

SECTION **GW**

GLASSES, WINDOW SYSTEM & MIRRORS

CONTENTS

PRECAUTIONS	3	POWER WINDOW SERIAL LINK	19
Precautions for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"	3	POWER WINDOW LOCK	19
Precautions for Procedures without Cowl Top Cover... Handling for Adhesive and Primer	3	RETAINED POWER OPERATION	19
PREPARATION	4	ANTI-PINCH SYSTEM	19
Special Service Tools	4	POWER WINDOW CONTROL BY THE KEY CYLINDER SWITCH	19
Commercial Service Tools	4	CAN Communication System Description	20
SQUEAK AND RATTLE TROUBLE DIAGNOSES	5	CAN Communication Unit	20
Work Flow	5	Schematic	21
CUSTOMER INTERVIEW	5	Wiring Diagram — WINDOW —	22
DUPLICATE THE NOISE AND TEST DRIVE	6	Terminal and Reference Value for BCM	26
CHECK RELATED SERVICE BULLETINS	6	Terminal and Reference Value for Power Window Main Switch	27
LOCATE THE NOISE AND IDENTIFY THE ROOT CAUSE	6	Terminal and Reference Value for Front Power Window Switch (Passenger Side)	28
REPAIR THE CAUSE	6	CONSULT-II Function (BCM)	29
CONFIRM THE REPAIR	7	CONSULT-II START PROCEDURE	29
Generic Squeak and Rattle Troubleshooting	7	ACTIVE TEST	29
INSTRUMENT PANEL	7	WORK SUPPORT	29
CENTER CONSOLE	7	DATE MONITOR	29
DOORS	7	Work Flow	30
TRUNK	8	Trouble Diagnosis Symptom Chart	30
SUNROOF/HEADLINING	8	Check BCM Power Supply and Ground Circuit	32
SEATS	8	Check Power Window Main Switch Power Supply Circuit	33
UNDERHOOD	8	Check Front Power Window Switch (Passenger Side) Power Supply and Ground Circuit	34
Diagnostic Worksheet	9	Check Front Power Window Motor (Driver Side) Circuit	35
WINDSHIELD GLASS	11	Check Front Power Window Motor (Passenger Side) Circuit	36
Removal and Installation	11	Check rear Power Window Motor (LH) Circuit	36
REMOVAL	11	Check Rear Power Window Motor (RH) Circuit	39
INSTALLATION	12	Check Limit Switch Circuit (Driver Side)	41
BACK DOOR WINDOW GLASS	13	Check Limit Switch Circuit (Passenger Side)	43
Removal and Installation	13	Check Encoder Circuit (Driver Side)	44
REMOVAL	13	Check Encoder Circuit (Passenger Side)	46
INSTALLATION	14	Check Door Switch	49
POWER WINDOW SYSTEM	15	Check Front Door Key Cylinder Switch	51
Component Parts and Harness Connector Location	15		
System Description	16		
MANUAL OPERATION	16		
AUTO OPERATION	18		

Check Power Window Serial Link (Passenger Side) ..	53	CONSULT-II Function (BCM)	75
Check Power Window Lock Switch	55	CONSULT-II START PROCEDURE	75
SIDE WINDOW GLASS	56	DATA MONITOR	75
Removal and Installation	56	ACTIVE TEST	75
REMOVAL	56	CONSULT-II Function (IPDM E/R)	75
INSTALLATION	57	CONSULT-II START PROCEDURE	75
FRONT DOOR GLASS AND REGULATOR	58	DATA MONITOR	75
Removal and Installation	58	ACTIVE TEST	75
DOOR GLASS	58	Work Flow	76
REGULATOR ASSEMBLY	59	Trouble Diagnoses Symptom Chart	76
Disassembly and assembly	60	Check BCM Power Supply and Ground Circuit	77
REGULATOR ASSEMBLY	60	Check Rear Window Defogger Switch Circuit	78
Inspection after Installation	60	Check rear Window Defogger Power Supply Circuit ..	79
SETTING OF LIMIT SWITCH	60	Check Rear Window Defogger Circuit	81
FITTING INSPECTION	60	Check Door Mirror Defogger Power Supply Circuit ..	82
REAR DOOR GLASS AND REGULATOR	62	Check Driver Side Door Mirror Defogger Circuit	84
Removal and Installation	62	Check Passenger Side Door Mirror Defogger Circuit ..	85
DOOR GLASS	62	Check Rear Window Defogger Signal	85
REGULATOR ASSEMBLY	63	Check Filament	87
Disassembly and assembly	64	Filament Repair	87
REGULATOR ASSEMBLY	64	REPAIR EQUIPMENT	87
Fitting Inspection	64	REPAIRING PROCEDURE	88
INSIDE MIRROR	65	DOOR MIRROR	89
Wiring Diagram — I/MIRR —	65	Wiring Diagram — MIRROR — (Without Electric	
Removal and Installation	66	Foldable Door Mirror)	89
REMOVAL	66	Schematic (With Electric Foldable Door Mirror)	91
INSTALLATION	66	Wiring Diagram — MIRROR — (With Electric Fold-	
COMPASS	66	able Door Mirror)	92
REAR WINDOW DEFOGGER	67	Trouble Diagnosis	97
Component Parts and Harness Connector Location ..	67	Removal and Installation	98
System Description	67	REMOVAL	98
CAN Communication System Description	68	INSTALLATION	98
CAN Communication Unit	68	Disassembly and Assembly	98
Schematic	69	DISASSEMBLY	98
Wiring Diagram — DEF —	70	ASSEMBLY	99
Terminal and Reference Value for BCM	74		
Terminal and Reference Value for IPDM E/R	74		

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.

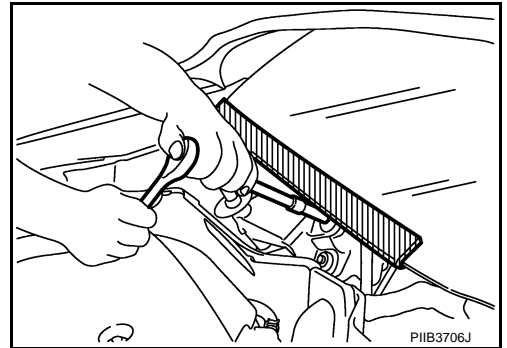
WARNING:

- 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 Procedures without Cowl Top Cover

NIS001QG

When performing the procedure after removing cowl top cover, cover the lower end of windshield with urethane, etc.



Handling for Adhesive and Primer

NIS001QH

- 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.

PREPARATION

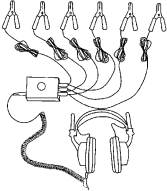
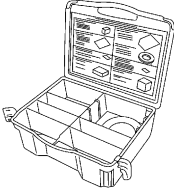
PREPARATION

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Special Service Tools

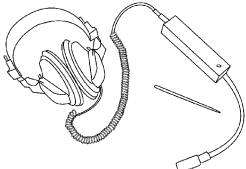
NIS001QI

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
(J39570) Chassis ear <div style="text-align: center;">  <p>SIIA0993E</p> </div>	Locating the noise
(J43980) NISSAN Squeak and Rattle Kit <div style="text-align: center;">  <p>SIIA0994E</p> </div>	Repairing the cause of noise

Commercial Service Tools

NIS001QJ

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

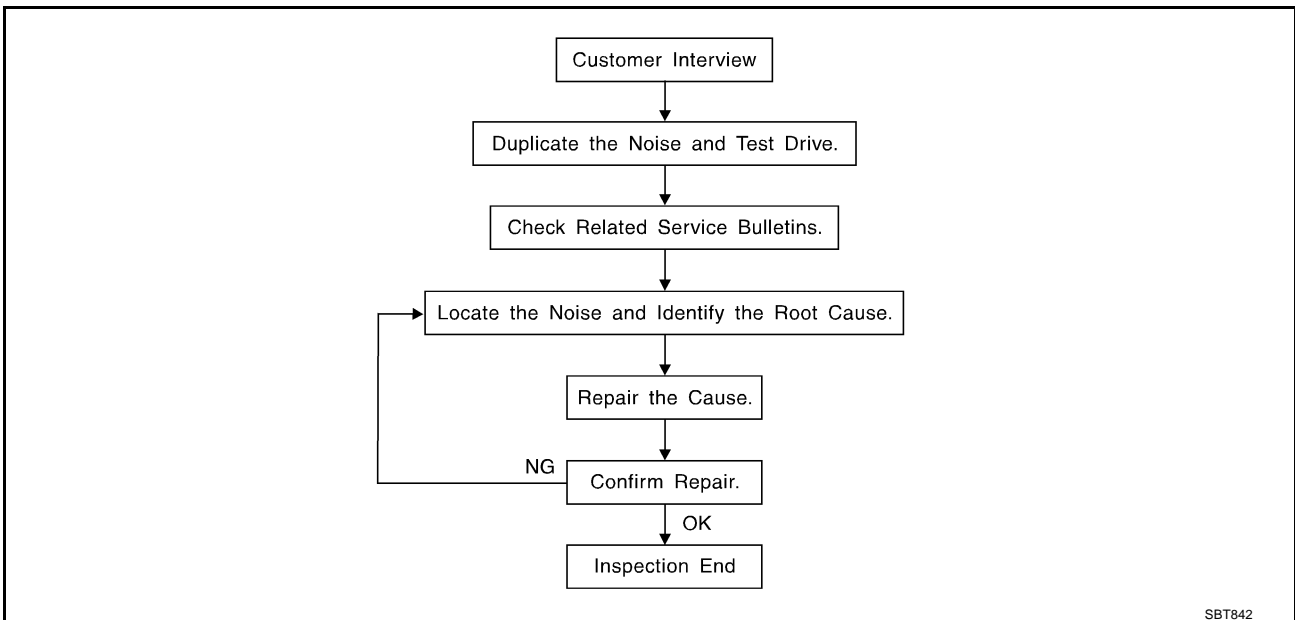
SQUEAK AND RATTLE TROUBLE DIAGNOSES

SQUEAK AND RATTLE TROUBLE DIAGNOSES

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Work Flow

NIS001QK



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 models, drive position on A/T models).
 - 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: J39570, 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 (J43980) 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.

NOTE:

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

The following materials are contained in the Nissan Squeak and Rattle Kit (J43980). Each item can be ordered separately as needed.

URETHANE PADS [1.5 mm (0.059 in) thick]

Insulates connectors, harness, etc.

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

71L02: 15 × 25 mm (0.59 × 0.98 in)

INSULATOR (Foam blocks)

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

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

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

SQUEAK AND RATTLE TROUBLE DIAGNOSES

INSULATOR (Light foam block)

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

FELT CLOTHTAPE

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

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

UHMW (TEFLON) TAPE

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

SILICONE GREASE

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

Note: Will only last a few months.

SILICONE SPRAY

Use when grease cannot be applied.

DUCT TAPE

Use to eliminate movement.

CONFIRM THE REPAIR

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

Generic Squeak and Rattle Troubleshooting

NIS001QL

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 (J43980) to repair the noise.

SQUEAK AND RATTLE TROUBLE DIAGNOSES

TRUNK

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

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

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

SUNROOF/HEADLINING

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

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

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

SEATS

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

Cause of seat noise include:

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

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

UNDERHOOD

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

Causes of transmitted underhood noise include:

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

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

SQUEAK AND RATTLE TROUBLE DIAGNOSES

Diagnostic Worksheet

NIS001QM



INFINITI.

SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

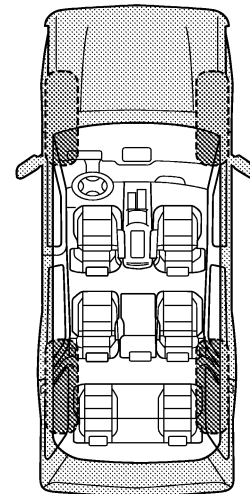
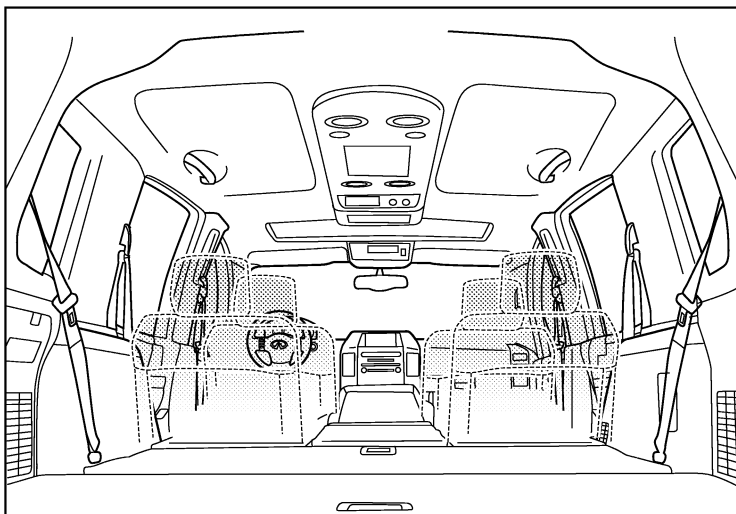
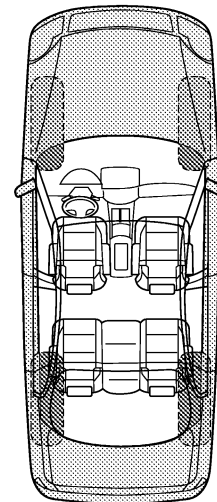
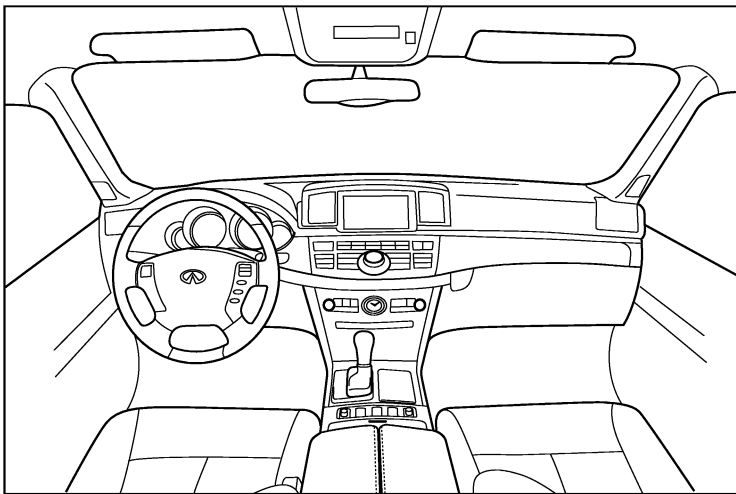
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Dear Infiniti Customer:

We are concerned about your satisfaction with your Infiniti vehicle. Repairing a squeak or rattle sometimes can be very difficult. To help us fix your Infiniti right the first time, please take a moment to note the area of the vehicle where the squeak or rattle occurs and under what conditions. You may be asked to take a test drive with a service consultant 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 page 2 of the worksheet and briefly describe the location of the noise or rattle. In addition, please indicate the conditions which are present when the noise occurs.

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SQUEAK AND RATTLE TROUBLE DIAGNOSES

SQUEAK & RATTLE DIAGNOSTIC WORKSHEET - page 2

Briefly describe the location where the noise occurs:

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

- | | |
|---|--|
| <input type="checkbox"/> anytime | <input type="checkbox"/> after sitting out in the rain |
| <input type="checkbox"/> 1st 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 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 at the door)
- tick (like a clock second hand)
- thump (heavy, muffled knock noise)
- buzz (like a bumble bee)

TO BE COMPLETED BY DEALERSHIP PERSONNEL

Test Drive Notes:

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

VIN: _____ Customer Name: _____

W.O.# _____ Date: _____

This form must be attached to Work Order

PIIB8742E

WINDSHIELD GLASS

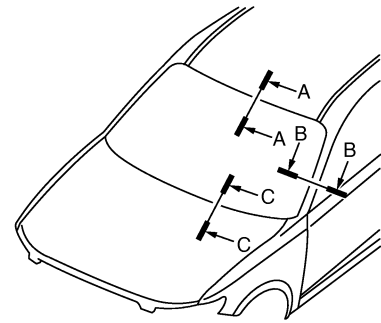
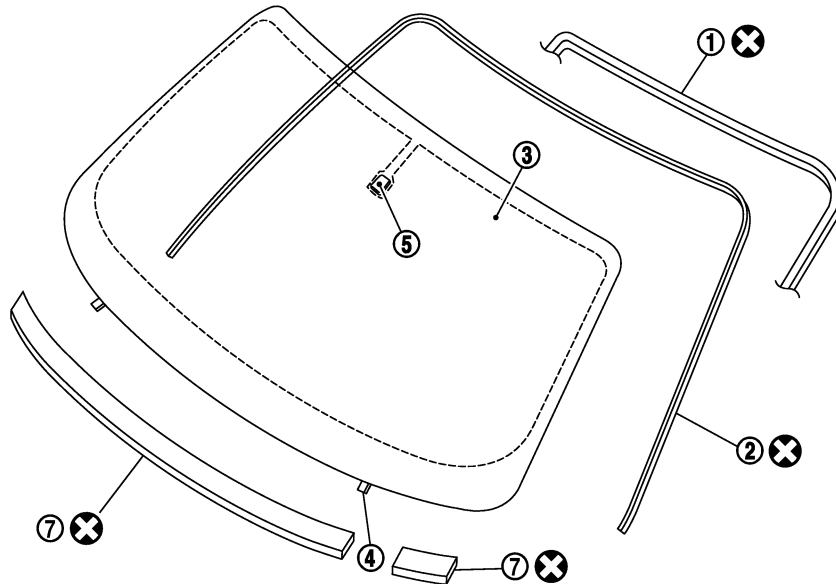
WINDSHIELD GLASS

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Removal and Installation

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SEC. 720

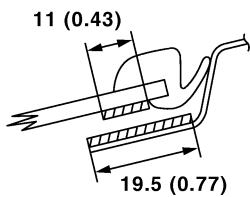


Unit: mm (in)

⊗: Always replace after every disassembly.

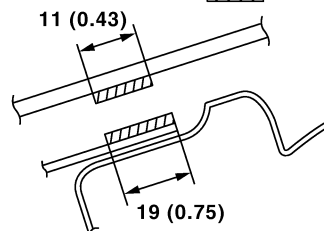
Primer area (Upper)

: Primer

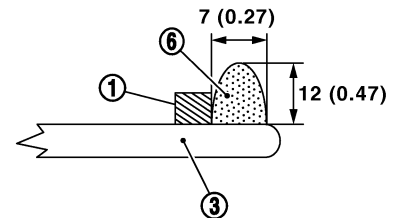


Primer area (Lower)

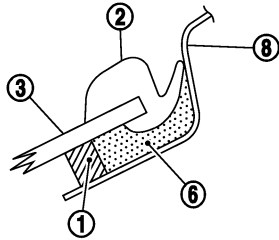
: Primer



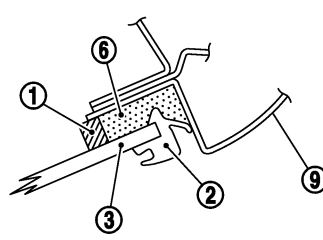
Adhesive coating shape



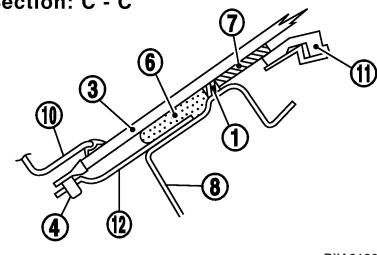
Section: A - A



Section: B - B



Section: C - C



PIA9190E

1. Dam rubber
4. Spacer
7. Insulator
10. Cowl top cover

2. Molding
5. Mirror base
8. Panel
11. Pad

3. Windshield glass
6. Bond
9. Body side (outer)
12. Bracket

REMOVAL

1. Remove the front pillar garnish. Refer to [EI-38, "BODY SIDE TRIM"](#) .
2. Partially remove the headlining (front edge). Refer to [EI-43, "HEADLINING"](#) .
3. Remove the front wiper arms. Refer to [WW-37, "Removal and Installation of Front Wiper and Washer Switch"](#) .
4. Remove the cowl top cover. Refer to [EI-23, "COWL TOP"](#) .
5. Pull the molding using the pliers.
6. 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.

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WINDSHIELD GLASS

NOTE:

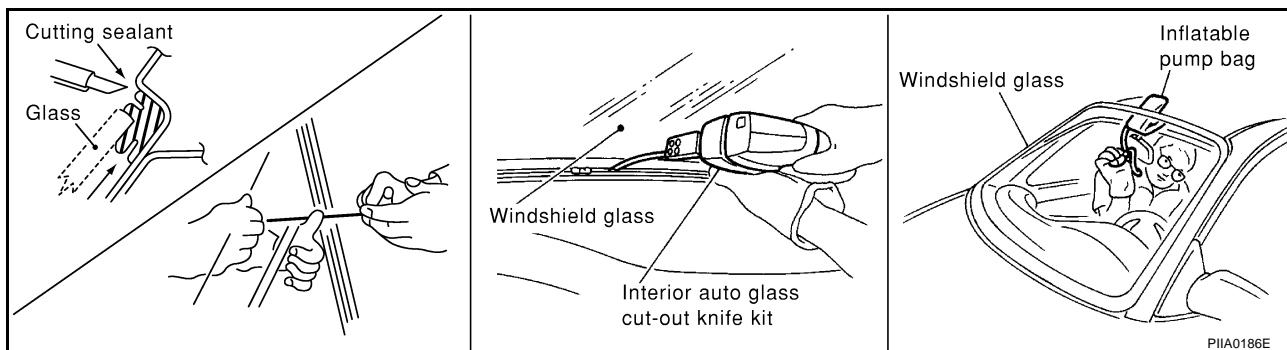
If a windshield glass is to be reused, mark the body and the glass with mating marks.

WARNING:

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

CAUTION:

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



7. Remove the windshield glass, using suction.

INSTALLATION

- Use a genuine Nissan Urethane Adhesive Kit (if available) or equivalent and follow the instructions furnished with it.
- While the urethane adhesive is curing, open a door window. This will prevent the glass from being forced out by passenger room 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 temperature and lower humidity.

Repairing Water Leaks for Windshield

Leaks can be repaired without removing and reinstalling glass.

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

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

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

BACK DOOR WINDOW GLASS

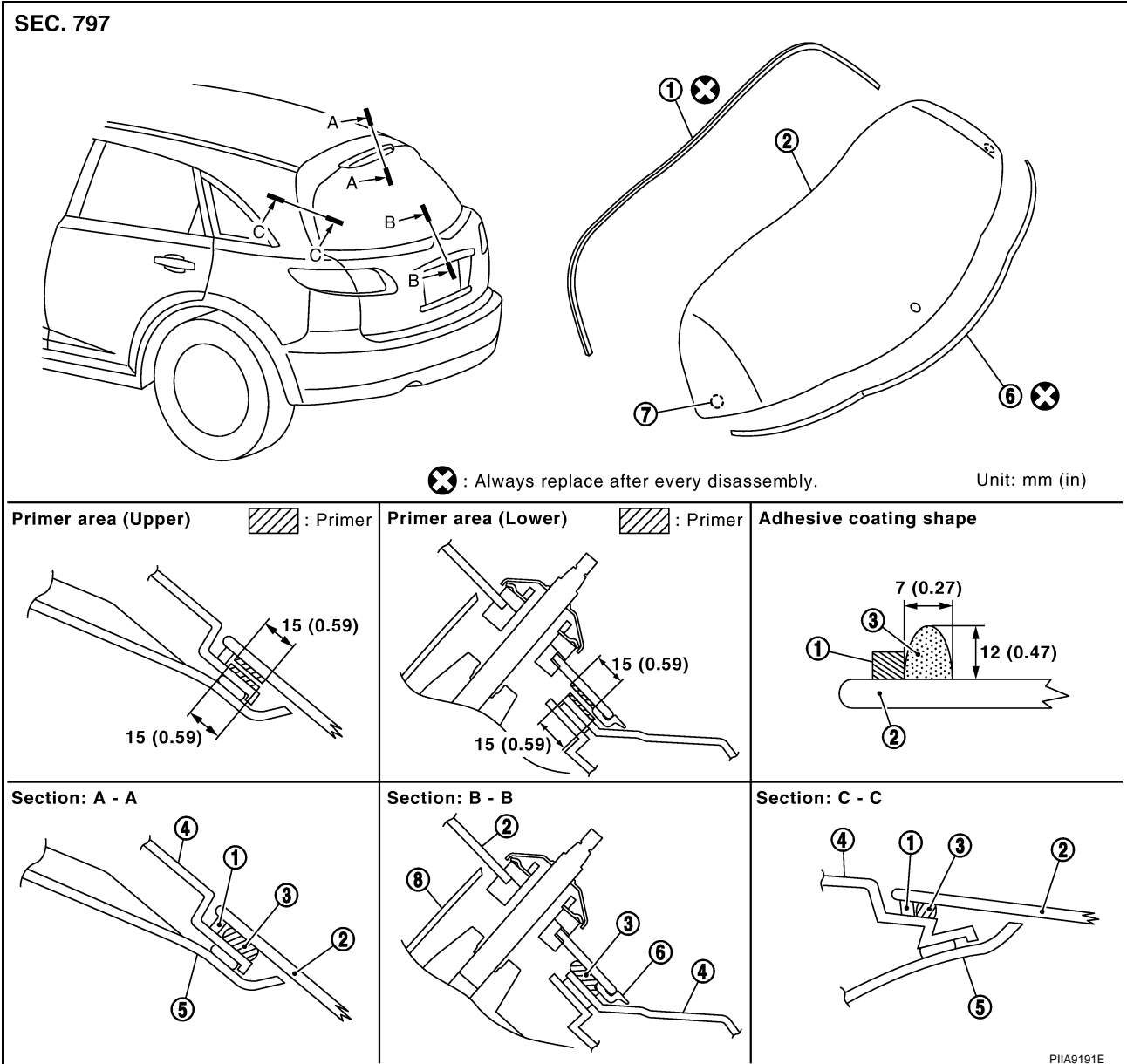
BACK DOOR WINDOW GLASS

PFP:90300

Removal and Installation

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|--------------------------|---------------------------|-----------------------------|
| 1. Dam rubber | 2. Back door window glass | 3. Adhesive |
| 4. Back door outer panel | 5. Back door inner panel | 6. Back door window molding |
| 7. Clip | 8. Back door finisher | |

REMOVAL

1. Remove the back door finisher. Refer to [EI-47, "BACK DOOR TRIM"](#).
2. Remove the rear wiper arm. Refer to [WW-54, "Removal and Installation of Rear Wiper and Washer Switch"](#).
3. Remove the connectors and grounds for the rear window defogger.
 - After removing molding, remove glass using cutting knife 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.

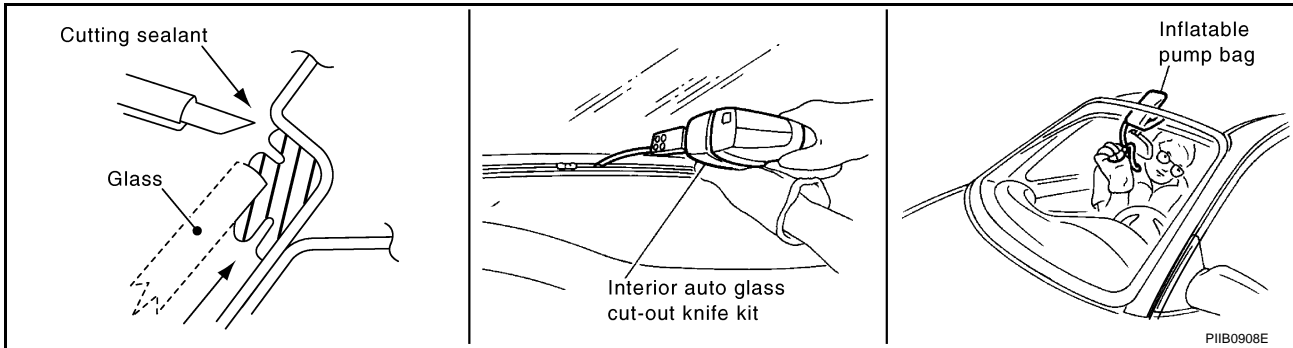
WARNING:

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:

- 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.



4. Remove the back door window glass, using suction liter.

INSTALLATION

- Use a genuine Nissan Urethane Adhesive Kit (if available) or equivalent and follow the instructions furnished with it.
- While the urethane adhesive is curing, open a door window. This will prevent the glass from being forced out by passenger room 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 back door window glass in case of an accident.

CAUTION:

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

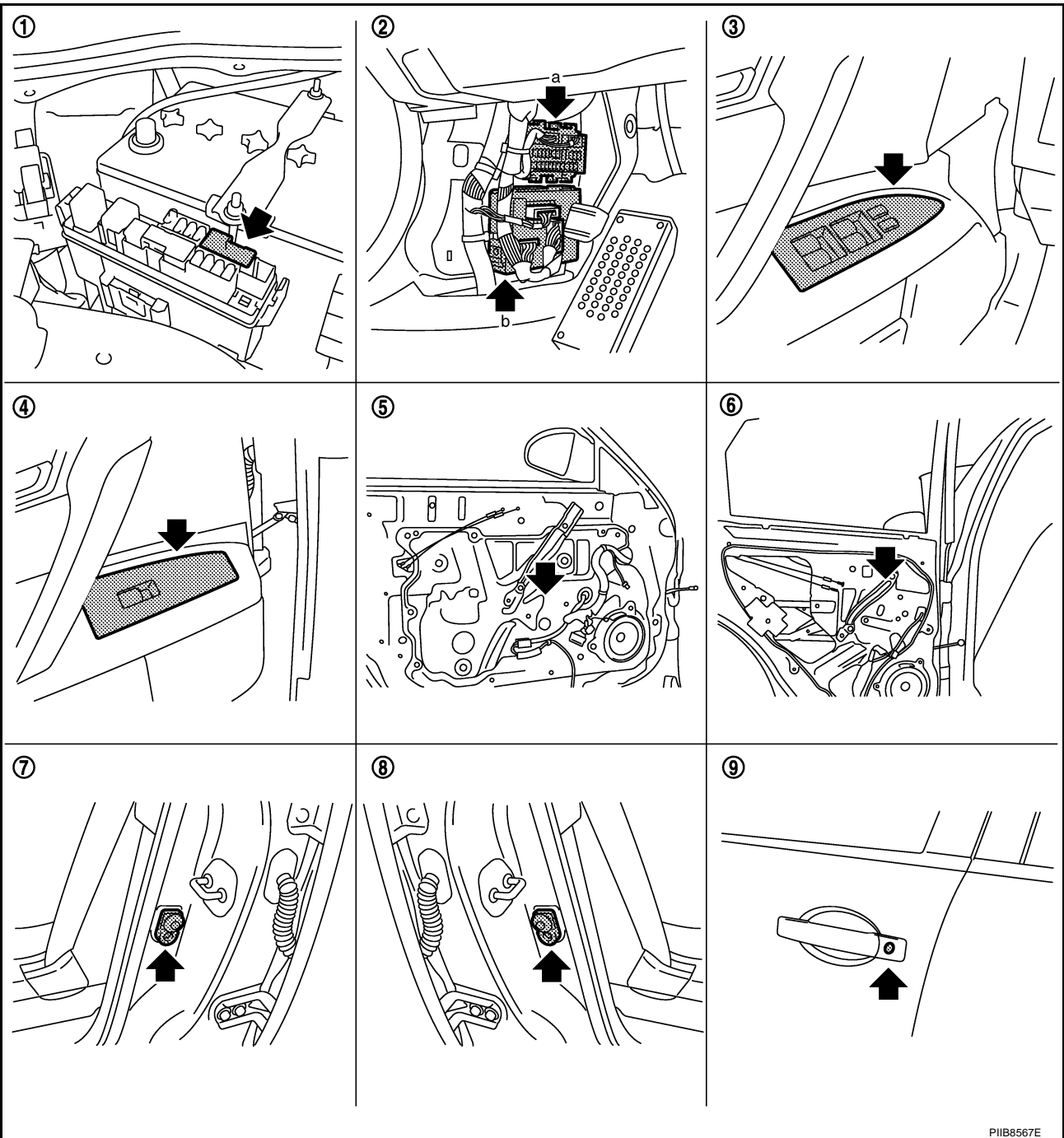
POWER WINDOW SYSTEM

POWER WINDOW SYSTEM

PFP:25401

Component Parts and Harness Connector Location

NIS001QP



- | | | |
|--|---|---|
| 1. Fusible link 50A letter M | 2. a: Fuse block (J/B) M1, M2
b: BCM M3, M4, B14 | 3. Power window main switch D6, D7 |
| 4. Rear power window switch LH D55 | 5. Front power window motor D8 (driver side) | 6. Rear power window motor LH D56 |
| 7. Front door switch (driver side) B26 | 8. Front door switch (passenger side) B36 | 9. Front door lock assembly (driver side) (key cylinder switch) D10 |

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POWER WINDOW SYSTEM

NIS001QQ

System Description

Power is supplied at all time

- through 50A fusible link (letter **M** , located in the fuse and fusible link box)
- to BCM terminal 55, and
- through BCM terminal 54
- to power window main switch terminal 19
- to front power window switch (passenger side) terminal 10.
- through 15A fuse [No. 22, located in the fuse block (J/B)]
- to BCM terminal 42.

