

SECTION **GW**

GLASSES, WINDOW SYSTEM & MIRRORS

CONTENTS

PRECAUTIONS	3	POWER WINDOW LOCK	16
Precautions for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"	3	RETAINED POWER OPERATION	16
Precautions for Battery Service	3	ANTI-PINCH SYSTEM	16
Handling for Adhesive and Primer	3	POWER WINDOW CONTROL BY THE KEY CYLINDER SWITCH	17
Trouble Diagnosis Precaution	3	AUTOMATIC WINDOW ADJUSTING FUNCTION	17
PREPARATION	4	Schematic	18
Special Service Tools	4	Wiring Diagram – WINDOW –	19
Commercial Service Tools	4	Terminal and Reference Value for BCM	22
SQUEAK AND RATTLE TROUBLE DIAGNOSES	5	Terminal and Reference Value for Power Window Main Switch	22
Work Flow	5	Terminal and Reference Value for Power Window Sub-Switch	23
CUSTOMER INTERVIEW	5	Work Flow	25
DUPLICATE THE NOISE AND TEST DRIVE	6	Preliminary Check	25
CHECK RELATED SERVICE BULLETINS	6	FUSE CHECK	25
LOCATE THE NOISE AND IDENTIFY THE ROOT CAUSE	6	CONSULT-II Inspection Procedure	26
REPAIR THE CAUSE	6	WORK SUPPORT	27
CONFIRM THE REPAIR	7	DATE MONITOR	27
Generic Squeak and Rattle Troubleshooting	7	ACTIVE TEST	27
INSTRUMENT PANEL	7	Trouble Diagnoses Symptom Chart	28
CENTER CONSOLE	7	Power Window Switch Power Supply Circuit Check..	29
DOORS	7	Drive Side Power Window Motor Circuit Check	31
TRUNK	8	Passenger Side Power Window Motor Circuit Check	31
SUNROOF/HEADLINER	8	Limit Switch Circuit Check (Driver Side)	32
SEATS	8	Limit Switch Circuit Check (Passenger Side)	34
UNDERHOOD	8	Encoder Circuit Check (Driver Side)	35
Diagnostic Worksheet	9	Encoder Circuit Check (Passenger Side)	37
WINDSHIELD GLASS	11	Door Switch Check	40
Removal and Installation	11	Power Window Serial Link Check	41
REMOVAL	11	Power Window Main Switch Power Supply and Ground Circuit Check	43
INSTALLATION	12	Power Window Sub-switch Power Supply and Ground Circuit Check	45
POWER WINDOW SYSTEM	13	Door Key Cylinder Switch Check	47
Component Parts and Harness Connector Location..	13		
System Description	13		
MANUAL OPERATION	15		
POWER WINDOW SERIAL LINK	16		
AUTO OPERATION	16		

FRONT DOOR GLASS AND REGULATOR	49	DATA MONITOR	62
Removal and Installation	49	ACTIVE TEST	63
REMOVAL	49	Work Flow	64
INSTALLATION	50	Trouble Diagnosis Symptom Chart	64
INSPECTION AFTER REMOVAL	50	Rear Window Defogger Switch Circuit Check	65
DISASSEMBLY AND ASSEMBLY	50	Rear Window Defogger Power Supply Circuit	
SETTING AFTER INSTALLATION	51	Check	66
FITTING INSPECTION	51	Rear Window Defogger Circuit Check	67
INSIDE MIRROR	52	Door Mirror Defogger Power Supply Circuit Check..	68
Wiring Diagram –I/MIRR–	52	Driver Side Door Mirror Defogger Circuit Check	69
Removal and Installation	53	PassengerSideDoorMirrorDefoggerCircuitCheck	
REMOVAL	53	70
INSTALLATION	53	Filament Check	71
REAR WINDOW DEFOGGER	54	Filament Repair	72
ComponentPartsandHarnessConnectorLocation..	54	REPAIR EQUIPMENT	72
System Description	54	REPAIRING PROCEDURE	72
CAN Communication System Description	56	DOOR MIRROR	73
CAN Communication Unit	56	Wring Diagram –MIRROR–	73
Schematic – DEF –	57	Removal and Installation	74
Wiring Diagram –DEF–	58	REMOVAL	74
Terminal and Reference Value for BCM	61	INSTALLATION	74
Terminal and Reference Value for IPDM E/R.	61	Disassembly and Assembly	74
Terminal and Reference Value for Unified Meter and		DISASSEMBLY	74
A/C Amp.	61	ASSEMBLY	75
CONSULT-II Function	62		
CONSULT-IIBASICOPERATIONPROCEDURE			

