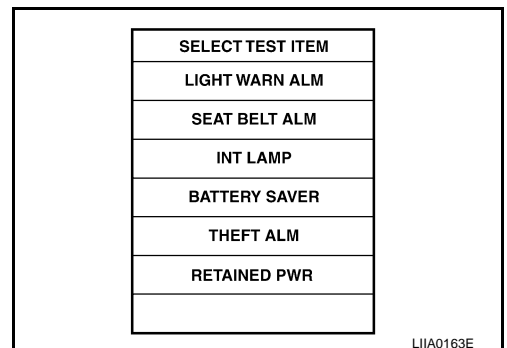
3. Turn ignition switch "ON".
4. Touch "START(NISSAN BASED VHCL)".



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



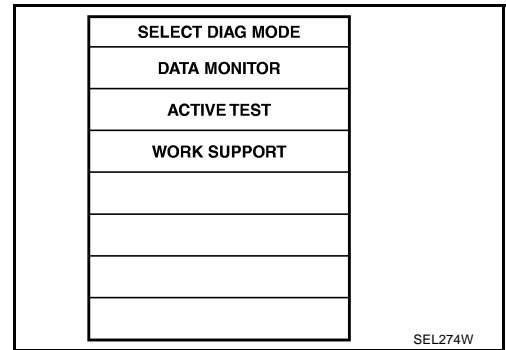
6. Touch "RETAINED PWR".



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POWER WINDOW SYSTEM

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



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 ● MODE 1 (45 sec.) / MODE 2 (OFF) / MODE 3 (2 min.).

DATE MONITOR

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

ACTIVE TEST

Test Item	Description
RETAINED PWR	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. 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.

POWER WINDOW SYSTEM

Trouble Diagnoses Symptom Chart

AIS000FG

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

Symptom	Diagnoses / service procedure	Refer to page
None of the power windows can be operated using any switch.	1. Preliminary check.	GW-28
	2. Power window switch power supply circuit check.	GW-32
	3. Power window serial link check.	GW-44
	4. Replace the BCM	BCS-20
Driver side power window cannot be operated	1. Preliminary check.	GW-28
	2. Driver side power window motor circuit check	GW-34
	3. Power window main switch power supply and ground circuit check	GW-46
	4. Replace the power window main switch	EI-30
Passenger side power window cannot be operated.	1. Preliminary check.	GW-28
	2. Passenger side power window motor circuit check.	GW-34
	3. Power window sub-switch power supply circuit check.	GW-48
	4. Power window serial link check.	GW-44
	5. Replace the BCM	BCS-20
Anti-pinch system does not operate normally (driver side).	1. Preliminary check.	GW-28
	2. Limit switch adjusting.	GW-54
	3. Limit switch circuit check (driver side).	GW-35
	4. Encoder circuit check (driver side).	GW-38
	5. Door window sliding part malfunction <ul style="list-style-type: none"> ● A foreign material adheres to window glass or grass run rubber. ● Glass run rubber wear or deformation. ● Sash is tilted too much, or not enough. 	—
Anti-pinch system does not operate normally (passenger side).	1. Preliminary check.	GW-28
	2. Limit switch adjusting.	GW-54
	3. Limit switch circuit check (passenger side).	GW-37
	4. Encoder circuit check (passenger side).	GW-40
	5. Door window sliding part malfunction <ul style="list-style-type: none"> ● A foreign material adheres to window glass or grass run rubber. ● Glass run rubber wear or deformation. ● Sash is tilted too much, or not enough. 	—
Power window retained power operation does not operate properly.	1. Preliminary check.	GW-28
	2. Check the retained power operation mode setting.	GW-30
	3. Door switch check.	GW-43
	4. Replace the BCM.	BCS-20
Automatic window adjusting function does not operate.	1. Preliminary check.	GW-28
	2. Door switch check	GW-43
	3. Limit switch adjusting.	GW-54
	4. Limit switch circuit check (driver side)	GW-35
	5. Limit switch circuit check (passenger side)	GW-37
	6. Power window serial link check.	GW-44
	7. Replace the BCM	BCS-20

A
B
C
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G
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K
L
M

GW

POWER WINDOW SYSTEM

Symptom	Diagnoses / service procedure	Refer to page
Does not operate by the key cylinder switch.	1. Preliminary check.	GW-28
	2. Door key cylinder switch check.	GW-50
	3. Driver side power window motor circuit check.	GW-34
	4. Power window switch power supply and ground circuit check.	GW-32
	5. Replace the power window main switch.	EI-30
Power window lock switch does not function.	1. Preliminary check.	GW-28
	2. Power window serial link check.	GW-44
	3. Replace the power window main switch.	EI-30

Power Window Switch Power Supply Circuit Check

AIS000FH

1. CHECK POWER SUPPLY CIRCUIT

Check voltage between BCM connector and ground.

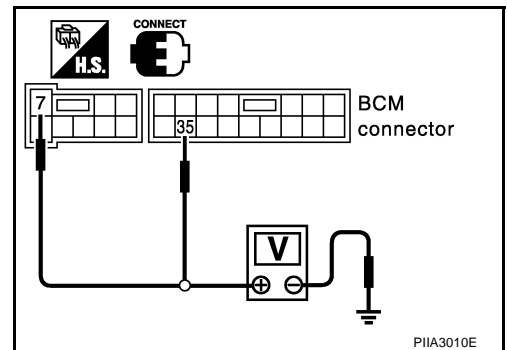
Terminals		(-)	Ignition switch position	
(+) (Wire color)			OFF	ON
Connector	Terminal (Wire color)	Ground	Battery voltage	Battery voltage
E105	7 (R)		0V	Battery voltage
M1	35 (W/L)			

OK or NG

OK >> GO TO 2.

NG >> Check the following.

- 40A fusible link (letter **F** , located in fuse and fusible link box).
- 10A fuse [No.1, located in fuse block (J/B)].
- Harness for open or short between BCM and fuse.



POWER WINDOW SYSTEM

2. CHECK POWER WINDOW MOTOR POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM, power window main switch and power window sub-switch connector.
3. Check continuity between BCM connector M1 terminal 28, 29, power window main switch connector D7 terminal 1, 10, and between BCM connector M1 terminal 28, 29 and ground.

BCM – Power window main switch

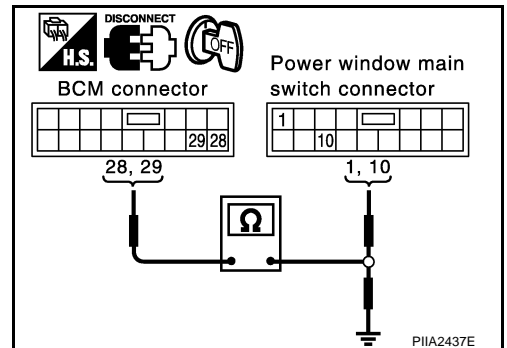
28 (W) – 1 (W) :Continuity should exist.

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

BCM – Ground

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

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



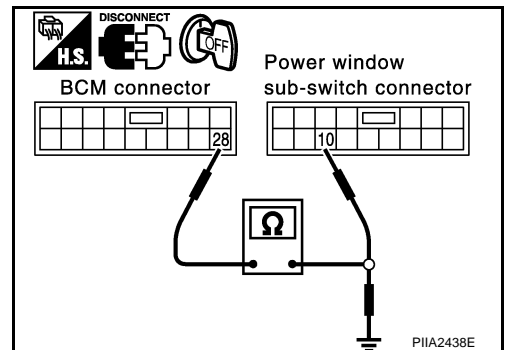
4. Check continuity between BCM connector M1 terminal 28, power window sub-switch connector D37 terminal 10, and between BCM connector M1 terminal 28 and ground.

BCM – Power window sub-switch

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

BCM – Ground

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



OK or NG

OK >> GO TO 3

NG >> Repair or replace harness.

3. CHECK BCM OUTPUT SIGNAL

1. Connect BCM connector.
2. Turn ignition switch ON.
3. Check voltage between BCM connector M1 terminal 28, 29 and ground.

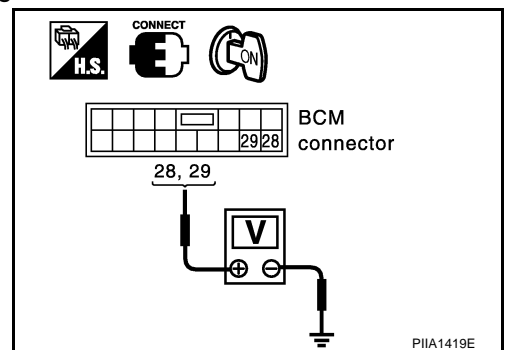
28 (W) – Ground :Battery voltage

29 (Y/B) – Ground :Battery voltage

OK or NG

OK >> INSPECTION END

NG >> Replace BCM.



POWER WINDOW SYSTEM

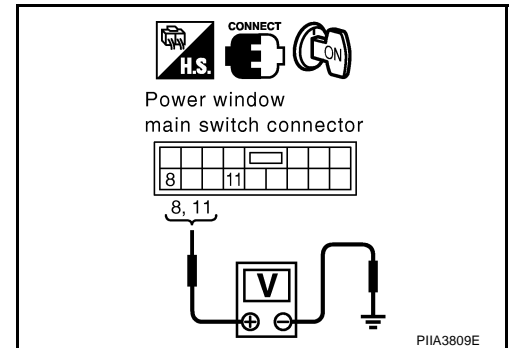
Drive Side Power Window Motor Circuit Check

AI5000FI

1. CHECK POWER WINDOW MAIN SWITCH OUTPUT SIGNAL

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

Terminals		Condition	Voltage (V) (Approx.)		
(+)	(-)				
Connector	Terminal (Wire color)	Ground			
D7	8 (L)			Closing	Battery voltage
				Opening	0
	11 (G)			Closing	0
		Opening	Battery voltage		



OK or NG

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

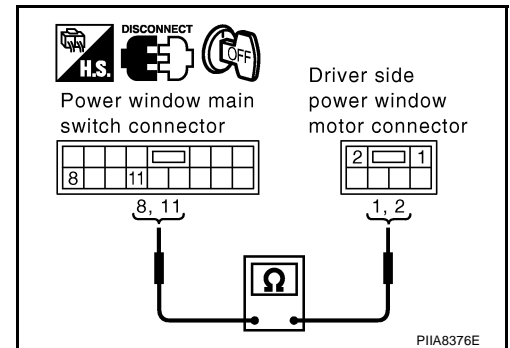
2. CHECK POWER WINDOW MOTOR CIRCUIT

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

8 (L) – 2 (L) : Continuity should exist.
11 (G) – 1 (G) : Continuity should exist.

OK or NG

- OK >> Further inspection is necessary. Refer to symptom chart.
 NG >> Repair or replace harness between power window main switch and driver side power window motor.



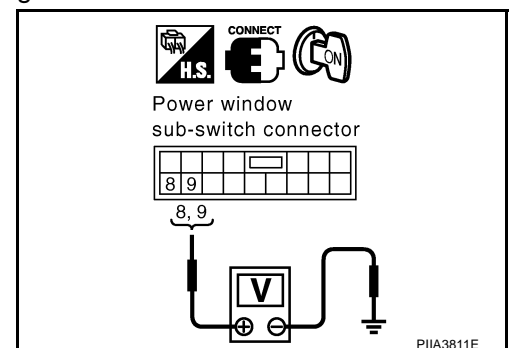
Passenger Side Power Window Motor Circuit Check

AI5000FJ

1. CHECK POWER WINDOW SUB-SWITCH OUTPUT SIGNAL

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

Terminals		Condition	Voltage (V) (Approx.)		
(+)	(-)				
Connector	Terminal (Wire color)	Ground			
D37	8 (L)			Closing	Battery voltage
				Opening	0
	9 (G)			Closing	0
		Opening	Battery voltage		



OK or NG

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

POWER WINDOW SYSTEM

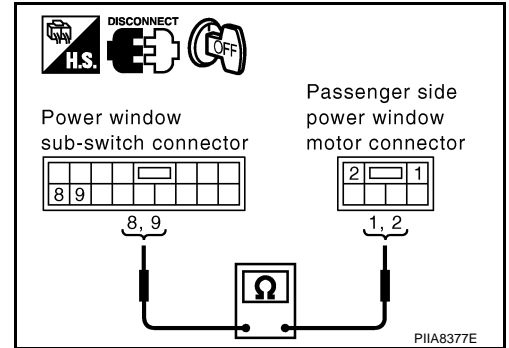
2. CHECK POWER WINDOW MOTOR CIRCUIT

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

9 (G) – 1 (G) :Continuity should exist.
8 (L) – 2 (L) :Continuity should exist.

OK or NG

- OK >> Further inspection is necessary. Refer to symptom chart.
 NG >> Repair or replace harness between power window sub-switch and passenger side power window motor.



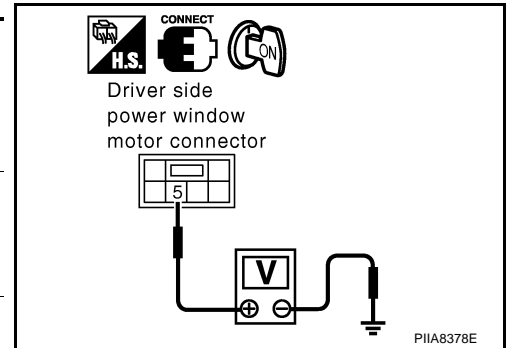
AIS000FL

Limit Switch Circuit Check (Driver Side)

1. CHECK DRIVER DOOR LIMIT SWITCH SIGNAL

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

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



OK or NG

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

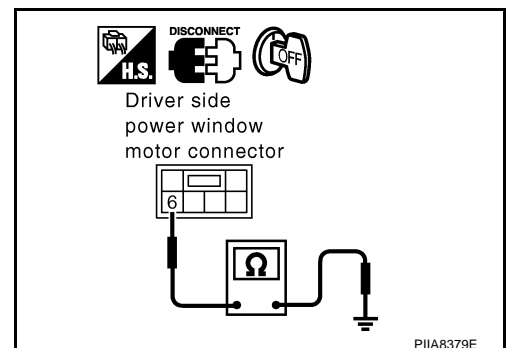
2. CHECK LIMIT SWITCH GROUND CIRCUIT

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

6 (LG) – Ground :Continuity should exist.

OK or NG

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



POWER WINDOW SYSTEM

3. CHECK HARNESS CONTINUITY

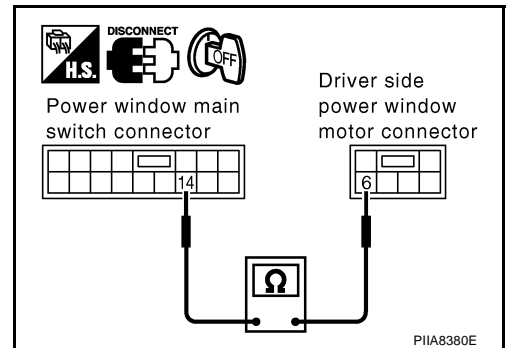
1. Disconnect power window main switch connector.
2. Check continuity between power window main switch connector D7 terminal 14 and driver side power window motor connector D9 terminal 6.

14 (LG) – 6 (LG)

Continuity should exist.

OK or NG

- OK >> Replace power window main switch.
NG >> Repair or replace harness between power window main switch and driver side power window motor.



4. CHECK POWER WINDOW MAIN SWITCH OUTPUT SIGNAL

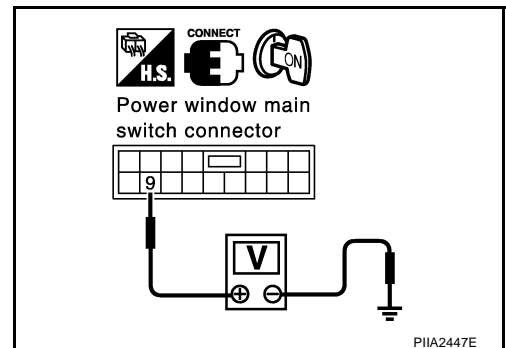
1. Turn ignition switch ON.
2. Check voltage between power window main switch connector D7 terminal 9 and ground.

9 (Y) – Ground

:Approx. 5V

OK or NG

- OK >> GO TO 5.
NG >> Replace power window main switch.



5. CHECK HARNESS CONTINUITY

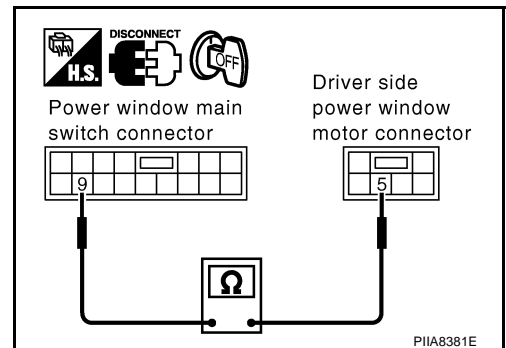
1. Turn ignition switch OFF.
2. Disconnect power window main switch connector.
3. Check continuity between power window main switch connector D7 terminal 9 and driver side power window motor connector D9 terminal 5.

9 (Y) – 5 (Y)

:Continuity should exist.

OK or NG

- OK >> Replace driver side power window motor.
NG >> Repair or replace harness between power window main switch and driver side power window motor.



POWER WINDOW SYSTEM

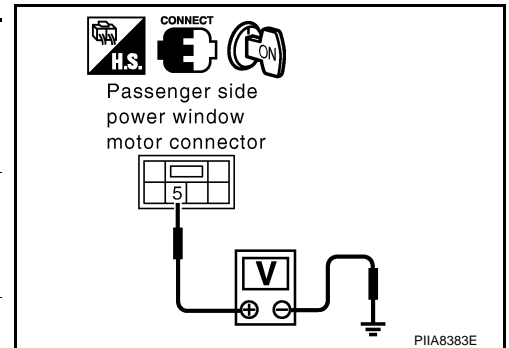
AIS00140

Limit Switch Circuit Check (Passenger Side)

1. CHECK POWER WINDOW LIMIT SWITCH SIGNAL

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

Terminals		Condition	Voltage (V) (Approx.)
(+)	(-)		
D38	5 (BR)	Ground	Passenger side door window is between fully-open and just before fully-closed position (ON)
			Passenger side door window is between just before fully-closed position and fully-closed position (OFF)



OK or NG

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

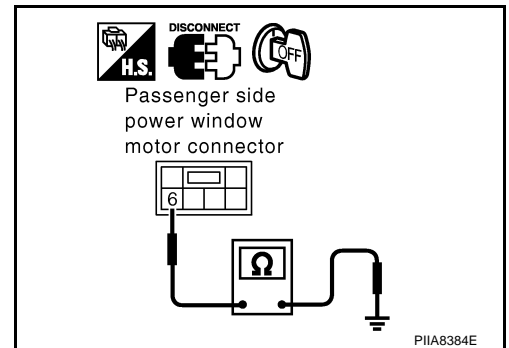
2. CHECK LIMIT SWITCH GROUND CIRCUIT

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

6 (GY) – Ground :Continuity should exist.