With ignition switch in ON or START position,
Power is supplied

- through 15A fuse [No. 1 , located in the fuse block (J/B)]
- to BCM terminal 38, and
- trough BCM terminal 53
- to power window main switch terminal 10
- to rear power window switch (LH and RH) terminal 1.

Ground supplied

- to BCM terminal 49 and 52
- through body grounds M35, M45 and M85.
- to power window main switch terminal 17
- through body grounds M35, M45 and M85.
- to front power window switch (passenger side) terminal 11
- through body grounds M35, M45 and M85.

MANUAL OPERATION

Front Driver Side Door

WINDOW UP

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

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

Ground is supplied

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

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

WINDOW DOWN

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

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

Ground is supplied

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

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

Front Passenger Side Door

FRONT POWER WINDOW SWITCH (PASSENGER SIDE) OPERATION

WINDOW UP

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

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

POWER WINDOW SYSTEM

Ground is supplied

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

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

WINDOW DOWN

When the front power window switch (passenger side) is pressed in the down position

Power is supplied

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

Ground is supplied

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

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

POWER WINDOW MAIN SWITCH OPERATION

Signal is sent

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

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

Rear Door (LH or RH)

REAR POWER WINDOW SWITCH (LH OR RH) OPERATION WINDOW UP

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

Power is supplied

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

Ground is supplied

- to rear power window motor (LH or RH) terminal 1
- through rear power window switch (LH or RH) terminal 4
- through rear power window switch (LH or RH) terminal 3
- through power window main switch terminal 3 (LH) or 5 (RH).

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

WINDOW DOWN

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

Power is supplied

- through rear power window switch (LH or RH) terminal 4
- to rear power window motor (LH or RH) terminal 1.

Ground is supplied

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

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

POWER WINDOW MAIN SWITCH OPERATION

WINDOW UP

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

Power is supplied

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

Ground is supplied

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POWER WINDOW SYSTEM

- to rear power window motor (LH or RH) terminal 1
- through rear power window switch (LH or RH) terminal 4
- through rear power window switch (LH or RH) terminal 3
- through power window main switch terminal 3 (LH) or 5 (RH)

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

WINDOW DOWN

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

Power is supplied

- through power window main switch terminal 3 (LH) or 5 (RH)
- through rear power window switch (LH or RH) terminal 3
- through rear power window switch (LH or RH) terminal 4
- to rear power window motor (LH or RH) terminal 1.

Ground is supplied

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

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

AUTO OPERATION

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

Two types of auto operation system are applied to model S50.

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

POWER WINDOW SYSTEM

POWER WINDOW SERIAL LINK

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

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

- Keyless power window down signal.

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

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

POWER WINDOW LOCK

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

RETAINED POWER OPERATION

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

Power is supplied for 45 seconds

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

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

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

RAP signal period can be changed by CONSULT-II. Refer to [GW-29, "CONSULT-II Function \(BCM\)"](#). H

ANTI-PINCH SYSTEM

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

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

- 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 L

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

POWER WINDOW CONTROL BY THE KEY CYLINDER SWITCH

When ignition key switch is OFF, front power window can be opened or closed by turning the key cylinder switch 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 DOWN 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 DOWN is operated.

POWER WINDOW SYSTEM

CAN Communication System Description

NIS001QR

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

CAN Communication Unit

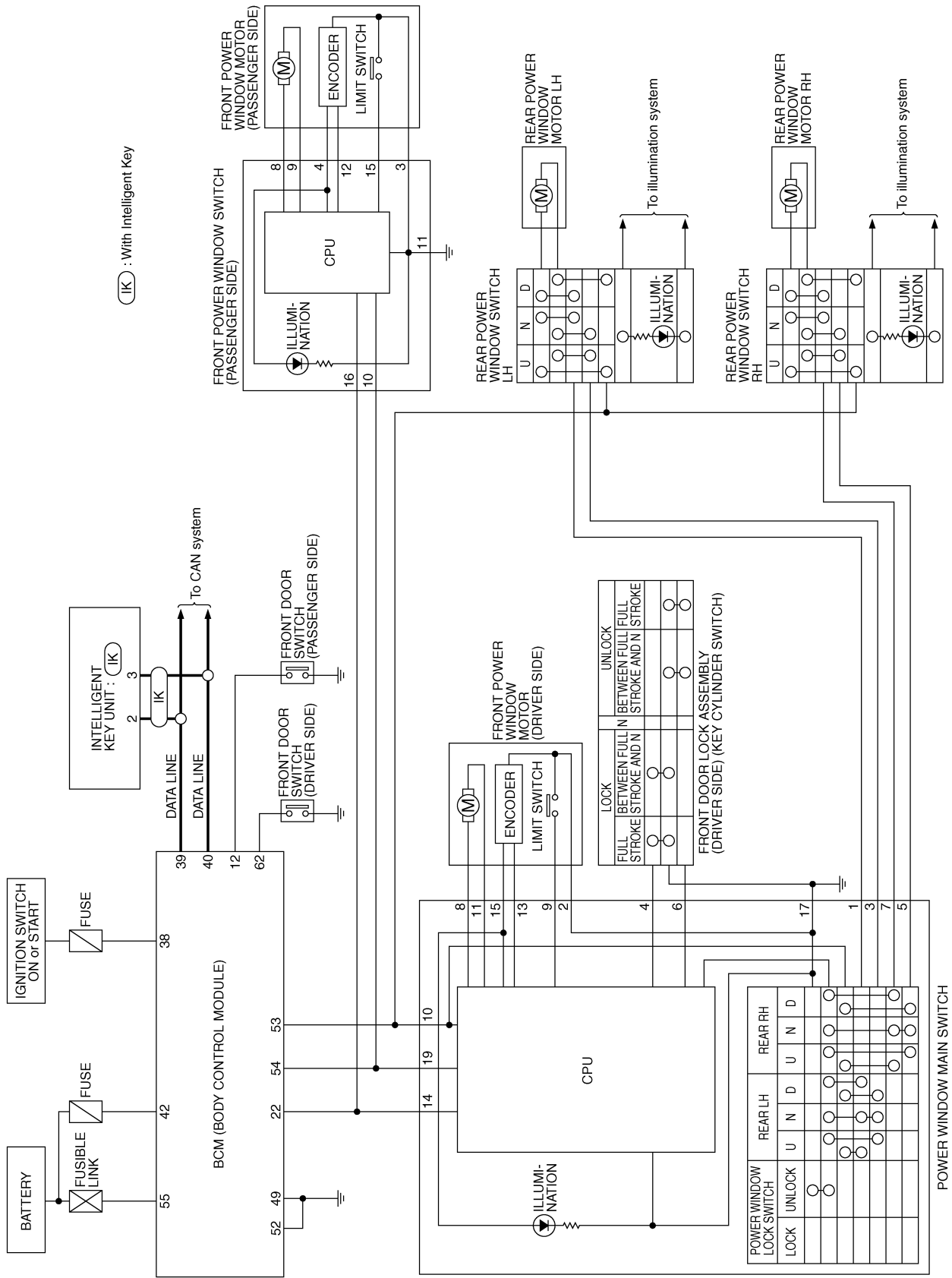
NIS001QS

Refer to [LAN-49, "CAN System Specification Chart"](#) .

POWER WINDOW SYSTEM

Schematic

NIS001QT



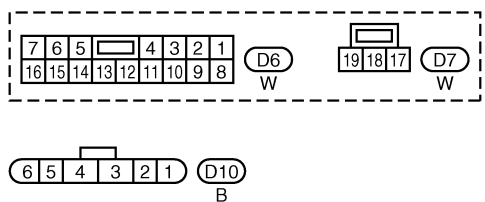
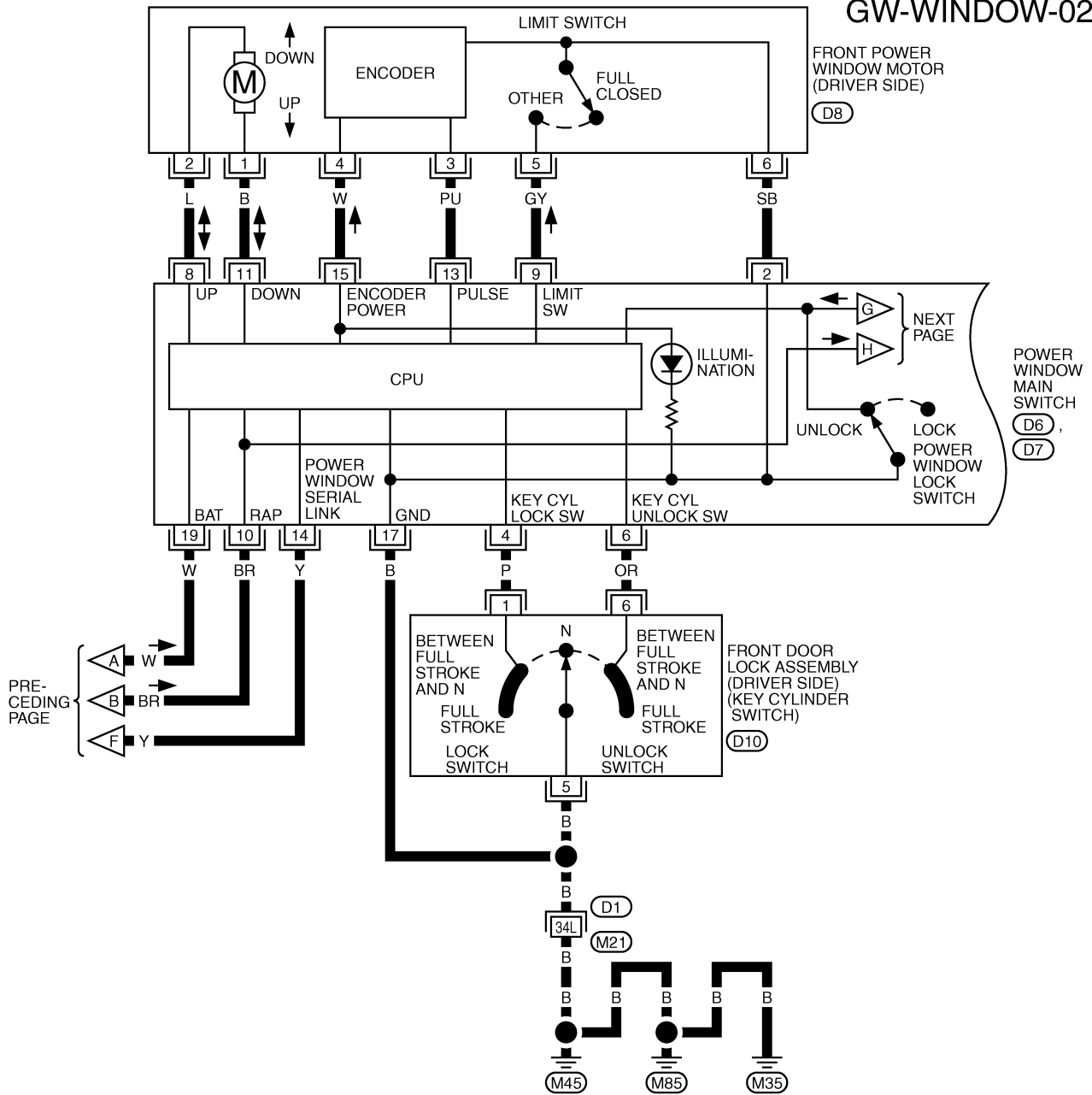
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POWER WINDOW SYSTEM

GW-WINDOW-02

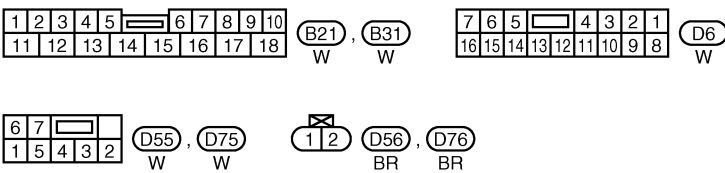
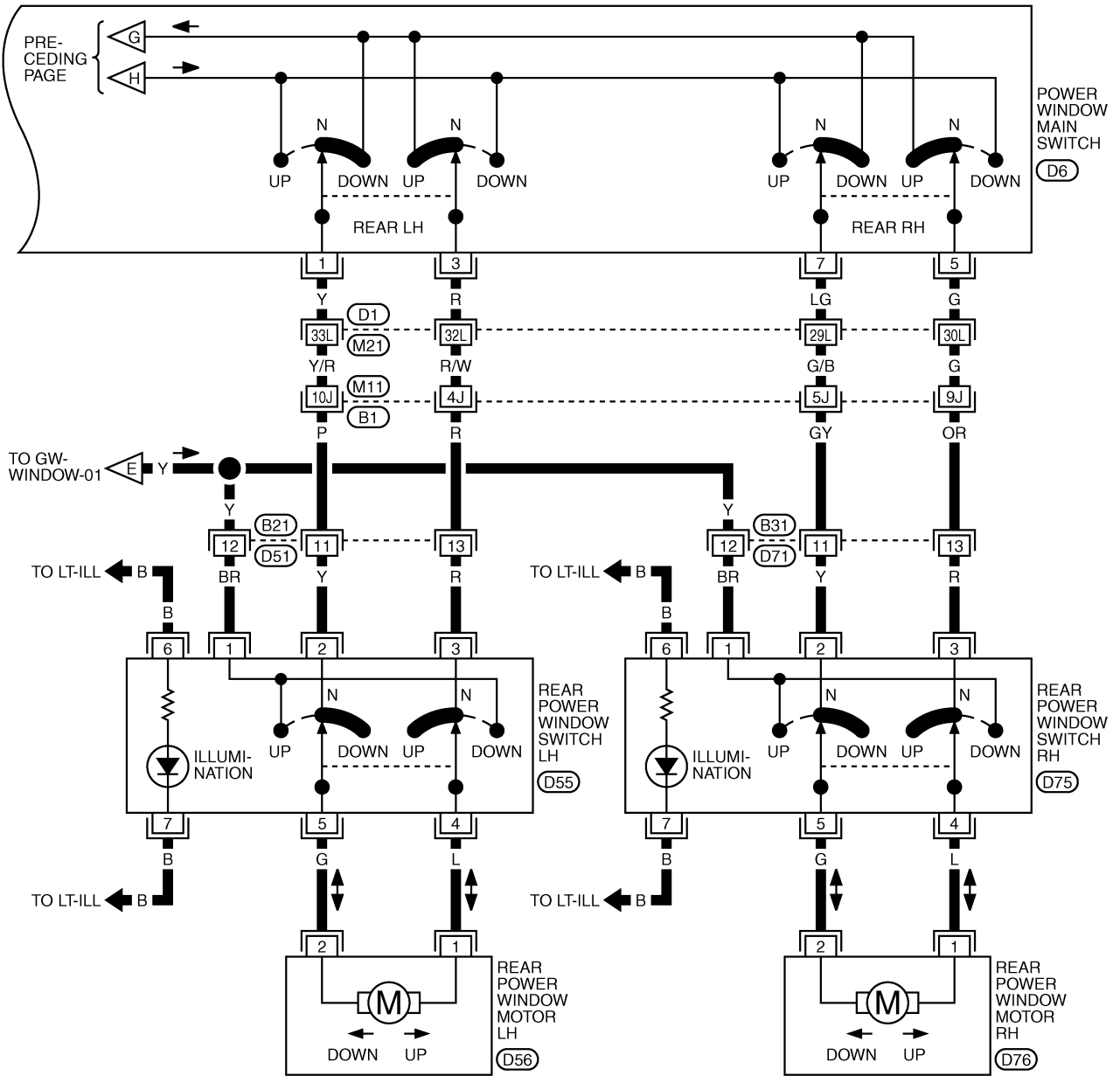


REFER TO THE FOLLOWING.
(D1) -SUPER MULTIPLE JUNCTION (SMJ)

TIWH0052E

POWER WINDOW SYSTEM

GW-WINDOW-03

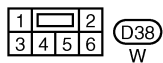
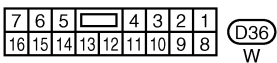
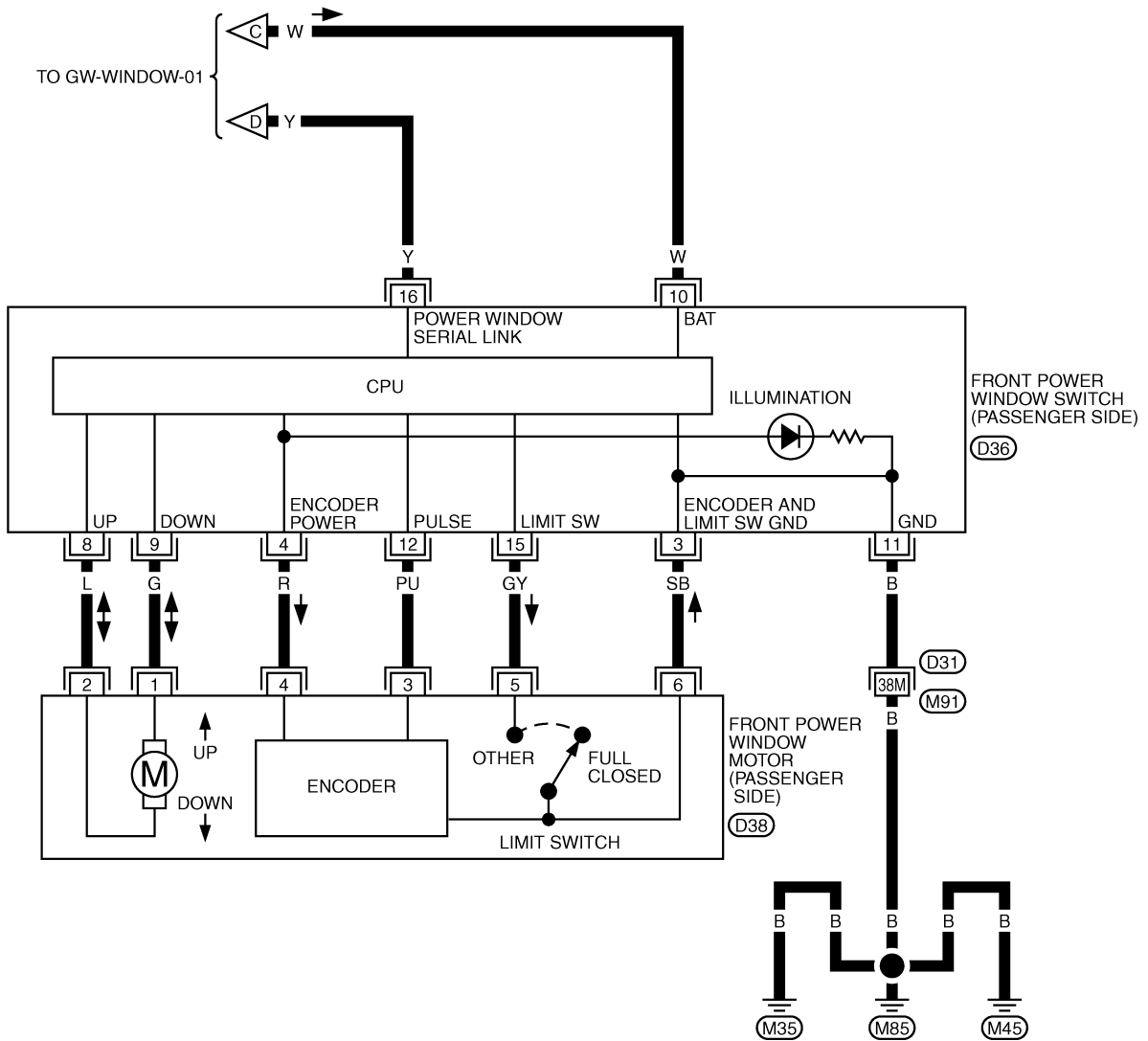


REFER TO THE FOLLOWING.
(B1), (D1) -SUPER MULTIPLE JUNCTION (SMJ)

TIWM1682E

POWER WINDOW SYSTEM

GW-WINDOW-04



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

TIWH0054E

POWER WINDOW SYSTEM

Terminal and Reference Value for BCM

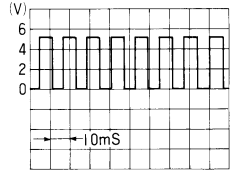
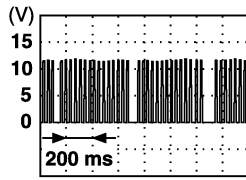
NIS001QV

Terminal	Wire color	Item	Signal Input/Output	Condition	Voltage [V] (Approx.)
12	P/B	Front door switch passenger side signal	Input	ON (Open)	0
				OFF (Close)	Battery voltage
22	OR	Power window serial link	Input/Output	IGN SW ON or power window timer operating.	<p style="text-align: right;">PIIA2344J</p>
38	W/L	Ignition switch (ON or START)	Input	Ignition switch (ON or START position)	Battery voltage
39	L	CAN - H	Input/Output	—	—
40	P	CAN - L	Input/Output	—	—
42	L/R	Power source (Fuse)	Input	—	Battery voltage
49	B	Ground (signal)	—	—	0
52	B	Ground (power)	—	—	0
53	Y/B	Rap signal	Output	IGN SW ON	Battery voltage
				Within 45 second after ignition switch is turned to OFF	Battery voltage
				When driver side or passenger side door is open in power window timer is operates	0
54	W	Power window power supply	Output	—	Battery voltage
55	G	Power source (Fusible link)	Input	—	Battery voltage
62	W	Front door switch driver side signal	Input	ON (Open)	0
				OFF (Close)	Battery voltage

POWER WINDOW SYSTEM

Terminal and Reference Value for Power Window Main Switch

NIS001QW

Ter- minal	Wire color	Item	Signal Input/Output	Condition	Voltage [V] (Approx.)
1	Y	Rear LH power window UP signal	Output	When rear LH switch in power window main switch is UP at operated.	Battery voltage
2	SB	Limit switch and encoder ground	—	—	0
3	R	Rear LH power window DOWN signal	Output	When rear LH switch in power window main switch is DOWN at operated.	Battery voltage
4	P	Door key cylinder switch LOCK signal	Input	Key position (Neutral → Locked)	5 → 0
5	G	Rear RH power window DOWN signal	Output	When rear RH switch in power window main switch is DOWN at operated.	Battery voltage
6	OR	Door key cylinder switch UNLOCK signal	Input	Key position (Neutral → Unlocked)	5 → 0
7	LG	Rear RH power window UP signal	Output	When rear RH switch in power window main switch is UP at operated.	Battery voltage
8	L	Front driver side power window motor UP signal	Output	When front LH switch in power window main switch is UP at operated	Battery voltage
9	GY	Limit switch signal	Input	Driver side door window is between fully-open and just before fully-closed position (ON)	0
				Driver side door window is between just before fully-closed position and fully-closed position (OFF)	5
10	BR	Rap signal	Input	IGN SW ON	Battery voltage
				Within 45 second after ignition switch is turned to OFF	Battery voltage
				When driver side or passenger side door open in power window timer is operates	0
11	B	Front driver side power window motor DOWN signal	Output	When front LH switch in power window main switch is DOWN at operated	Battery voltage
13	PU	Encoder pulse signal	Input	When power window motor operates.	 <small>OCC3383D</small>
14	Y	Power window serial link	Input/Output	IGN SW ON or power window timer operating.	 <small>PIIA2344J</small>

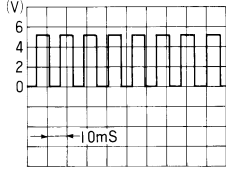
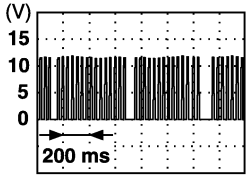
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POWER WINDOW SYSTEM

Terminal	Wire color	Item	Signal Input/Output	Condition	Voltage [V] (Approx.)
15	W	Encoder power supply	Output	When ignition switch ON or power window timer operates	10
17	B	Ground	—	—	0
19	W	Battery power supply	Input	—	Battery voltage

Terminal and Reference Value for Front Power Window Switch (Passenger Side)

NIS001QX

Terminal	Wire color	Item	Signal Input/Output	Condition	Voltage [V] (Approx.)
3	SB	Limit switch and encoder ground	Input	—	0
4	R	Encoder power supply	Output	When ignition switch ON or power window timer operates	10
8	L	Front passenger side power window motor UP signal	Output	When power window motor is UP at operated.	Battery voltage
9	G	Front passenger side power window motor DOWN signal	Output	When power window motor is DOWN at operated.	Battery voltage
10	W	Battery power supply	Input	—	Battery voltage
11	B	Ground	—	—	0
12	PU	Encoder pulse signal	Input	When power window motor operates.	 <p style="text-align: right;">OCC3383D</p>
15	GY	Limit switch signal	Input	Passenger side door window is between fully-open and just before fully-closed position (ON)	0
				Passenger side door window is between just before fully-closed position and fully-closed position (OFF)	5
16	Y	Power window serial link	Input/Output	IGN SW ON or power window timer operating.	 <p style="text-align: right;">PIIA2344J</p>

POWER WINDOW SYSTEM

CONSULT-II Function (BCM)

NIS001R3

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

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

CONSULT-II START PROCEDURE

Refer to [GI-38, "CONSULT-II Start Procedure"](#) .

ACTIVE TEST

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

WORK SUPPORT

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

DATE MONITOR

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

POWER WINDOW SYSTEM

Work Flow

NIS001R4

1. Check the symptom and customer's requests.
2. Understand the outline of system. Refer to [GW-16, "System Description"](#)
3. According to the trouble diagnosis chart, repair or replace the cause of the malfunction. Refer to [GW-30, "Trouble Diagnosis Symptom Chart"](#).
4. Does power window system operate normally? Yes, GO TO 5, If No, GO TO 3.
5. INSPECTION END

Trouble Diagnosis Symptom Chart

NIS001R5

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

Symptom	Repair order	Refer to page
None of the power windows can be operated using any switch.	1. Check BCM power supply and ground circuit	GW-32
	2. Check power window main switch power supply and ground circuit	GW-33
	3. Check power window serial link	GW-53
Driver side power window alone does not operated.	1. Check front power window motor (driver side) circuit	GW-35
	2. Replace power window main switch	—
Front passenger side power window alone does not operated.	1. Check front power window switch (passenger side) power and ground circuit	GW-34
	2. Check power window serial link	GW-53
	3. Check front power window motor (passenger side) circuit	GW-36
	4. Replace BCM	BCS-14
Rear LH side power window alone does not operated	Check rear power window motor (LH) circuit	GW-36
Rear RH side power window alone does not operated	Check rear power window motor (RH) circuit	GW-39
Anti-pinch system does not operate normally (driver side)	1. Door window sliding part malfunction <ul style="list-style-type: none"> ● A foreign material adheres to window glass or glass run rubber. ● Glass run rubber wear or deformation. ● Sash is tilted too much, or no enough. 	—
	2. Limit switch adjusting	GW-60
	3. Check limit switch circuit (driver side)	GW-41
	4. Check encoder circuit (driver side)	GW-44
Anti-pinch system does not operate normally (passenger side)	1. Door window sliding part malfunction <ul style="list-style-type: none"> ● A foreign material adheres to window glass or glass run rubber. ● Glass run rubber wear or deformation. ● Sash is tilted too much, or no enough. 	—
	2. Limit switch adjusting	GW-60
	3. Check limit switch circuit (passenger side)	GW-43
	4. Check encoder circuit (passenger side)	GW-46
Power window retained power operation does not operate properly	1. Check the retained power operation mode setting.	GW-29
	2. Check door switch	GW-49
	3. Replace BCM.	BCS-14
Does not operate by key cylinder switch	1. Check door key cylinder switch	GW-51
	2. Replace power window main switch	—
Power window lock switch does not function	Check power window lock switch	GW-55

POWER WINDOW SYSTEM

Symptom	Repair order	Refer to page
Auto operation does not operate but manual operates normally (driver side)	1. Check encoder circuit (driver side)	GW-44
	2. Replace power window main switch.	—
Auto operation does not operate but manual operates normally (passenger side)	1. Check encoder circuit (passenger side)	GW-46
	2. Replace front power window switch (passenger side)	—

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

GW

POWER WINDOW SYSTEM

NIS001R7

Check BCM Power Supply and Ground Circuit

1. CHECK FUSE

- Check 15A fuse [No. 1, located in fuse block (J/B)]
- Check 15A fuse [No. 22, located in fuse block (J/B)]
- Check 50A fusible link (letter **M** , located in the fuse and fusible link box).

NOTE:

Refer to [GW-15, "Component Parts and Harness Connector Location"](#) .

OK or NG

OK >> GO TO 2.

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

2. CHECK POWER SUPPLY CIRCUIT

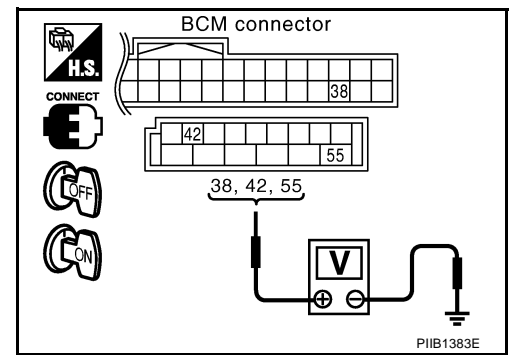
Check voltage between BCM connector and ground.