OK or NG

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



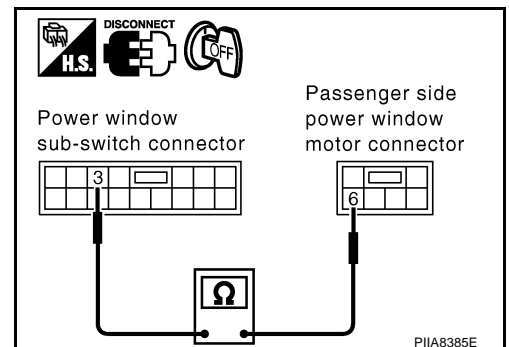
3. CHECK HARNESS CONTINUITY

1. Disconnect power window sub-switch connector.
2. Check continuity between power window sub-switch connector D37 terminal 3 and passenger side power window motor connector D38 terminal 6.

3 (GY) – 6 (GY) :Continuity should exist.

OK or NG

- OK >> Replace power window sub-switch.
 NG >> Repair or replace harness between power window sub-switch and passenger side power window motor.



POWER WINDOW SYSTEM

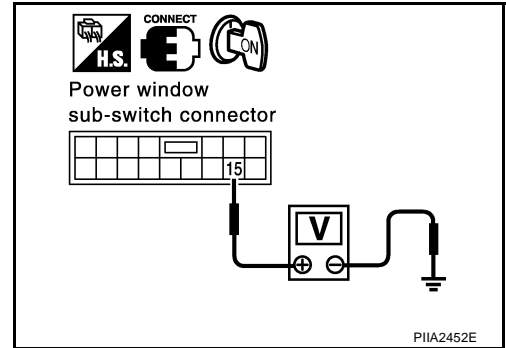
4. CHECK POWER WINDOW SUB-SWITCH OUTPUT SIGNAL

1. Turn ignition switch ON.
2. Check voltage between power window sub-switch connector D37 terminal 15 and ground.

15 (BR) – Ground :Approx. 5V

OK or NG

- OK >> GO TO 5.
NG >> Replace power window sub-switch.



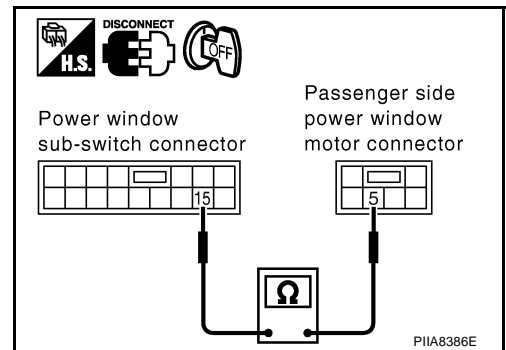
5. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect power window sub-switch connector.
3. Check continuity between power window sub-switch connector D37 terminal 15 and passenger side power window motor connector D38 terminal 5.

15 (BR) – 5 (BR) :Continuity should exist.

OK or NG

- OK >> Replace passenger side power window motor.
NG >> Repair or replace harness between power window sub-switch and passenger side power window motor.



Encoder Circuit Check (Driver Side)

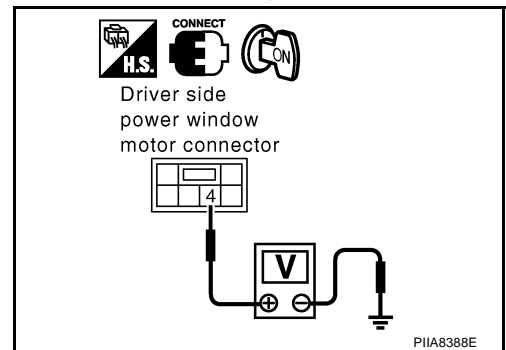
1. CHECK DRIVER SIDE POWER WINDOW MOTOR POWER SUPPLY

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

4 (W) – Ground : Approx. 10V

OK or NG

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

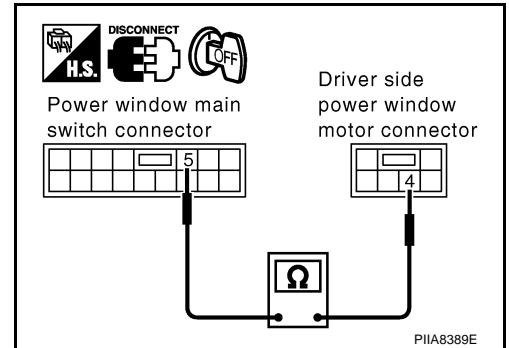


POWER WINDOW SYSTEM

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect power window main switch and driver side power window motor connector.
3. Check continuity between power window main switch connector D7 terminal 5 and driver side power window motor connector D9 terminal 4.

5 (W) – 4 (W) : Continuity should exist.



OK or NG

OK >> Replace power window main switch.

NG >> Repair or replace harness between power window main switch and driver side power window motor.

3. CHECK ENCODER GROUND

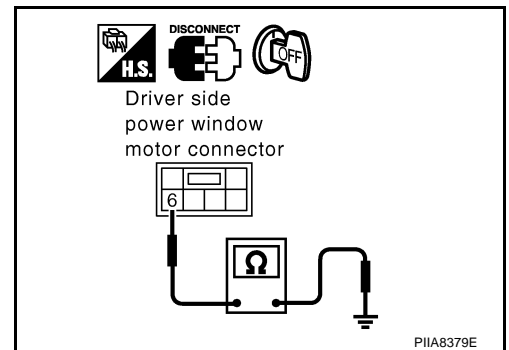
1. Turn ignition switch OFF.
2. Disconnect driver side power window motor connector.
3. Check continuity between driver side power window motor connector D9 terminal 6 and ground.

6 (LG) – Ground : Continuity should exist.

OK or NG

OK >> GO TO 5.

NG >> GO TO 4.



4. CHECK ENCODER GROUND CIRCUIT

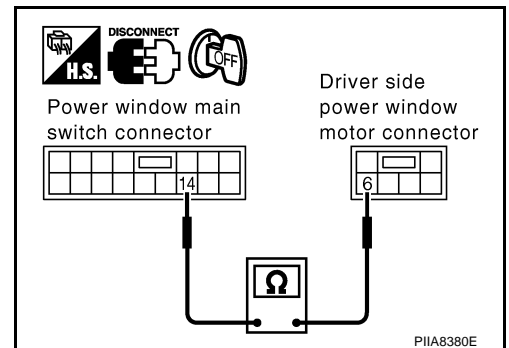
1. Disconnect power window main switch connector.
2. Check continuity between power window main switch connector D7 terminal 14 and driver side power window motor connector D9 terminal 6.

14 (LG) – 6 (LG) : Continuity should exist.

OK or NG

OK >> Replace power window main switch.

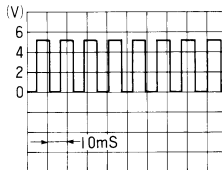
NG >> Repair or replace harness between power window main switch and driver side power window motor.



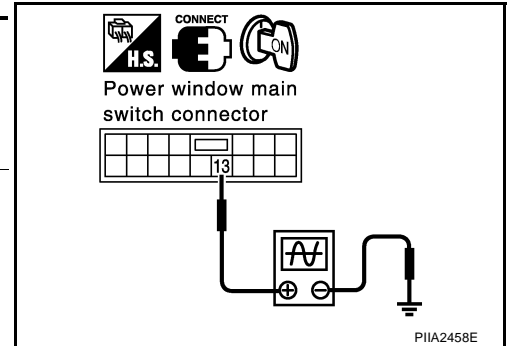
POWER WINDOW SYSTEM

5. CHECK ENCODER SIGNAL

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

Terminals		Condition	Signal
(+)	(-)		
Connector	Terminal (Wire color)		
D7	13 (GY)	Ground	
		opening	

OCC3383D



OK or NG

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

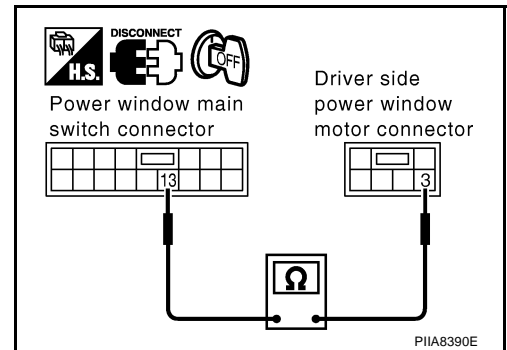
6. CHECK ENCODER CIRCUIT

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

13 (GY) – 3 (GY) : Continuity should exist.

OK or NG

- OK >> Replace driver side power window motor.
 NG >> Repair or replace harness between power window main switch and driver side power window motor.



Encoder Circuit Check (Passenger Side)

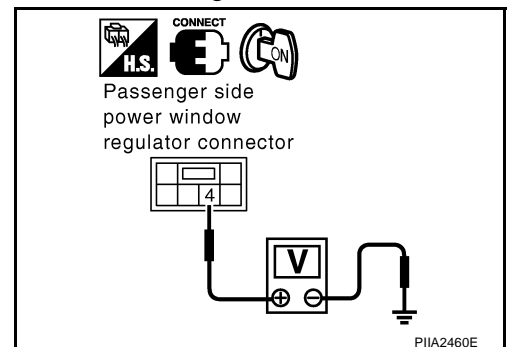
1. CHECK PASSENGER SIDE POWER WINDOW MOTOR POWER SUPPLY

1. Turn ignition switch ON.
2. Check voltage between passenger side power window motor connector D38 and ground.

4 (R) – Ground : Approx. 10V

OK or NG

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

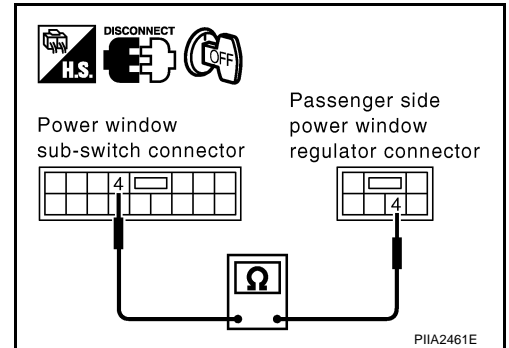


POWER WINDOW SYSTEM

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect power window sub-switch and passenger side power window motor connector.
3. Check continuity between power window sub-switch connector D37 terminal 4 and passenger side power window motor connector D38 terminal 4.

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



OK or NG

OK >> Replace power window sub-switch.

NG >> Repair or replace harness between power window sub-switch and passenger side power window motor.

3. CHECK ENCODER GROUND

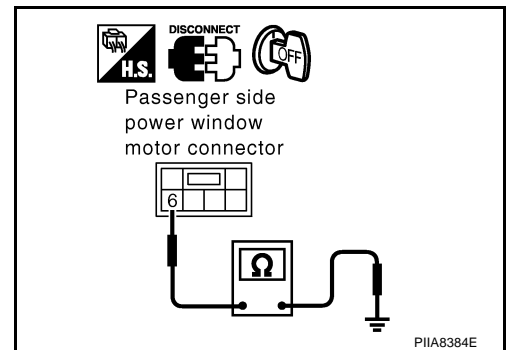
1. Turn ignition switch OFF.
2. Disconnect passenger side power window motor connector.
3. Check continuity between passenger side power window motor connector D38 terminal 6 and ground

6 (GY) – Ground : Continuity should exist.

OK or NG

OK >> GO TO 5.

NG >> GO TO 4.



4. CHECK ENCODER GROUND CIRCUIT

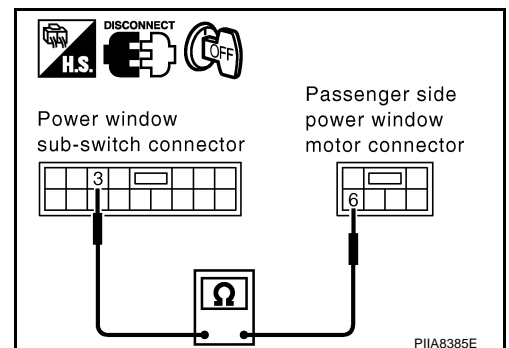
1. Disconnect power window sub-switch connector.
2. Check continuity between power window sub-switch connector D37 terminal 3 and passenger side power window motor connector D38 terminal 6.

3 (GY) – 6 (GY) : Continuity should exist.

OK or NG

OK >> Replace power window sub switch.

NG >> Repair or replace harness between power window sub-switch and passenger side power window motor.

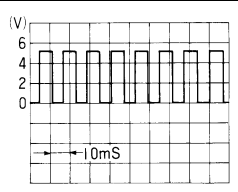


POWER WINDOW SYSTEM

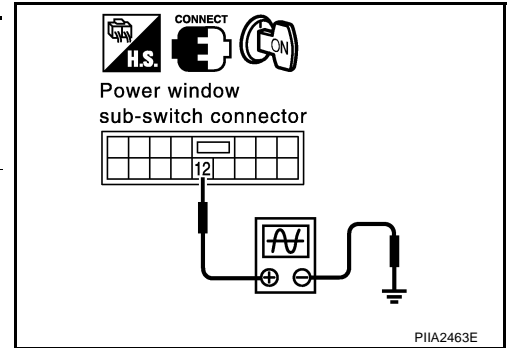
5. CHECK ENCODER SIGNAL

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

Terminals		Condition	Signal
(+)	(-)		
Connector	Terminal (Wire color)		
D37	12 (PU)	Ground	opening



OCC3383D



OK or NG

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

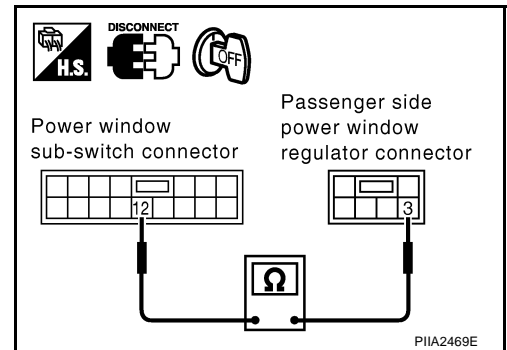
6. CHECK ENCODER CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect power window sub-switch and passenger side power window motor connector.
3. Check continuity between power window sub-switch connector D37 terminal 12 and passenger side power window motor connector D38 terminal 3.

12 (PU) – 3 (PU) : Continuity should exist.

OK or NG

- OK >> Replace passenger side power window motor.
 NG >> Repair or replace harness between power window sub-switch and passenger side power window motor.



POWER WINDOW SYSTEM

AIS000FN

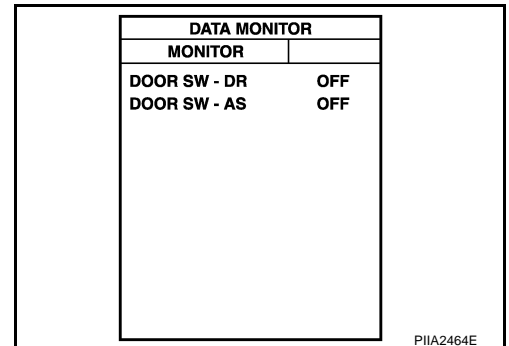
Door Switch Check

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT-II

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

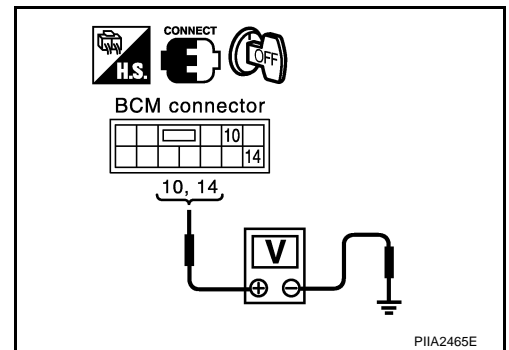
Monitor item	Condition
DOOR SW-DR	OPEN : ON
	CLOSE : OFF
DOOR SW-AS	OPEN : ON
	CLOSE : OFF



Without CONSULT-II

Check voltage between BCM connector B4 terminals 10, 14 and ground.

Item	Terminals		Condition	Voltage (V) (Approx.)
	(+) (Wire color)	(-)		
Passenger side door switch	10 (P)	Ground	OPEN	0
			CLOSE	5
Driver side door switch	14 (W)		OPEN	0
			CLOSE	5



OK or NG

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

2. CHECK DOOR SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect door switch and BCM connector.
3. Check continuity between door switch connector B17, B23 terminals 1 and BCM connector B4 terminals 10, 14.

Driver side door

1 (W)–14 (W) :Continuity should exist.

Passenger side door

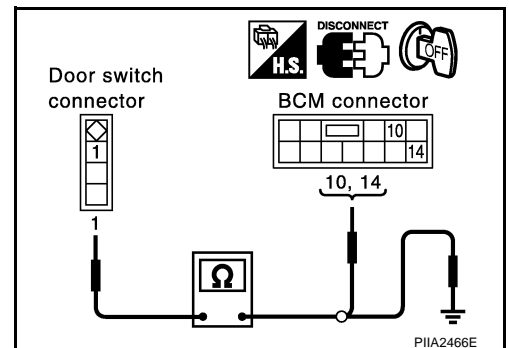
1 (P)–10 (P) :Continuity should exist.

4. Check continuity between door switch connector B17, B23 terminals 1 and ground.

1 (W or P) – Ground :Continuity should not exist.

OK or NG

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



POWER WINDOW SYSTEM

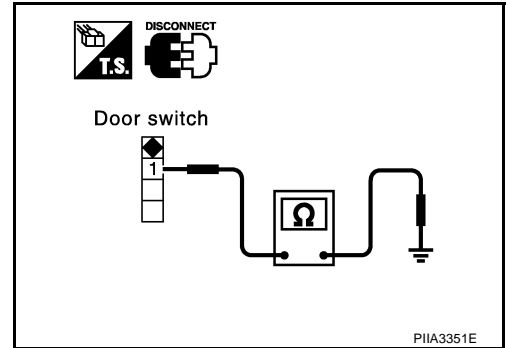
3. CHECK DOOR SWITCH

Check continuity between door switch B17 (driver side) or B23 (passenger side) terminal 1 and ground.

Terminal		Door switch	Continuity
1	Ground	Pushed	No
		Released	Yes

OK or NG

- OK >> Further inspection is necessary. Refer to symptom chart.
- NG >> Replace malfunction door switch.



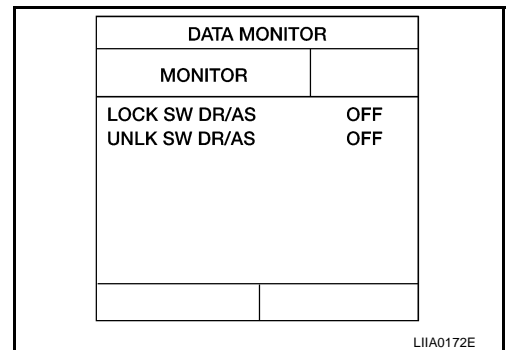
Power Window Serial Link Check

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

With CONSULT-II

Check door lock and unlock switch ("LOCK SW DR/AS", "UNLK SW DR/AS") in DATA MONITOR mode with CONSULT-II. Refer to [BL-30, "DATA MONITOR"](#).

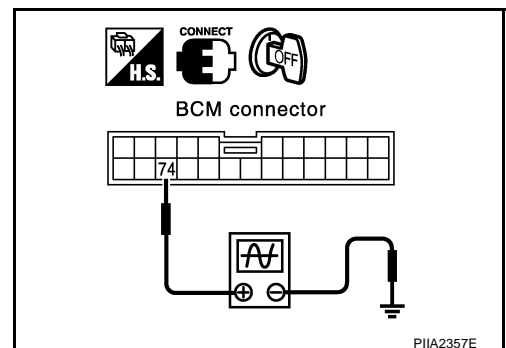
- When door lock and unlock switch is turned to LOCK
LOCK SW DR/AS :ON
- When door lock and unlock switch is turned to UNLOCK
UNLK SW DR/AS :ON



Without CONSULT-II

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

Terminals		Signal
(+)	(-)	
Connector	Terminal (Wire color)	
M3	74 (Y)	



OK or NG

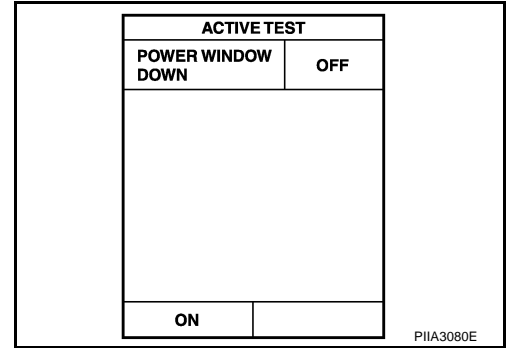
- OK >> GO TO 2.
- NG >> GO TO 3.

POWER WINDOW SYSTEM

2. CHECK BCM OUTPUT SIGNAL

Check power window serial link ("POWER WINDOW DOWN") in "ACTIVE TEST" mode with CONSULT-II. Refer to [BL-66. "Work Support"](#).

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



OK or NG

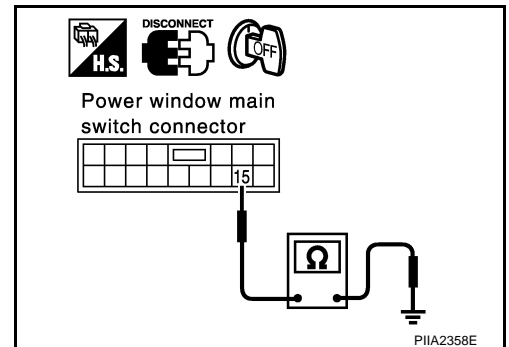
- OK >> Further inspection is necessary. Refer to symptom chart.
- NG >> Replace BCM.

3. CHECK POWER WINDOW SWITCH GROUND

- Turn ignition switch OFF.
- Disconnect power window main switch and power window sub-switch connector.
- Check continuity between power window main switch connector D7 terminals 15 and ground.

15 (B) – Ground

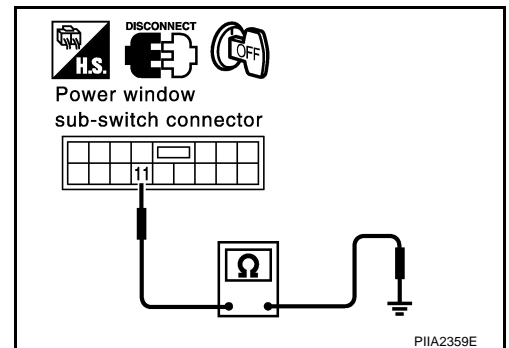
:Continuity should exist.



- Check continuity between power window sub-switch connector D37 terminal 11 and ground.

11 (B) – Ground

:Continuity should exist.



OK or NG

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

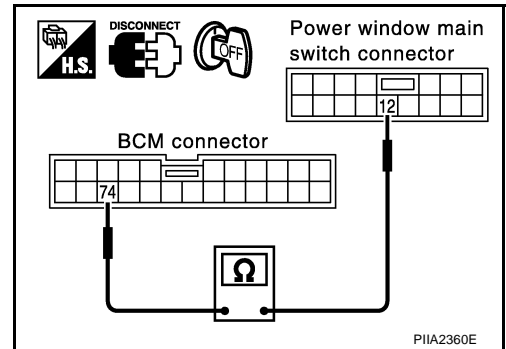
POWER WINDOW SYSTEM

4. CHECK POWER WINDOW SERIAL LINK CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between BCM connector M3 terminal 74 and power window main switch connector D7 terminal 12.

74 (Y) – 12 (PU)

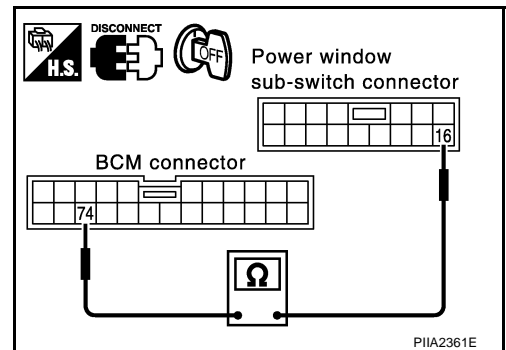
:Continuity should exist.



3. Check continuity between BCM connector M3 terminal 74 and power window sub-switch connector D37 terminal 16.

74 (Y) – 16 (SB)

:Continuity should exist.



OK or NG

OK >> Replace power window main switch.

NG >> Repair or replace harness.

Power Window Main Switch Power Supply and Ground Check

AIS001M1

1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch ON.
2. Check voltage between power window main switch connector D7 terminal 1,10 and ground.

1 (W) – Ground

:Battery voltage.

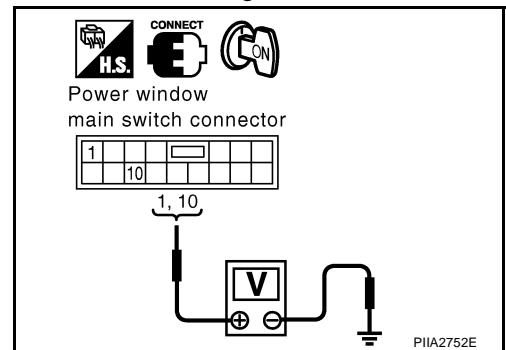
10 (SB) – Ground

:Battery voltage.

OK or NG

OK >> GO TO 2.

NG >> GO TO 3.



POWER WINDOW SYSTEM

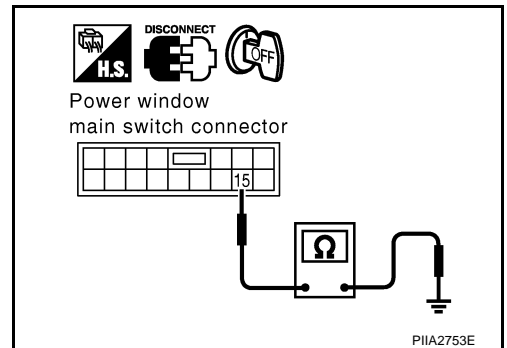
2. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect power window main switch connector.
3. Check continuity between power window main switch connector D7 terminal 15 and ground.

15 (B) – Ground :Continuity should exist.

OK or NG

- OK >> Power window main switch power supply and ground circuits are OK. Further inspection is necessary. Refer to symptom chart.
- NG >> Repair or replace harness.



3. CHECK POWER WINDOW MAIN SWITCH POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM and power window main switch connector.
3. Check continuity between BCM connector M1 terminal 28, 29 and power window main switch connector D7 terminal 1, 10.

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

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

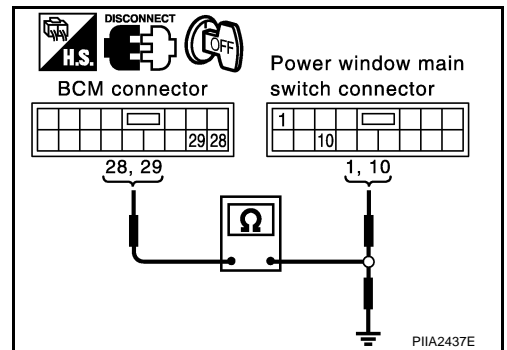
4. Check continuity between BCM connector M1 terminal 28, 29 and ground.

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

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

OK or NG

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



4. CHECK BCM OUTPUT SIGNAL

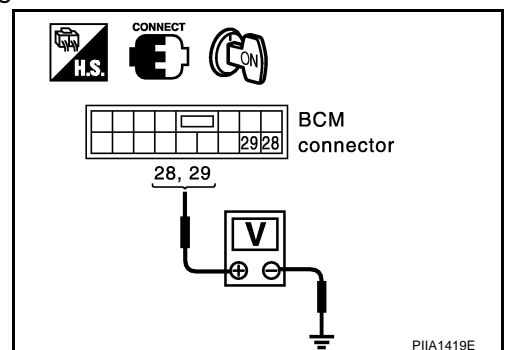
1. Connect BCM connector.
2. Turn ignition switch ON.
3. Check voltage between BCM connector M1 terminal 28, 29 and ground.

28 (W) – Ground :Battery voltage.

29 (Y/B) – Ground :Battery voltage.

OK or NG

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



POWER WINDOW SYSTEM

AIS001MJ

Power Window Sub-switch Power Supply and Ground Check

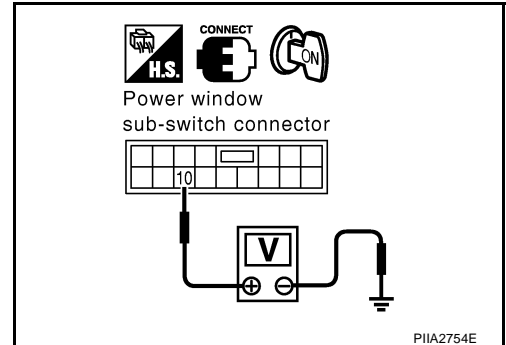
1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch ON.
2. Check voltage between power window sub-switch connector D37 terminal 10 and ground.

10 (W) – Ground :Battery voltage.

OK or NG

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



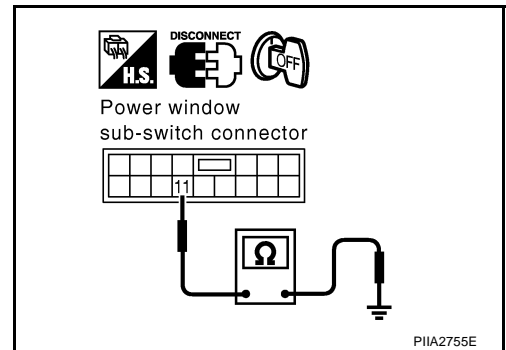
2. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect power window sub-switch connector.
3. Check continuity between power window sub-switch connector D37 terminal 11 and ground.

11 (B) – Ground :Continuity should exist.

OK or NG

- OK >> Power window sub-switch power supply and ground circuit are OK. Further inspection is necessary. Refer to symptom chart.
NG >> Repair or replace harness.



3. CHECK POWER WINDOW SUB-SWITCH POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM and power window sub-switch connector.
3. Check continuity between BCM connector M1 terminal 28 and power window sub-switch connector D37 terminal 10.

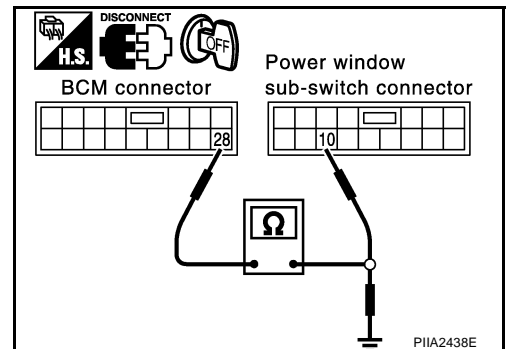
28 (W) – 10 (W) :Continuity should exist.

4. Check continuity between BCM connector M1 terminal 28 and ground.

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

OK or NG

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



POWER WINDOW SYSTEM

4. CHECK BCM OUTPUT SIGNAL

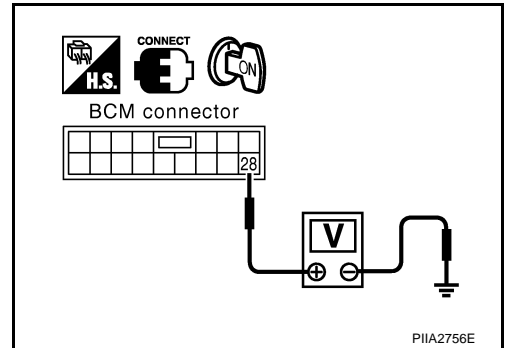
1. Connect BCM connector.
2. Turn ignition switch ON.
3. Check voltage between BCM connector M1 terminal 28 and ground.

28 (W) – Ground

:Battery voltage.

OK or NG

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



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POWER WINDOW SYSTEM

AIS001PS

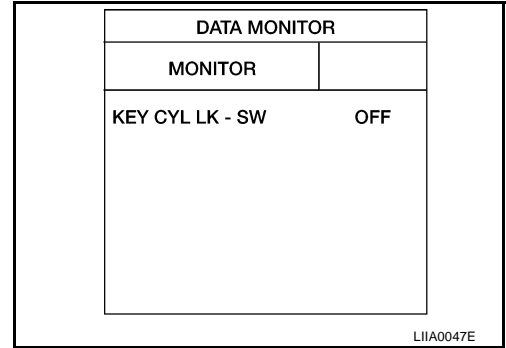
Door Key Cylinder Switch Check

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

④ With CONSULT-II

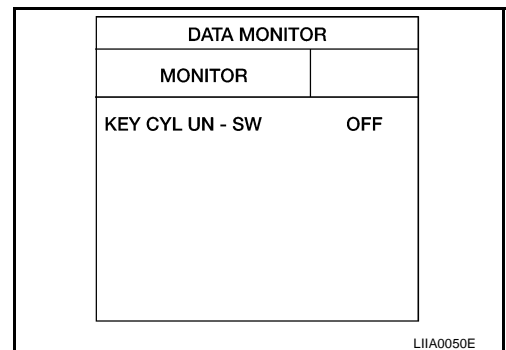
- Check door key cylinder switch ("KEY CYL LK SW") in "DATA MONITOR" mode with CONSULT-II.

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



- Check door key cylinder switch ("KEY CYL UN-SW") in "DATA MONITOR" mode with CONSULT-II.

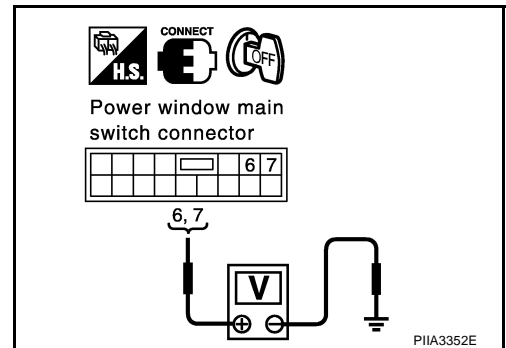
"KEY CYL UN-SW" should be "ON" when key inserted in door key cylinder was turned to unlock.



⊗ Without CONSULT-II

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

Terminals		Key position	Voltage (V) (Approx.)
(+)	(-)		
D7	6 (R)	Neutral/Unlock	5
		Lock	0
	7 (SB)	Neutral/Lock	5
		Unlock	0



OK or NG

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

POWER WINDOW SYSTEM

2. CHECK DOOR KEY CYLINDER SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect power window main switch (door lock and unlock switch) and door key cylinder switch connector.
3. Check continuity between power window main switch (door lock and unlock switch) connector D7 terminal 6, 7 and door key cylinder switch connector D12 terminals 1, 3.

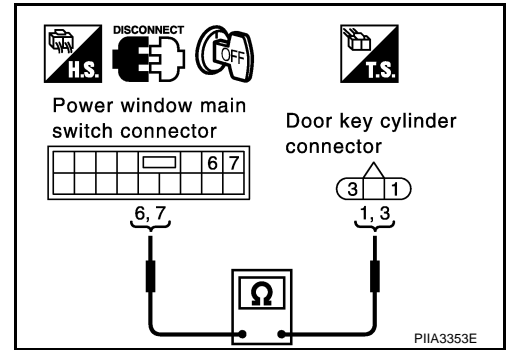
6 (R) – 3 (R) :Continuity should exist.

7 (SB) – 1 (SB) :Continuity should exist.

OK or NG

OK >> GO TO 3.

NG >> Repair or replace harness between power window main switch and door key cylinder switch.



3. CHECK DOOR KEY CYLINDER SWITCH GROUND

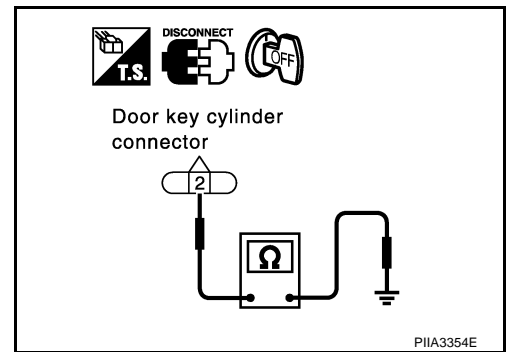
Check continuity between door key cylinder switch connector D12 terminal 2 and ground.