Connector	Terminal (Wire color)		Condition of ignition switch	Voltage [V] (Approx.)
	(+)	(-)		
M3	38 (W/L)	Ground	ON	Battery voltage
M4	42 (L/R)		OFF	
		55 (G)		

OK or NG

OK >> GO TO 3.

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



3. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check continuity between BCM connector M4 terminal 49, 52 and ground.

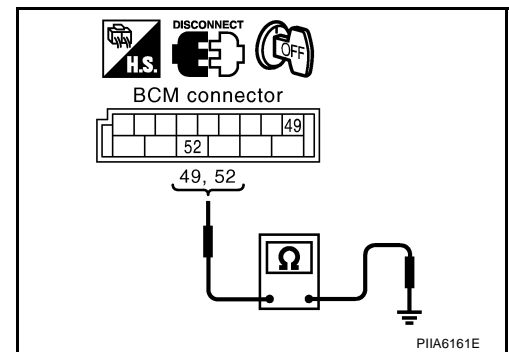
49 (B) – Ground : Continuity should exist.

52 (B) – Ground : Continuity should exist.

OK or NG

OK >> Power supply and ground circuit are OK.

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



POWER WINDOW SYSTEM

Check Power Window Main Switch Power Supply Circuit

NIS001R8

1. CHECK POWER SUPPLY CIRCUIT

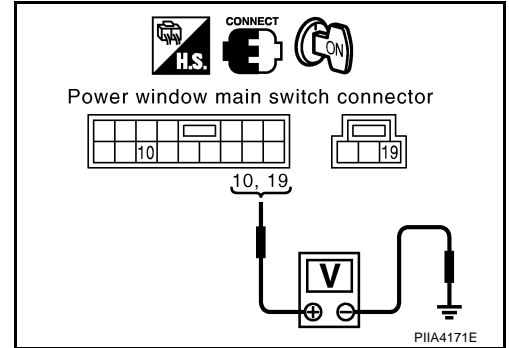
1. Turn ignition switch ON.
2. Check voltage between power window main switch connector D6, D7 terminal 10, 19 and ground.

10 (BR) – Ground : Battery voltage

19 (W) – Ground : Battery voltage

OK or NG

- OK >> Power window main switch power supply and ground circuit are OK.
NG >> GO TO 2.



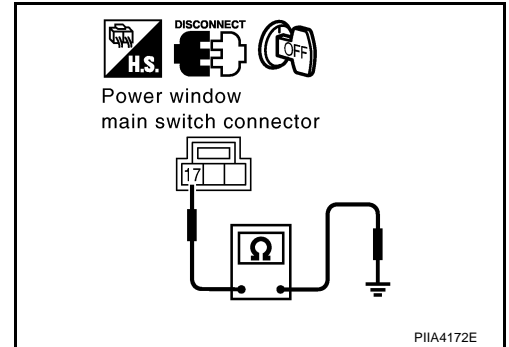
2. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect power window main switch connector.
3. Check continuity between power window main switch connector D7 terminal 17 and ground.

17 (B) – Ground : Continuity should exist.

OK or NG

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



3. CHECK HARNESS CONTINUITY

1. Disconnect BCM connector.
2. Check continuity between BCM connector M4 terminal 53, 54 and power window main switch connector D6, D7 terminal 10, 19.

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

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

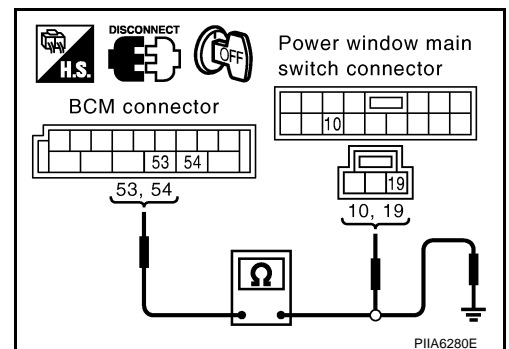
3. Check continuity between BCM connector M4 terminal 53, 54 and ground.

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

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

OK or NG

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



POWER WINDOW SYSTEM

4. CHECK BCM OUTPUT SIGNAL

1. Connect BCM connector.
2. Turn ignition switch ON.
3. Check voltage between BCM connector M4 terminal 53, 54 and ground.

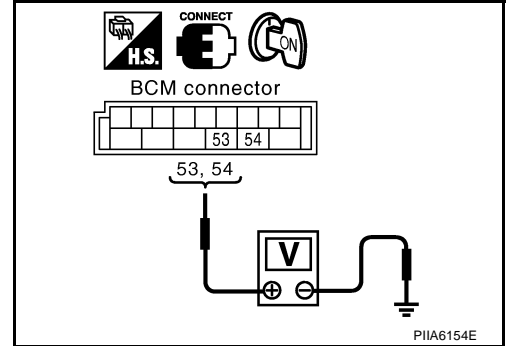
53 (Y/B) – Ground : Battery voltage

54 (W) – Ground : Battery voltage

OK or NG

OK >> Check condition of harness and connector.

NG >> Replace BCM.



Check Front Power Window Switch (Passenger Side) Power Supply and Ground Circuit

NIS001R9

1. CHECK POWER SUPPLY CIRCUIT

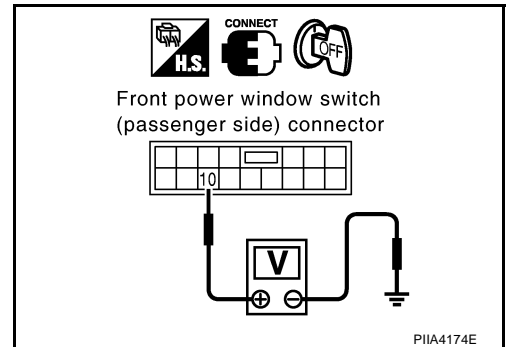
Check voltage between front power window switch (passenger side) connector D36 terminal 10 and ground.

10 (W) – Ground : Battery voltage

OK or NG

OK >> GO TO 2.

NG >> GO TO 3.



2. CHECK GROUND CIRCUIT

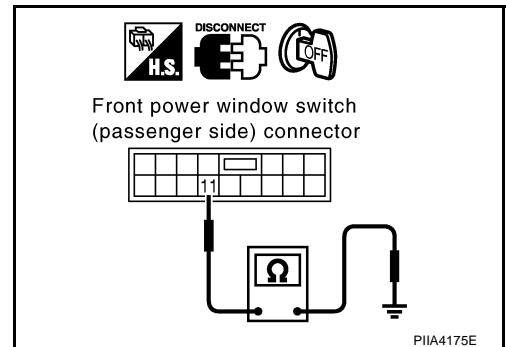
1. Turn ignition switch OFF.
2. Disconnect front power window switch (passenger side) connector.
3. Check continuity between front power window switch (passenger side) connector D36 terminal 11 and ground.

11 (B) – Ground : Continuity should exist.

OK or NG

OK >> Front power window switch (passenger side) power supply and ground circuit are OK.

NG >> Repair or replace harness.



POWER WINDOW SYSTEM

3. CHECK HARNESS CONTINUITY

1. Disconnect BCM connector.
2. Check continuity between BCM connector M4 terminal 54 and front power window switch (passenger side) connector D36 terminal 10.

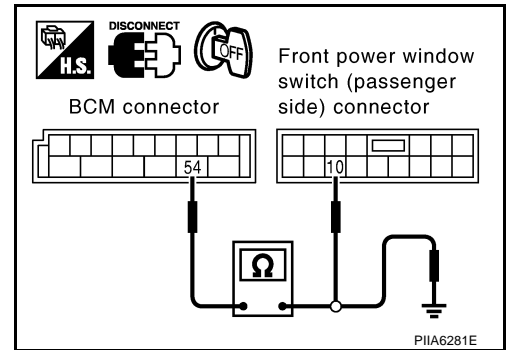
54 (W) – 10 (W) : Continuity should exist.

3. Check continuity between BCM connector M4 terminal 54 and ground.

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

OK or NG

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



Check Front Power Window Motor (Driver Side) Circuit

NIS001RB

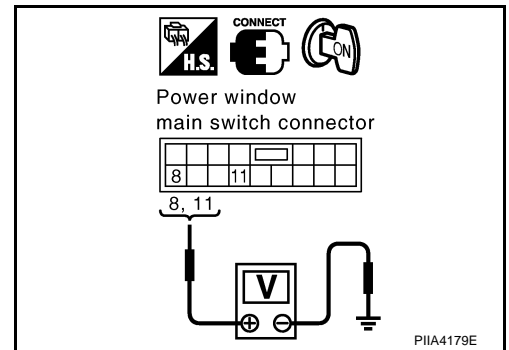
1. CHECK POWER WINDOW MAIN SWITCH OUTPUT SIGNAL

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

Connector	Terminals (Wire color)		Window condition	Voltage [V] (Approx.)
	(+)	(-)		
D6	8 (L)	Ground	UP	Battery voltage
			DOWN	0
	11 (B)		UP	0
			DOWN	Battery voltage

OK or NG

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



2. CHECK HARNESS CONTINUITY

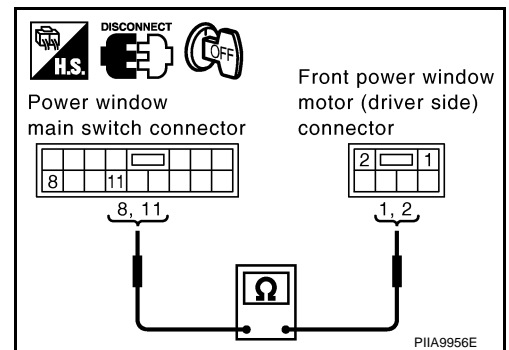
1. Turn ignition switch OFF.
2. Disconnect power window main switch and front power window motor (driver side) connector.
3. Check continuity between power window main switch connector D6 terminal 8, 11 and front power window motor (driver side) connector D8 terminal 1, 2.

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

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

OK or NG

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



POWER WINDOW SYSTEM

Check Front Power Window Motor (Passenger Side) Circuit

NIS001RC

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

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

Connector	Terminals (Wire color)		Window condition	Voltage [V] (Approx.)
	(+)	(-)		
D36	8 (L)	Ground	UP	Battery voltage
			DOWN	0
	9 (G)		UP	0
			DOWN	Battery voltage

OK or NG

OK >> GO TO 2.

NG >> Replace front power window switch (passenger side).

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect front power window switch (passenger side) and front power window motor (passenger side) connector.
3. Check continuity between front power window switch (passenger side) connector D36 terminals 8, 9 and front power window motor (passenger side) connector D38 terminals 1, 2.

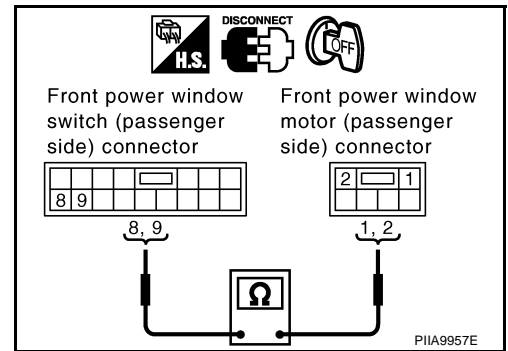
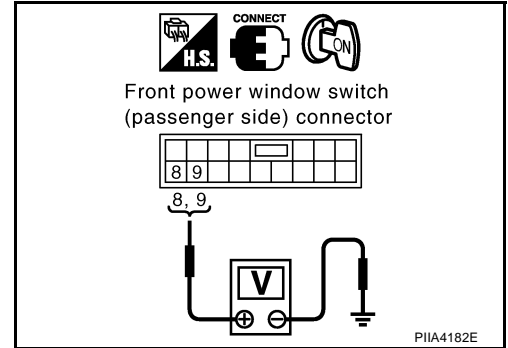
8 (L) – 2 (L) : Continuity should exist.

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

OK or NG

OK >> Replace front power window motor (passenger side).

NG >> Repair or replace harness.



Check rear Power Window Motor (LH) Circuit

NIS001RD

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

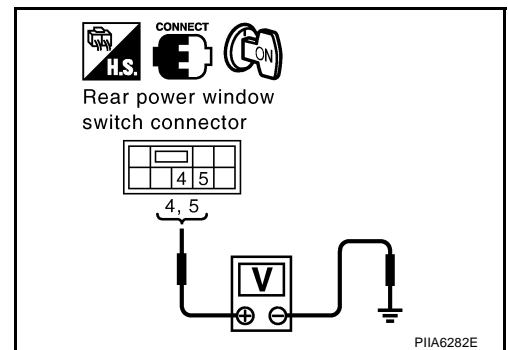
1. Turn ignition switch ON.
2. Check voltage between rear power window switch (LH) connector and ground.

Connector	Terminals (Wire color)		Window condition	Voltage [V] (Approx.)
	(+)	(-)		
D55	4 (L)	Ground	UP	0
			DOWN	Battery voltage
	5 (G)		UP	Battery voltage
			DOWN	0

OK or NG

OK >> GO TO 2.

NG >> GO TO 3.



POWER WINDOW SYSTEM

2. CHECK HARNESS CONTINUITY 1

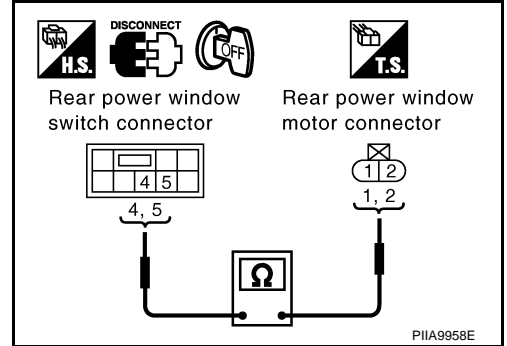
1. Turn ignition switch OFF.
2. Disconnect rear power window switch (LH) and rear power window motor (LH) connector.
3. Check continuity between rear power window switch (LH) connector D55 terminal 4, 5 and rear power window motor (LH) connector D56 terminal 1, 2.

4 (L) – 1 (L) : Continuity should exist.

5 (G) – 2 (G) : Continuity should exist.

OK or NG

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



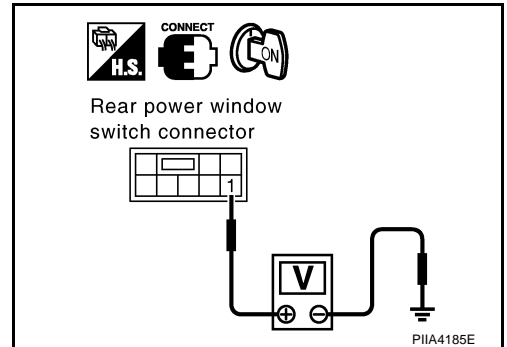
3. CHECK REAR POWER WINDOW SWITCH POWER SUPPLY

1. Connect rear power window switch (LH) connector.
2. Turn ignition switch ON.
3. Check voltage between rear power window switch (LH) connector D55 terminal 1 and ground.

1 (BR) – Ground : Battery voltage

OK or NG

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



4. CHECK HARNESS CONTINUITY 2

1. Turn ignition switch OFF.
2. Disconnect BCM and rear power window switch (LH) connector.
3. Check continuity between BCM connector M4 terminal 53 and rear power window switch (LH) connector D55 terminal 1.

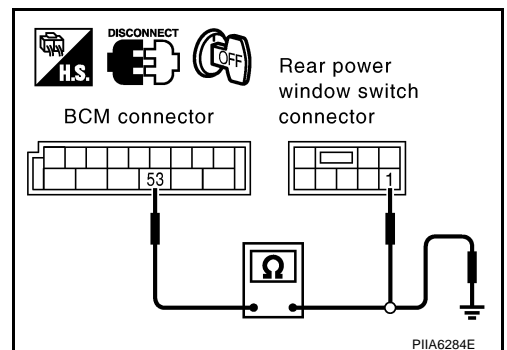
53 (Y/B) – 1 (BR) : Continuity should exist.

4. Check continuity between BCM connector M4 terminal 53 and ground.

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

OK or NG

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



POWER WINDOW SYSTEM

5. CHECK REAR POWER WINDOW SWITCH

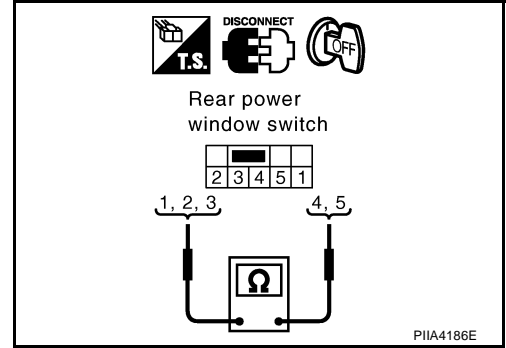
1. Turn ignition switch OFF.
2. Disconnect rear power window switch connector.
3. Rear power window switch (LH) operate, check continuity between rear power window switch terminal 1, 2, 3 and 4, 5.

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

OK or NG

OK >> GO TO 6.

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



6. CHECK HARNESS CONTINUITY 3

1. Disconnect power window main switch connector.
2. Check continuity between power window main switch connector D6 terminal 1, 3 and rear power window switch (LH) terminal 2, 3.

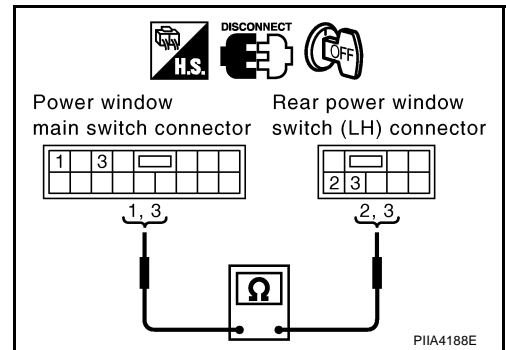
1 (Y) – 2 (Y) : Continuity should exist.

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

OK or NG

OK >> GO TO 7.

NG >> Repair or replace harness.



7. CHECK POWER WINDOW MAIN SWITCH OUTPUT SIGNAL

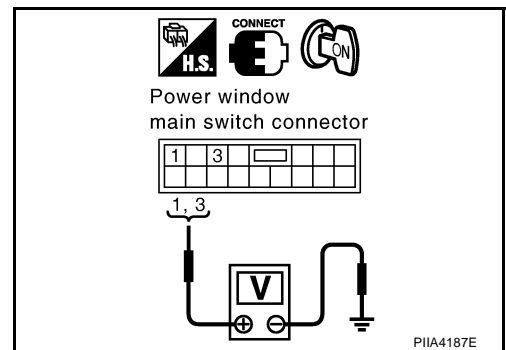
1. Connect power window main switch connector.
2. Turn ignition switch ON.
3. Rear LH switch in power window main switch is operated, check voltage between power window main switch connector and ground.

Connector	Terminals (Wire color)		Window condition	Voltage [V] (Approx.)
	(+)	(-)		
D6	1 (Y)	Ground	UP	Battery voltage
			DOWN	0
	3 (R)		UP	0
			DOWN	Battery voltage

OK or NG

OK >> Check condition of harness and connector.

NG >> Replace power window main switch.



POWER WINDOW SYSTEM

NIS001RE

Check Rear Power Window Motor (RH) Circuit

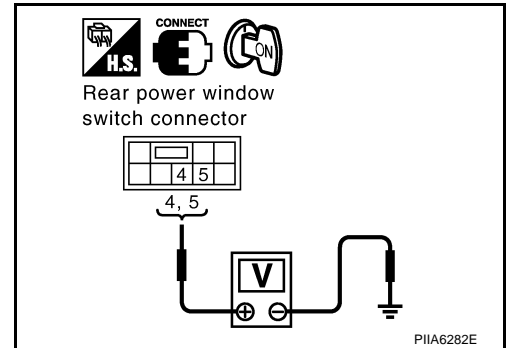
1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

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

Connector	Terminals (Wire color)		Window condition	Voltage [V] (Approx.)
	(+)	(-)		
D75	4 (L)	Ground	UP	0
			DOWN	Battery voltage
	5 (G)		UP	Battery voltage
			DOWN	0

OK or NG

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



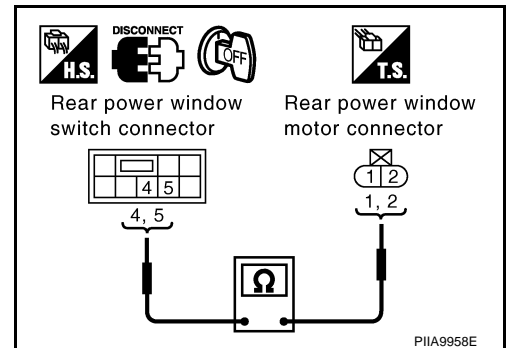
2. CHECK HARNESS CONTINUITY 1

1. Turn ignition switch OFF.
2. Disconnect rear power window switch (RH) and rear power window motor (RH) connector.
3. Check continuity between rear power window switch (RH) connector D75 terminals 4, 5 and rear power window motor (RH) connector D76 terminals 1, 2.

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

OK or NG

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



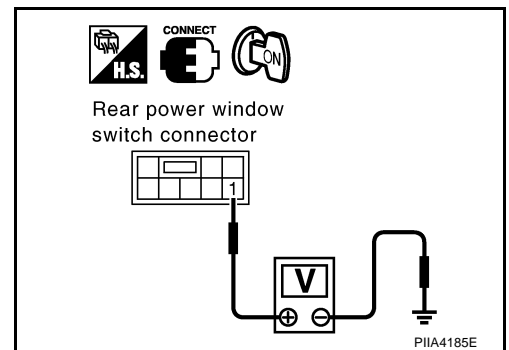
3. CHECK REAR POWER WINDOW SWITCH POWER SUPPLY

1. Connect rear power window switch (RH) connector.
2. Turn ignition switch ON.
3. Check voltage between rear power window switch (RH) connector D75 terminal 1 and ground.

- 1 (BR) – Ground : Battery voltage**

OK or NG

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



POWER WINDOW SYSTEM

4. CHECK HARNESS CONTINUITY 2

1. Turn ignition switch OFF.
2. Disconnect BCM and rear power window switch (RH) connector.
3. Check continuity between BCM connector M4 terminal 53 and rear power window switch (RH) connector D75 terminal 1.

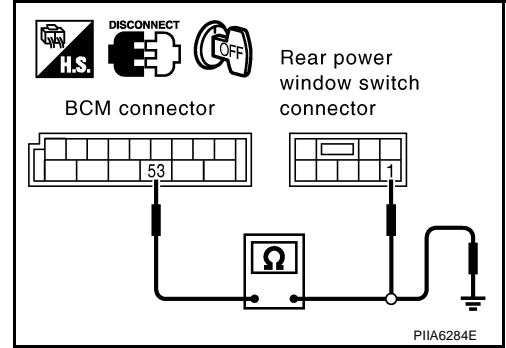
53 (Y/B) – 1 (BR) : Continuity should exist.

4. Check continuity between BCM connector M4 terminal 53 and ground.

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

OK or NG

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



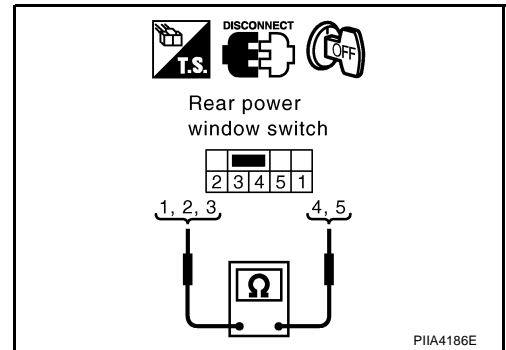
5. CHECK REAR POWER WINDOW SWITCH

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

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

OK or NG

- OK >> GO TO 6.
 NG >> Replace rear power window switch (RH).



6. CHECK HARNESS CONTINUITY 3

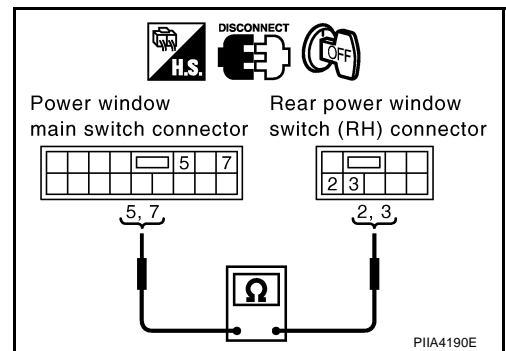
1. Disconnect power window main switch connector.
2. Check continuity between power window main switch connector D6 terminals 5, 7 and rear power window switch (RH) connector D75 terminals 2, 3.

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

7 (LG) – 2 (Y) : Continuity should exist.

OK or NG

- OK >> GO TO 7.
 NG >> Repair or replace harness.

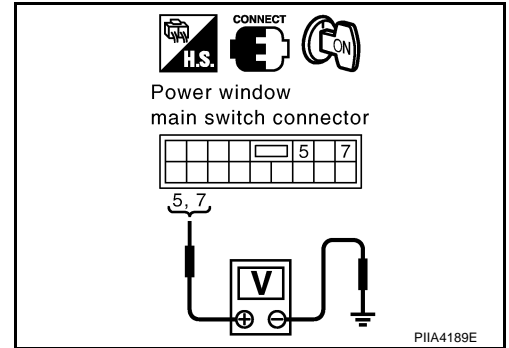


POWER WINDOW SYSTEM

7. CHECK POWER WINDOW MAIN SWITCH OUTPUT SIGNAL

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

Connector	Terminals (Wire color)		Window condition	Voltage [V] (Approx.)
	(+)	(-)		
D6	5 (G)	Ground	UP	0
			DOWN	Battery voltage
	7 (LG)		UP	Battery voltage
			DOWN	0



OK or NG

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

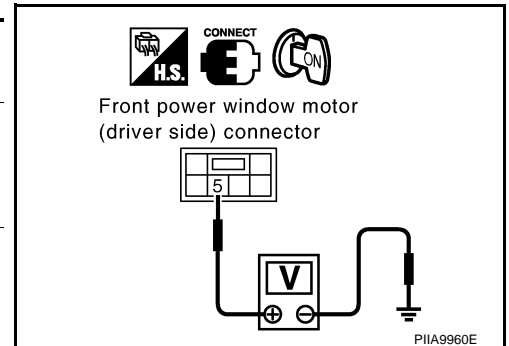
Check Limit Switch Circuit (Driver Side)

NIS001RG

1. CHECK DRIVER DOOR MAIN SWITCH LIMIT SIGNAL

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

Connector	Terminals (Wire color)		Condition	Voltage [V] (Approx.)
	(+)	(-)		
D8	5 (GY)	Ground	Driver side door window is between fully-open and just before fully-closed position (ON)	0
			Driver side door window is between just before fully-closed position and fully-closed position (OFF)	5



OK or NG

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

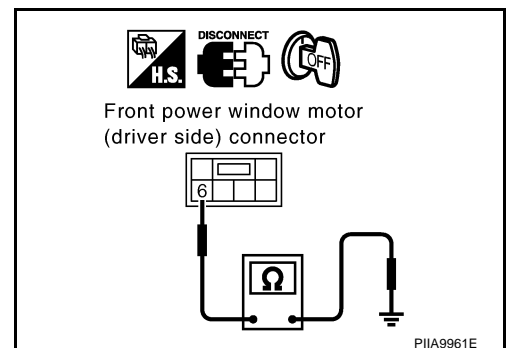
2. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect front power window motor (driver side) connector.
3. Check continuity between front power window motor (driver side) connector D8 terminal 6 and ground.

6 (SB) – Ground : Continuity should exist.

OK or NG

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



POWER WINDOW SYSTEM

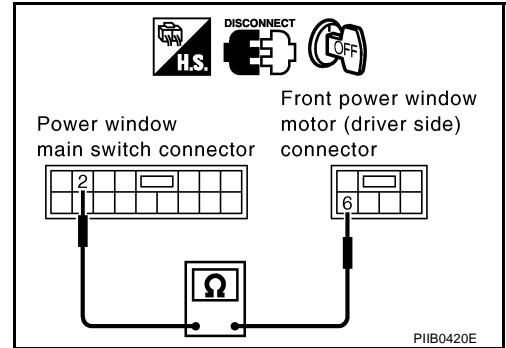
3. CHECK HARNESS CONTINUITY 1

1. Disconnect power window main switch connector.
2. Check continuity between power window main switch connector D6 terminal 2 and front power window motor (driver side) connector D8 terminal 6.

2 (SB) – 6 (SB) : Continuity should exist.

OK or NG

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



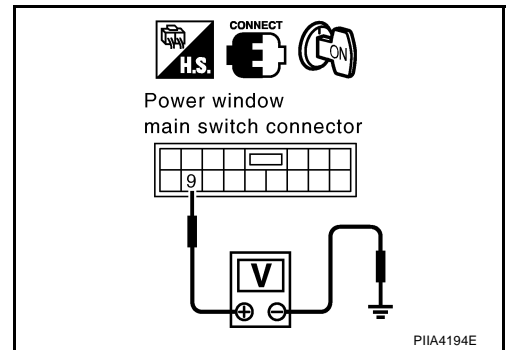
4. CHECK POWER WINDOW MAIN SWITCH OUTPUT SIGNAL

1. Turn ignition switch ON.
2. Check voltage between power window main switch connector D6 terminal 9 and ground.

9 (GY) – Ground : Approx. 5V

OK or NG

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



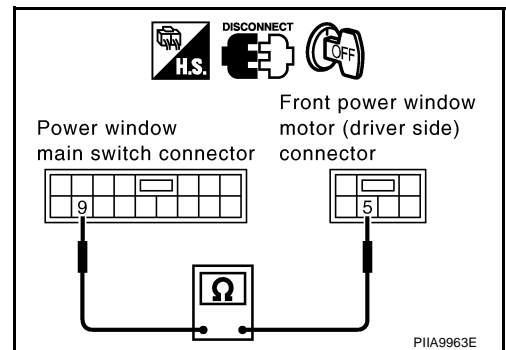
5. CHECK HARNESS CONTINUITY 2

1. Turn ignition switch OFF.
2. Disconnect power window main switch connector.
3. Check continuity between power window main switch connector D6 terminal 9 and front power window motor connector D8 terminal 5.

9 (GY) – 5 (GY) : Continuity should exist.

OK or NG

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



POWER WINDOW SYSTEM

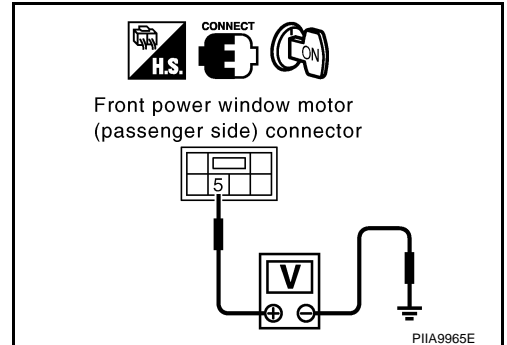
NIS001RH

Check Limit Switch Circuit (Passenger Side)

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

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

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



OK or NG

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

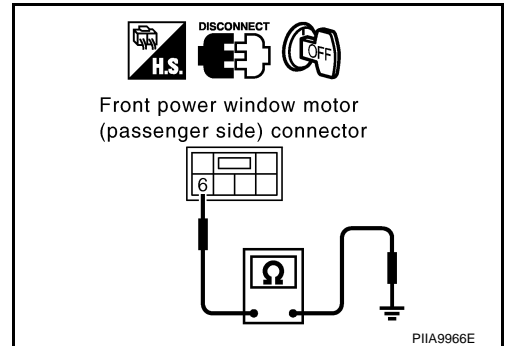
2. CHECK GROUND CIRCUIT

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

6 (SB) – Ground : Continuity should exist.

OK or NG

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



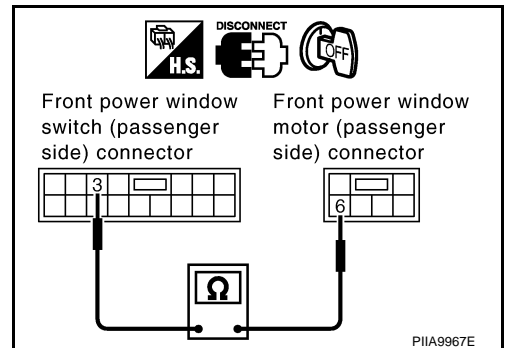
3. CHECK HARNESS CONTINUITY 1

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

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

OK or NG

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



POWER WINDOW SYSTEM

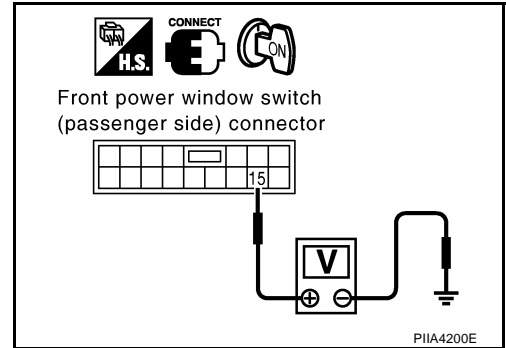
4. CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE) OUTPUT SIGNAL

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

15 (GY) – Ground : Approx. 5V

OK or NG

- OK >> GO TO 5
NG >> Replace front power window switch (passenger side).



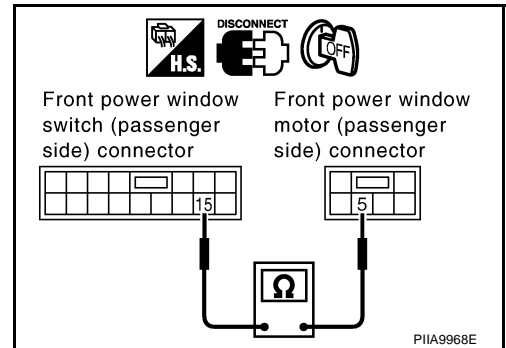
5. CHECK HARNESS CONTINUITY 2

1. Turn ignition switch OFF.
2. Disconnect front power window switch (passenger side) connector.
3. Check continuity between front power window switch (passenger side) connector D36 terminal 15 and front power window motor (passenger side) connector D38 terminal 5.

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

OK or NG

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



Check Encoder Circuit (Driver Side)

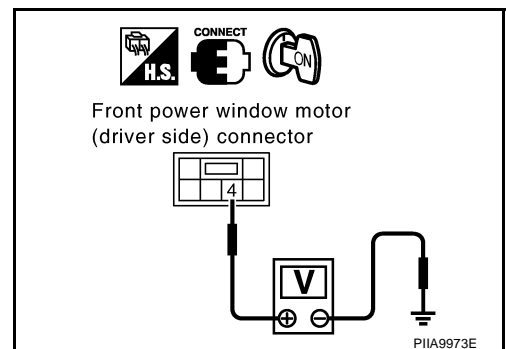
1. CHECK FRONT POWER WINDOW MOTOR (DRIVER SIDE) POWER SUPPLY

1. Turn ignition switch ON.
2. Check voltage between front power window motor (driver side) connector D8 terminal 4 and ground.

4 (W) – Ground : Approx. 10V

OK or NG

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



POWER WINDOW SYSTEM

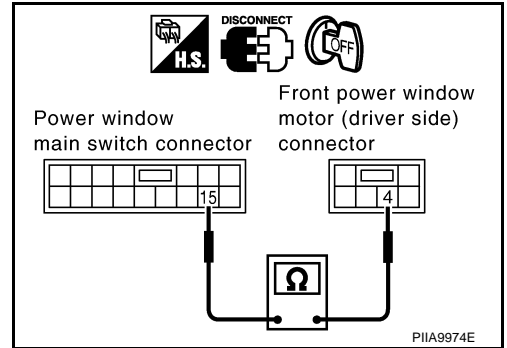
2. CHECK HARNESS CONTINUITY 1

1. Turn ignition switch OFF.
2. Disconnect power window main switch and front power window motor (driver side).
3. Check continuity between power window main switch connector D6 terminal 15 and front power window motor (driver side) connector D8 terminal 4.

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

OK or NG

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



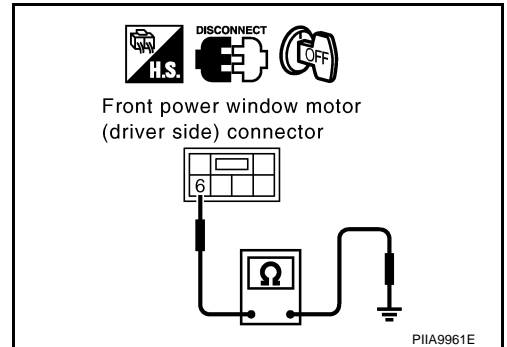
3. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect front power window motor (driver side) connector.
3. Check continuity between front power window motor (driver side) connector D8 terminal 6 and ground.

6 (SB) – Ground : Continuity should exist.

OK or NG

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



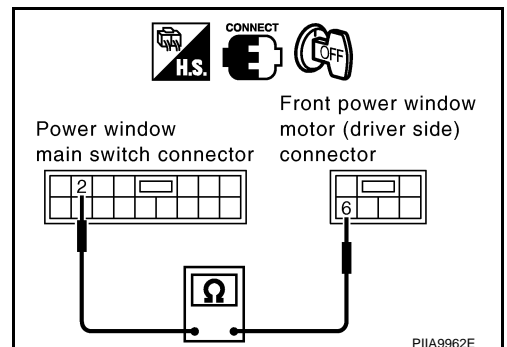
4. CHECK HARNESS CONTINUITY 2

1. Disconnect power window main switch connector.
2. Check continuity between power window main switch connector D6 terminal 2 and front power window motor (driver side) connector D8 terminal 6.

2 (SB) – 6 (SB) : Continuity should exist.

OK or NG

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

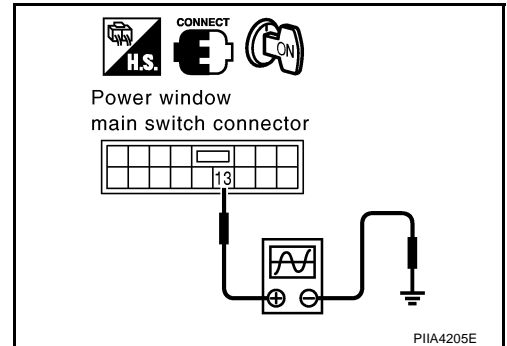


POWER WINDOW SYSTEM

5. CHECK ENCODER SIGNAL

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

Connector	Terminals (Wire color)		Condition	Signal (Reference value)
	(+)	(-)		
D6	13 (PU)	Ground	Window DOWN	<p>OCC3383D</p>



OK or NG

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

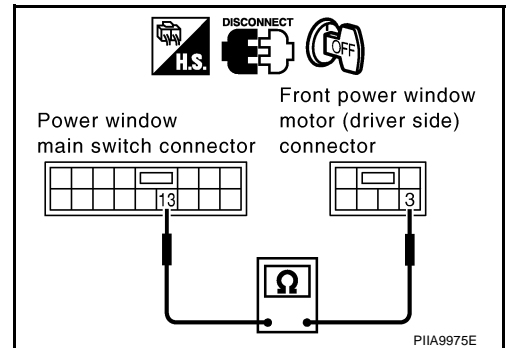
6. CHECK HARNESS CONTINUITY 3

1. Turn ignition switch OFF.
2. Disconnect power window main switch and front power window motor (driver side) connector.
3. Check continuity between power window main switch connector D6 terminal 13 and front power window motor (driver side) connector D8 terminal 3.

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

OK or NG

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



Check Encoder Circuit (Passenger Side)

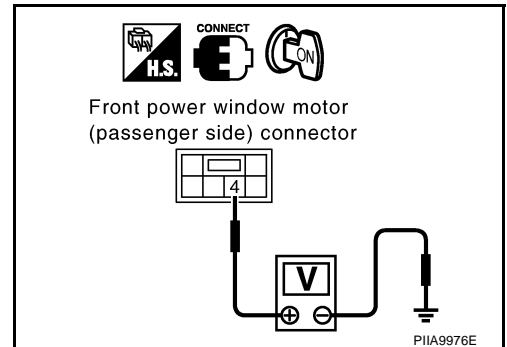
1. CHECK FRONT POWER WINDOW MOTOR (PASSENGER SIDE) POWER SUPPLY

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

4 (R) – Ground : Approx.10V

OK or NG

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



POWER WINDOW SYSTEM

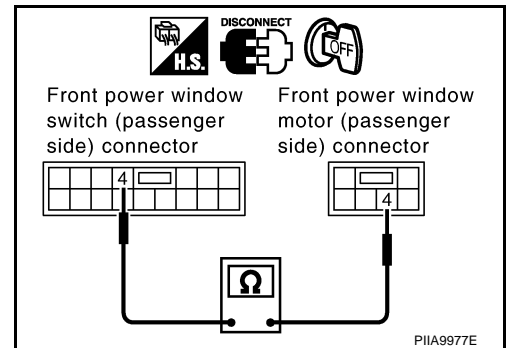
2. CHECK HARNESS CONTINUITY 1

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

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

OK or NG

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



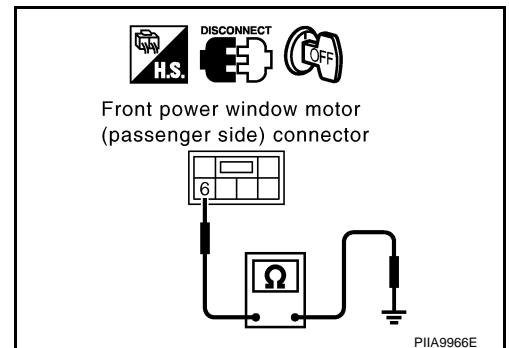
3. CHECK GROUND CIRCUIT

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

6 (SB) – Ground : Continuity should exist.

OK or NG

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



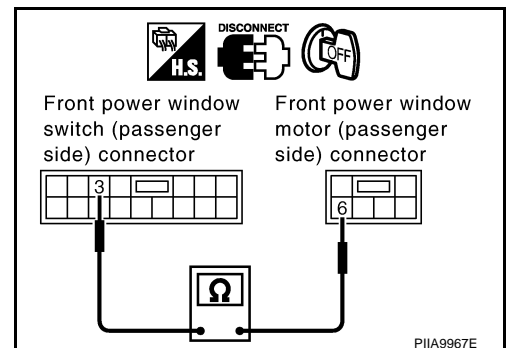
4. CHECK HARNESS CONTINUITY 2

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

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

OK or NG

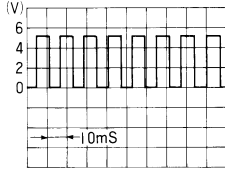
- OK >> Replace front power window switch (passenger side).
NG >> Repair or replace harness.

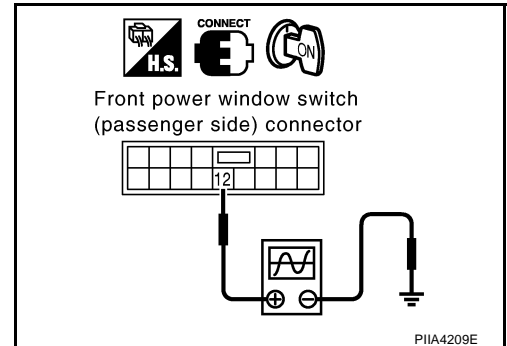


POWER WINDOW SYSTEM

5. CHECK ENCODER SIGNAL

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

Connector	Terminals (Wire color)		Condition	Signal (Reference value)
	(+)	(-)		
D36	12 (PU)	Ground	Window DOWN	 <p>OCC3383D</p>



OK or NG

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

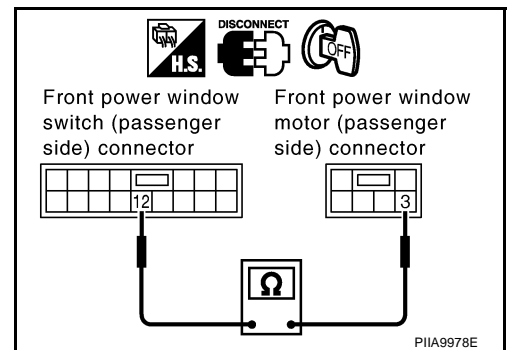
6. CHECK HARNESS CONTINUITY 3

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

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

OK or NG

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



POWER WINDOW SYSTEM

Check Door Switch

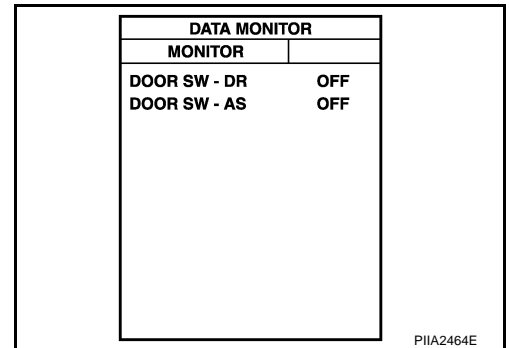
NIS001RM

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT-II

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

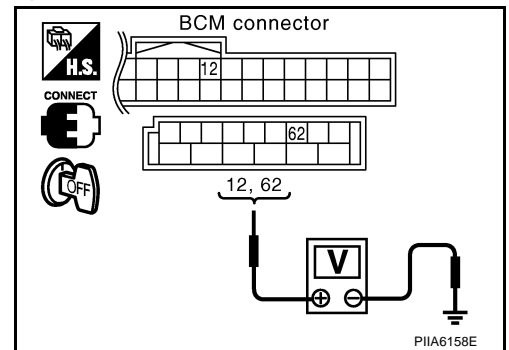
Monitor item	Condition	
DOOR SW-DR	OPEN	: ON
	CLOSE	: OFF
DOOR SW-AS	OPEN	: ON
	CLOSE	: OFF



Without CONSULT-II

Check voltage between BCM connector M3, B14 terminals 12, 62 and ground.

Item	Terminals (Wire color)		Door condition	Voltage [V] (Approx.)
	(+)	(-)		
Passenger side door switch	12 (P/B)	Ground	OPEN	0
			CLOSE	Battery voltage
Driver side door switch	62 (W)	Ground	OPEN	0
			CLOSE	Battery voltage



OK or NG

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

POWER WINDOW SYSTEM

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect door switch and BCM connector.
3. Check continuity between BCM connector M3, B14 terminals 12, 62 and door switch connector B26, B36 terminal 1.

Driver side door

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

Passenger side door

12 (P/B) – 1 (SB) : Continuity should exist.

4. Check continuity between BCM connector M3, B14 terminals 12, 62 and ground.

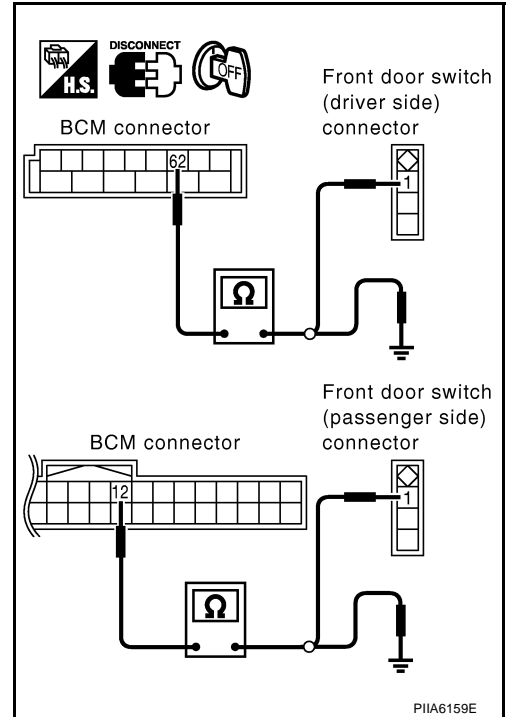
12 (P/B) – Ground : Continuity should not exist.

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

OK or NG

OK >> GO TO 3.

NG >> Repair or replace harness.



3. CHECK DOOR SWITCH

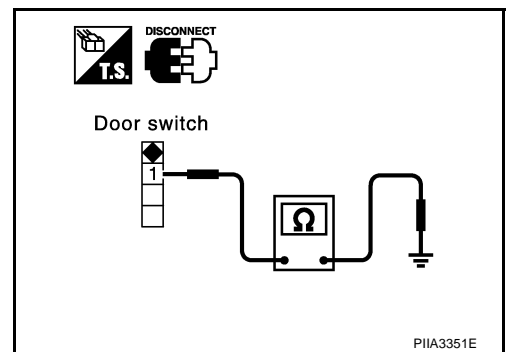
Check continuity between door switches terminal 1 and ground part of door switch.

Terminal		Door switch	Continuity
1	Ground part of door switch	Pushed	No
		Released	Yes

OK or NG

OK >> GO TO 4.

NG >> Replace malfunction door switch.



4. CHECK BCM OUTPUT SIGNAL

1. Connect BCM connector.
2. Check voltage between BCM connector M3, B14 terminals 12, 62 and ground.

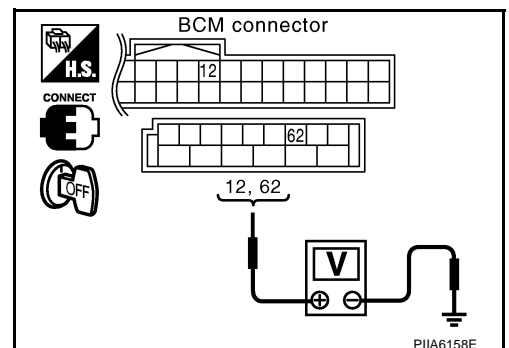
12 (P/B) – Ground : Battery voltage

62 (W) – Ground : Battery voltage

OK or NG

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

NG >> Replace BCM.



POWER WINDOW SYSTEM

NIS001RN

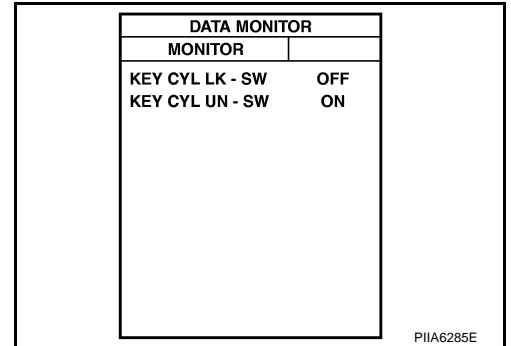
Check Front Door Key Cylinder Switch

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

With CONSULT-II

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

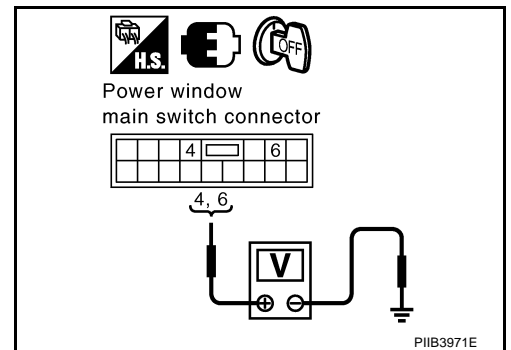
Monitor item	Condition
KEY CYL LK-SW	Lock : ON
	Neutral / Unlock : OFF
KEY CYL UN-SW	Unlock : ON
	Neutral / Lock : OFF



Without CONSULT-II

- Turn ignition switch OFF.
- Check voltage between power window main switch connector and ground.

Connector	Terminals (Wire color)		Key position	Voltage [V] (Approx.)
	(+)	(-)		
D6	4 (P)	Ground	Lock	0
			Neutral / Unlock	5
	6 (OR)		Unlock	0
			Neutral / Lock	5



OK or NG

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

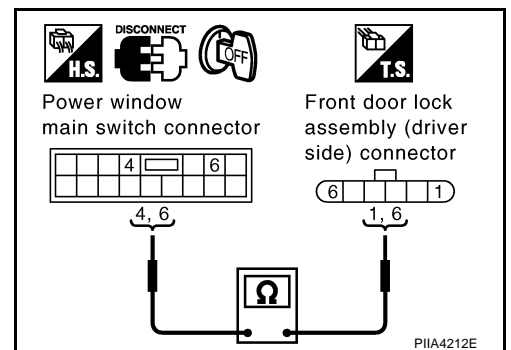
2. CHECK HARNESS CONTINUITY

- Disconnect power window main switch and front door key lock assembly (driver side) connector.
- Check continuity between power window main switch connector D6 terminals 4, 6 and front door lock assembly (driver side) connector D10 terminals 1, 6.

4 (P) – 1 (P) : Continuity should exist.
6 (OR) – 6 (OR) : Continuity should exist.

OK or NG

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



POWER WINDOW SYSTEM

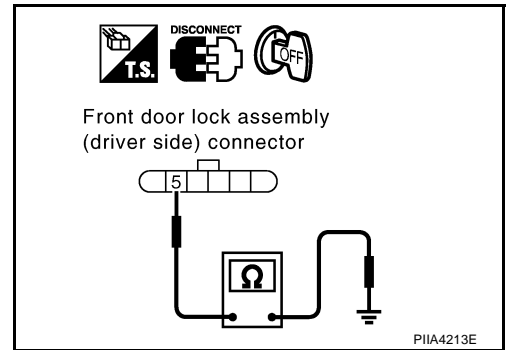
3. CHECK DOOR KEY CYLINDER SWITCH GROUND

Check continuity between front door lock assembly (driver side) connector D10 terminal 5 and ground.

5 (B) – Ground : Continuity should exist.

OK or NG

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



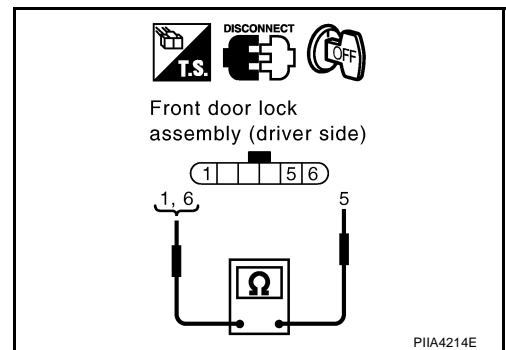
4. CHECK DOOR KEY CYLINDER SWITCH

Check continuity between door lock assembly terminals 1, 6 and 5.

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

OK or NG

- OK >> Further inspection is necessary. Refer to symptom chart.
- NG >> Replace front door key cylinder (driver side) switch.



POWER WINDOW SYSTEM

Check Power Window Serial Link (Passenger Side)

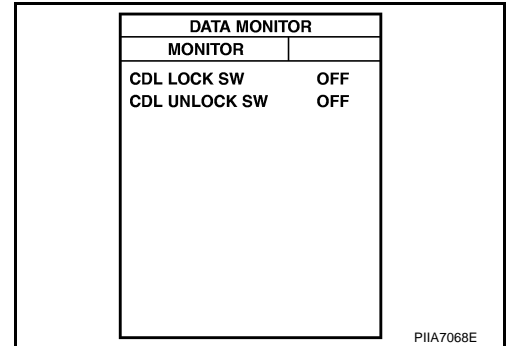
NIS001RO

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

With CONSULT-II

Check ("CDL LOCK SW", "CDL UNLOCK SW") in DATA MONITOR mode for "REMOTE KEYLESS ENTRY SYSTEM" with CONSULT-II. Refer to [BL-37, "Data Monitor"](#).

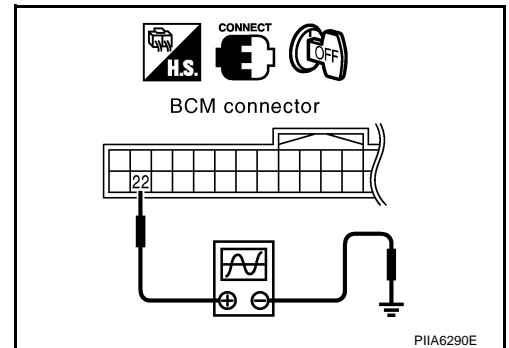
Monitor item	Condition
CDL LOCK SW	LOCK : ON
	UNLOCK : OFF
CDL UNLOCK SW	LOCK : OFF
	UNLOCK : ON



Without CONSULT-II

1. Remove key from ignition switch, and the door of driver side and passenger side is closed.
2. Check 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".

Connector	Terminals (Wire color)		Signal (Reference value)
	(+)	(-)	
M3	22 (OR)	Ground	<p>PIIA1297E</p>



OK or NG

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

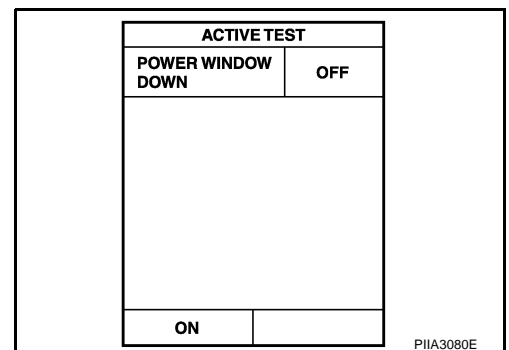
2. CHECK BCM OUTPUT SIGNAL

Check ("POWER WINDOW DOWN") in "ACTIVE TEST" mode for "REMOTE KEYLESS ENTRY SYSTEM" with CONSULT-II. Refer to [BL-64, "Active Test"](#)

When "ACTIVE TEST" is performed, 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.

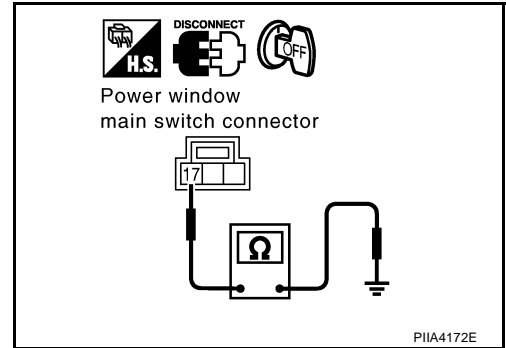


POWER WINDOW SYSTEM

3. CHECK POWER WINDOW SWITCH GROUND

1. Turn ignition switch OFF.
2. Disconnect power window main switch and front power window switch (passenger side) connector.
3. Check continuity between power window main switch connector D7 terminal 17 and ground.

17 (B) – Ground : Continuity should exist.

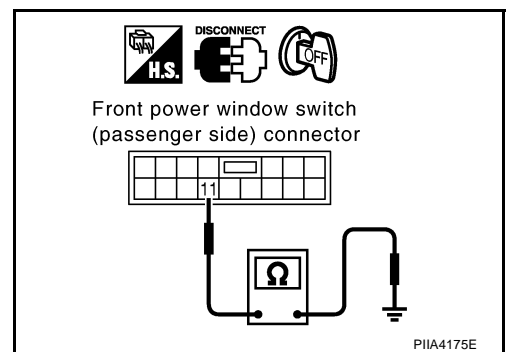


4. Check continuity between front power window switch (passenger side) connector D36 terminal 11 and ground.

11 (B) – Ground : Continuity should exist.

OK or NG

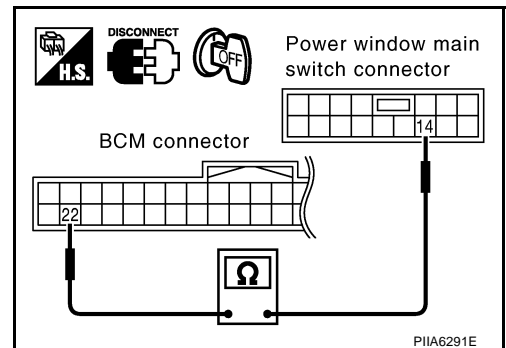
- OK >> GO TO 4.
NG >> Repair or replace harness.



4. CHECK POWER WINDOW SERIAL LINK CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between BCM connector M3 terminal 22 and power window main switch connector D6 terminal 14.

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

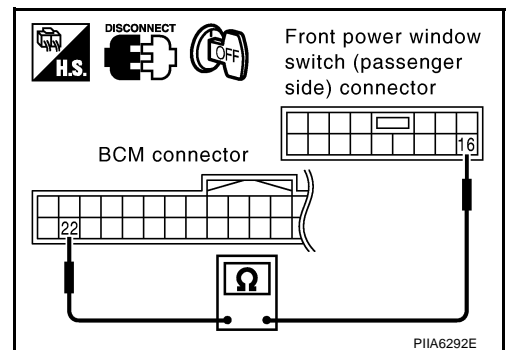


3. Check continuity between BCM connector M3 terminal 22 and front power window switch (passenger side) connector D36 terminal 16.

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

OK or NG

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



POWER WINDOW SYSTEM

Check Power Window Lock Switch

NIS001RQ

1. CHECK POWER WINDOW LOCK SIGNAL

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

Does power window lock operate?

YES >> Replace power window main switch.

NO >> Check condition of harness and connector.