2 (B) – Ground :Continuity should exist.

OK or NG

OK >> GO TO 4.

NG >> Repair or replace harness.



4. CHECK DOOR KEY CYLINDER SWITCH

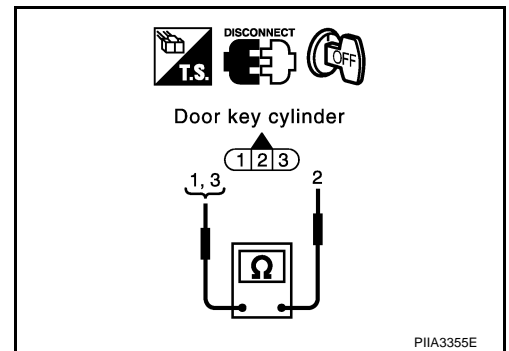
Check continuity between door key cylinder switch terminal 1, 3 and 2.

Terminals		Key position	Continuity
1	2	Neutral/Lock	No
		Unlock	Yes
3		Neutral/Unlock	No
		Lock	Yes

OK or NG

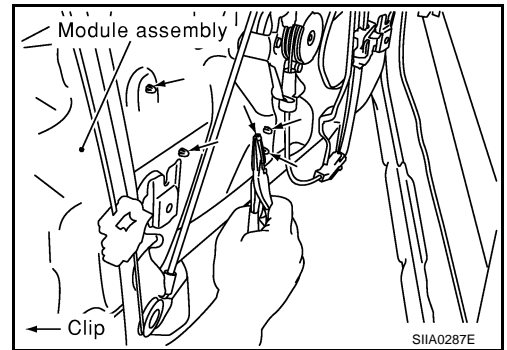
OK >> Further inspection is necessary. Refer to symptom chart.

NG >> Replace door key cylinder switch.



FRONT DOOR GLASS AND REGULATOR

5. Remove mounting bolts, and remove module assembly.
6. Disconnect harness connector for module assembly, and unclip harness from the back.



INSTALLATION

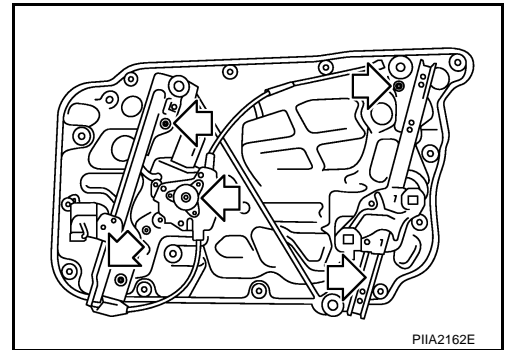
Install in the reverse order of removal.

INSPECTION AFTER REMOVAL

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

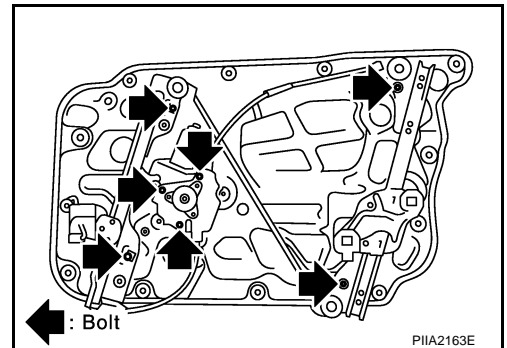
- Wire wear
- Regulator deformation
- Grease condition for each sliding part

The arrows in the figure show the application points of body grease.



DISASSEMBLY AND ASSEMBLY

Remove power window motor and guide rail from module assembly.



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FRONT DOOR GLASS AND REGULATOR

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 regulator.
- Removal and installation of motor from regulator.

Resetting

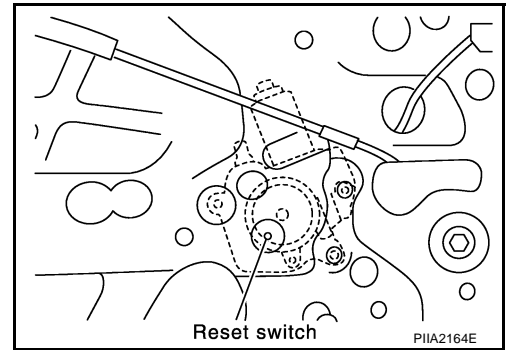
After installing each component to vehicle, follow the steps below.

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

CAUTION:

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

Do not operate the door switch is turning on.



FITTING INSPECTION

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

INSIDE MIRROR

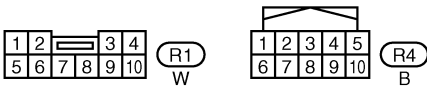
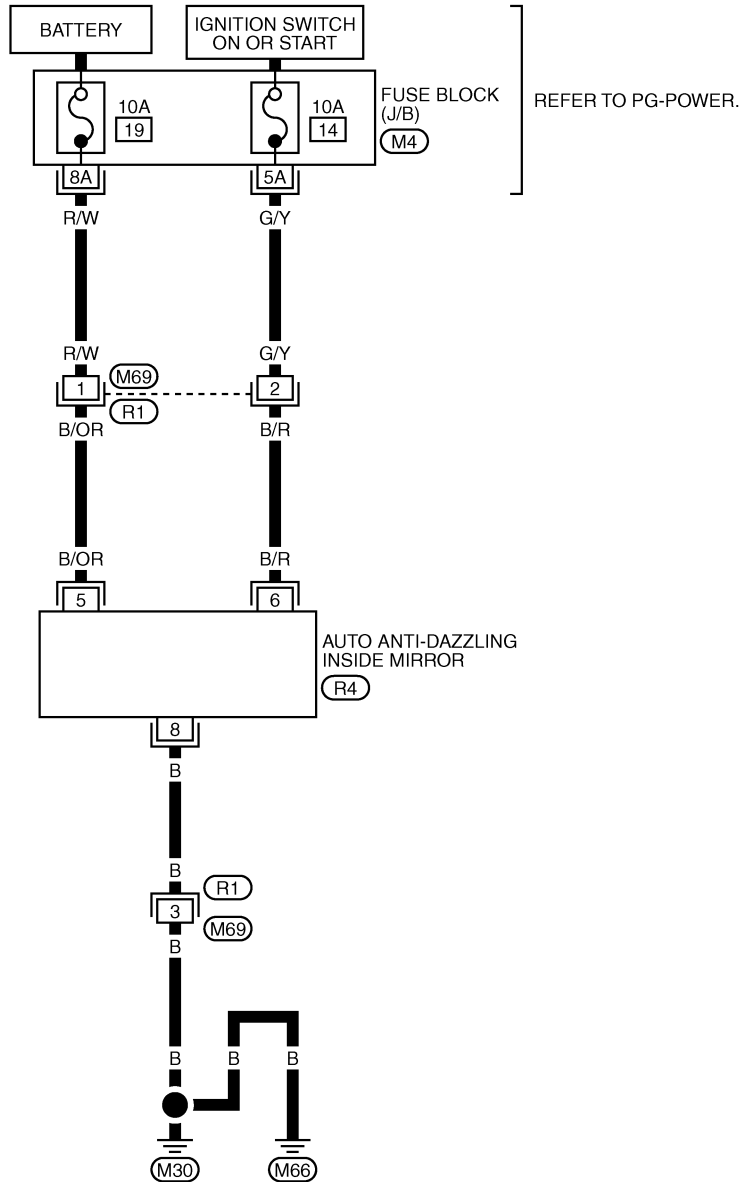
PFP:96321

INSIDE MIRROR

Wiring Diagram -I/MIRR-

AIS000FQ

GW-I/MIRR-01



REFER TO THE FOLLOWING.

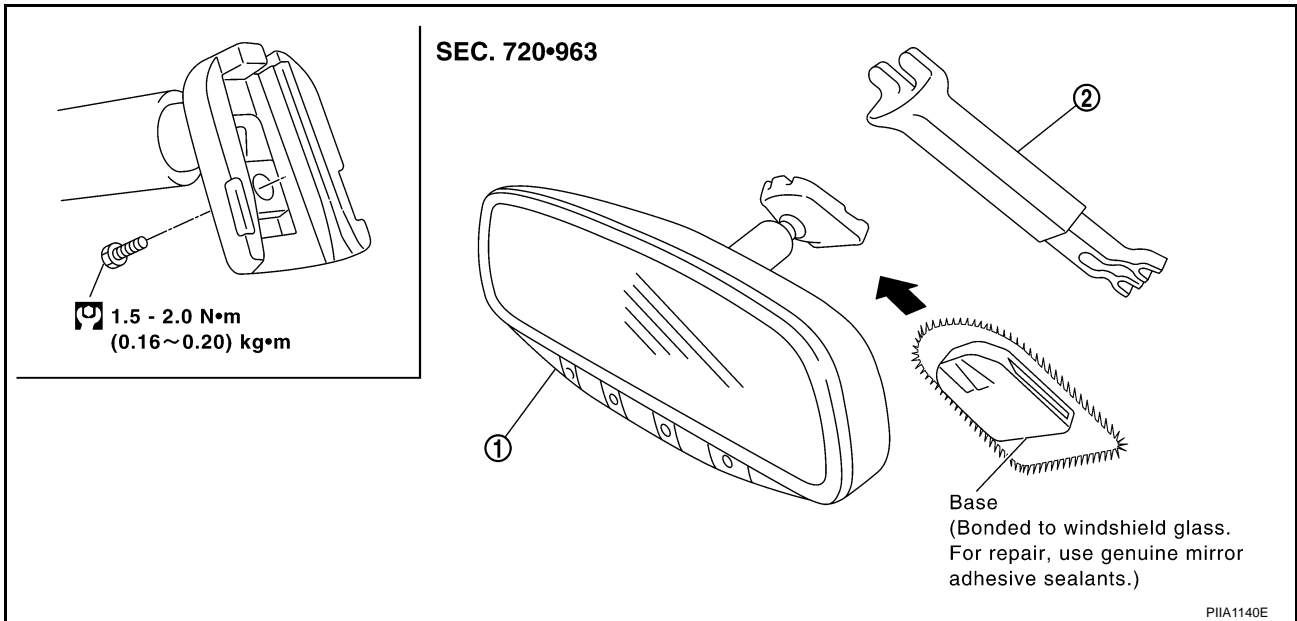
(M4) - FUSE BLOCK-JUNCTION BOX (J/B)

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INSIDE MIRROR

Removal and Installation

AIS000FR



1. Inside mirror

2. Inside mirror finisher

REMOVAL

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

INSTALLATION

Install in the reverse order of removal.

CAUTION:

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

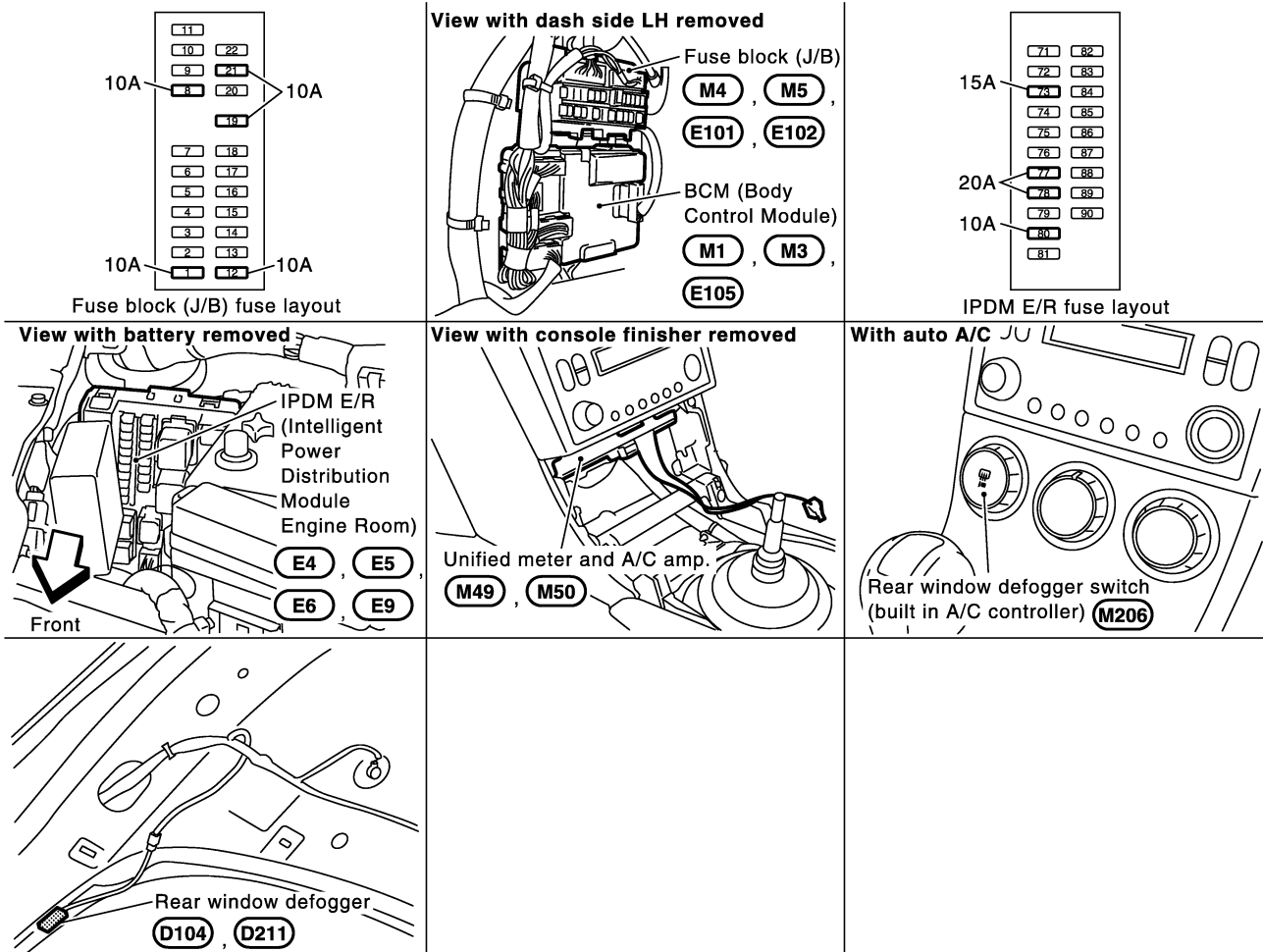
REAR WINDOW DEFOGGER

PPF:25350

AIS000FS

REAR WINDOW DEFOGGER

Component Parts and Harness Connector Location



PIIA2387E

AIS000FT

System Description

The rear window defogger system is controlled by BCM (Body Control Module) and IPDM E/R (Intelligent Power Distribution Module Engine Room). The rear window defogger operates only for approximately 15 minutes.

Power is at all times supplied

- through 20A fuse [No. 77, and 78, located in the IPDM E/R]
- to rear window defogger relay terminal 3 and 6,
- through 10A fuse [No. 21, located in the fuse block (J/B)]
- to rear window defogger relay terminal 1,
- through 40A fusible link [letter F, located in the fuse block (J/B)]
- to BCM terminal 7,
- through 10A fuse [No. 19, located in the fuse block (J/B)]
- to unified meter and A/C amp. terminal 21.

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

- through 10A fuse [No. 1, located in the fuse block (J/B)]
- to BCM terminal 35,
- through 10A fuse [No. 12, located in the fuse block (J/B)]
- to unified meter and A/C amp. terminal 22,
- and then through unified meter and A/C amp.
- to A/C controller (rear window defogger switch) terminal 84,

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REAR WINDOW DEFOGGER

- through unified meter and A/C amp.
- to A/C controller (rear window defogger switch) terminal 72.

Ground is supplied

- to BCM terminal 8
- through body grounds E17, E43, and F152,
- to unified meter and A/C amp. terminal 29 and 30
- through body grounds M30 and M66,
- to internal CPU of IPDM E/R terminal 14 and 45
- through body grounds E17, E43 and F152.

When A/C controller (rear window defogger switch) is turned to ON, rear window defogger switch signals are transmitted,

- through A/C controller. terminal 87,
- to unified meter and A/C amp.

Then ground is supplied

- to BCM terminal 69,
- through unified meter and A/C amp. terminal 38,
- through unified meter and A/C amp. terminal 30,
- through body grounds M30 and M66.

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

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

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

- to rear window defogger relay terminal 2,
- through IPDM E/R terminal 54,
- through internal CPU of IPDM E/R and IPDM E/R terminal 45.
- through body grounds E17, E43 and E152, and then rear window defogger relay is energized.

When rear window defogger relay is turned ON, signals are transmitted,

- to rear window defogger terminal 1,
- through rear window defogger relay terminals 5 and 7.

Rear window defogger terminal 2 is grounded through body ground D212.

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

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

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

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

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

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

- to unified meter and A/C amp. terminal 56,
- through rear window defogger relay terminals 5 and 7.

Then ground is supplied

- to A/C controller terminal 78,
- through unified meter and A/C amp.
- through unified meter and A/C amp. terminal 29 and 30,
- through body grounds M30 and M66.

This energizes rear window defogger indicator.