A

B

C

D

E

F

G

H

GW

J

K

L

M

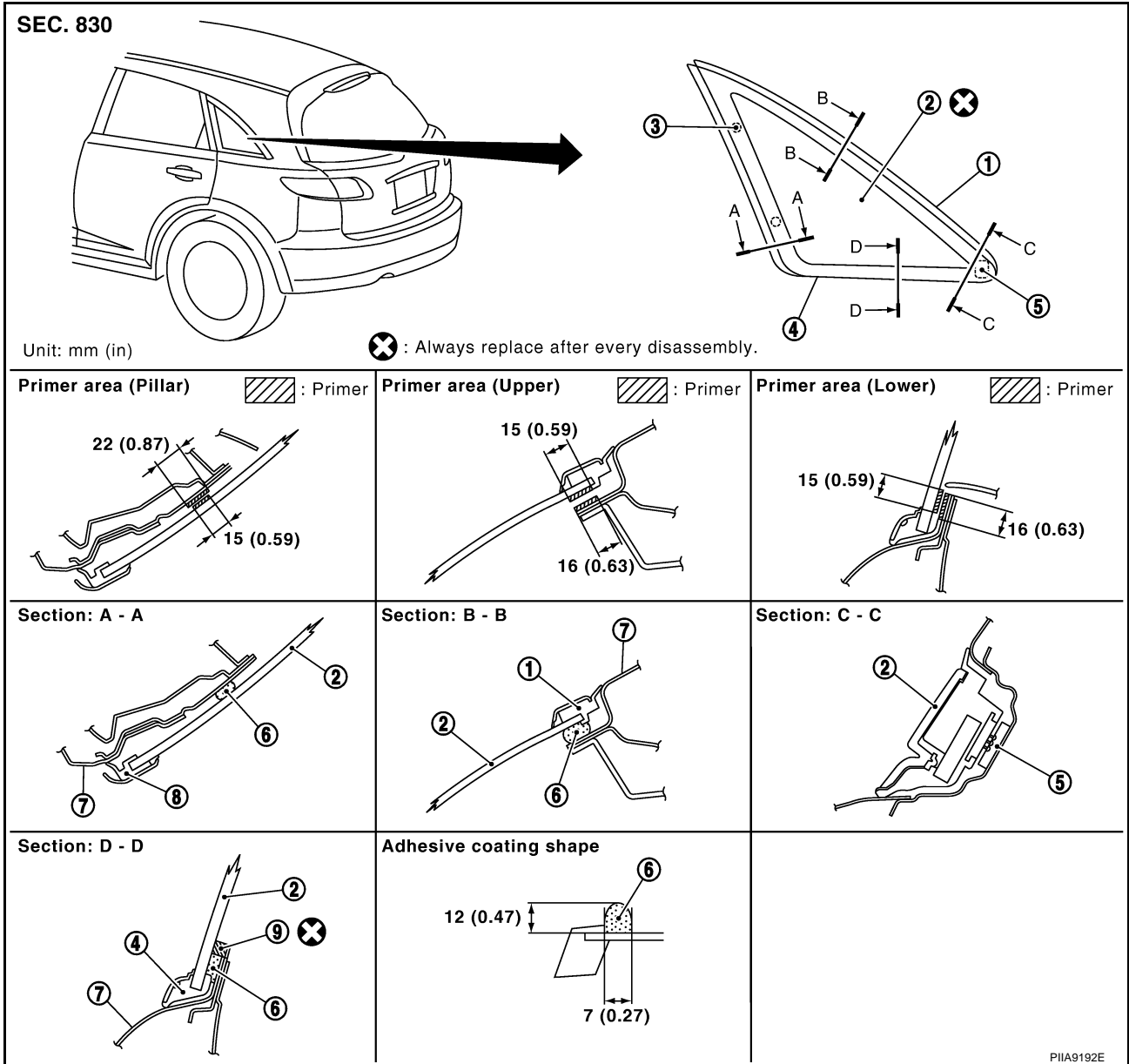
SIDE WINDOW GLASS

PFP:83300

NIS001RR

SIDE WINDOW GLASS

Removal and Installation



- | | | |
|--------------------------------------|---------------------------------------|---------------|
| 1. Side window glass molding (upper) | 2. Side window glass | 3. Clip |
| 4. Side window glass molding (lower) | 5. Fastener | 6. Adhesive |
| 7. Body side outer panel | 8. Side window glass molding (pillar) | 9. Dam rubber |

REMOVAL

1. Remove the roof rear garnish. Refer to [EI-45, "Removal and Installation"](#).
2. Remove the luggage side finisher. Refer to [EI-45, "Removal and Installation"](#).
3. Remove the rear pillar upper garnish. Refer to [EI-45, "Removal and Installation"](#).
4. Apply a protective tape around the side window glass to protect the painted surface from damage.

Remove side window glass using piano wire or power cutting tool and an inflatable pump bag.

WARNING:

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

CAUTION:

- Be careful not to scratch the glass when removing.

SIDE WINDOW GLASS

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

INSTALLATION

- Use a genuine Nissan Urethane Adhesive Kit (if available) or equivalent and follow the instructions furnished with it.
- While the urethane adhesive is curing, open a door window. This will prevent the glass from being forced out by passenger room 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 side window in case of an accident.**

CAUTION:

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

Repairing Water Leaks

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 side window area while pushing glass outward.

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

A

B

C

D

E

F

G

H

GW

J

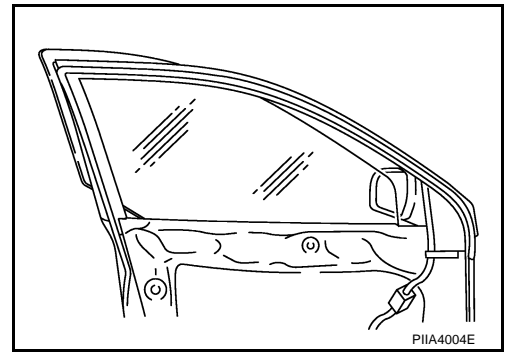
K

L

M

FRONT DOOR GLASS AND REGULATOR

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



A
B
C
D

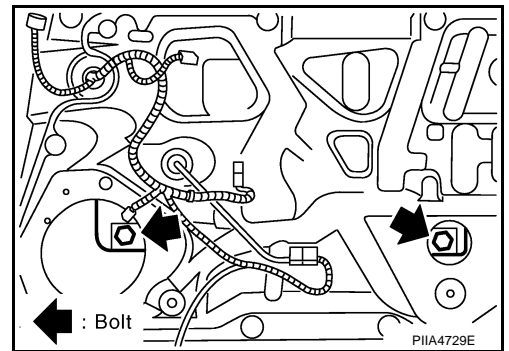
Installation

Install in the reverse order of removal.

REGULATOR ASSEMBLY

Removal

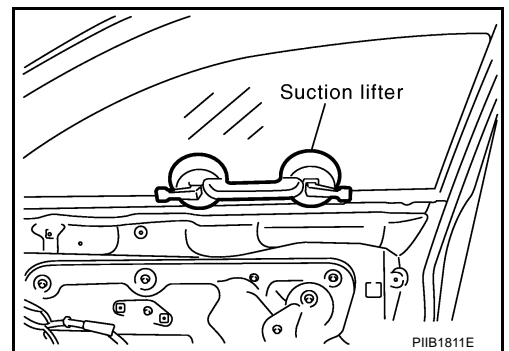
1. Remove the front door finisher. Refer to [EI-36, "DOOR FINISHER"](#).
2. Remove speaker unit. Refer to [AV-44, "Removal and Installation for Front Door Speaker"](#).
3. Operate the power window main switch to raise/lower the door window until the glass mounting bolts can be seen.
4. Remove the glass mounting bolts.
5. Remove the module stop bolts.



E
F
G
H

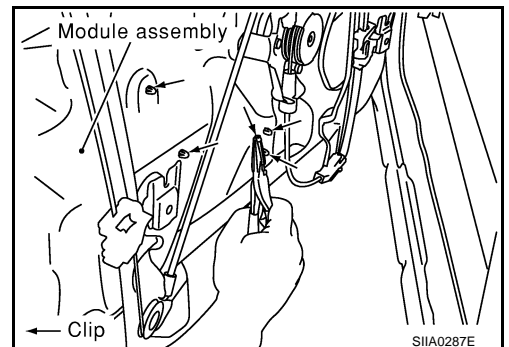
GW

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



J
K
L
M

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



Installation

Install in the reverse order of removal.

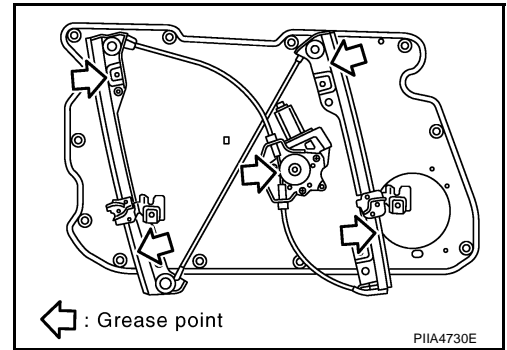
FRONT DOOR GLASS AND REGULATOR

Inspection after Removal

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

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

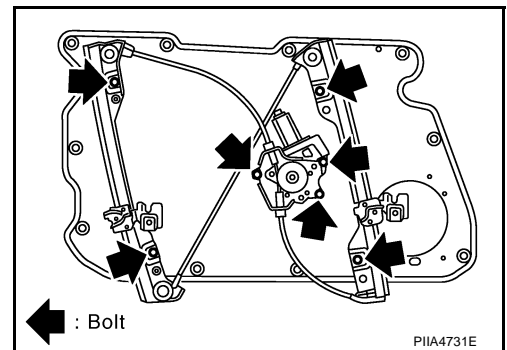
The arrows in the figure show the application points of the body grease.



Disassembly and assembly REGULATOR ASSEMBLY

Disassembly

Remove the power window motor and guide rail from the module assembly.



Assembly

Assemble in the reverse order of disassembly.

Inspection after Installation SETTING OF LIMIT SWITCH

Setting of Limit Switch

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

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

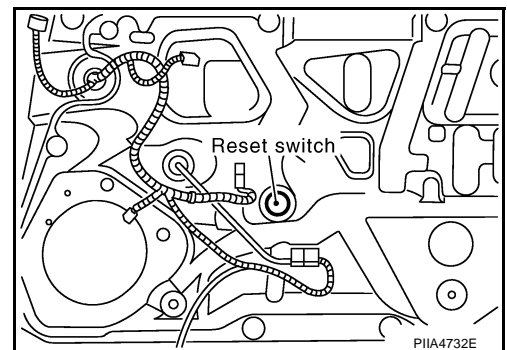
Resetting

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

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

CAUTION:

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



FITTING INSPECTION

- Make sure the glass is securely fit into the glass run groove.

FRONT DOOR GLASS AND REGULATOR

- Lower the glass slightly [approx. 10 to 20 mm (0.39 to 0.79 in)] and make sure the clearance to the sash is parallel. If the clearance between the glass and sash is not parallel, loosen the regulator mounting bolts, guide rail mounting bolts, and glass and guide rail mounting bolts to correct the glass position.

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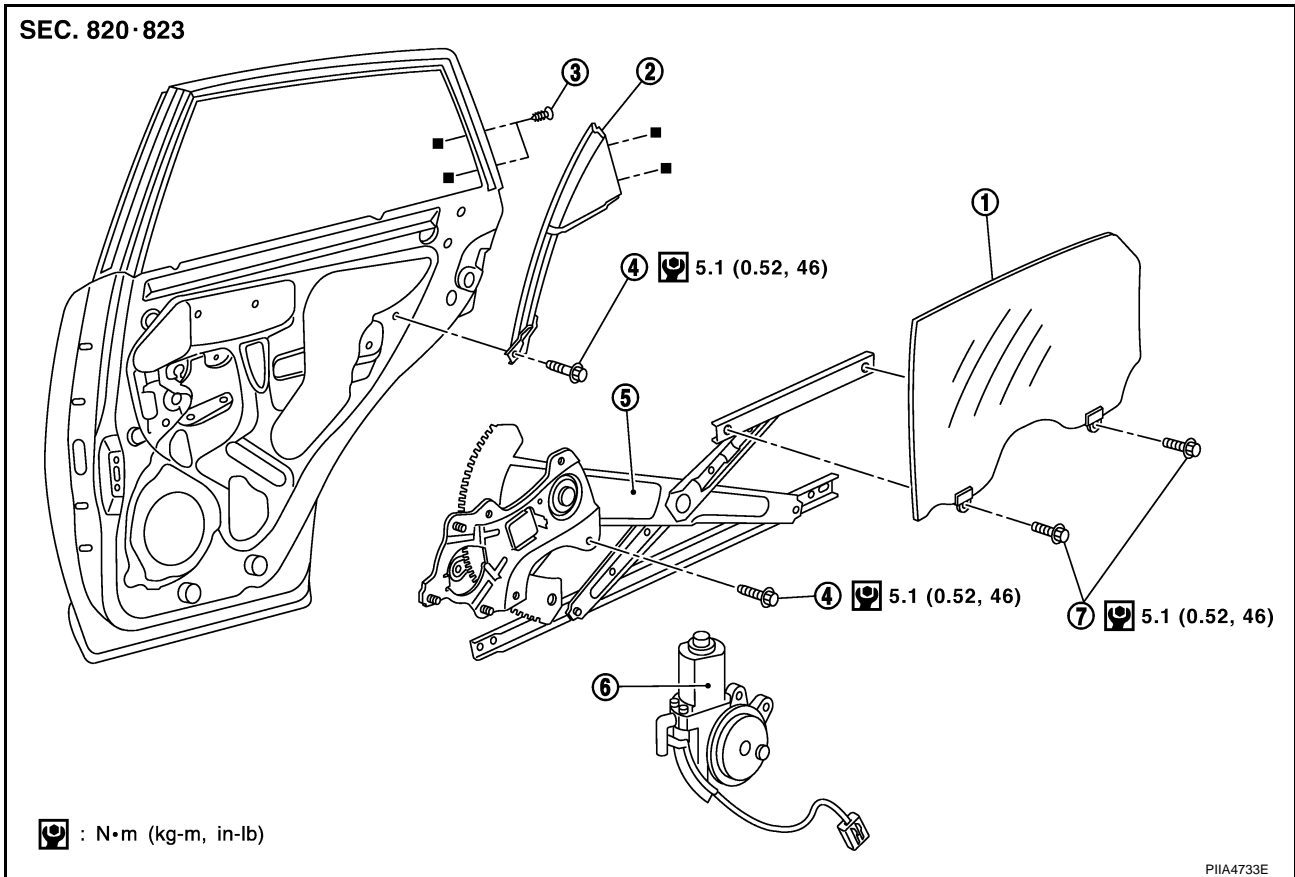
REAR DOOR GLASS AND REGULATOR

PFP:82300

NIS001RV

REAR DOOR GLASS AND REGULATOR

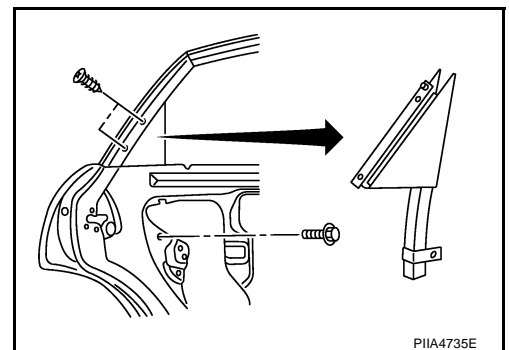
Removal and Installation



DOOR GLASS

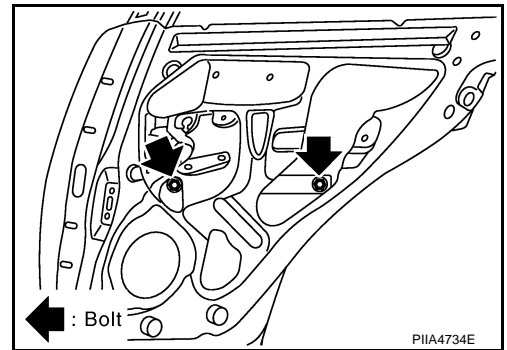
Removal

1. Remove the rear door finisher. Refer to [EI-36, "DOOR FINISHER"](#).
2. Remove the rear door outside molding. Refer to [EI-25, "DOOR OUTSIDE MOLDING"](#).
3. Remove the sealing screen.
4. Lower the door glass.
5. Remove the corner piece screws and bolt.
6. Remove the corner piece assembly.



REAR DOOR GLASS AND REGULATOR

7. Operate the power window switch to raise/lower the door window until the glass mounting bolts can be seen.
8. Remove the glass mounting bolts, and remove the glass from the inside of the panel.



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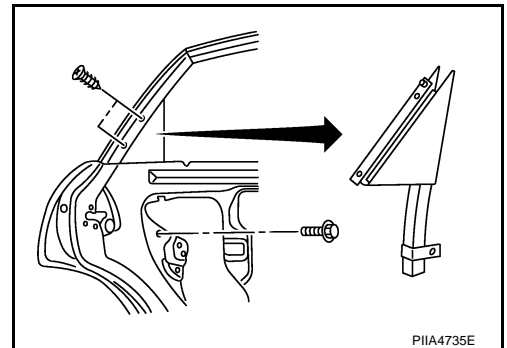
Installation

Install in the reverse order of removal.

REGULATOR ASSEMBLY

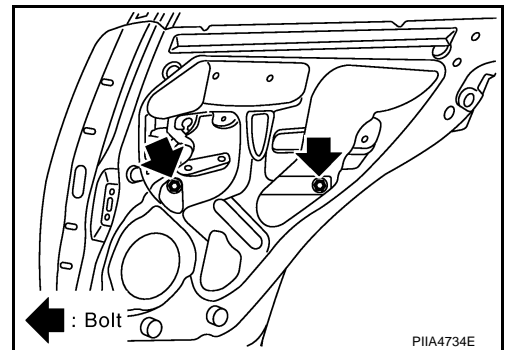
Removal

1. Remove the rear door finisher. Refer to [EI-36, "DOOR FINISHER"](#).
2. Remove the rear door outside molding. Refer to [EI-25, "DOOR OUTSIDE MOLDING"](#).
3. Remove the sealing screen.
4. Lower the door glass.
5. Remove the corner piece screws and bolt.
6. Remove the corner piece assembly.

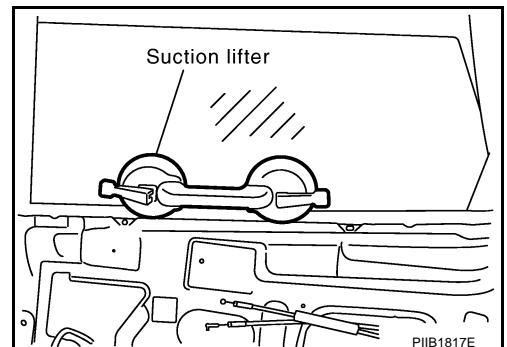


GW

7. Operate the power window switch to raise/lower the door window until the glass mounting bolts can be seen.
8. Remove the glass mounting bolts.

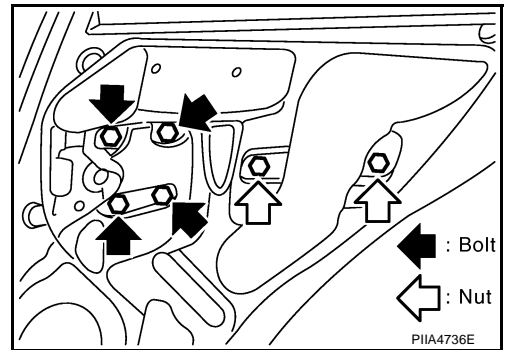


9. Raise up the door glass and hold with a suction lifter.



REAR DOOR GLASS AND REGULATOR

10. Remove the power window motor mounting bolts and nuts, and remove the regulator from the panel.
11. Disconnect the connector for the regulator assembly.



Installation

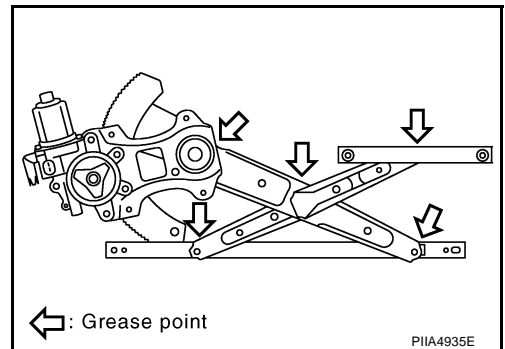
Install in the reverse order of removal.

Inspection after Removal

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

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

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



Disassembly and assembly REGULATOR ASSEMBLY

Disassembly

Remove the power window motor from the regulator assembly.

Assembly

Assemble in the reverse order of disassembly.

Fitting Inspection

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

INSIDE MIRROR

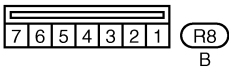
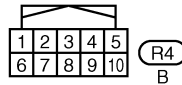
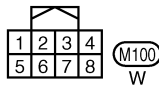
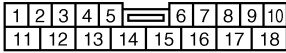
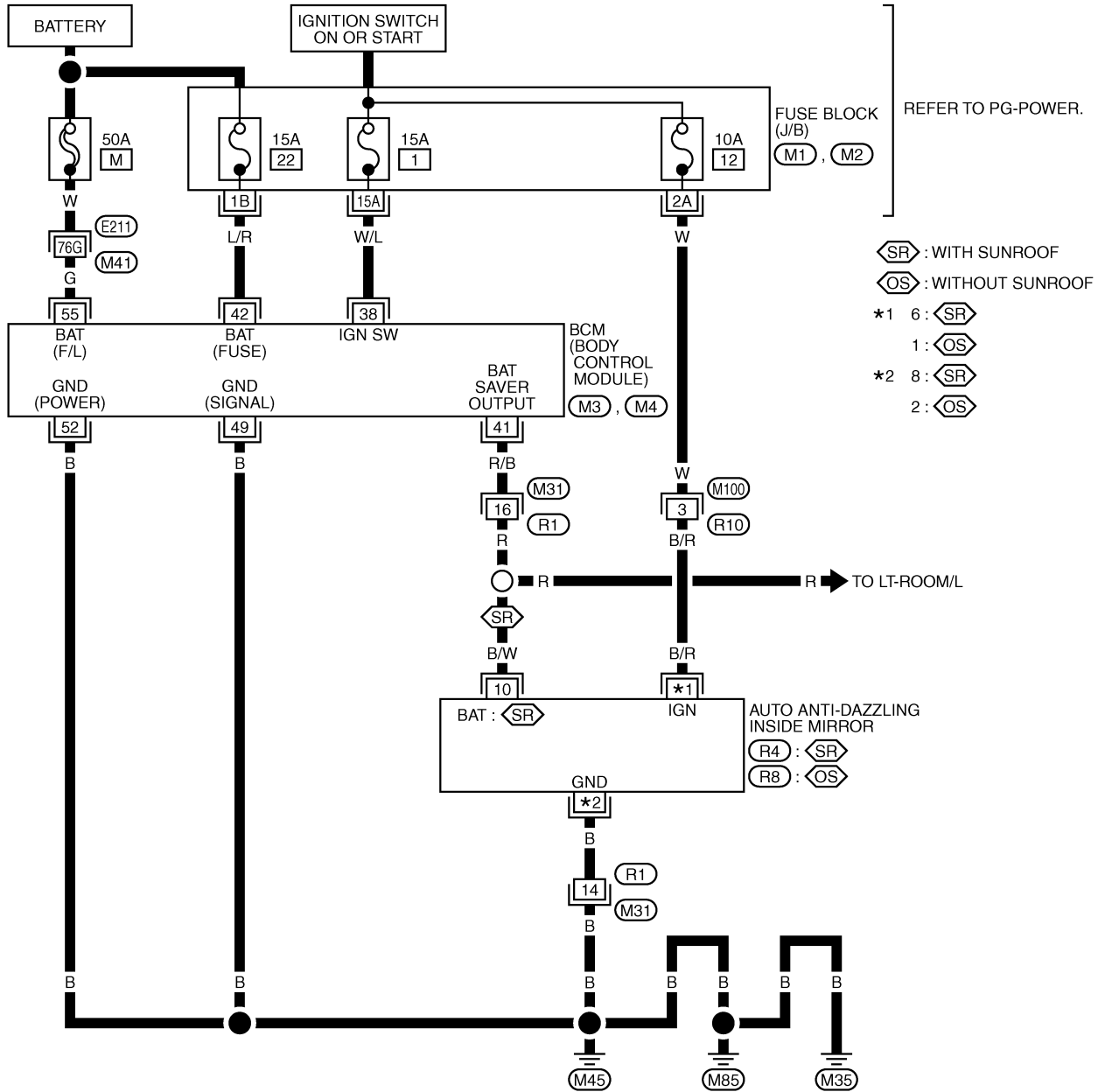
PPF:96321

INSIDE MIRROR

Wiring Diagram — I/MIRR —

NIS001RY

GW-I/MIRR-01



REFER TO THE FOLLOWING.

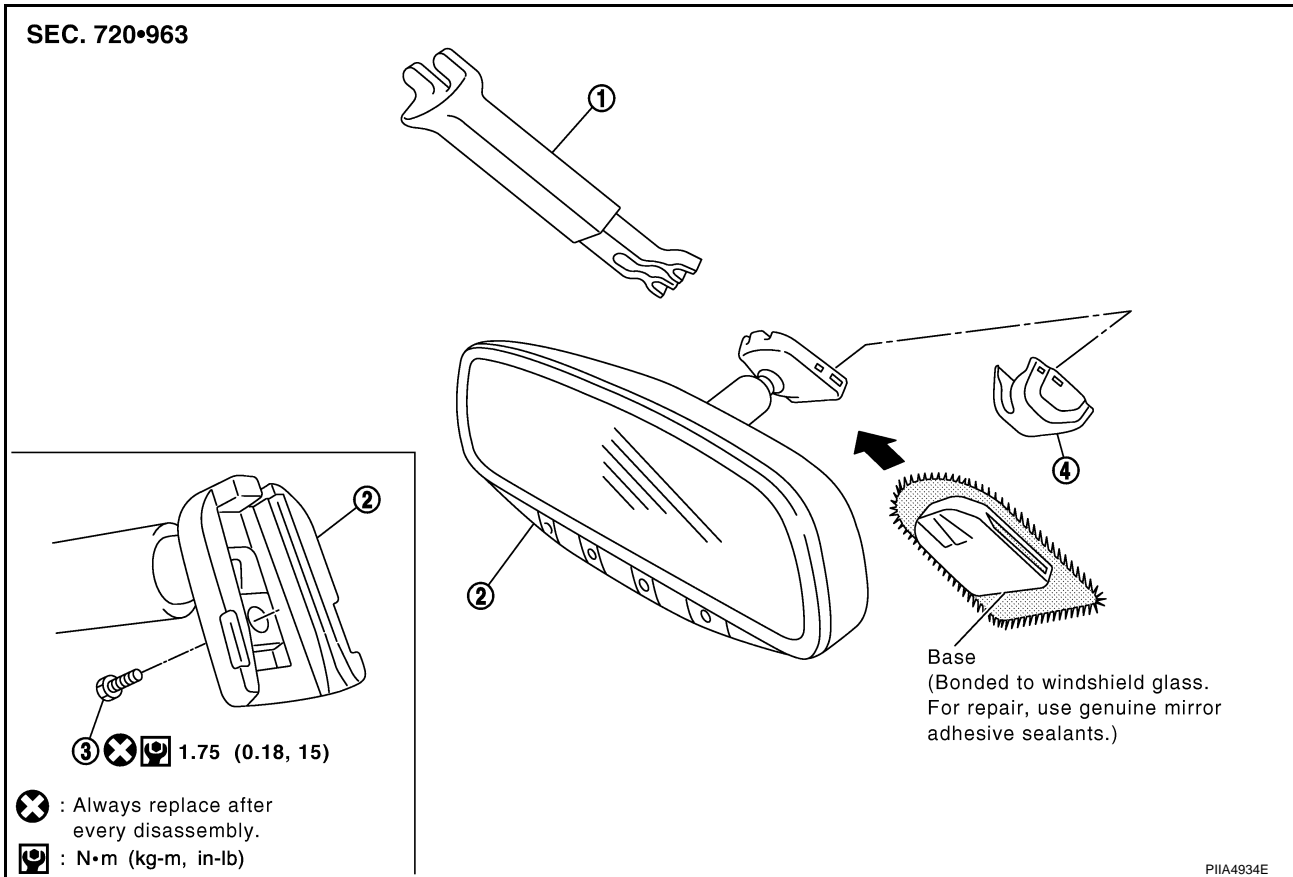
- (E21) -SUPER MULTIPLE JUNCTION (SMJ)
- (M1), (M2) -FUSE BLOCK-JUNCTION BOX (J/B)
- (M3), (M4) -ELECTRICAL UNITS

TIWM1683E

INSIDE MIRROR

Removal and Installation

NIS001RZ



1. Inside mirror finisher

2. Inside mirror

3. TORX bolt (T20)

4. Inside mirror cover

REMOVAL

1. Remove inside mirror cover.
2. Remove inside mirror finisher.
3. Remove TORX bolt (T20) of the mirror base.
4. Slide the mirror base upward to remove.
5. Disconnect the connector.

INSTALLATION

Install in the reverse order of removal.

COMPASS

For reset of compass, refer to [DI-106, "System Description"](#).

CAUTION:

Apply Genuine Mirror Adhesive or equivalent to bonding surface of mounting bracket. Refer to [GI-48, "RECOMMENDED CHEMICAL PRODUCTS AND SEALANTS"](#).

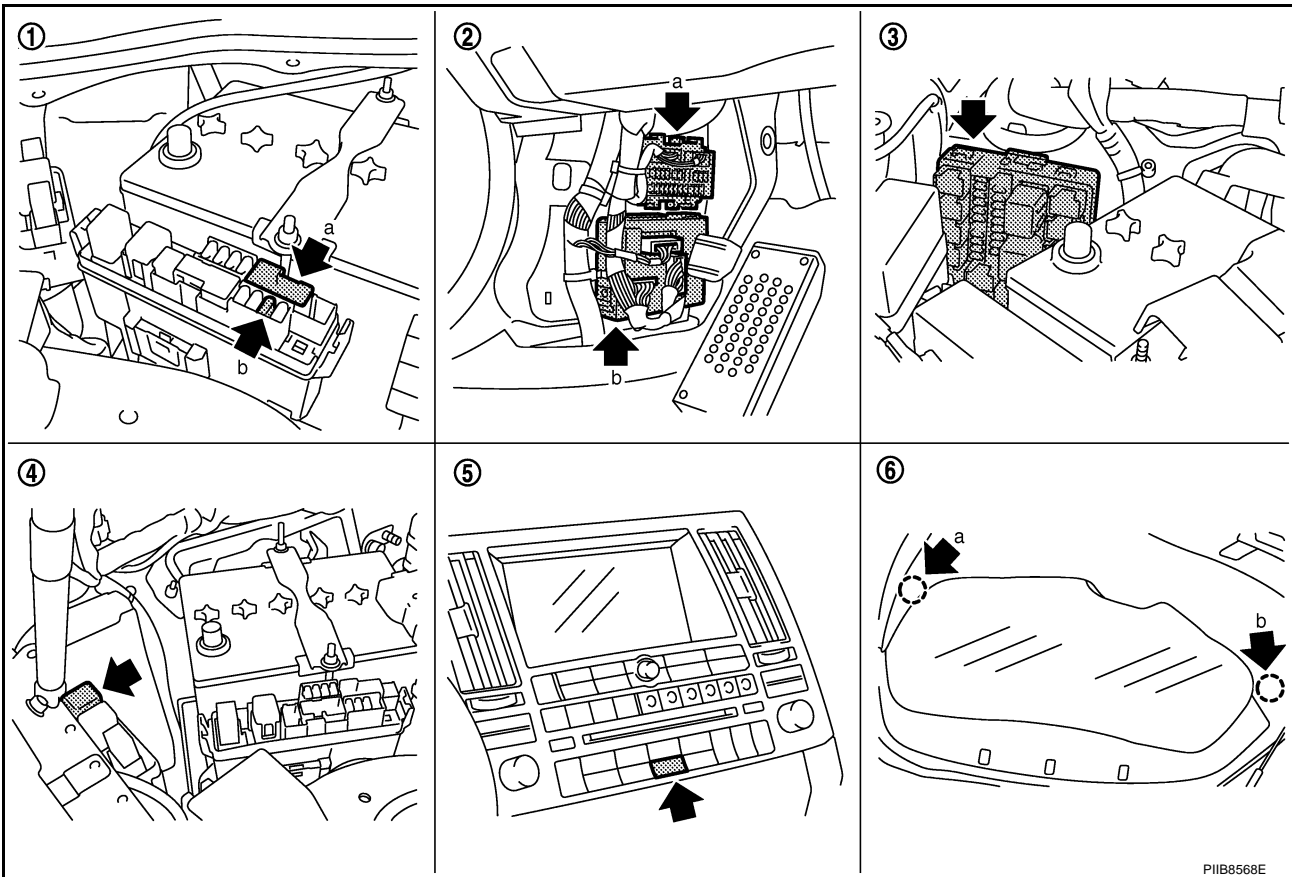
REAR WINDOW DEFOGGER

REAR WINDOW DEFOGGER

PFP:25350

Component Parts and Harness Connector Location

NIS001S0



- | | | |
|--|---|---|
| <p>1. a: Fusible link 50A letter M
b: Fuse 15A No.32</p> | <p>2. a: Fuse block (J/B) M1, M2, E201
b: BCM M3, M4</p> | <p>3. IPDM E/R E4, E8, E9</p> |
| <p>4. Rear window defogger relay E13</p> | <p>5. A/C and AV switch M64
(Rear window defogger switch)</p> | <p>6. a: Rear window defogger D104
b: Rear window defogger D114</p> |

PIIB8568E

System Description

NIS001S1

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

The rear window defogger operates only for approximately 15 minutes.