REAR WINDOW DEFOGGER

CAN Communication System Description

AIS00108

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

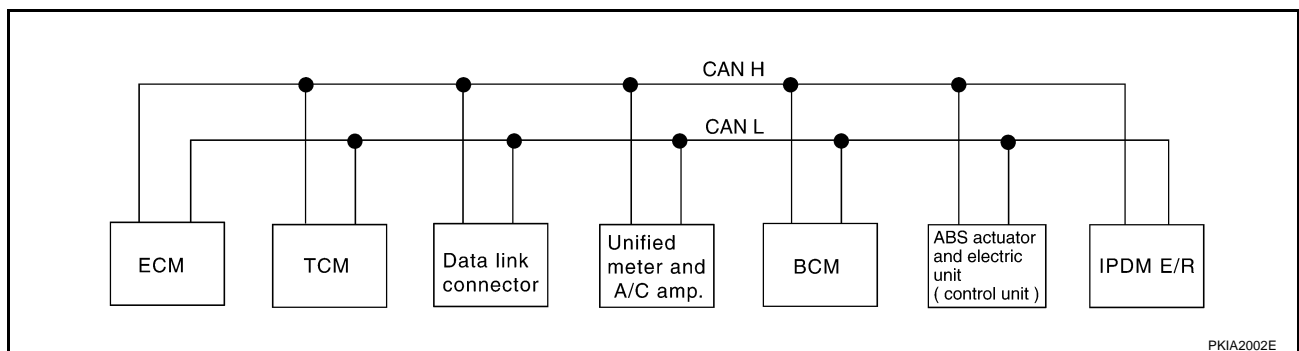
Body type	Coupe						
Axle	2WD						
Engine	VQ35DE						
Transmission	A/T	M/T					
Brake control	TCS	ABS		TCS		VDC	
Low tire pressure warning system	Not applicable	Not applicable	Applicable	Not applicable	Applicable	Not applicable	Applicable
CAN communication unit							
ECM	×	×	×	×	×	×	×
TCM	×						
Data link connector	×	×	×	×	×	×	×
Unified meter and A/C amp.	×	×	×	×	×	×	×
BCM	×	×	×	×	×	×	×
Low tire pressure warning control unit			×		×		×
Steering angle sensor						×	×
ABS actuator and electric unit (control unit)	×	×	×	×	×		
VDC/TCS/ABS control unit						×	×
IPDM E/R	×	×	×	×	×	×	×
CAN communication type	<u>GW-59, "TYPE 1"</u>	<u>GW-61, "TYPE 2/TYPE3"</u>		<u>GW-63, "TYPE 4/TYPE5"</u>		<u>GW-64, "TYPE 6/TYPE7"</u>	

×: Applicable

TYPE 1

System diagram

- Type1



Input/output signal chart

T: Transmit R: Receive

Signals	ECM	TCM	Unified meter and A/C amp.	BCM	ABS actuator and electric unit (control unit)	IPDM E/R
Engine speed signal	T	R	R		R	
Engine torque signal	T	R			R	

REAR WINDOW DEFOGGER

Signals	ECM	TCM	Unified meter and A/C amp.	BCM	ABS actuator and electric unit (control unit)	IPDM E/R
Engine coolant temperature signal	T	R	R			
Accelerator pedal position signal	T	R			R	
Closed throttle position signal	T	R				
Wide open throttle position signal	T	R				
Battery voltage signal	T	R				
Stop lamp switch signal		R	T			
Fuel consumption monitor signal	T		R			
A/T self-diagnosis signal	R	T				
A/T CHECK indicator lamp signal		T	R			
A/T position indicator signal		T	R		R	
Manual mode gear position signal		T	R			
ABS operation signal		R			T	
A/T shift schedule change demand signal		R			T	
A/C switch signal	R			T		
A/C compressor request signal	T					R
A/C compressor feedback signal	T		R			
Blower fan motor switch signal	R			T		
Cooling fan speed request signal	T					R
Position lights request signal			R	T		R
Low beam request signal				T		R
Low beam status signal	R					T
High beam request signal			R	T		R
High beam status signal	R					T
Vehicle speed signal	R	R	R	R	T	
Sleep request 1 signal			R	T		
Sleep request 2 signal				T		R
Wake up request 1 signal			R	T		
Door switch signal			R	T		R
Turn indicator signal			R	T		
Seat belt buckle switch signal			T	R		
Buzzer output signal			R	T		
Fuel level sensor signal	R		T			
Malfunction indicator lamp signal	T		R			
ASCD SET lamp signal	T		R			
ASCD operation signal	T	R				
ASCD CRUISE lamp signal	T		R			
ASCD OD cancel request signal	T	R				
Output shaft revolution signal	R	T				
Turbine revolution signal	R	T				
Front wiper request signal				T		R
Front wiper stop position signal				R		T

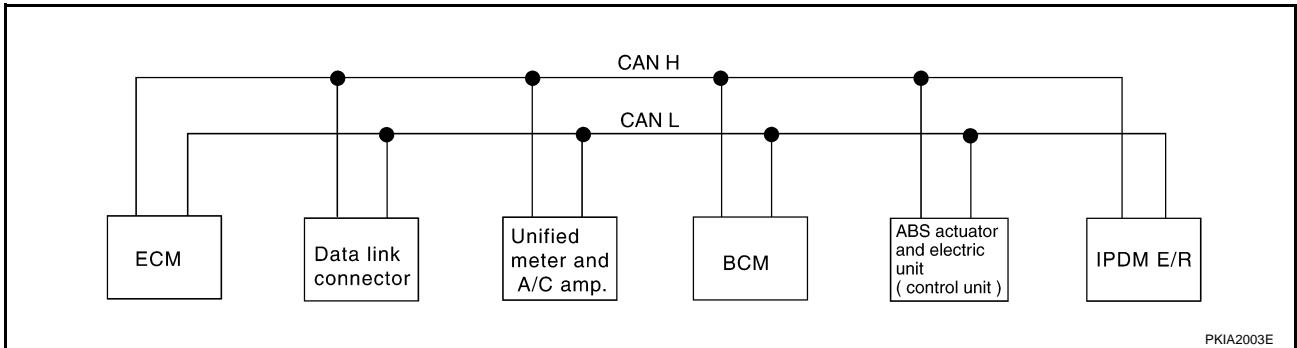
REAR WINDOW DEFOGGER

Signals	ECM	TCM	Unified meter and A/C amp.	BCM	ABS actuator and electric unit (control unit)	IPDM E/R
Rear window defogger switch signal				T		R
Rear window defogger control signal	R					T
Manual mode signal		R	T			
Not manual mode signal		R	T			
Manual mode shift up signal		R	T			
Manual mode shift down signal		R	T			
Manual mode indicator signal		T	R			
Hood switch signal				R		T
Theft warning horn request signal				T		R
Horn chirp signal				T		R
ABS warning lamp signal			R		T	
TCS OFF indicator lamp signal			R		T	
SLIP indicator lamp signal			R		T	
Brake warning lamp signal			R		T	

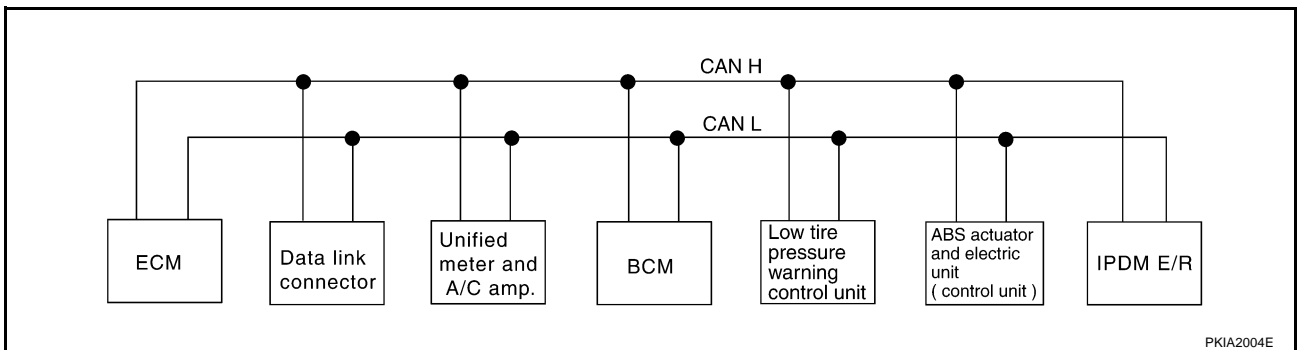
TYPE 2/TYPE3

System diagram

- Type2



- Type3



REAR WINDOW DEFOGGER

Input/output signal chart

T: Transmit R: Receive

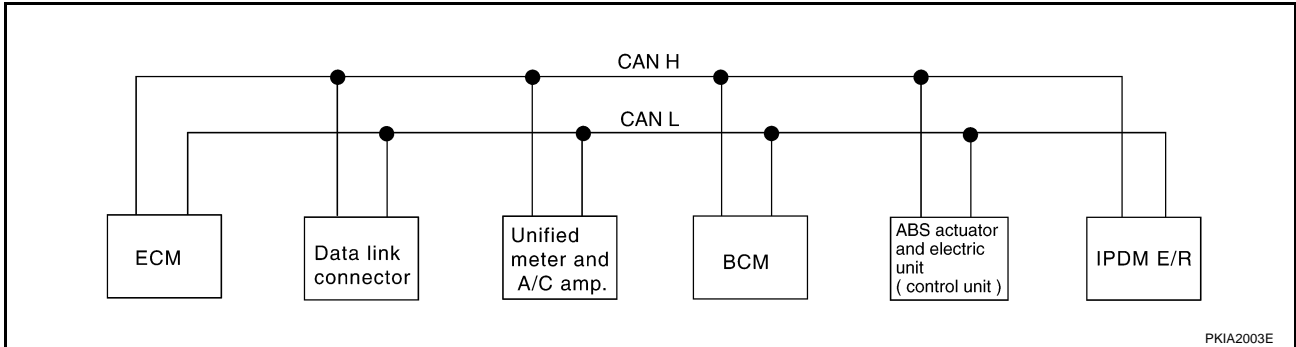
Signals	ECM	Unified meter and A/C amp.	BCM	Low tire pressure warning control unit	ABS actuator and electric unit (control unit)	IPDM E/R
Engine speed signal	T	R			R	
Engine coolant temperature signal	T	R				
Accelerator pedal position signal	T				R	
Fuel consumption monitor signal	T	R				
A/C switch signal	R		T			
A/C compressor request signal	T					R
A/C compressor feedback signal	T	R				
Blower fan motor switch signal	R		T			
Cooling fan speed request signal	T					R
Position lights request signal			R	T		R
Low beam request signal			T			R
Low beam status signal	R					T
High beam request signal		R	T			R
High beam status signal	R					T
Vehicle speed signal		R			T	
	R	T	R	R		
Sleep request 1 signal		R	T			
Sleep request 2 signal			T			R
Wake up request 1 signal		R	T			
Door switch signal		R	T			R
Turn indicator signal		R	T			
Seat belt buckle switch signal		T	R			
Buzzer output signal		R	T			
Fuel level sensor signal	R	T				
Malfunction indicator lamp signal	T	R				
ASCD SET lamp signal	T	R				
ASCD CRUISE lamp signal	T	R				
Front wiper request signal			T			R
Front wiper stop position signal			R			T
Rear window defogger switch signal			T			R
Rear window defogger control signal	R					T
Hood switch signal			R			T
Theft warning horn request signal			T			R
Horn chirp signal			T			R
Tire pressure signal		R		T		
ABS warning lamp signal		R			T	
Brake warning lamp signal		R			T	

REAR WINDOW DEFOGGER

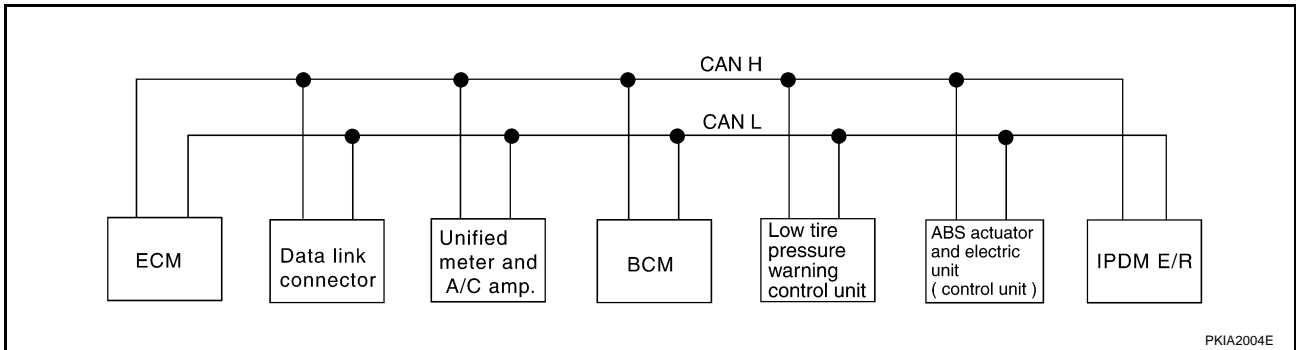
TYPE 4/TYPE5

System diagram

- Type4



- Type5



Input/output signal chart

T: Transmit R: Receive

Signals	ECM	Unified meter and A/C amp.	BCM	Low tire pressure warning control unit	ABS actuator and electric unit (control unit)	IPDM E/R
Engine speed signal	T	R			R	
Engine torque signal	T				R	
Engine coolant temperature signal	T	R				
Accelerator pedal position signal	T				R	
Fuel consumption monitor signal	T	R				
A/C switch signal	R		T			
A/C compressor request signal	T					R
A/C compressor feedback signal	T	R				
Blower fan motor switch signal	R		T			
Cooling fan speed request signal	T					R
Position lights request signal		R	T			R
Low beam request signal			T			R
Low beam status signal	R					T
High beam request signal		R	T			R
High beam status signal	R					T
Vehicle speed signal		R			T	
	R	T	R	R		
Sleep request 1 signal		R	T			
Sleep request 2 signal			T			R

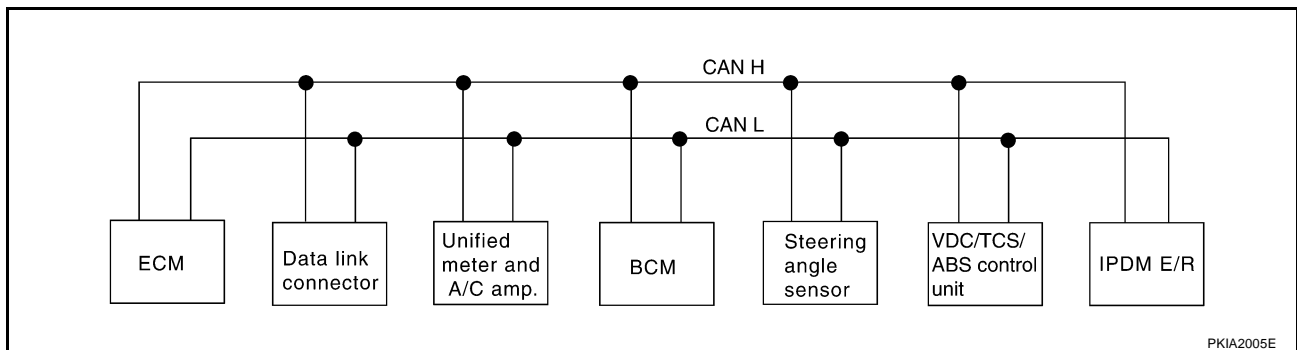
REAR WINDOW DEFOGGER

Signals	ECM	Unified meter and A/C amp.	BCM	Low tire pressure warning control unit	ABS actuator and electric unit (control unit)	IPDM E/R
Wake up request 1 signal		R	T			
Door switch signal		R	T			R
Turn indicator signal		R	T			
Seat belt buckle switch signal		T	R			
Buzzer output signal		R	T			
Fuel level sensor signal	R	T				
Malfunction indicator lamp signal	T	R				
ASCD SET lamp signal	T	R				
ASCD CRUISE lamp signal	T	R				
Front wiper request signal			T			R
Front wiper stop position signal			R			T
Rear window defogger switch signal			T			R
Rear window defogger control signal	R					T
Hood switch signal			R			T
Theft warning horn request signal			T			R
Horn chirp signal			T			R
Tire pressure signal		R		T		
ABS warning lamp signal		R			T	
TCS OFF indicator lamp signal		R			T	
SLIP indicator lamp signal		R			T	
Brake warning lamp signal		R			T	

TYPE 6/TYPE7

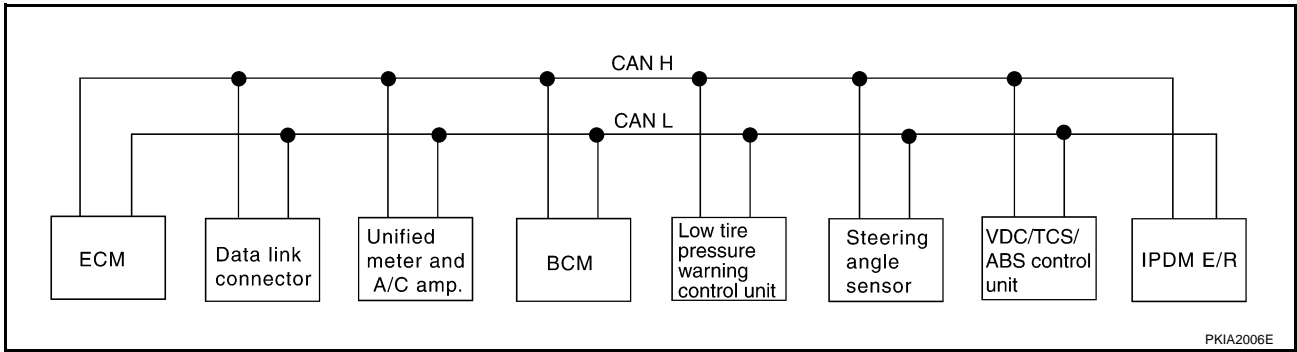
System diagram

- Type6



REAR WINDOW DEFOGGER

- Type7



Input/output signal chart

T: Transmit R: Receive

Signals	ECM	Unified meter and A/C amp.	BCM	Low tire pressure warning control unit	Steering angle sensor	VDC/TCS/ABS control unit	IPDM E/R
Engine speed signal	T	R				R	
Engine torque signal	T					R	
Engine coolant temperature signal	T	R					
Accelerator pedal position signal	T					R	
Fuel consumption monitor signal	T	R					
A/C switch signal	R		T				
A/C compressor request signal	T						R
A/C compressor feedback signal	T	R					
Blower fan motor switch signal	R		T				
Cooling fan speed request signal	T						R
Position lights request signal		R	T				R
Low beam request signal			T				R
Low beam status signal	R						T
High beam request signal		R	T				R
High beam status signal	R						T
Vehicle speed signal	R	R	R	R		T	
Sleep request 1 signal		R	T				
Sleep request 2 signal			T				R
Wake up request 1 signal		R	T				
Door switch signal		R	T				R
Turn indicator signal		R	T				
Seat belt buckle switch signal		T	R				
Buzzer output signal		R	T				
Fuel level sensor signal	R	T					
Malfunction indicator signal	T	R					
ASCD SET lamp signal	T	R					
ASCD CRUISE lamp signal	T	R					
Front wiper request signal			T				R
Front wiper stop position signal			R				T
Rear window defogger switch signal			T				R

REAR WINDOW DEFOGGER

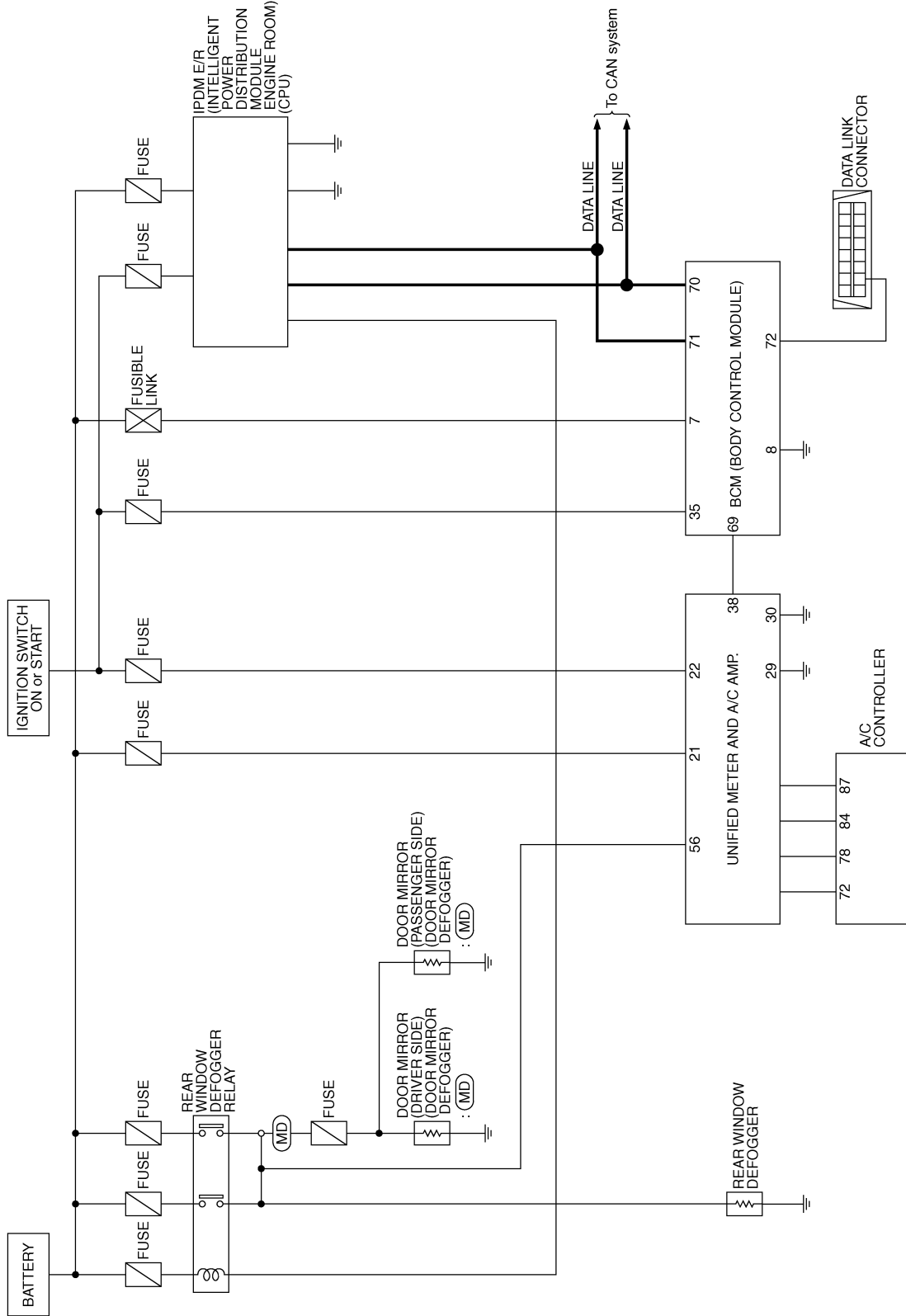
Signals	ECM	Unified meter and A/C amp.	BCM	Low tire pressure warning control unit	Steering angle sensor	VDC/TCS/ABS control unit	IPDM E/R
Rear window defogger control signal	R						T
Hood switch signal			R				T
Theft warning horn request signal			T				R
Horn chirp signal			T				R
Steering angle sensor signal					T	R	
Tire pressure signal		R		T			
ABS warning lamp signal		R				T	
VDC OFF indicator lamp signal		R				T	
SLIP indicator lamp signal		R				T	
Brake warning lamp signal		R				T	

REAR WINDOW DEFOGGER

Schematic – DEF –

AIS000FV

(MD) : With mirror defogger



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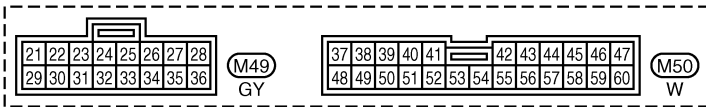
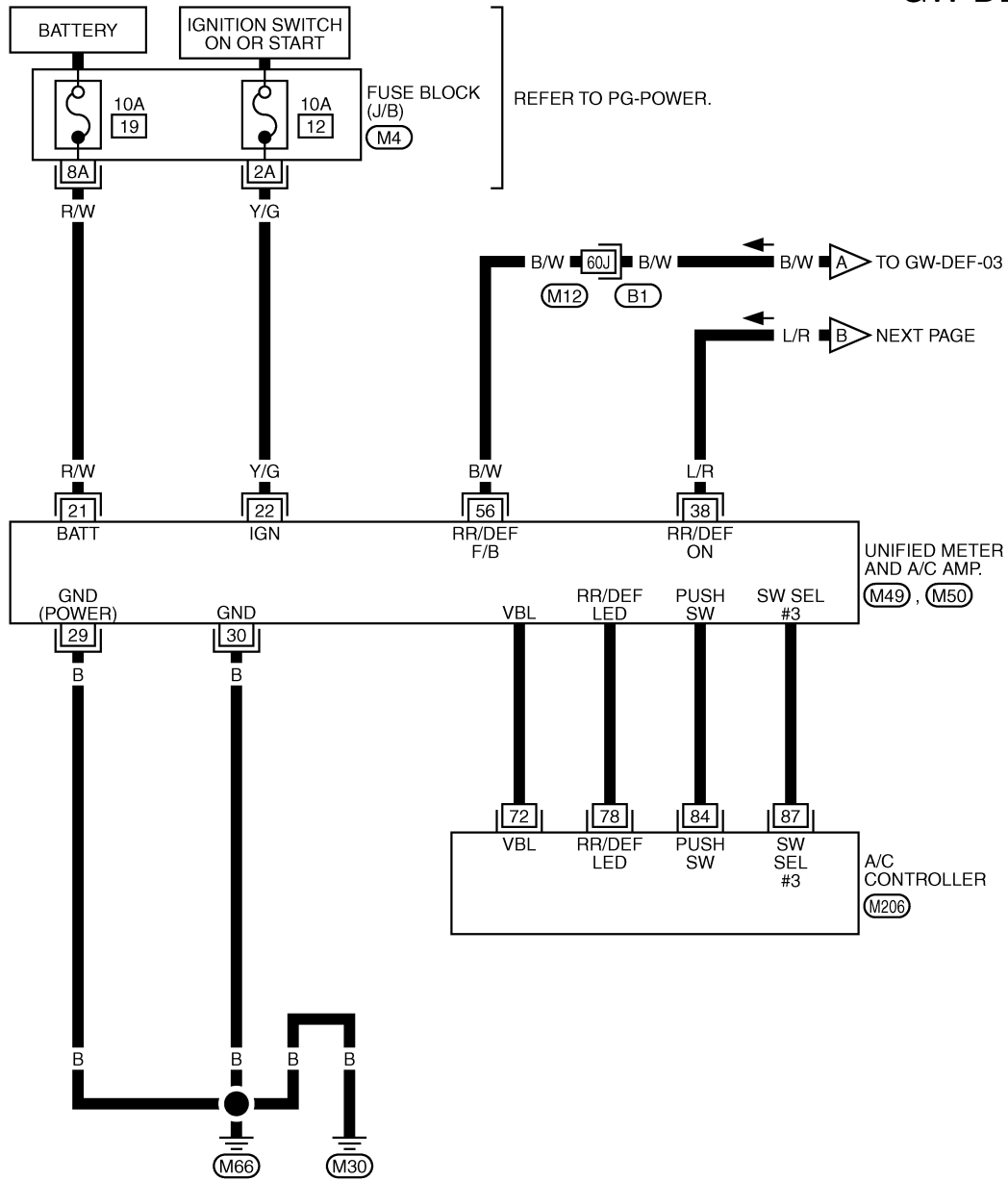
TIWT0258E

REAR WINDOW DEFOGGER

Wiring Diagram -DEF-

AIS000FW

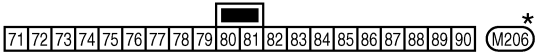
GW-DEF-01



REFER TO THE FOLLOWING.

(B1) -SUPER MULTIPLE JUNCTION (SMJ)

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

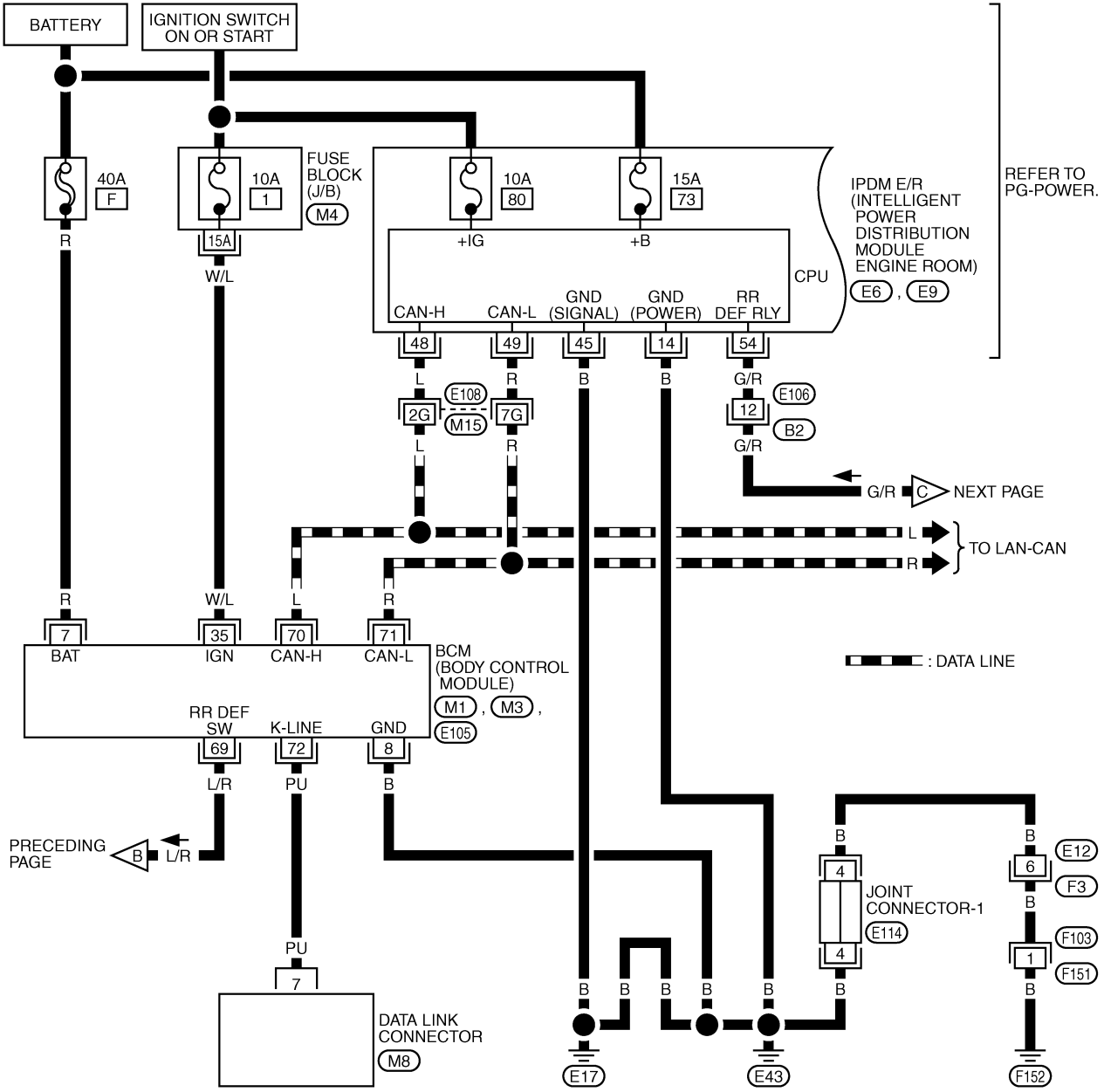


*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

TIWT0259E

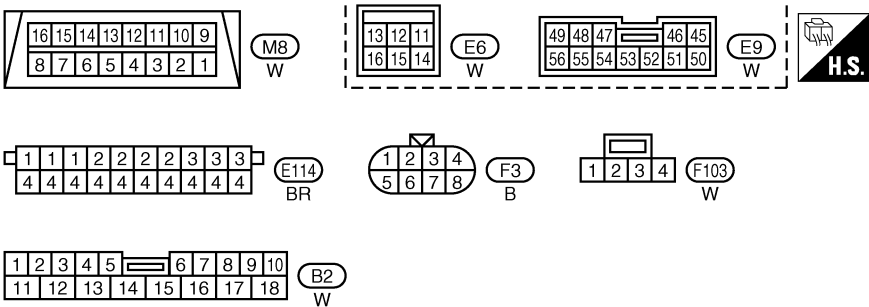
REAR WINDOW DEFOGGER

GW-DEF-02



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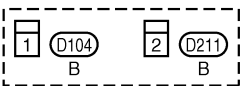
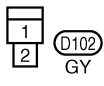
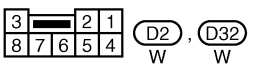
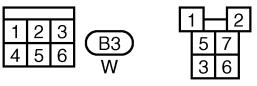
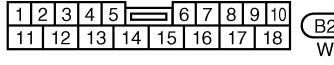
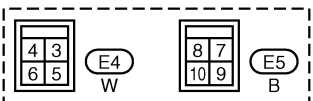
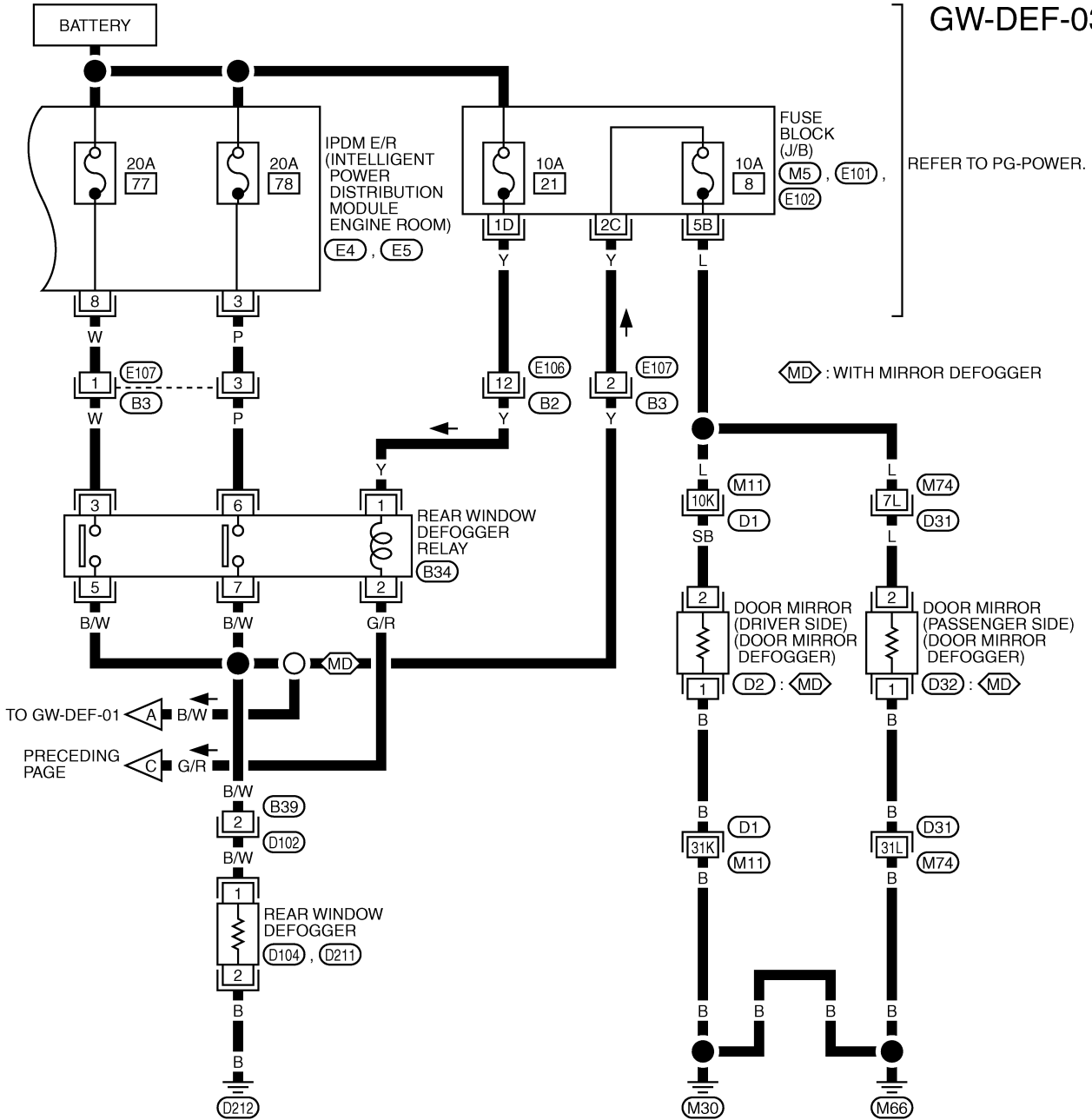


REFER TO THE FOLLOWING.
 (E108) -SUPER MULTIPLE JUNCTION (SMJ)
 (M4) -FUSE BLOCK-JUNCTION BOX (J/B)
 (M1), (M3), (E105) -ELECTRICAL UNITS

TIWT0260E

REAR WINDOW DEFOGGER

GW-DEF-03



REFER TO THE FOLLOWING.
 (D1), (D31) -SUPER MULTIPLE JUNCTION (SMJ)
 (M5), (E101), (E102) -FUSE BLOCK-JUNCTION BOX (J/B)

TIWT0261E

REAR WINDOW DEFOGGER

Terminal and reference value for BCM

AIS000FX

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (Approx.)
7	R	BAT power supply	—	Battery voltage
8	B	Ground	—	0
35	W/L	IGN power supply	IGN ON or START	Battery voltage
69	L/R	Rear window defogger switch signal	When rear window defogger switch is pressed.	0
			When rear window defogger switch is OFF.	5
70	L	DATA LINE (CAN - H)	—	—
71	R	DATA LINE (CAN - L)	—	—
72	PU	K-line	—	0

Terminal and reference value for IPDM E/R.