Power is at all times supplied

- through 20A fuse [No. 75, located in the IPDM E/R]
- to rear window defogger relay terminals 3,
- through 20A fuse [No. 80, located in the IPDM E/R]
- to rear window defogger relay terminals 6,
- through 15A fuse [No. 32, located in the fuse block (J/B)]
- to A/C and AV switch terminal 1,
- through 50A fusible link (letter **M**, located in the fuse and fusible link box)
- to BCM terminal 55,
- through 15A fuse [No. 22, located in the fuse block (J/B)]
- to BCM terminal 42.

With the ignition switch turned to ON or START position,

Power is supplied

- through 15A fuse [No. 1, located in the fuse block (J/B)]
- to BCM terminal 38.
- through 10A fuse [No. 12, located in the fuse block]

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REAR WINDOW DEFOGGER

- to rear window defogger relay terminal 1,

Ground is supplied

- to BCM terminal 49 and 52
- through body grounds M35, M45 and M85,
- to A/C and AV switch terminal 5
- through body grounds M35, M45 and M85,
- to IPDM E/R terminals 38 and 60
- through body grounds E21, E50 and E51.

When rear window defogger switch in A/C and AV switch is turned to ON,

Ground is supplied

- to BCM terminal 9
- through A/C and AV switch terminal 16
- through A/C and AV switch terminal 5 and
- through body grounds M35, M45 and M85.

Then rear window defogger switch is illuminated.

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

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

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

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

Ground is supplied

- to rear window defogger relay terminal 2
- through IPDM E/R terminal 52
- through IPDM E/R terminals 38 and 60 and
- through body grounds E21, E50 and E51.

And then rear window defogger relay is energized.

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

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

Rear window defogger terminal 2 is grounded through grounds B15 and B45.

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 terminal 7
- through fuse block (J/B) terminal 2C
- through 15A fuse [No. 8, located in the fuse block (J/B)] and
- through fuse block (J/B) terminal 5B
- to door mirror defogger (driver side and passenger side) terminal 4.

Door mirror defogger (driver side and passenger side) terminal 3 is grounded through body grounds M35, M45 and M85.

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

CAN Communication System Description

NIS001S2

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

CAN Communication Unit

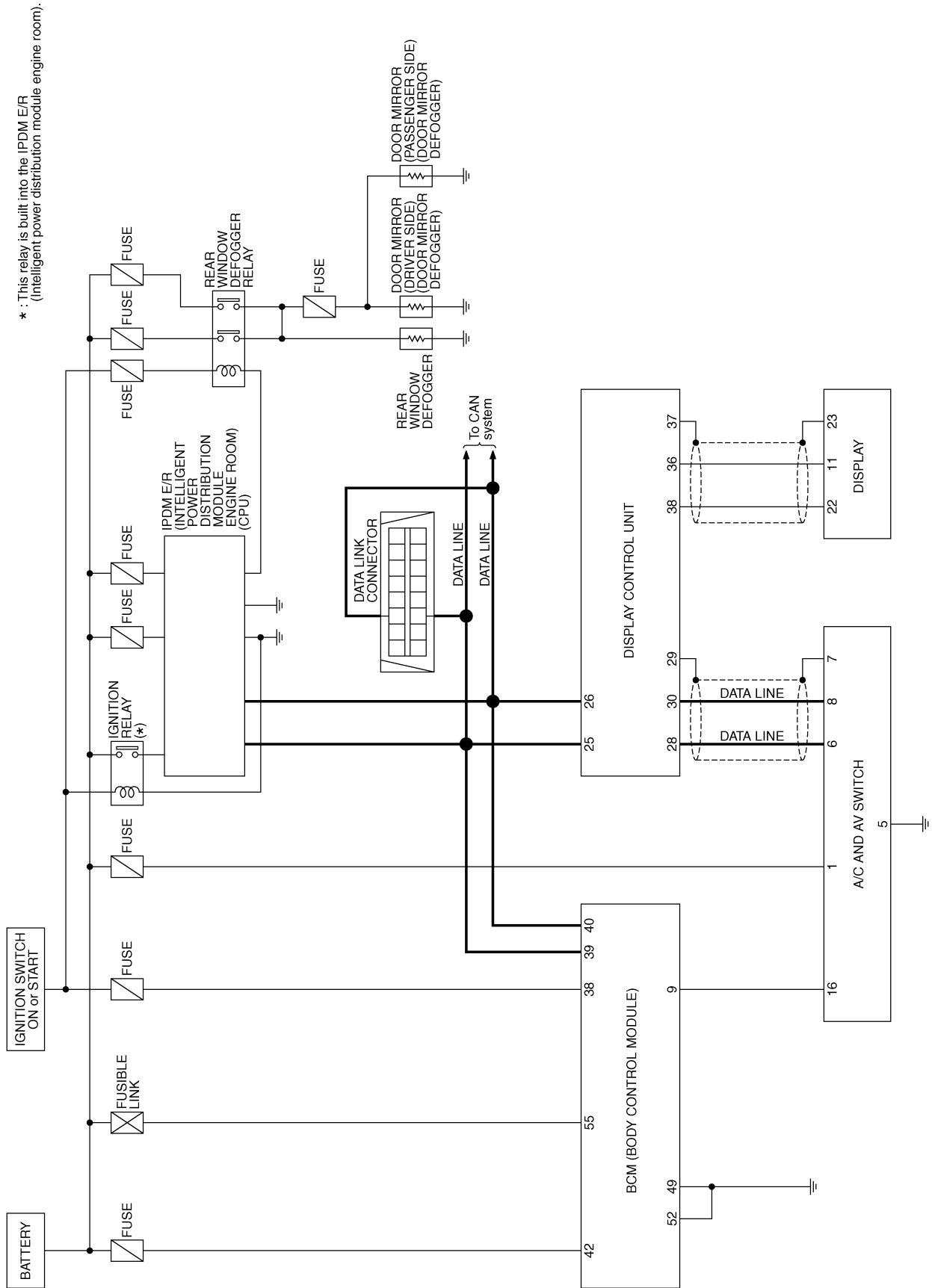
NIS001S3

Refer to [LAN-49, "CAN System Specification Chart"](#) .

REAR WINDOW DEFOGGER

Schematic

NIS001S4



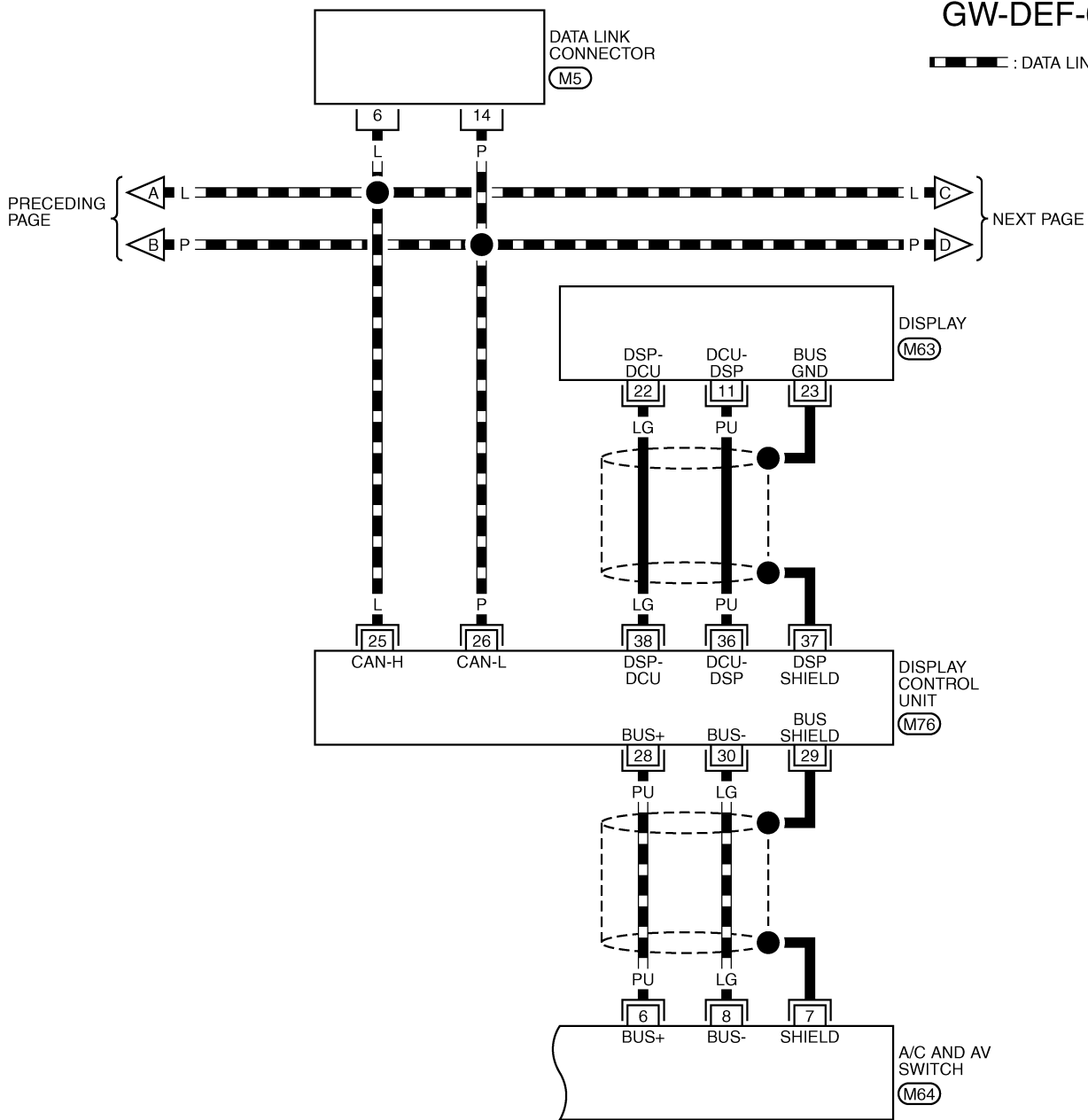
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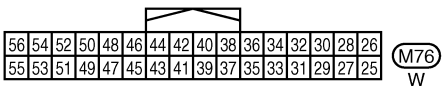
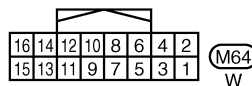
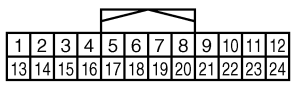
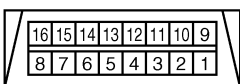
TIWM1684E

REAR WINDOW DEFOGGER

GW-DEF-02



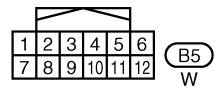
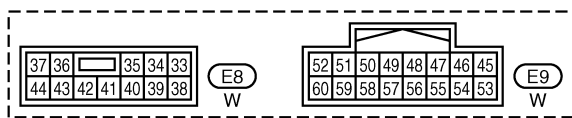
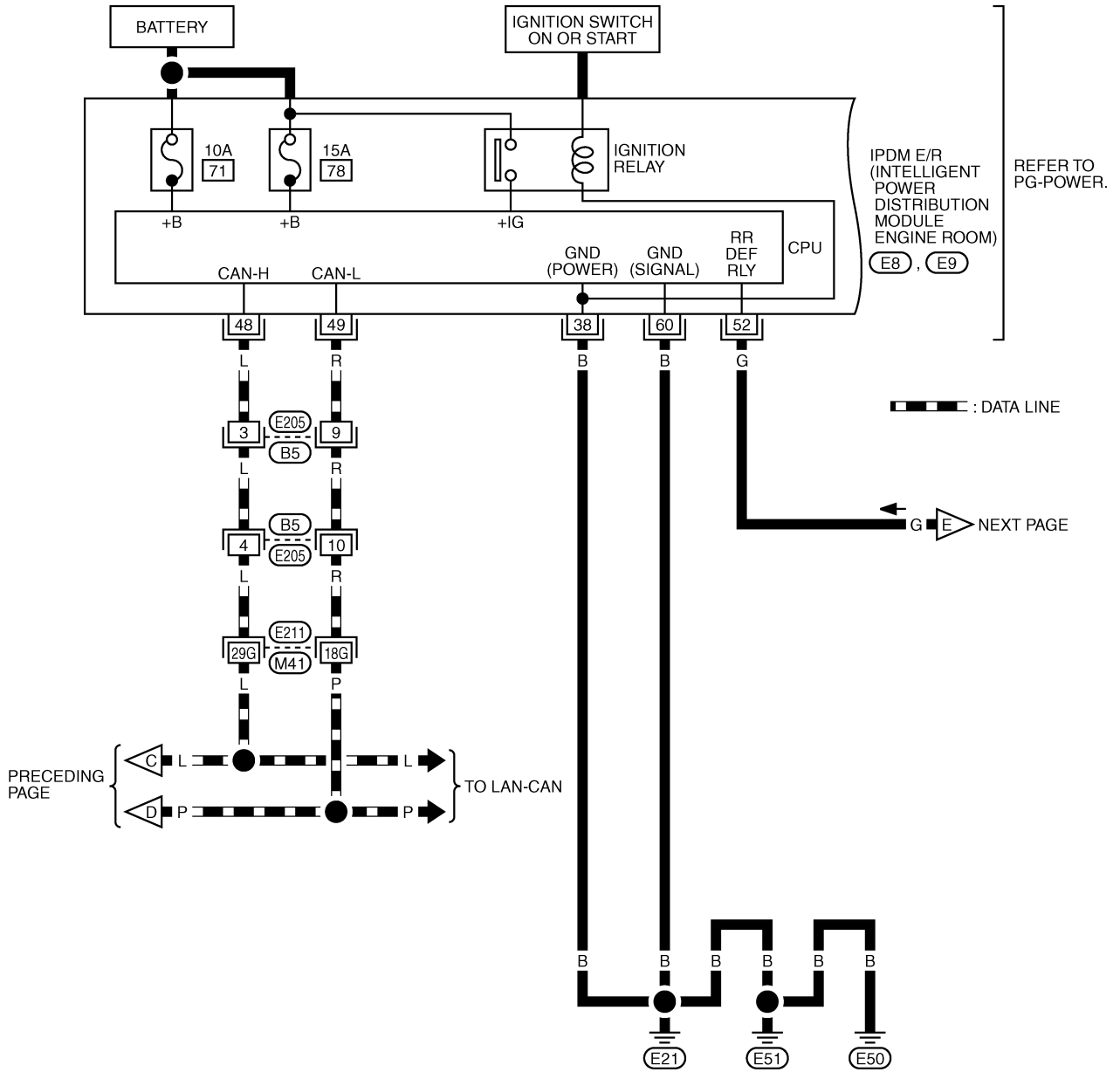
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TIWM1686E

REAR WINDOW DEFOGGER

GW-DEF-03

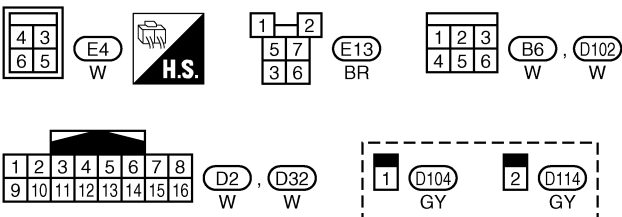
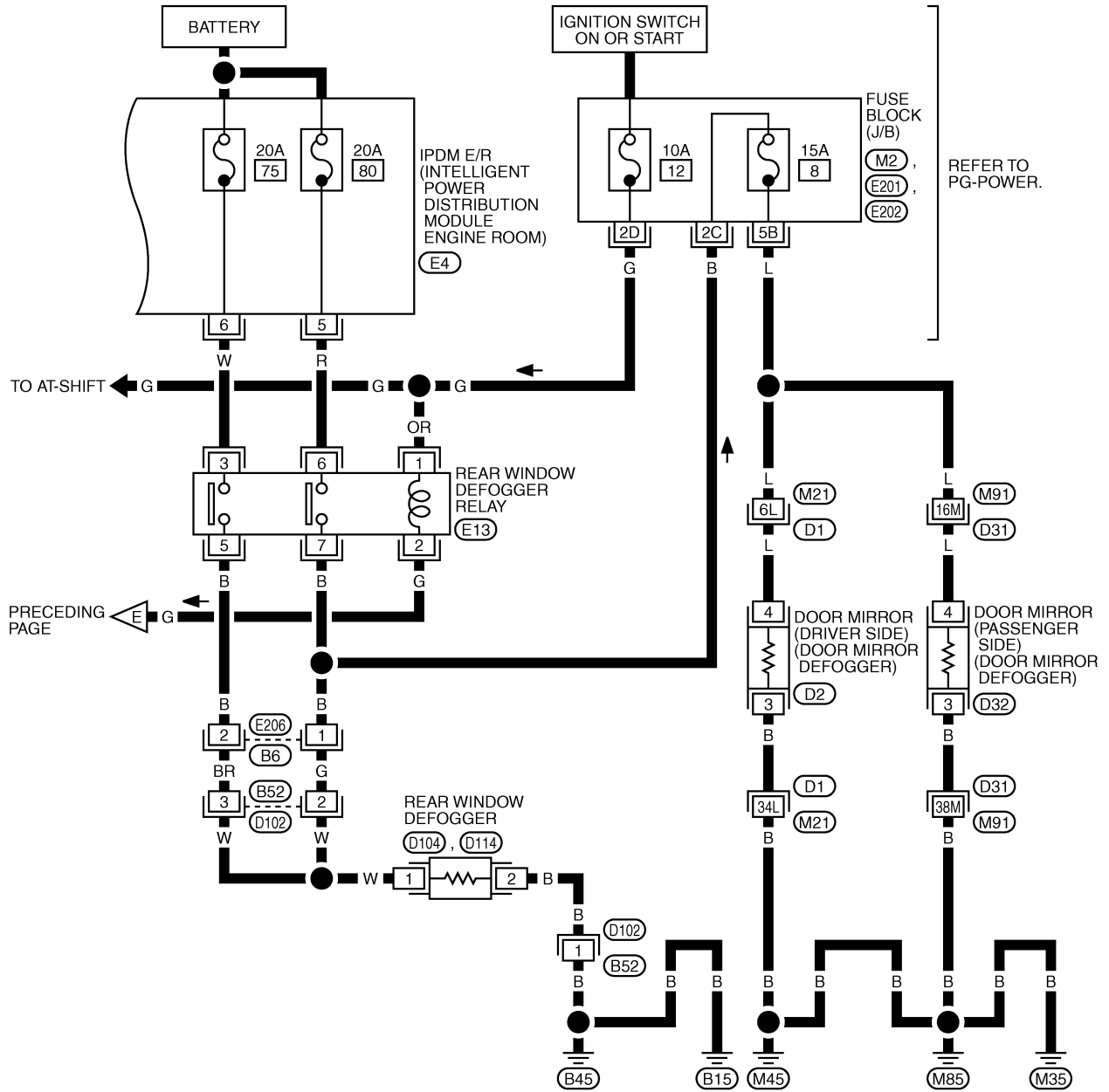


REFER TO THE FOLLOWING.
 (E21) -SUPER MULTIPLE JUNCTION (SMJ)

TIWM1687E

REAR WINDOW DEFOGGER

GW-DEF-04



REFER TO THE FOLLOWING.
 (D1), (D31) -SUPER MULTIPLE JUNCTION (SMJ)
 (M2), (E201), (E202) -FUSE BLOCK-JUNCTION BOX (J/B)

TIWM1688E

REAR WINDOW DEFOGGER

Terminal and Reference Value for BCM

NIS001S6

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

Terminal and Reference Value for IPDM E/R

NIS001S7

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

REAR WINDOW DEFOGGER

CONSULT-II Function (BCM)

NIS001S8

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

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

CONSULT-II START PROCEDURE

Refer to [GI-38, "CONSULT-II Start Procedure"](#) .

DATA MONITOR

Display Item List

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

ACTIVE TEST

Display Item List

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

CONSULT-II Function (IPDM E/R)

NIS00292

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

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

CONSULT-II START PROCEDURE

Refer to [GI-38, "CONSULT-II Start Procedure"](#) .

DATA MONITOR

Monitored Item	Description
RR DEF REQ	Indicates [ON/OFF] condition of rear window defogger function by IPDM E/R.

ACTIVE TEST

Test Item	Description
REAR DEFOGGER	This test is able to check rear window defogger operation. Rear window defogger operates when "ON" on CONSULT-II screen is touched.

REAR WINDOW DEFOGGER

Work Flow

NIS001S9

1. Check the symptom and customer's requests.
2. Understand the outline of system. Refer to [GW-67, "System Description"](#) .
3. According to the trouble diagnosis chart, repair or replace the cause of the malfunction. Refer to [GW-76, "Trouble Diagnoses Symptom Chart"](#) .
4. Does rear window defogger operate normally? YES: GO TO 5, NO: GO TO 3.
5. INSPECTION END.

Trouble Diagnoses Symptom Chart

NIS001SA

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

Symptom	Diagnoses / Service procedure	Refer to page
Rear window defogger and door mirror defogger do not operate.	1. Check BCM power supply and ground circuit	GW-77
	2. Check IPDM E/R auto active test	PG-21
	3. Check rear window defogger switch circuit	GW-78
	4. Check rear window defogger power supply circuit	GW-79
	5. Replace IPDM E/ R	PG-28
Rear window defogger does not operate but both of door mirror defogger operate.	1. Check rear window defogger circuit	GW-81
	2. Check filament	GW-87
Door mirror defogger does not operated but both of rear window defogger operate.	1. Check door mirror defogger power supply circuit	GW-82
Driver side door mirror defogger does not operate.	1. Check driver side door mirror defogger circuit	GW-84
Passenger side door mirror defogger does not operate.	1. Check passenger side door mirror defogger circuit	GW-85
Rear window defogger switch does not light, and rear window defogger is not displayed on the display. But rear window defogger operates.	1. Check rear window defogger signal	GW-85

REAR WINDOW DEFOGGER

NIS001SB

Check BCM Power Supply and Ground Circuit

First perform the "SELF-DIAG RESULTS" in "BCM" with CONSULT-II, when perform the each trouble diagnosis. Refer to [BCS-13, "CAN Communication Inspection Using CONSULT-II \(Self-Diagnosis\)"](#).

1. CHECK FUSE

- Check 15A fuse [No.1, located in the fuse block (J/B)]
- Check 15A fuse [No.22, located in the fuse block (J/B)]
- Check 50A fusible link (letter **M** located in the fuse and fusible link box).

NOTE:

Refer to [GW-67, "Component Parts and Harness Connector Location"](#).

OK or NG

OK >> GO TO 2.

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

2. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch ON.
2. Check voltage between BCM connector M3, M4 terminal 38, 42, 55 and ground.

38 (W/L) – Ground : Battery voltage

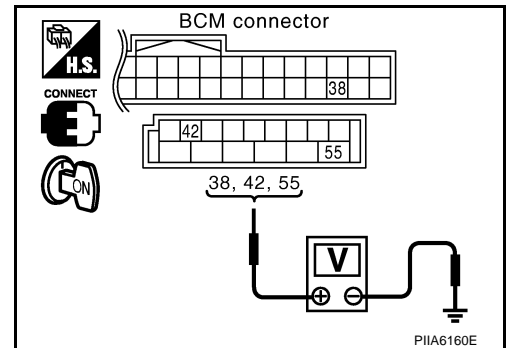
42 (L/R) – Ground : Battery voltage

55 (G) – Ground : Battery voltage

OK or NG

OK >> GO TO 3.

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



3. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check continuity between BCM connector M4 terminal 49, 52 and ground.

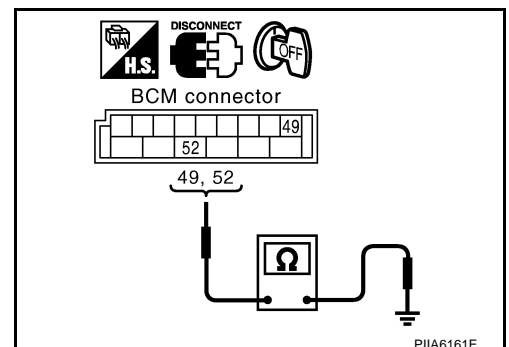
49 (B) – Ground : Continuity should exist.

52 (B) – Ground : Continuity should exist.

OK or NG

OK >> Power supply and ground circuit are OK.

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



REAR WINDOW DEFOGGER

Check Rear Window Defogger Switch Circuit

NIS001SC

1. CHECK REAR WINDOW DEFOGGER SWITCH OPERATION

With CONSULT-II

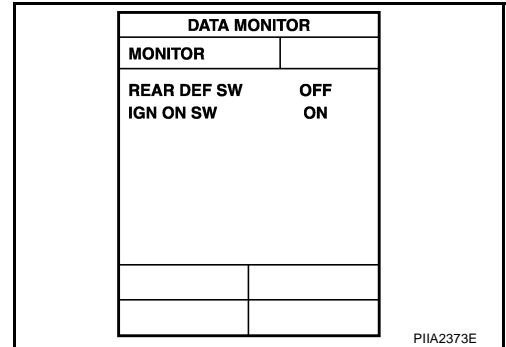
Check ("REAR DEF SW", "IGN ON SW") in DATA MONITOR mode with CONSULT-II.

When rear window defogger switch is turned to ON

REAR DEF SW : ON

When ignition switch is turned to ON

IGN ON SW : ON



Without CONSULT-II

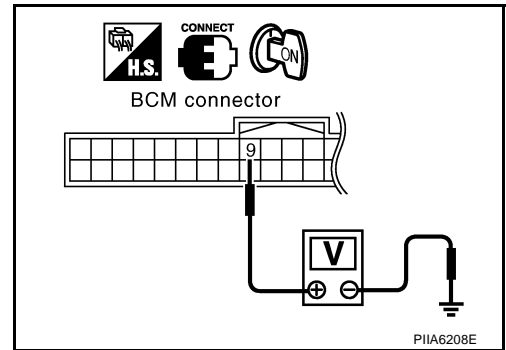
1. Turn ignition switch ON.
2. Check voltage between BCM connector ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M3	9 (L/W)	Ground	Rear window defogger switch is pressed.	0
			Rear window defogger switch is OFF.	5

OK or NG

OK >> Rear window defogger switch is OK.

NG >> GO TO 2.



2. CHECK HARNESS CONTINUITY

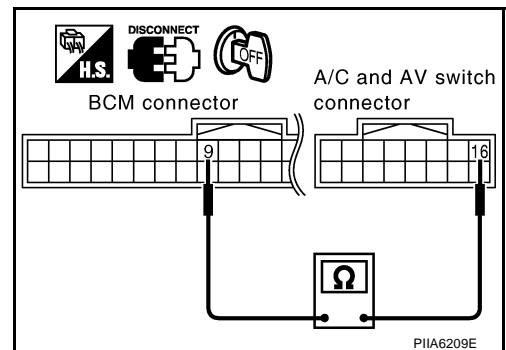
1. Turn ignition switch OFF.
2. Disconnect BCM and A/C and AV switch connector.
3. Check continuity between BCM connector M3 terminal 9 and A/C and AV switch connector M64 terminal 16.

9 (L/W) – 16 (L/W) : Continuity should exist.

OK or NG

OK >> GO TO 3.

NG >> Repair or replace harness.



REAR WINDOW DEFOGGER

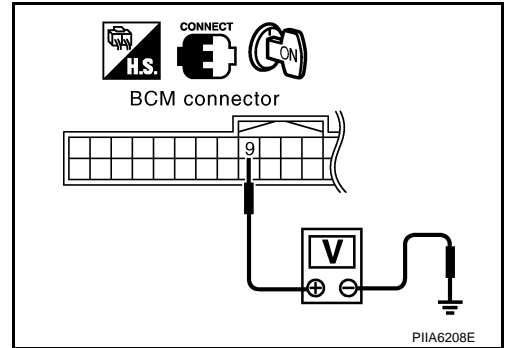
3. CHECK BCM OUTPUT SIGNAL

1. Connect BCM connector.
2. Turn ignition switch ON.
3. Check voltage between BCM connector M3 terminal 9 and ground.

9 (L/W) – Ground : Approx. 5

OK or NG

- OK >> Replace A/C and AV switch.
NG >> Replace BCM.



Check rear Window Defogger Power Supply Circuit

NIS001SD

1. CHECK FUSE

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

NOTE:

Refer to [GW-67, "Component Parts and Harness Connector Location"](#).

OK or NG

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

2. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Remove rear window defogger relay.
3. Turn ignition switch ON.
4. Check voltage between rear window defogger relay connector E13 terminals 1, 3, 6 and ground.