AIS000FY

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (Approx.)
3	P	BAT power supply	—	Battery voltage
8	W	BAT power supply	—	Battery voltage
14	B	Ground (power)	—	0
45	B	Ground (Signal)	—	0
48	L	DATA LINE (CAN - H)	—	—
49	R	DATA LINE (CAN - L)	—	—
54	G/R	Rear window defogger relay control signal	When rear window defogger switch is ON.	0
			When rear window defogger switch is OFF.	Battery voltage

Terminal and reference value for unified meter and A/C amp.

AIS0014K

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (Approx.)
21	R/W	BAT power supply	—	Battery voltage
22	Y/G	IGN power supply	IGN ON or START	Battery voltage
29	B	Ground	—	0
30	B	Ground	—	0
38	L/R	Rear window defogger switch signal	When rear window defogger switch is pressed.	0
			When rear window defogger switch is OFF.	5
56	B/W	Rear window defogger ON signal	When rear window defogger switch is pressed	Battery voltage
			When rear window defogger switch is OFF.	0
72	—	Indicator power supply	IGN ON or START	5
78	—	Rear window defogger indicator signal	When rear window defogger switch is pressed.	0
			When rear window defogger switch is OFF.	5
84	—	A/C control push switch power supply	IGN ON or START	5

REAR WINDOW DEFOGGER

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (Approx.)
87	—	Rear window defogger switch ON signal	When rear window defogger switch is pressed.	0
			When rear window defogger switch is OFF.	5

Work Flow

AIS000FZ

1. Check the symptom and customer's requests.
2. Understand the outline of system. Refer to [GW-57, "System Description"](#) .
3. According to the trouble diagnosis chart, repair or replace the cause of the malfunction. Refer to [GW-74, "Trouble Diagnoses Symptom Chart"](#) .
4. Does rear window defogger operate normally? YES: GO TO 5, NO: GO TO 4.
5. INSPECTION END.

CONSULT-II Function

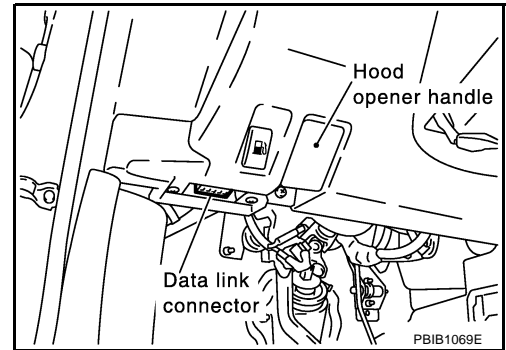
AIS000G1

CONSULT-II BASIC OPERATION PROCEDURE

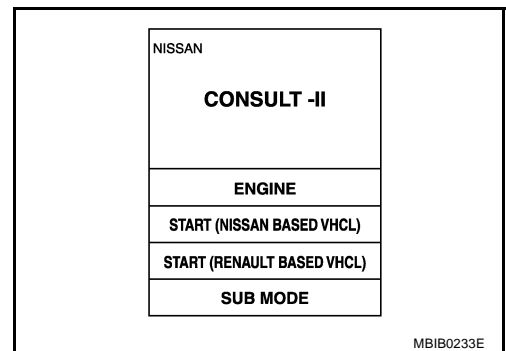
CAUTION:

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

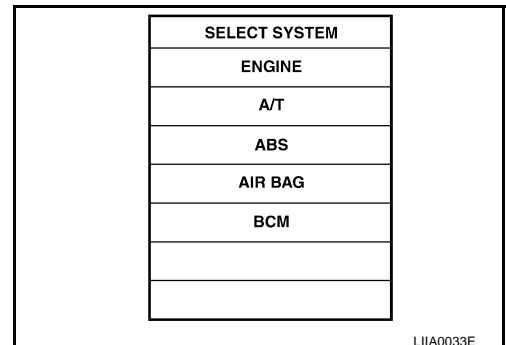
1. Turn ignition switch "OFF".
2. Connect "CONSULT-II" and CONSULT-II CONVERTER to data link connector.



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

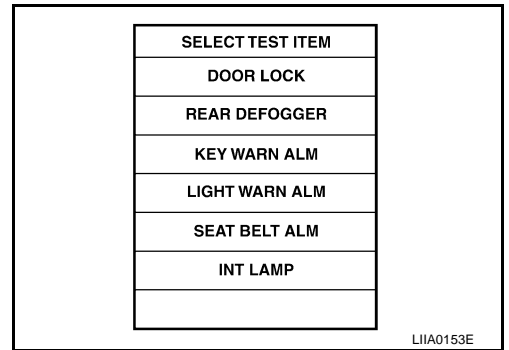


5. Touch "BCM".
If "BCM" is not indicated, go to [GI-39](#) , "CONSULT-II Date Link Connector (DLC) Circuit"



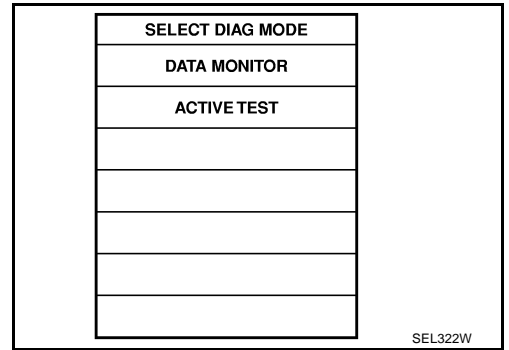
REAR WINDOW DEFOGGER

6. Touch "REAR DEFOGGER".



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



D
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G

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.

GW

ACTIVE TEST

Display Item List

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

J
K
L
M

REAR WINDOW DEFOGGER

AI500158

Trouble Diagnoses Symptom Chart

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

Symptom	Diagnoses / service procedure	Refer to page
Rear window defogger and door mirror defogger do not operate. (With door mirror defogger)	1. CAN communication inspection using CONSLUT-II (self-diagnosis)	BCS-18
	2. Rear window defogger switch circuit check.	GW-77
	3. Rear window defogger power supply circuit check.	GW-76
	4. Replace IPDM E/R.	—
Rear window defogger does not operated. (without door mirror defogger)	1. CAN communication inspection using CONSLUT-II (self-diagnosis)	BCS-18
	2. Rear window defogger switch circuit check.	GW-75
	3. Rear window defogger power supply circuit check.	GW-76
	4. Rear window defogger circuit check.	GW-77
	5. Filament check.	GW-80
	6. Replace IPDM E/R.	—
Both of rear window defogger does not operate but door mirror defogger operates.(With door mirror defogger)	1. Rear window defogger circuit check.	GW-77
	2. Filament check.	GW-80
Both of door mirror defogger does not operated but rear window defogger operate. (With door mirror defogger)	1. Door mirror defogger power supply circuit check.	GW-78
Driver side door mirror defogger does not operated.	1. Driver side door mirror defogger circuit check.	GW-79
Passenger side door mirror defogger does not operated.	1. Passenger side door mirror defogger circuit check.	GW-80

REAR WINDOW DEFOGGER

Rear Window Defogger Switch Circuit Check

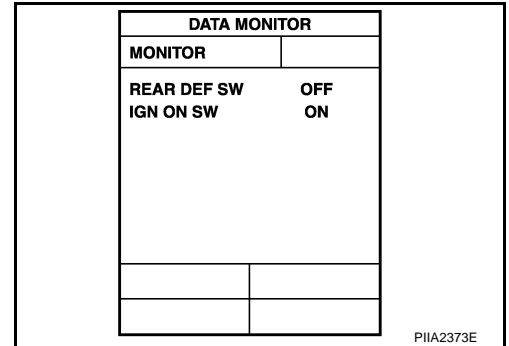
AIS001CR

1. REAR WINDOW DEFOGGER SWITCH OPERATION INSPECTION

With CONSULT-II

Using "REAR DEF SW" in the "DATA MONITOR".

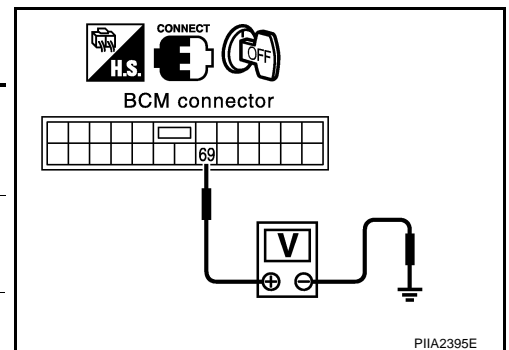
Monitor item "OPERATION"		Content
REAR DEF SW	"ON/OFF"	Displays "Press (ON)/others (OFF)" status determined with the rear window defogger switch.
IGN ON SW	"ON/OFF"	Displays "IGN (ON)/OFF" status determined with the ignition switch signal.



With out CONSULT-II

- Turn ignition switch OFF.
- Check voltage between BCM connector M3 terminal 69(L/R) and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V)
	(+)	(-)		
M3	69 (L/R)	Ground	Turn ignition switch OFF. When rear window defogger switch is pressed.	0
			When rear window defogger switch is OFF.	Battery voltage



OK or NG

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

2. REAR WINDOW DEFOGGER SWITCH SIGNAL CIRCUIT HARNESS CONTINUITY INSPECTION

- Disconnect BCM connector and unified meter and A/C amp. connector.
- Check continuity between BCM connector M3 terminal 69(L/R) and unified meter and A/C amp. connector M50 terminal 38(L/R).

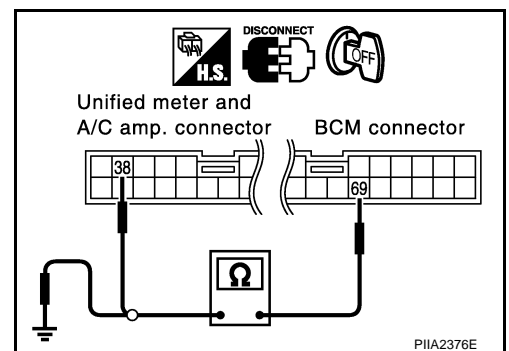
69 (L/R) – 38(L/R) :Continuity should exist

- Check continuity between BCM harness connector M3 terminal 69(L/R) and ground

69 (L/R) – ground :Continuity should not exist

OK or NG

- OK >> GO TO 3.
 NG >> Repair or replace harness between BCM and unified meter and A/C amp.



REAR WINDOW DEFOGGER

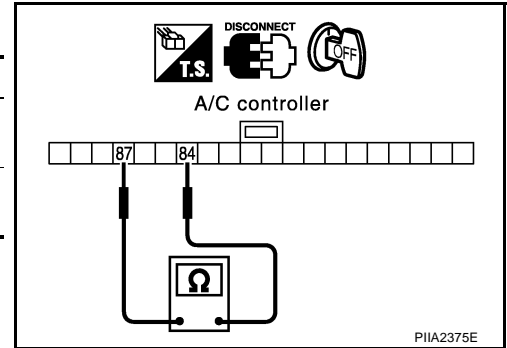
3. REAR WINDOW DEFOGGER SWITCH INSPECTION

1. Disconnected A/C controller connector.
2. Pushing the rear window defogger switch.
3. Check continuity A/C controller connectors.

Connector	Terminal	Condition	Continuity
M206	87 — 84	When rear window defogger switch is pressed.	Should exist
		When rear window defogger switch is OFF.	Should not exist

OK or NG

- OK >> Replace unified meter and A/C amp.
 NG >> Replace A/C controller.



Rear Window Defogger Power Supply Circuit Check

AIS0014M

1. CHECK FUSE

Check if any of the following fuses for Fuse block (J/B) are blown.

COMPONENT PARTS	TERMINAL NO. (SIGNAL)	AMPERE	FUSE NO.
Fuse block (J/B)	1D (BAT power supply)	10A	#21

NOTE:

Refer to [GW-57, "Component Parts and Harness Connector Location"](#) .

OK or NG

- OK >> GO TO 2.
 NG >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse, refer to [GW-57, "Component Parts and Harness Connector Location"](#) .

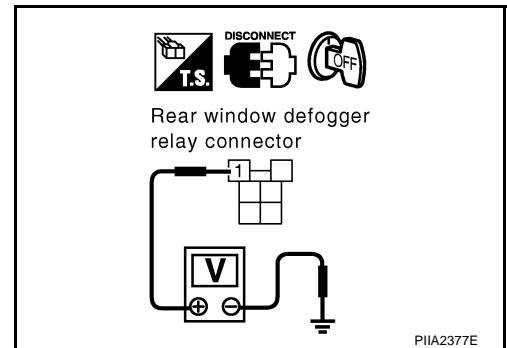
2. REAR WINDOW DEFOGGER RELAY POWER SUPPLY CIRCUIT INSPECTION

1. Turn ignition switch OFF.
2. Disconnect rear window defogger relay connector.
3. Check voltage between rear window defogger relay harness connector B34 terminal 1 (Y) and ground.

1 (Y) – Ground : Battery voltage

OK or NG

- OK >> GO TO 3.
 NG >> Repair or replace harness between fuse block (J/B) and rear window defogger relay.

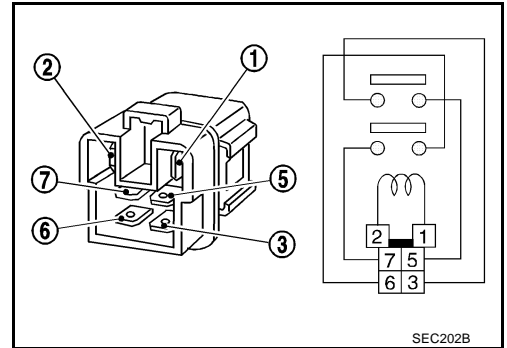


REAR WINDOW DEFOGGER

3. REAR WINDOW DEFOGGER RELAY INSPECTION

1. Remove rear window defogger relay.
2. Check continuity between terminals 3 and 5, 6 and 7.

Terminal		Condition	Continuity
(+)	(-)		
3	5	12V direct current supply between terminals 1 and 2	Should exist
		No current supply	Should not exist
6	7	12V direct current supply between terminals 1 and 2	Should exist
		No current supply	Should not exist



OK or NG

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

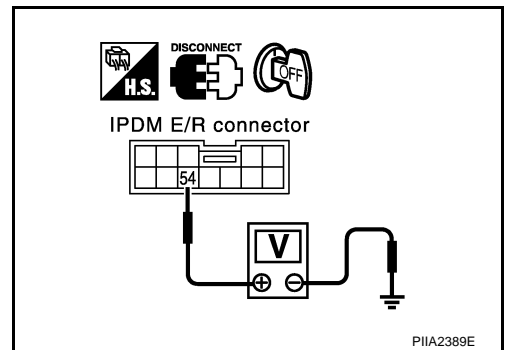
4. REAR WINDOW DEFOGGER RELAY GROUND CIRCUIT INSPECTION

1. Installation rear window defogger relay.
2. Check voltage between IPDM E/R connector E9 terminal 54 (G/R) and ground.

54 (G/R) – Ground : Battery voltage

OK or NG

- OK >> Rear window defogger power supply circuit check is OK.
 NG >> Repair or replace harness between rear window defogger relay and IPDM E/R.

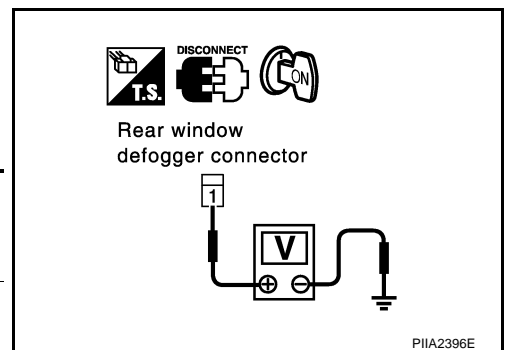


Rear Window Defogger Circuit Check

1. REAR WINDOW DEFOGGER POWER SUPPLY CIRCUIT INSPECTION

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

Con- nector	Terminal (Wire color)		Condition	Voltage (V)
	(+)	(-)		
D104	1 (B/W)	Ground	Turn ignition switch ON. When rear window defogger switch is pressed.	Battery voltage
			Turn ignition switch OFF.	0



OK or NG

- OK >> GO TO 2.
 NG >> Repair or replace harness between rear window defogger relay and rear window defogger.

REAR WINDOW DEFOGGER

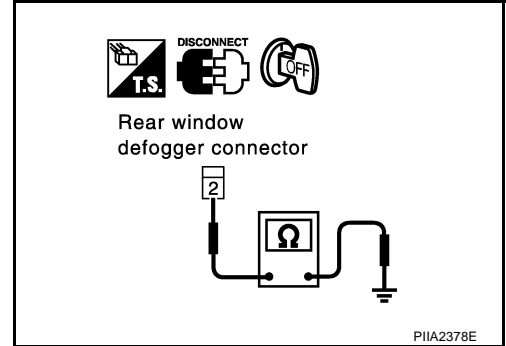
2. REAR WINDOW DEFOGGER GROUND HARNESS INSPECTION

1. Turn ignition switch OFF.
2. Disconnect rear window defogger connector.
3. Check continuity between rear window defogger connector D211 terminal 2 (B) and ground.

2(B) – ground :Continuity should exist

OK or NG

- OK >> Rear window defogger circuit check is OK.
 NG >> Repair or replace harness between rear window defogger and ground.



Door Mirror Defogger Power Supply Circuit Check

AIS00140

1. CHECK FUSE

Check if any of the following fuses for Fuse block (J/B) are blown.

COMPONENT PARTS	TERMINAL NO. (SIGNAL)	AMPERE	FUSE NO.
Fuse block (J/B)	5B (BAT power supply)	10A	#8

NOTE:

Refer to [GW-57, "Component Parts and Harness Connector Location"](#) .