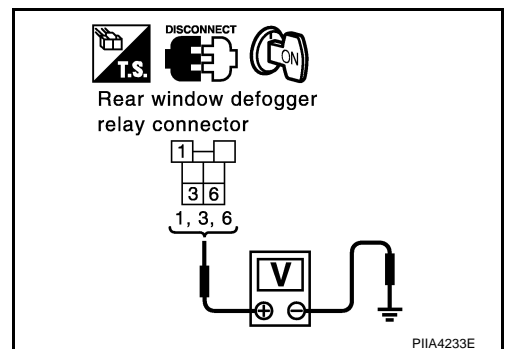
1 (OR) – Ground : Battery voltage

3 (W) – Ground : Battery voltage

6 (R) – Ground : Battery voltage

OK or NG

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

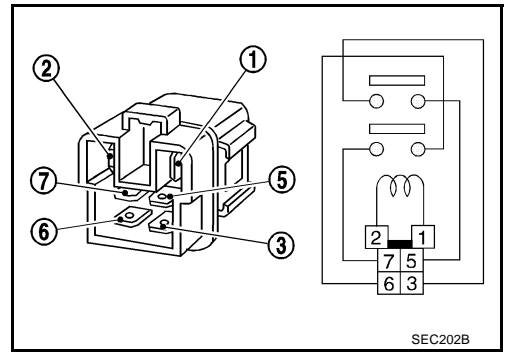


REAR WINDOW DEFOGGER

3. CHECK REAR WINDOW DEFOGGER RELAY

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

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



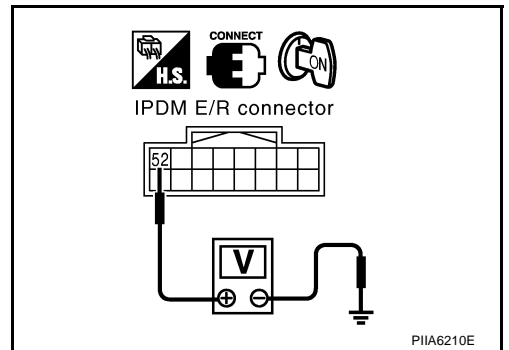
OK or NG

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

4. CHECK REAR WINDOW DEFOGGER RELAY GROUND CIRCUIT

- Turn ignition switch OFF.
- Installation rear window defogger relay.
- Turn ignition switch ON.
- Check voltage between IPDM E/R connector and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
E9	52 (G)	Ground	When rear window defogger switch ON	0
			When rear window defogger switch OFF	Battery voltage



OK or NG

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

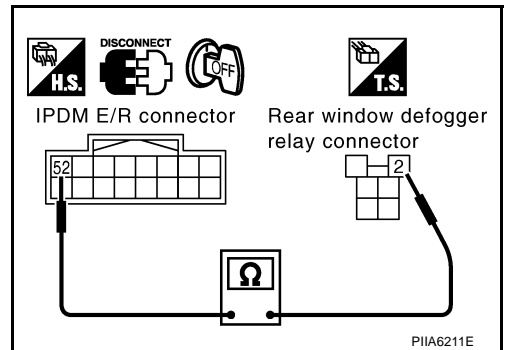
5. CHECK HARNESS CONTINUITY

- Turn ignition switch OFF.
- Disconnect IPDM E/R connector and rear window defogger relay.
- Check continuity between IPDM E/R connector E9 terminal 52 and rear window defogger relay connector E13 terminal 2.

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

OK or NG

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



REAR WINDOW DEFOGGER

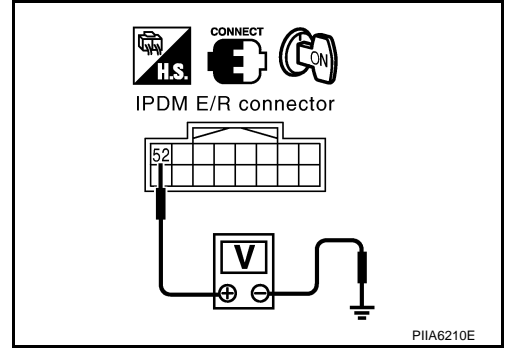
6. CHECK REAR WINDOW DEFOGGER RELAY OUTPUT SIGNAL

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

52 (G) – Ground : Battery voltage

OK or NG

- OK >> Check condition of harness and connector.
 NG >> Replace IPDM E/R.



Check Rear Window Defogger Circuit

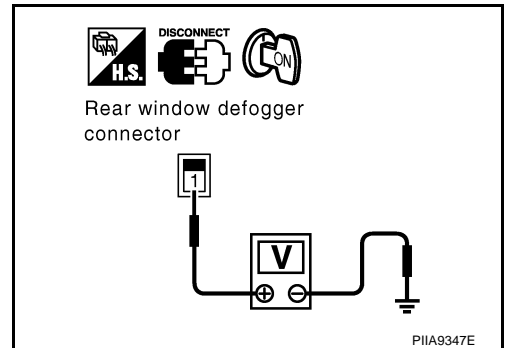
1. CHECK POWER SUPPLY CIRCUIT 1

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

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
D104	1(W)	Ground	Rear window defogger switch ON.	Battery voltage
			Rear window defogger switch OFF.	0

OK or NG

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



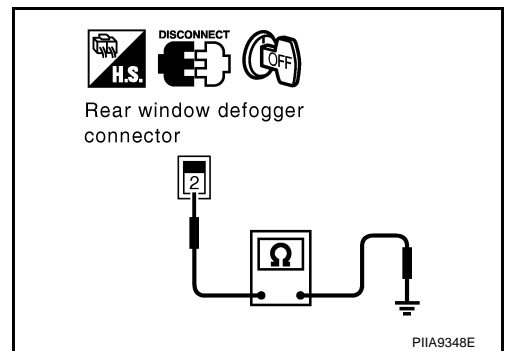
2. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between rear window defogger connector D114 terminal 2 and ground.

2 (B) – Ground : Continuity should exist.

OK or NG

- OK >> Check filament. Refer to [GW-87, "Check Filament"](#)
- If filament is OK, check condition of harness and connector.
 - If filament is NG, repair filament.
- NG >> Repair or replace harness.



REAR WINDOW DEFOGGER

3. CHECK REAR WINDOW DEFOGGER RELAY CIRCUIT

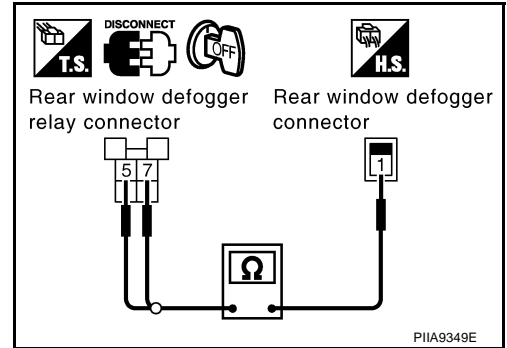
1. Turn ignition switch OFF.
2. Remove rear window defogger relay.
3. Check continuity between rear window defogger relay connector E13 terminal 5, 7 and rear window defogger connector D104 terminal 1.

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

7 (B) – 1 (W) : Continuity should exist.

OK or NG

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



Check Door Mirror Defogger Power Supply Circuit

NIS001SF

1. CHECK FUSE

- Check 15A fuse [No.8, located in fuse block (J/B)]

NOTE:

Refer to [GW-67, "Component Parts and Harness Connector Location"](#).

OK or NG

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

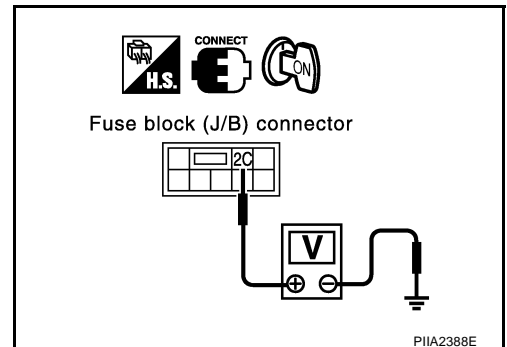
2. CHECK POWER SUPPLY CIRCUIT 1

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

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
E201	2C (B)	Ground	Rear window defogger switch ON	Battery voltage
			Rear window defogger switch OFF	0

OK or NG

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



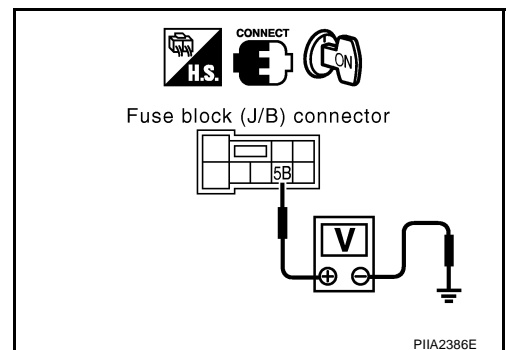
3. CHECK POWER SUPPLY CIRCUIT 2

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

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M2	5B (L)	Ground	Rear window defogger switch ON	Battery voltage
			Rear window defogger switch OFF	0

OK or NG

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



REAR WINDOW DEFOGGER

4. CHECK DOOR MIRROR CIRCUIT

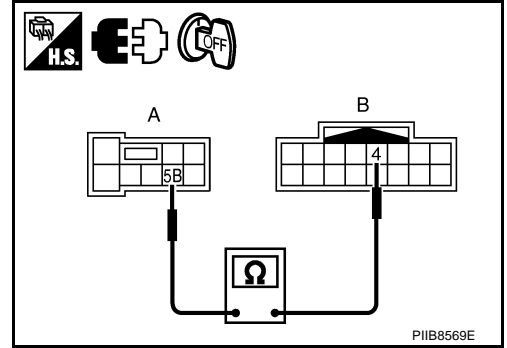
1. Turn ignition switch OFF.
2. Disconnect fuse block (J/B) and door mirror connector.
3. Check continuity between fuse block (J/B) connector and door mirror connector.

A		B		Continuity
Fuse block (J/B) connector	Terminal	Door mirror connector	Terminal	
M2	5B (L)	D2 (driver side) D32 (passenger side)	4(L)	Yes

OK or NG

OK >> GO TO 5.

NG >> Repair or replace harness.



5. CHECK GROUND CIRCUIT

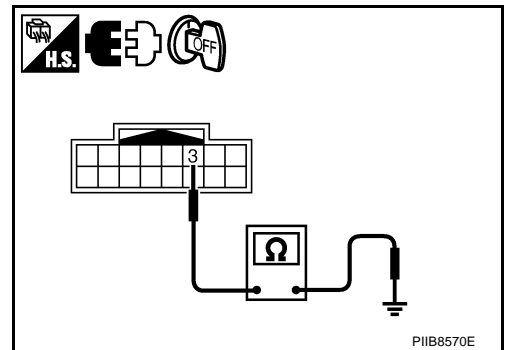
Check continuity between each door mirror connector and ground.

Door mirror connector	terminal	Ground	Continuity
D2 (driver side) D32 (passenger side)	3(B)		Yes

OK or NG

OK >> GO TO 6.

NG >> Repair or replace harness.



6. CHECK DOOR MIRROR DEFOGGER

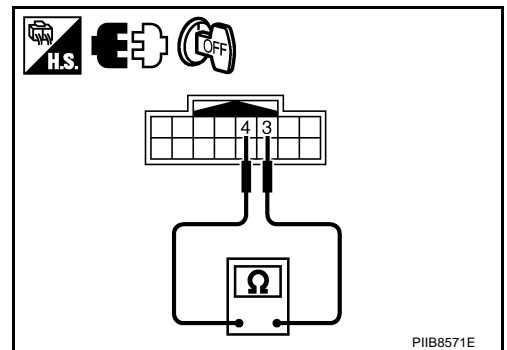
1. Connect door mirror connector.
2. Check continuity between each door mirror connector.

Door mirror connector	terminal	Terminal	Continuity
D2 (driver side) D32 (passenger side)	3(B)	4(L)	Yes

OK or NG

OK >> Check condition of harness and connector.

NG >> Replace malfunctioning door mirror.



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REAR WINDOW DEFOGGER

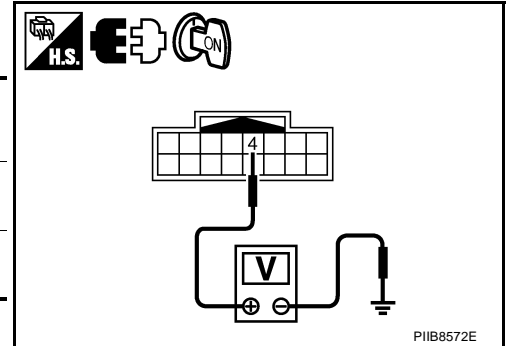
NIS001SG

Check Driver Side Door Mirror Defogger Circuit

1. CHECK POWER SUPPLY CIRCUIT

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

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
D2	4 (L)	Ground	Rear window defogger switch ON	Battery voltage
			Rear window defogger switch OFF	0



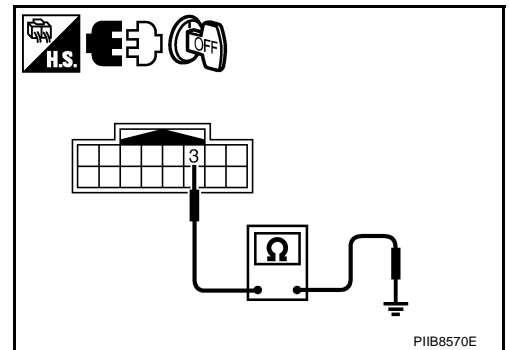
OK or NG

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

2. CHECK GROUND CIRCUIT

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

Door mirror connector	terminal	Ground	Continuity
D2 (driver side) D32 (passenger side)	3(B)		



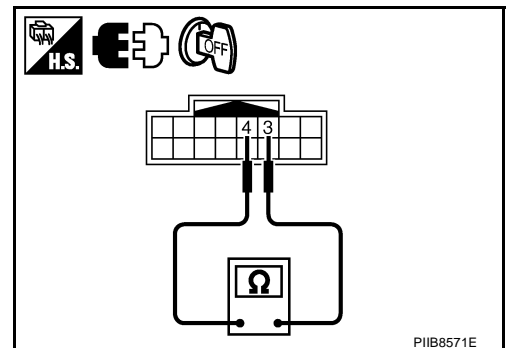
OK or NG

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

3. CHECK DOOR MIRROR DEFOGGER

1. Connector door mirror connector.
2. Check continuity between each door mirror connector.

Door mirror connector	terminal	Terminal	Continuity
D2 (driver side) D32 (passenger side)	3(B)	4(L)	Yes



OK or NG

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

REAR WINDOW DEFOGGER

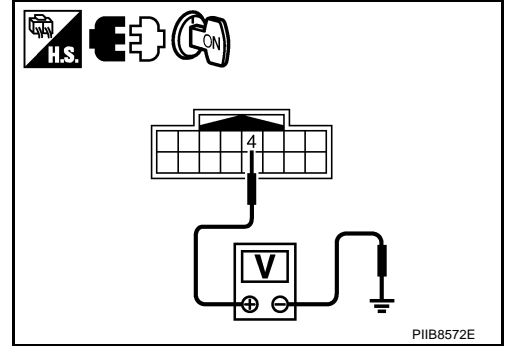
Check Passenger Side Door Mirror Defogger Circuit

NIS001SH

1. CHECK POWER SUPPLY CIRCUIT

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

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
D32	4 (L)	Ground	Rear window defogger switch ON	Battery voltage
			Rear window defogger switch OFF	0



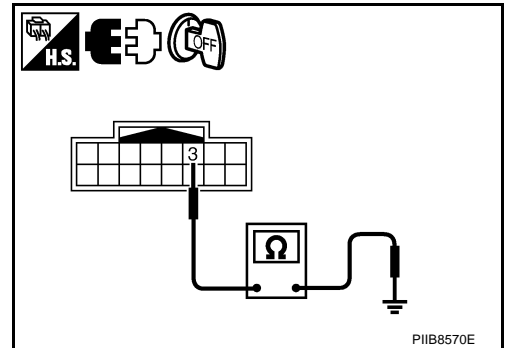
OK or NG

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

2. CHECK GROUND CIRCUIT

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

Door mirror connector	terminal	Ground	Continuity
D2 (driver side) D32 (passenger side)	3(B)		



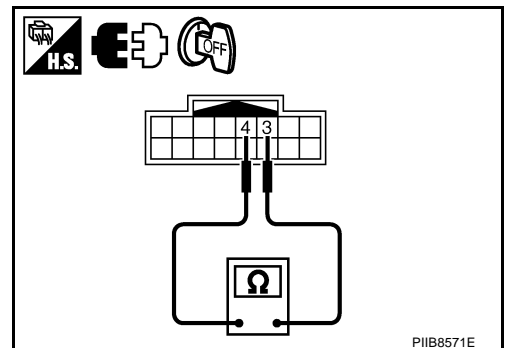
OK or NG

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

3. CHECK DOOR MIRROR DEFOGGER

1. Connector door mirror connector.
2. Check continuity between each door mirror connector.

Door mirror connector	terminal	Terminal	Continuity
D2 (driver side) D32 (passenger side)	3(B)	4(L)	Yes



OK or NG

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

Check Rear Window Defogger Signal

NIS001SI

1. CHECK REAR WINDOW DEFOGGER SWITCH LAMP

A/C and AV switch self-diagnosis is performed. Refer to [AV-35, "A/C and AV Switch Self-Diagnosis Function"](#)

Does rear window defogger switch light?

- YES >> GO TO 2.
NO >> Replace A/C and AV switch.

REAR WINDOW DEFOGGER

2. CHECK AV COMMUNICATION LINE

AV communication line check is performed. Refer to [AV-84, "Unable to Operate System with A/C and AV Switch"](#)

Is rear window defogger displayed on the display?

YES >> GO TO 3.

NO >> Replace display control unit.

3. CHECK CAN COMMUNICATION LINE

CAN communication line check is performed. Refer to [AV-83, "CAN Communication Check"](#) .

OK or NG

OK >> Check condition of harness and connector.

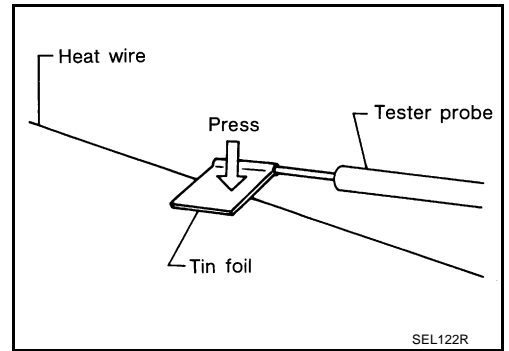
NG >> In addition, it is necessary to check CAN communication line. Refer to [AV-83, "CAN Communication Check"](#) .

REAR WINDOW DEFOGGER

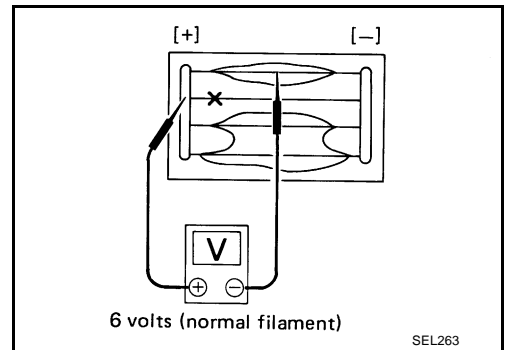
Check Filament

NIS001SJ

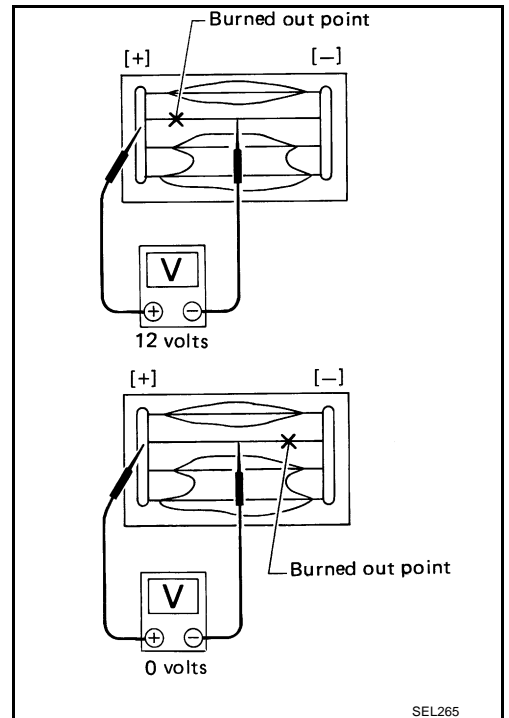
1. When measuring voltage, wrap tin foil around the top of the negative probe. Then press the foil against the wire with your finger.



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



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



Filament Repair REPAIR EQUIPMENT

NIS001SK

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

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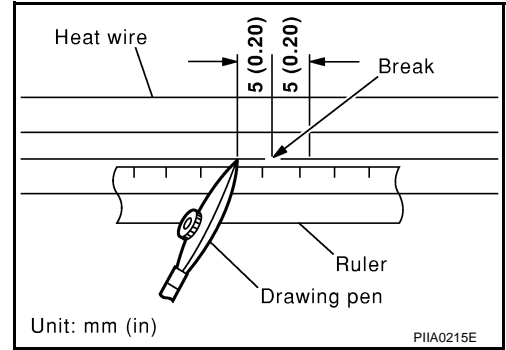
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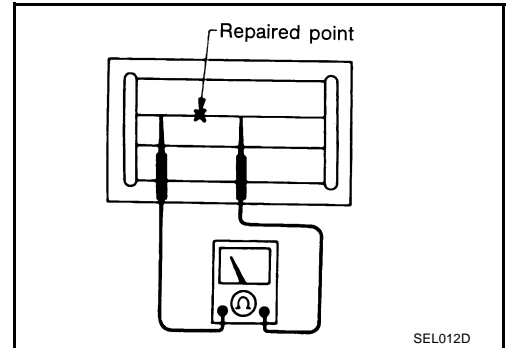
REAR WINDOW DEFOGGER

REPAIRING PROCEDURE

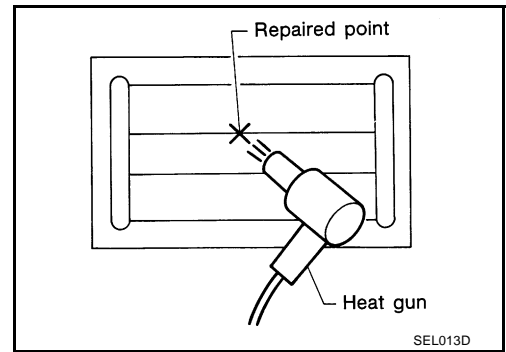
1. Wipe broken heat wire and its surrounding area clean with a cloth dampened in alcohol.
2. Apply a small amount of conductive silver composition to tip of drawing pen. Shake silver composition container before use.
3. Place ruler on glass along broken line. Deposit conductive silver composition on 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

DOOR MIRROR

PPF:96301

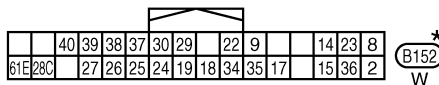
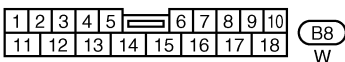
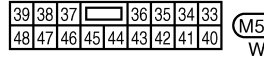
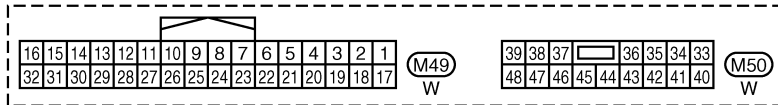
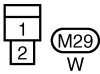
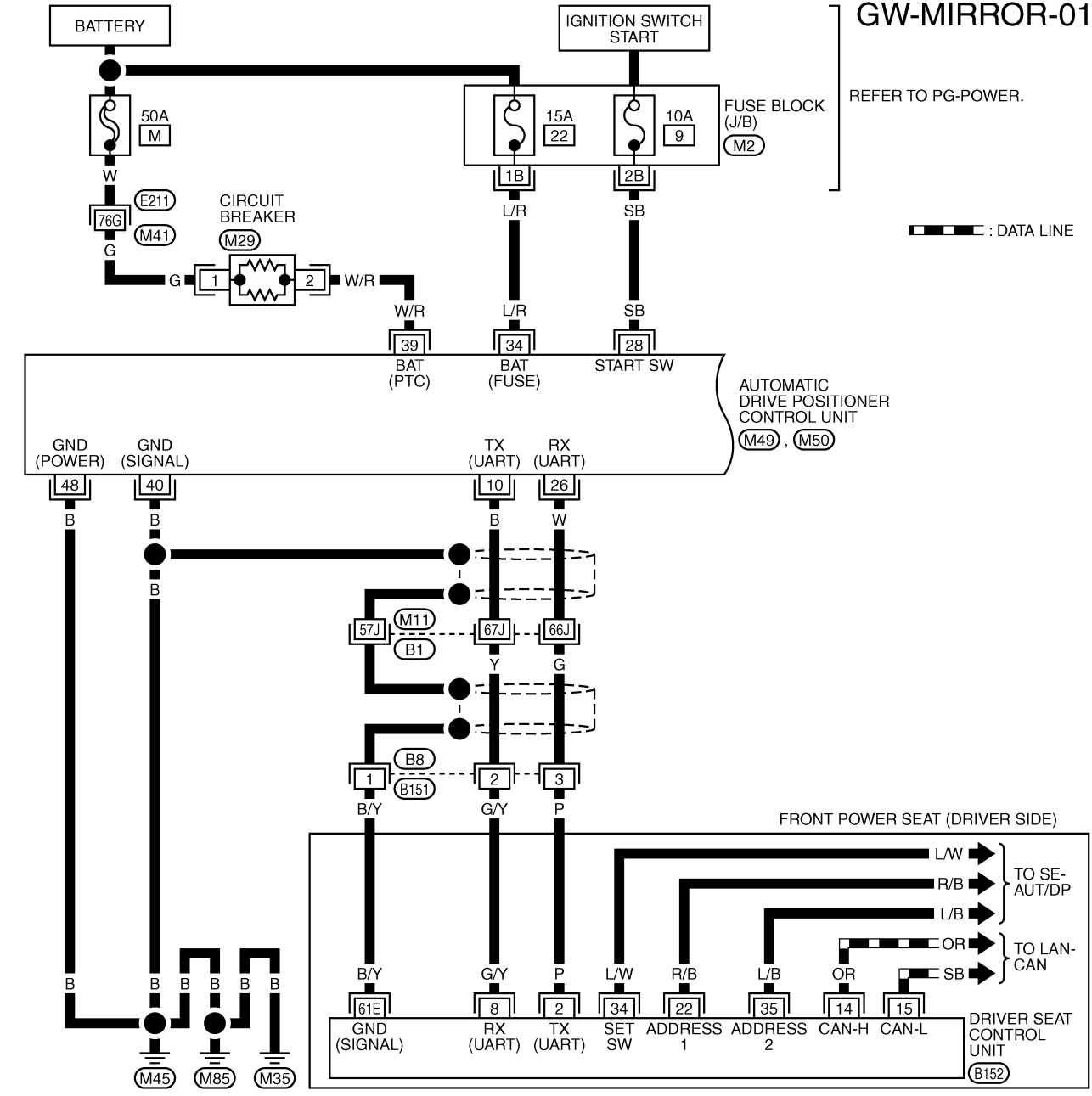
Wiring Diagram — MIRROR — (Without Electric Foldable Door Mirror)

NIS001SM

GW-MIRROR-01

REFER TO PG-POWER.

DATA LINE



REFER TO THE FOLLOWING.

(E21), (B1) -SUPER MULTIPLE JUNCTION (SMJ)

(M2) -FUSE BLOCK-JUNCTION BOX (J/B)

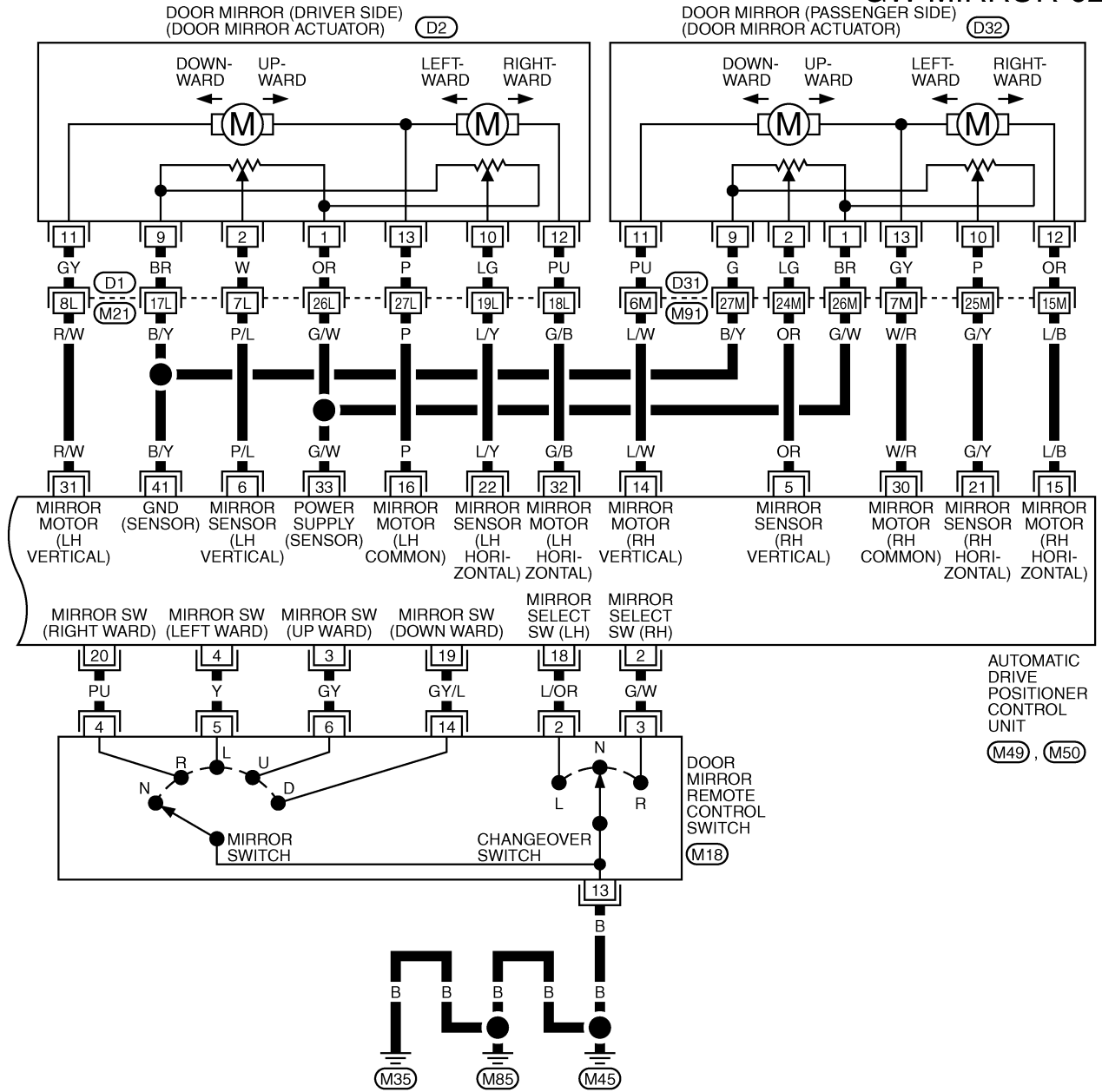
*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

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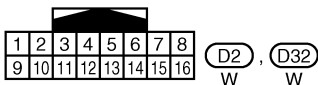
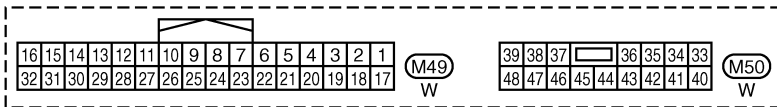
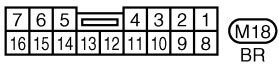
GW

DOOR MIRROR

GW-MIRROR-02



AUTOMATIC DRIVE POSITIONER CONTROL UNIT (M49, M50)