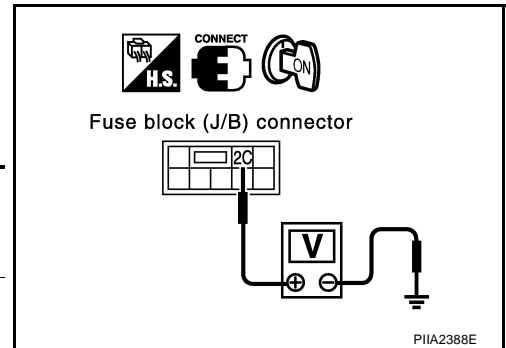
OK or NG

- OK >> GO TO 2.
 NG >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse, refer to [GW-57, "Component Parts and Harness Connector Location"](#) .

2. DOOR MIRROR DEFOGGER POWER SUPPLY CIRCUIT INSPECTION 1

1. Turn ignition switch ON.
2. Push the rear window defogger switch.
3. Check voltage between fuse block (J/B) connector and body ground.

Con- nector	Terminal (Wire color)		Condition	Voltage (V)
	(+)	(-)		
E101	2C (Y)	Ground	Turn ignition switch ON. When rear window defogger switch is pressed.	Battery voltage
			Turn ignition switch OFF.	0



OK or NG

- OK >> GO TO 3.
 NG >> Repair or replace between harness rear window defogger relay and Fuse block (J/B)

REAR WINDOW DEFOGGER

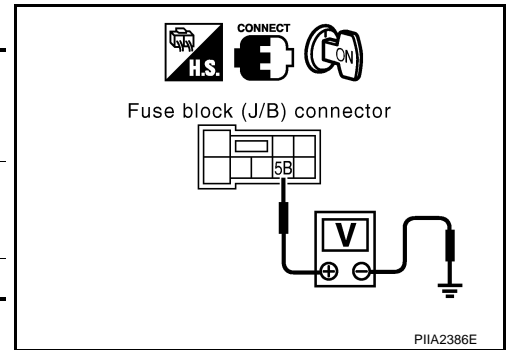
3. DOOR MIRROR DEFOGGER POWER SUPPLY INSPECTION 2

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

Con- nector	Terminal (Wire color)		Condition	Voltage (V)
	(+)	(-)		
M5	5B (L)	Ground	Turn ignition switch ON. When rear window defogger switch is pressed.	Battery voltage
			Turn ignition switch OFF.	0

OK or NG

- OK >> Repair or replace harness between fuse block (J/B) and door mirror defogger (driver side, passenger side).
 NG >> Replace fuse block (J/B).



Driver Side Door Mirror Defogger Circuit Check

AIS00156

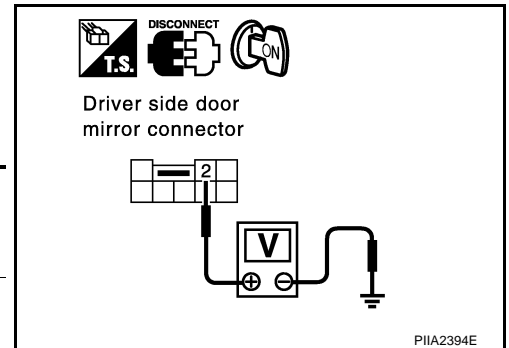
1. DOOR MIRROR DEFOGGER POWER SUPPLY CIRCUIT INSPECTION

1. Turn ignition switch ON.
2. Remove door mirror defogger connector.
3. Push the rear window defogger switch
4. Check voltage between driver side door mirror defogger connector and ground.

Con- nector	Terminal (Wire color)		Condition	Voltage (V)
	(+)	(-)		
D2	2 (SB)	Ground	Turn ignition switch ON. When rear window defogger switch is pressed.	Battery voltage
			Turn ignition switch OFF.	0

OK or NG

- OK >> GO TO 2.
 NG >> Repair or replace harness between fuse block (J/B) and driver side door mirror defogger.



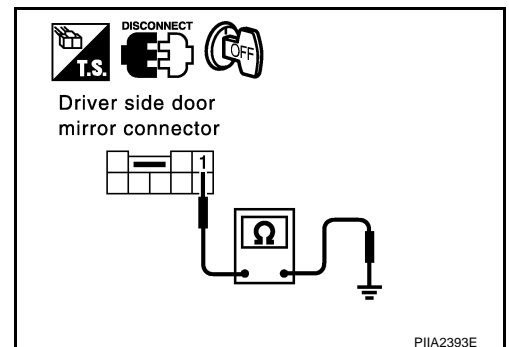
2. DOOR MIRROR DEFOGGER GROUND HARNESS INSPECTION

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

1 (B) – Ground : Continuity should exist.

OK or NG

- OK >> Check the following, if it is OK, replace driver side door mirror assembly.
 ● Door mirror defogger firmament continuity check.
 NG >> Repair or replace harness between driver side door mirror defogger and ground.



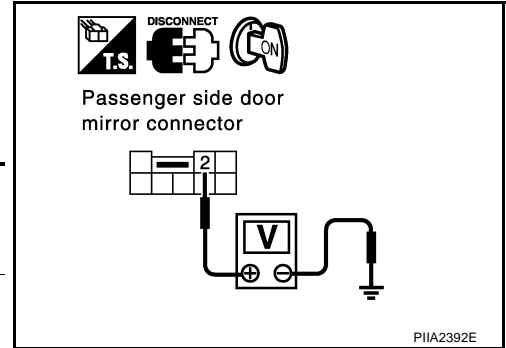
REAR WINDOW DEFOGGER

AIS00157

Passenger Side Door Mirror Defogger Circuit Check

1. DOOR MIRROR DEFOGGER POWER SUPPLY CIRCUIT INSPECTION

1. Turn ignition switch ON.
2. Remove passenger side door mirror defogger connector.
3. Keep pushing the rear window defogger switch.
4. Check voltage between passenger side door mirror defogger connector and body ground.



Con- nector	Terminal (Wire color)		Condition	Voltage (V)
	(+)	(-)		
D32	2 (L)	Ground	Turn ignition switch ON. When rear window defogger switch is pressed.	Battery voltage
			Turn ignition switch OFF.	0

OK or NG

OK >> GO TO 2.

NG >> Repair or replace harness between fuse block (J/B) and passenger side door mirror defogger.

2. DOOR MIRROR DEFOGGER GROUND HARNESS INSPECTION

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

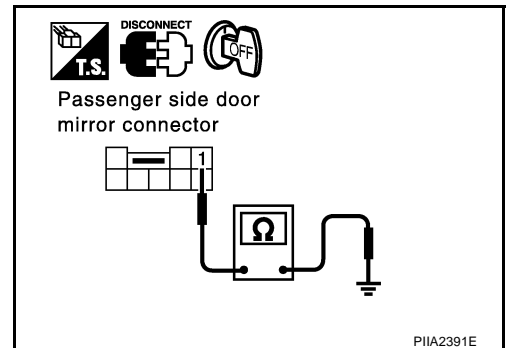
1 (B) – Ground : Continuity should exist.

OK or NG

OK >> Check the following, if it is OK, replace passenger side door mirror assembly

- Door mirror defogger firmament continuity check.

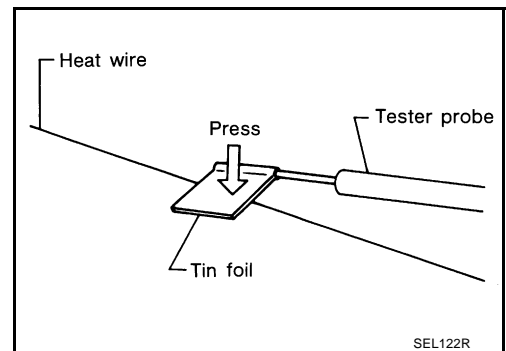
NG >> Repair or replace harness between passenger side door mirror defogger and ground.



Filament Check

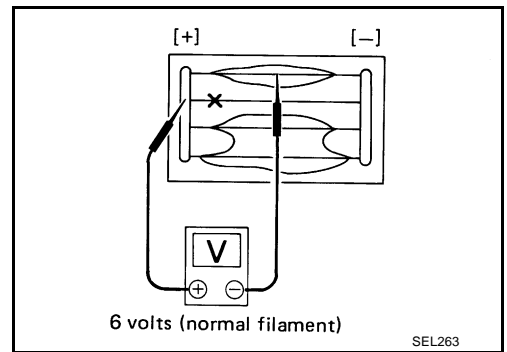
AIS000G3

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

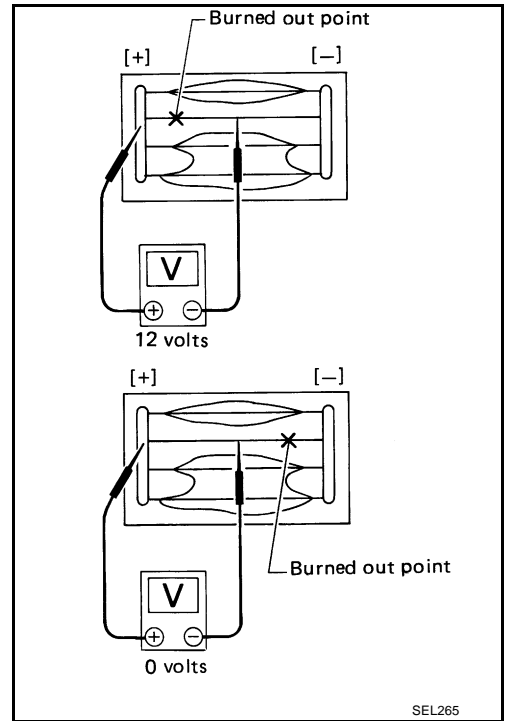


REAR WINDOW DEFOGGER

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



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



Filament Repair REPAIR EQUIPMENT

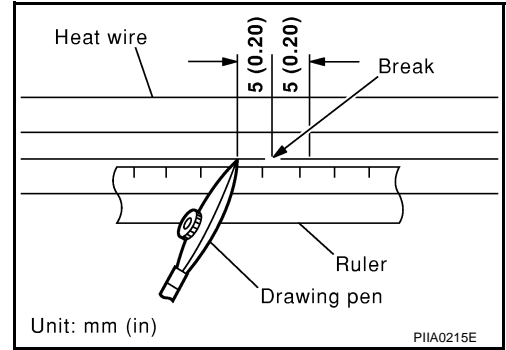
- Conductive silver composition (Dopant No. 4817 or equivalent)
- Ruler 30 cm (11.8 in) long
- Drawing pen
- Heat gun
- Alcohol
- Cloth

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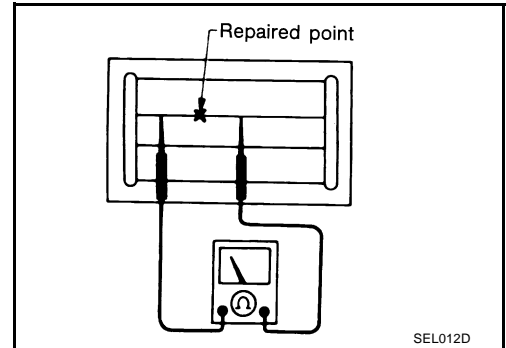
REAR WINDOW DEFOGGER

REPAIRING PROCEDURE

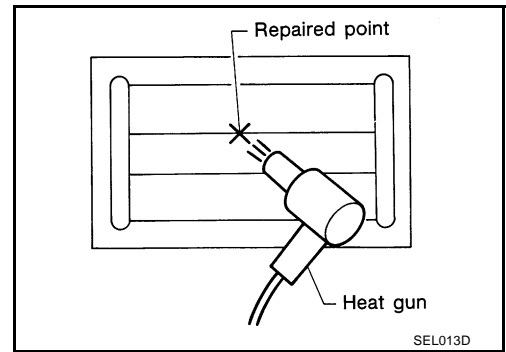
1. Wipe broken heat wire and its surrounding area clean with a cloth dampened in alcohol.
2. Apply a small amount of conductive silver composition to tip of drawing pen. Shake silver composition container before use.
3. Place ruler on glass along broken line. Deposit conductive silver composition on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



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



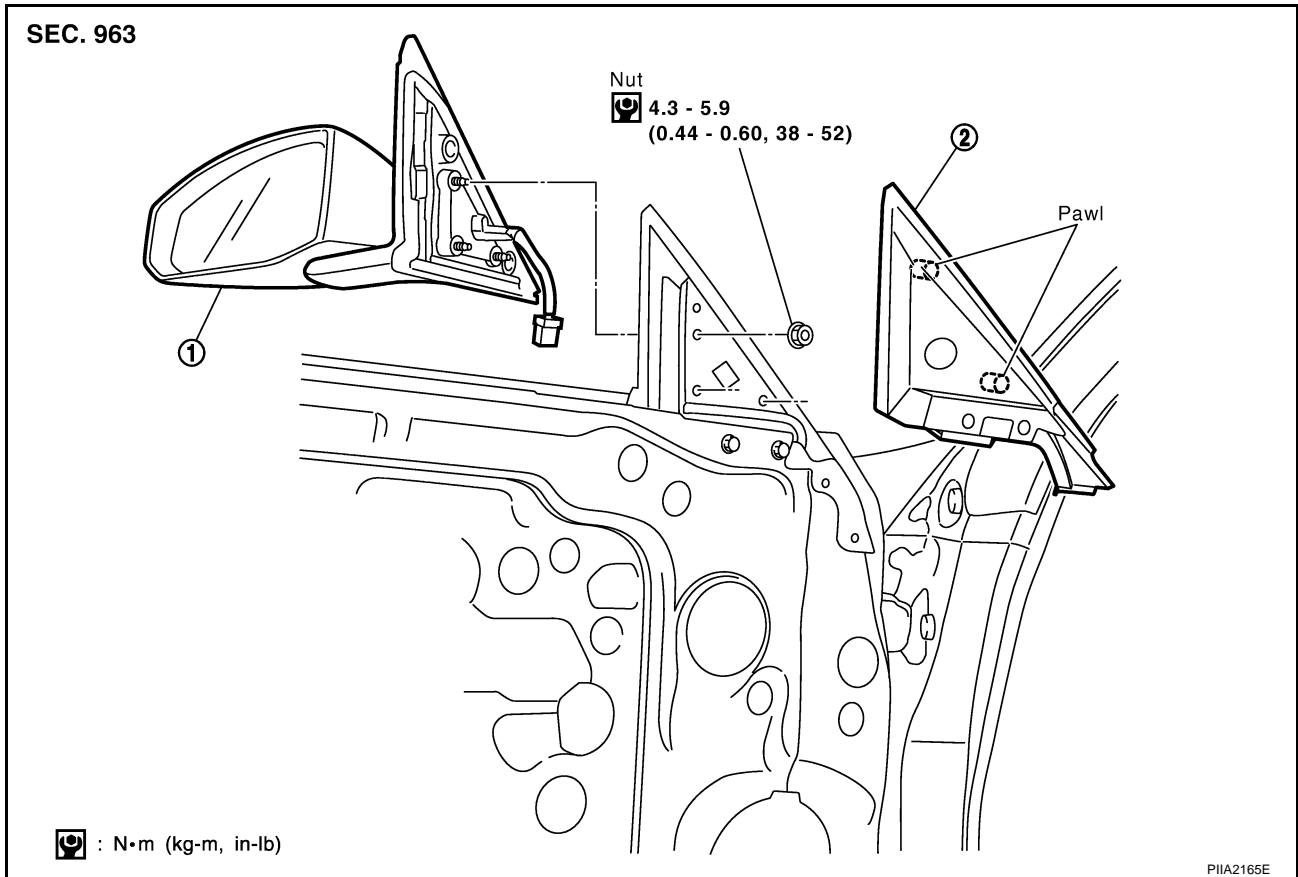
5. Apply a constant stream of hot air directly to the repaired area for approximately 20 minutes with a heat gun. A minimum distance of 3 cm (1.2 in) should be kept between repaired area and hot air outlet. If a heat gun is not available, let the repaired area dry for 24 hours.



DOOR MIRROR

AIS000G6

Removal and Installation



REMOVAL

1. Remove door finisher. Refer to [EI-30, "DOOR FINISHER"](#).
2. Remove corner cover inner.
3. Disconnect door mirror harness connector.
4. Remove door mirror mounting nuts, and remove door mirror assembly.

INSTALLATION

Install in the reverse order of removal.

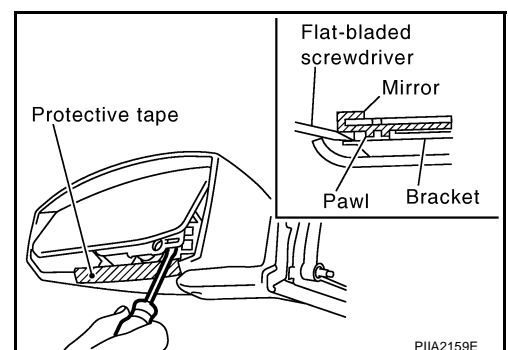
DISASSEMBLY

1. Place the mirror body with mirror glass facing upward.
2. Put strip of protective tape on mirror body.
3. As shown in the figure insert a small slotted screwdriver into the recess between mirror base (mirror holder) and mirror holder bracket and push up two pawls to remove mirror holder lower half side.

NOTE:

When pushing up pawls do not attempt to use one recess only, be sure to push up with both recesses. Insert screwdriver into recesses, and push up while rotating (twist) to make work easier.

4. Remove two terminals of mirror heater attachment.
5. Lightly lift up lower side of mirror surface from mirror surface, and detach two pawls of upper side as if pulling it out. Remove mirror surface from mirror body.



DOOR MIRROR

NOTE:

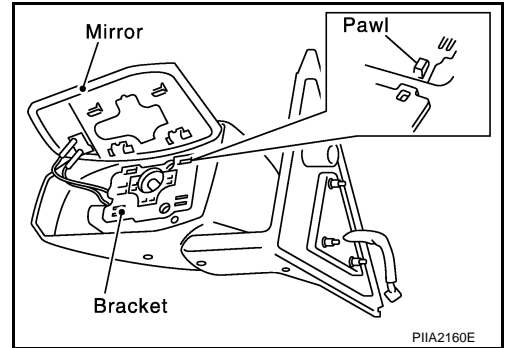
Be certain not to allow grease on sealing agent in center of mirror body assembly (actuator) or back side of mirror surface (mirror holder).

ASSEMBLY

1. Place mirror holder bracket and mirror body assembly (actuator) in a horizontal position.
2. Connect two terminals of heater installed mirror.
3. Fit the upper two pawls on the mirror face onto the mirror holder bracket first, then press the lower side of mirror face until a click sound is heard to engage the lower pawls.

NOTE:

After installation, visually check that lower two pawls are securely engaged from the bottom of mirror face.



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DOOR MIRROR