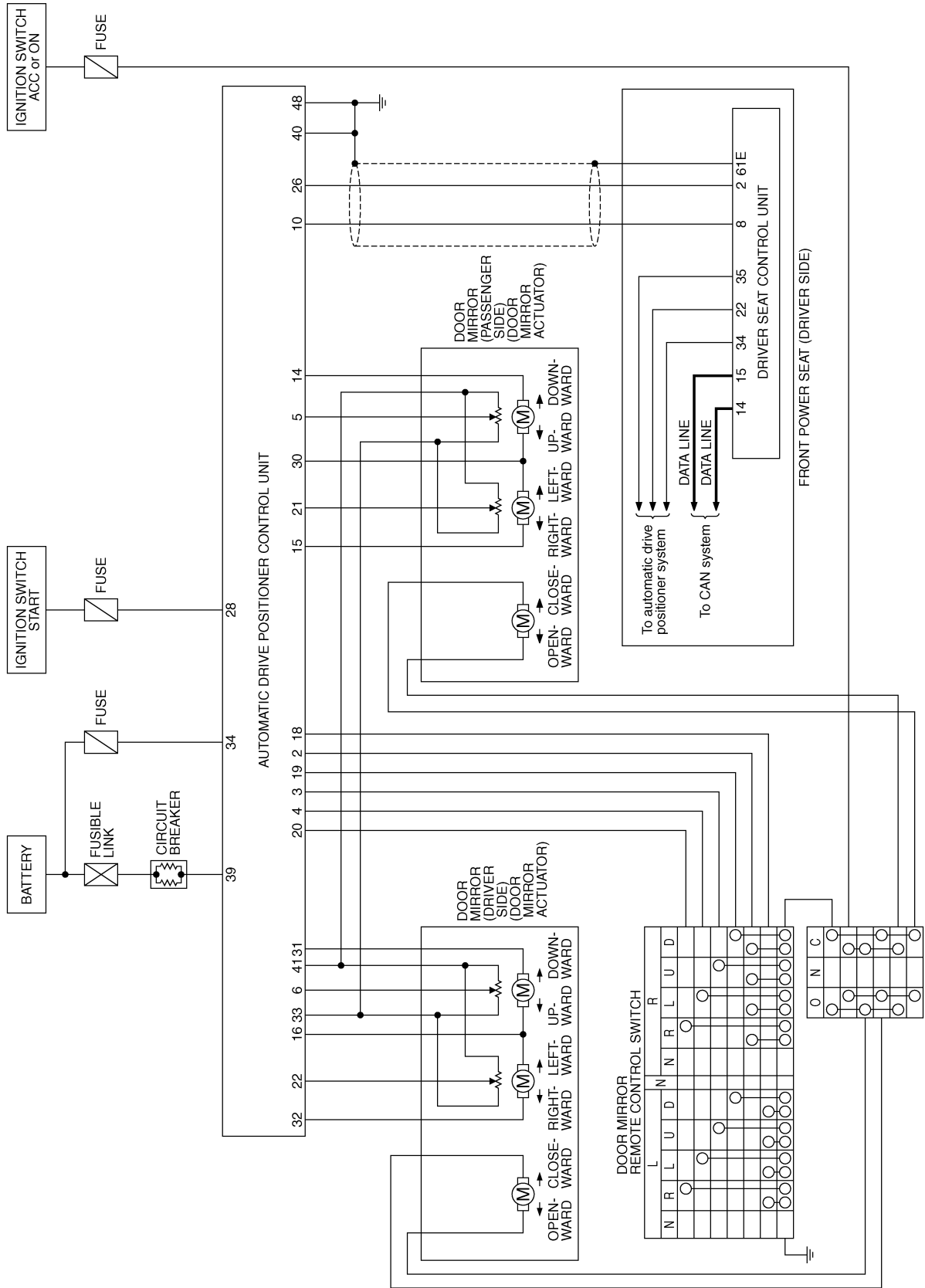
REFER TO THE FOLLOWING.
 (D1), (D31) -SUPER MULTIPLE JUNCTION (SMJ)

TIWM1690E

DOOR MIRROR

Schematic (With Electric Foldable Door Mirror)

NIS00290



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TIWM1732E

DOOR MIRROR

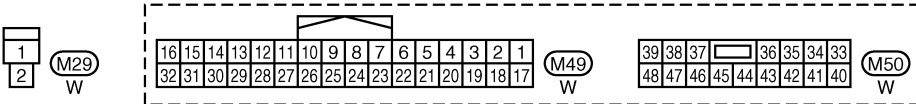
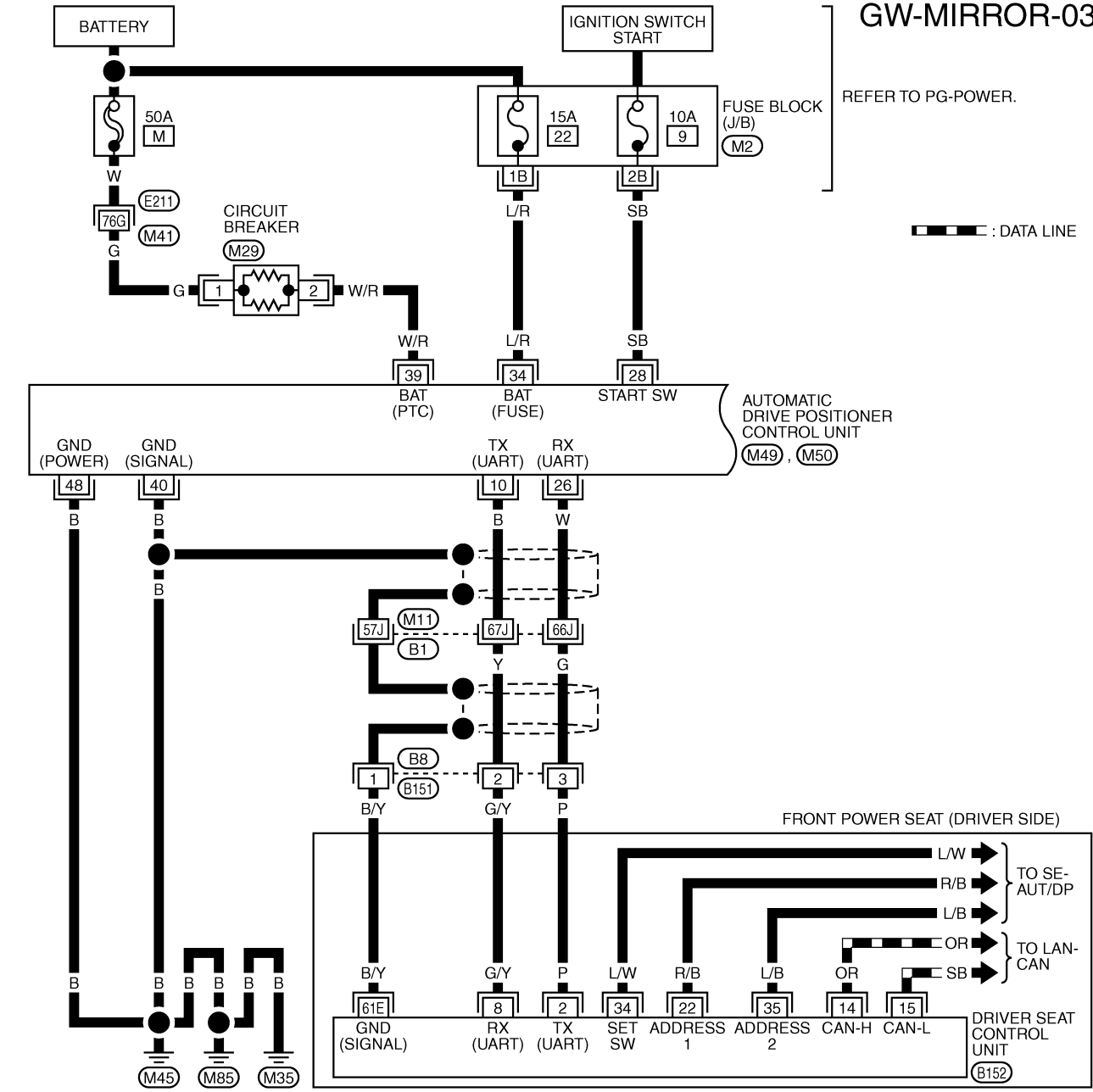
Wiring Diagram — MIRROR — (With Electric Foldable Door Mirror)

NIS00291

GW-MIRROR-03

REFER TO PG-POWER.

DATA LINE



REFER TO THE FOLLOWING.

(E211), (B1) -SUPER MULTIPLE JUNCTION (SMJ)

(M2) -FUSE BLOCK-JUNCTION BOX (J/B)

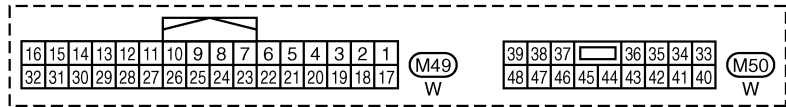
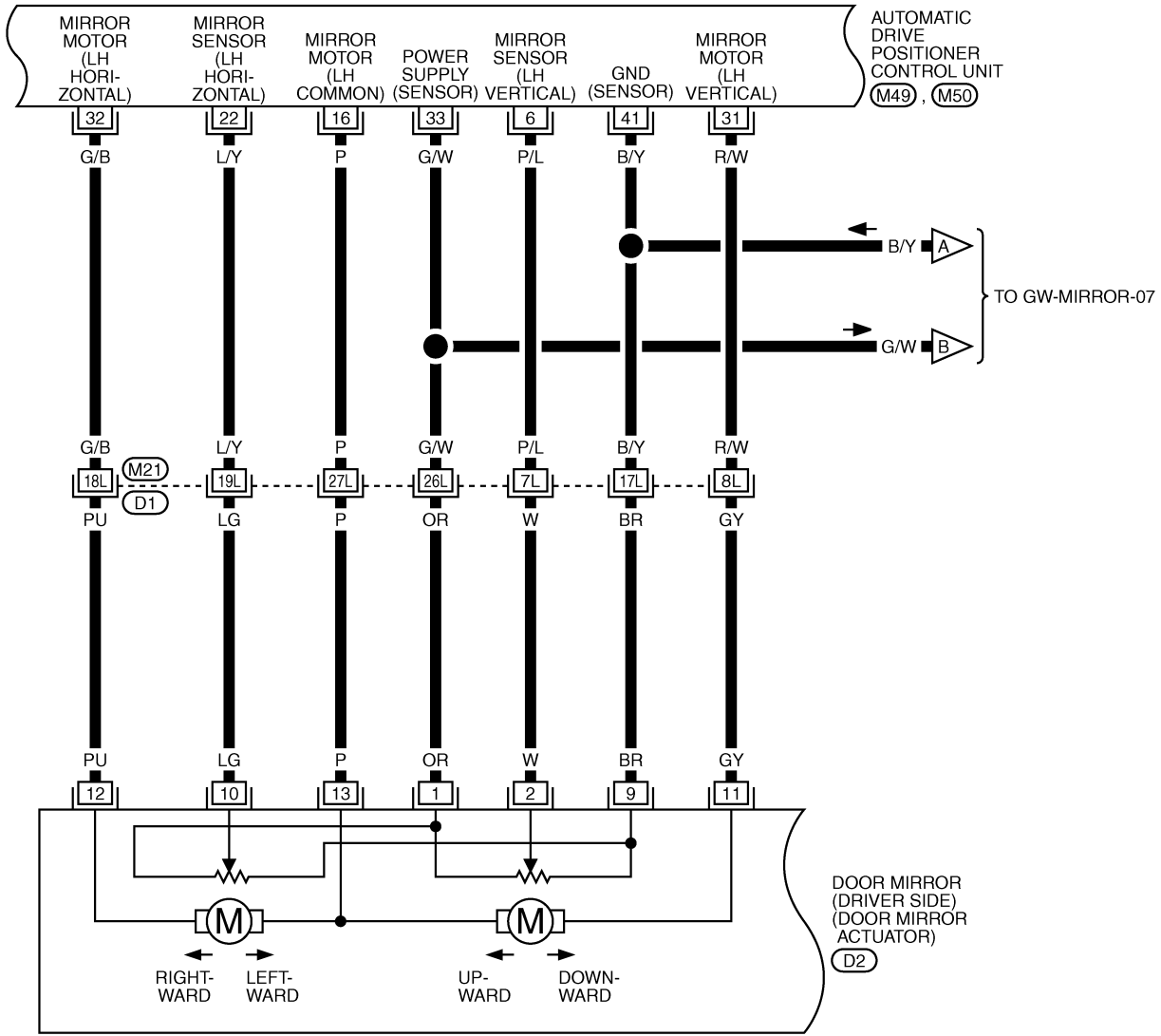
*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

TIWM1862E

DOOR MIRROR

GW-MIRROR-04

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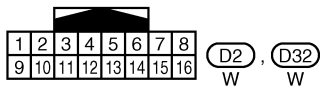
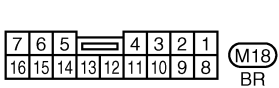
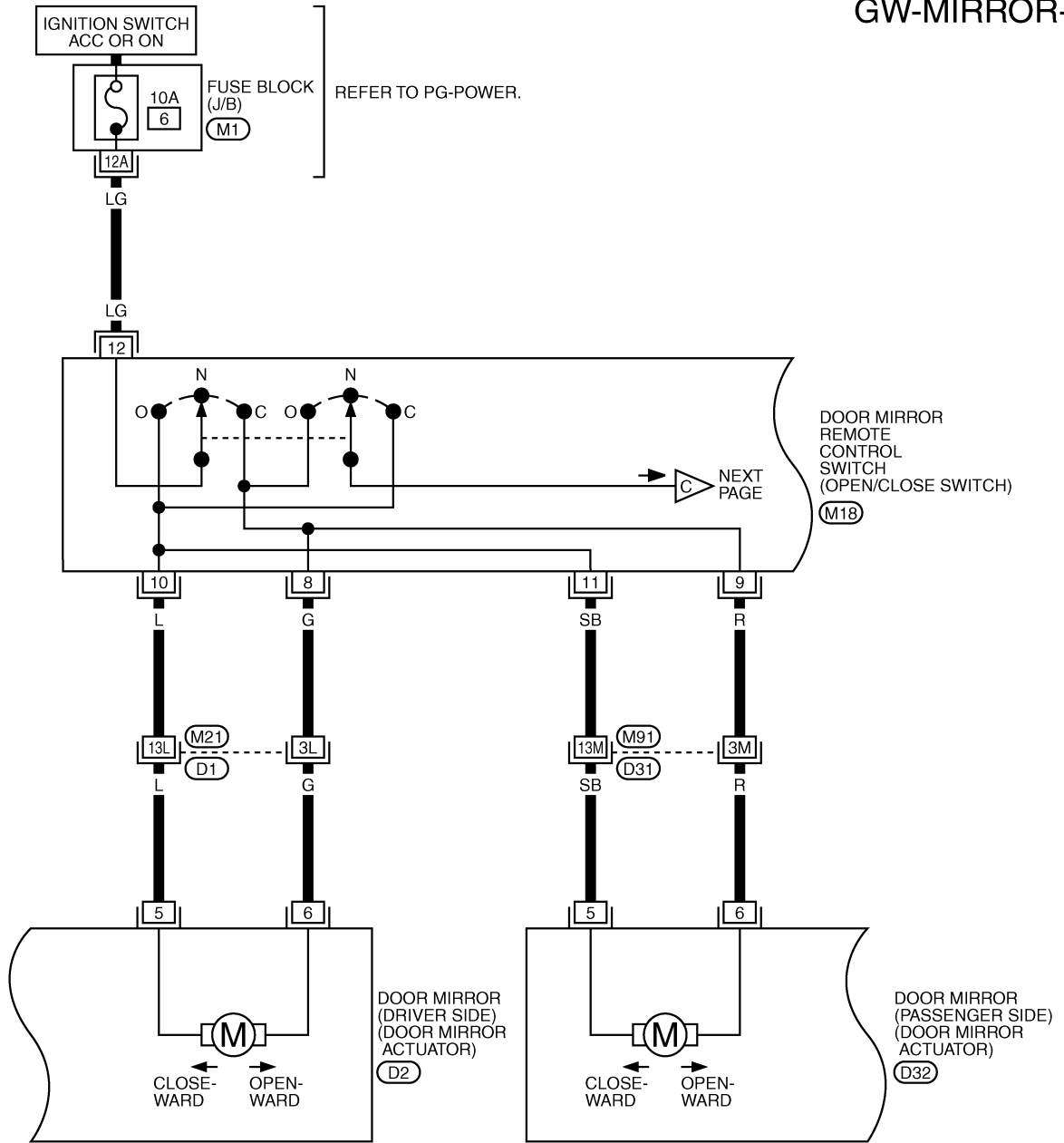


REFER TO THE FOLLOWING.
(D1) -SUPER MULTIPLE JUNCTION (SMJ)

TIWM1860E

DOOR MIRROR

GW-MIRROR-05



REFER TO THE FOLLOWING.

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

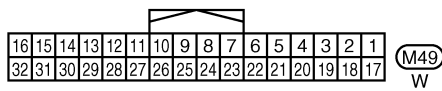
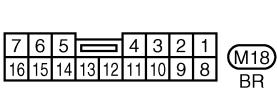
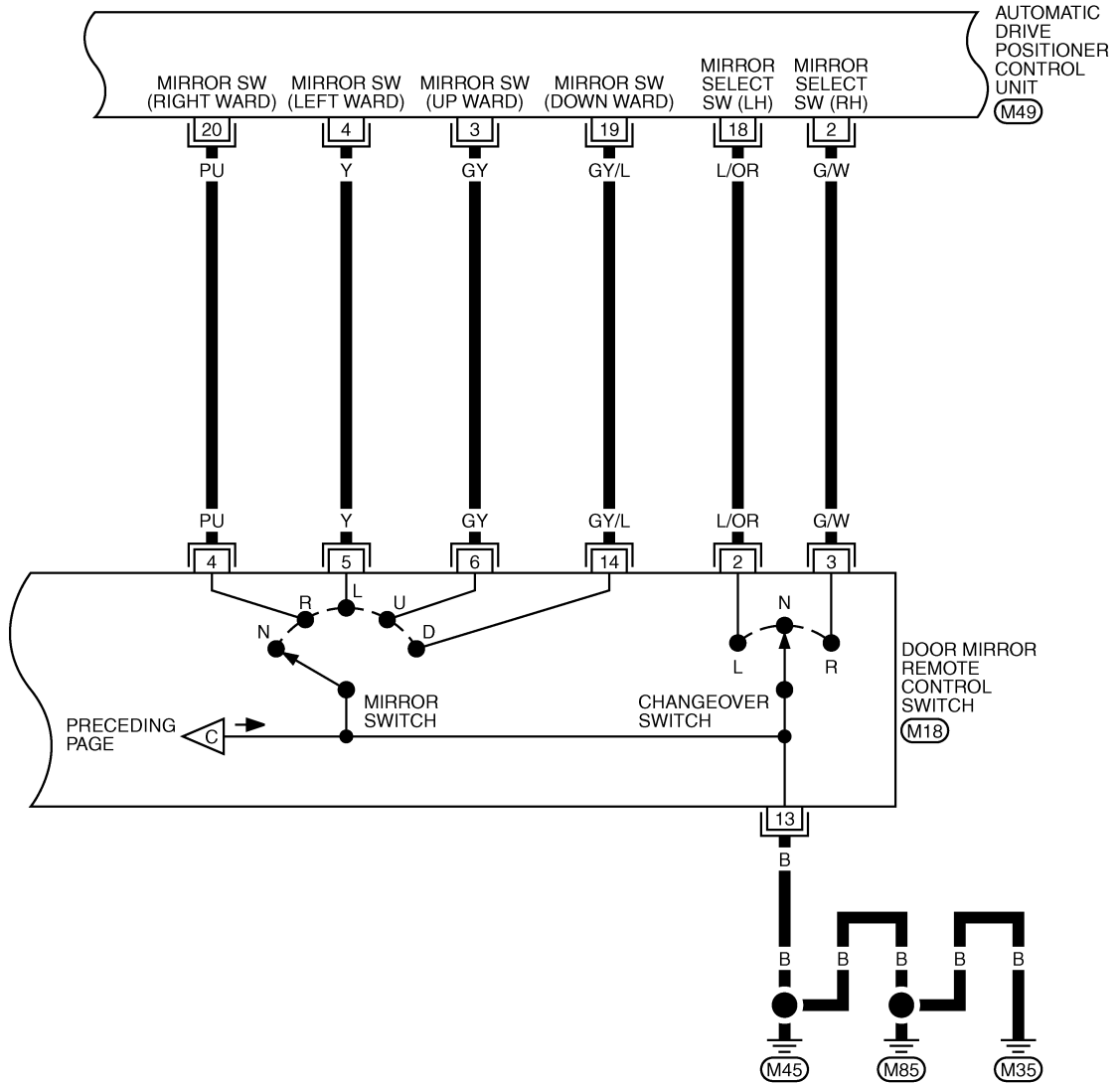
(M1) -FUSE BLOCK-JUNCTION BOX (J/B)

TIWM1863E

DOOR MIRROR

GW-MIRROR-06

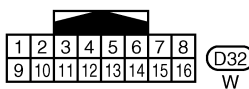
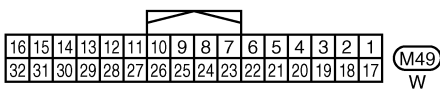
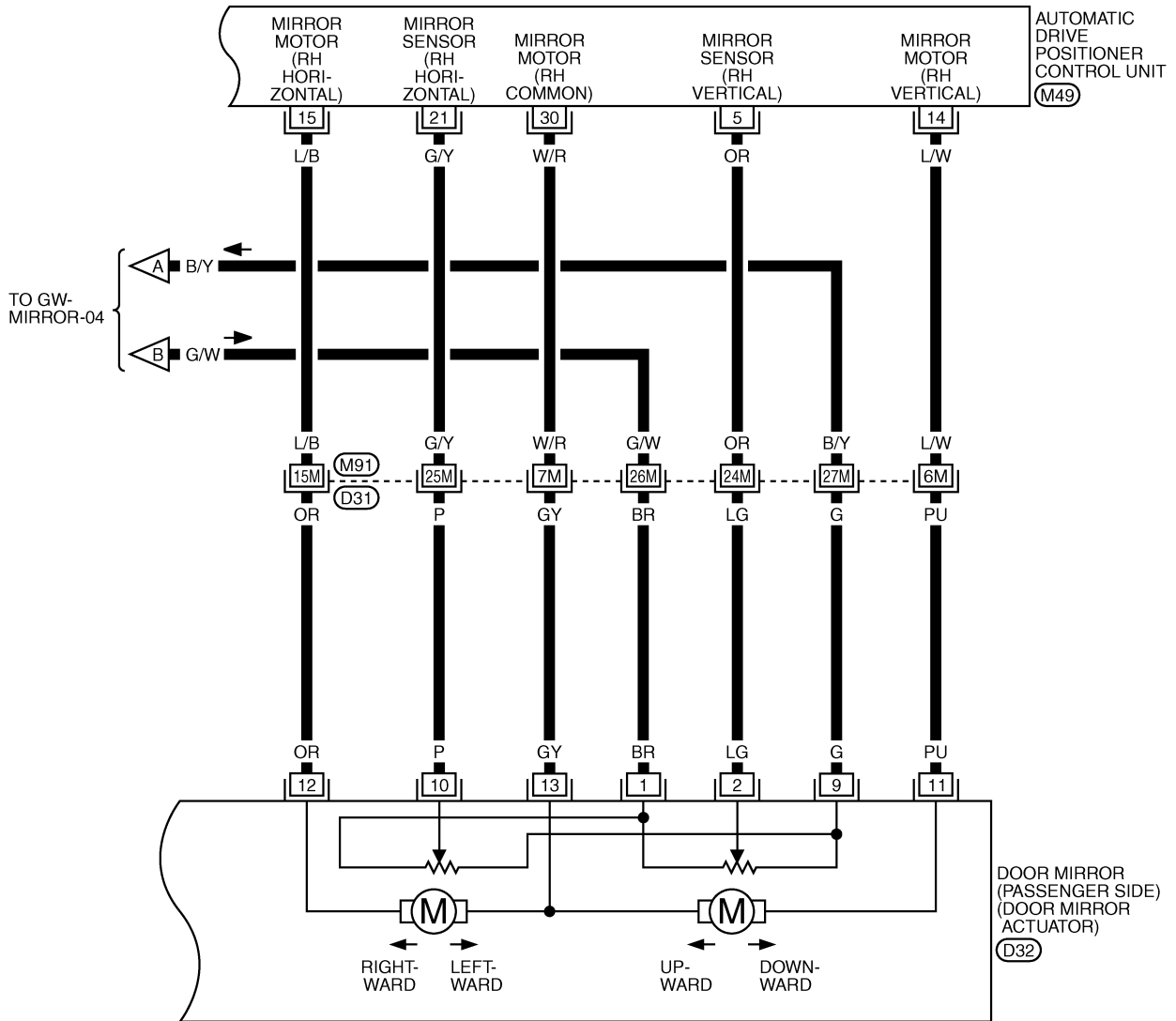
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TIWM1864E

DOOR MIRROR

GW-MIRROR-07



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

TIWM1861E

DOOR MIRROR

Trouble Diagnosis

NIS001SN

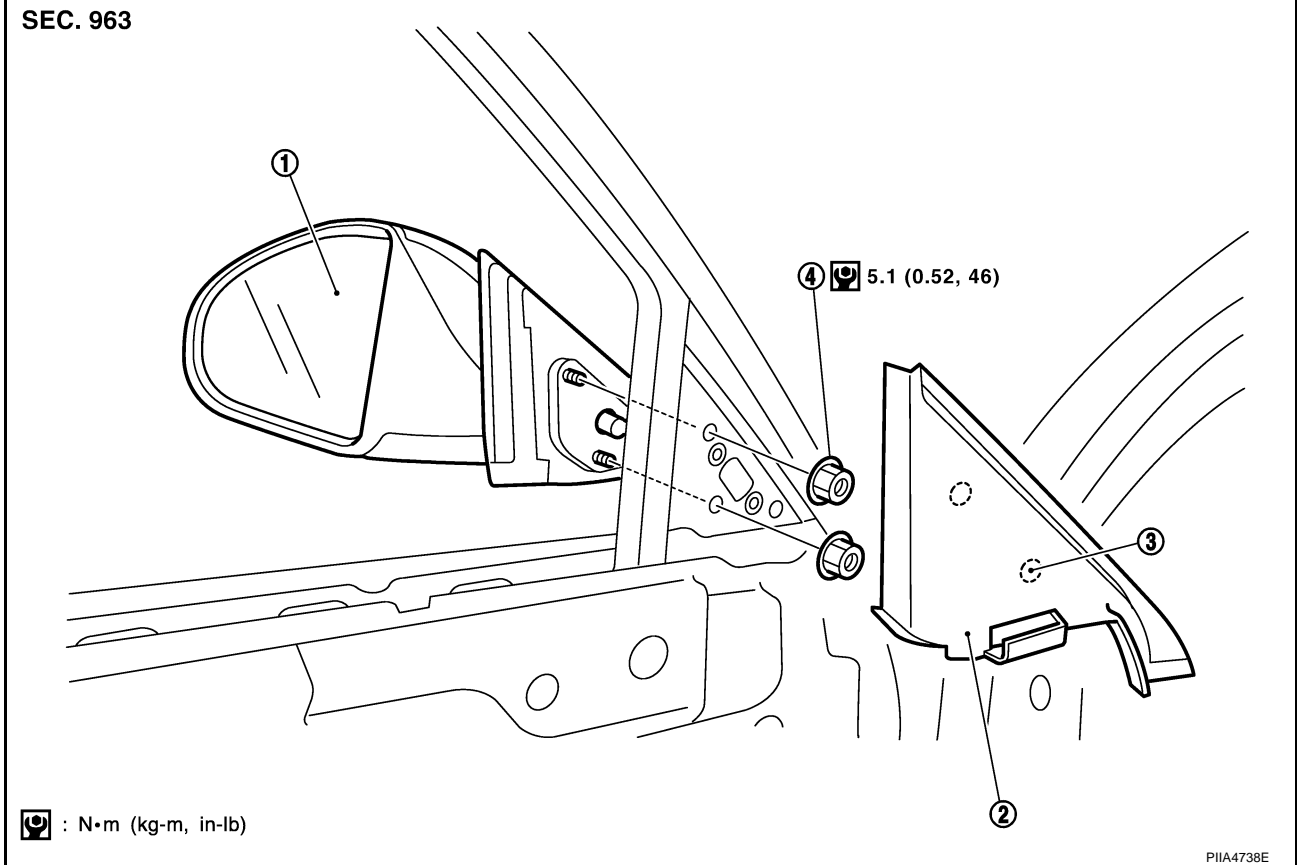
A trouble diagnosis of a automatic drive positioner interlocking door mirror is refer to [SE-11, "AUTOMATIC DRIVE POSITIONER"](#).

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DOOR MIRROR

Removal and Installation

NIS001SO



1. Door mirror assembly
2. Corner cover inner
3. Clip (C101)
4. Nut

CAUTION:

Be careful not to damage the mirror body.

REMOVAL

1. Remove the front door finisher. Refer to [EI-36, "DOOR FINISHER"](#).
2. Remove the corner cover inner.
3. Remove the door mirror harness connector.
4. Remove the door mirror mounting nuts, and remove the door mirror assembly.

INSTALLATION

Install in the reverse order of removal.

Disassembly and Assembly DISASSEMBLY

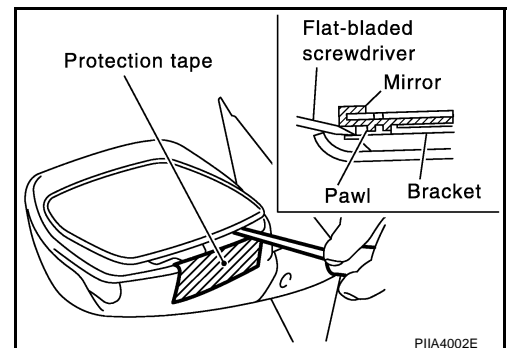
NIS001SP

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

NOTE:

When pushing up pawls do not attempt to use 1 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 terminals of mirror heater attachment.



DOOR MIRROR

5. Lightly lift up lower side of mirror surface, and detach pawls of upper side from bracket as if pulling it out. Remove mirror surface from mirror body.

NOTE:

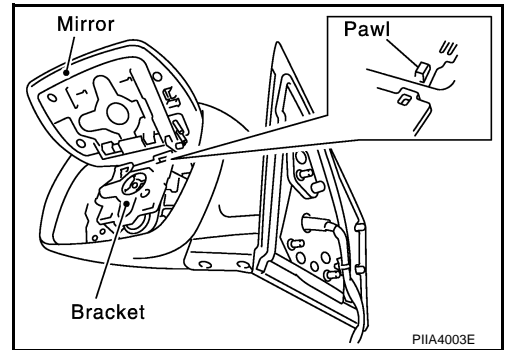
Be certain not to allow grease on sealing agent in center of mirror body assembly (actuator) or back side of mirror surface (mirror holder).

ASSEMBLY

1. Place mirror holder bracket and mirror body assembly (actuator) in a horizontal position.
2. Connect terminals of heater installed mirror.
3. Fit the upper 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 make sure lower pawls are securely engaged from the bottom of mirror face.



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DOOR MIRROR