PRECAUTIONS

PRECAUTIONS

PF0:00001

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

AIS000EV

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

WARNING:

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

Precautions for Battery Service

AIS0010Y

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

Handling for Adhesive and Primer

AIS000EW

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

Trouble Diagnosis Precaution

AIS000EX

When you read wiring diagrams, refer to the following:

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

When you perform trouble diagnosis, refer to the following:

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

Check for any service bulletins before servicing the vehicle.

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

PREPARATION

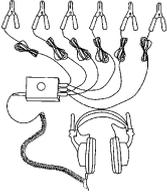
PREPARATION

PFP:00002

Special Service Tools

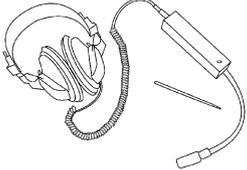
AIS000EY

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

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

Commercial Service Tools

AIS000EZ

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

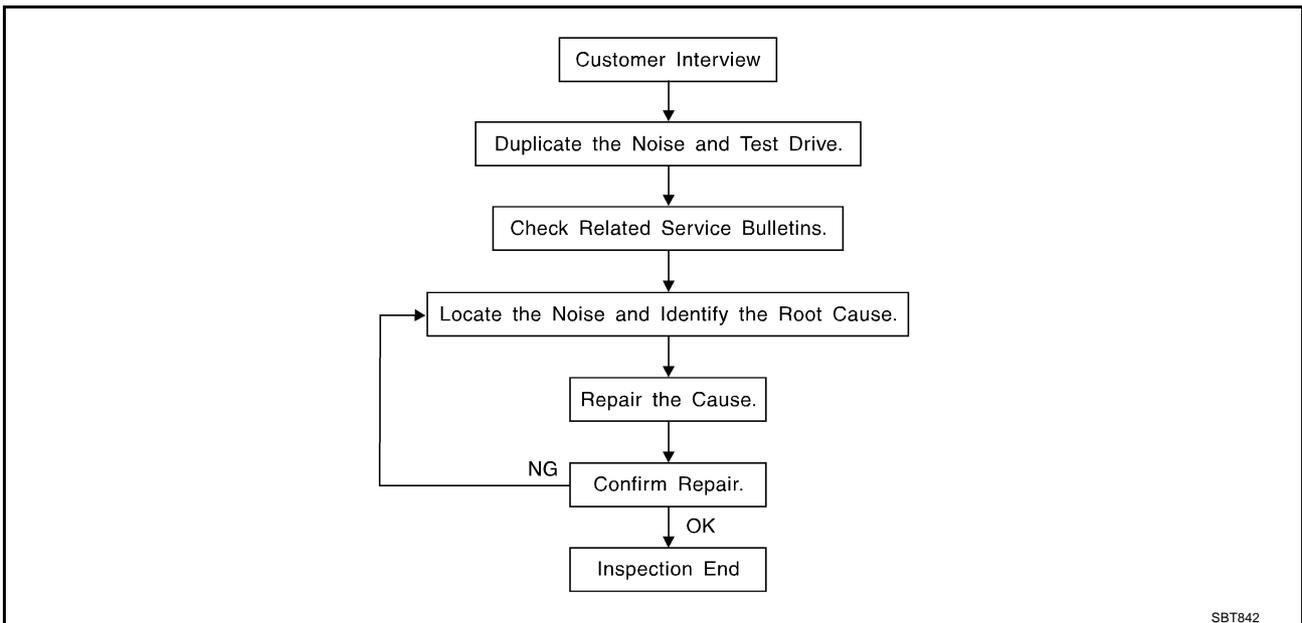
SQUEAK AND RATTLE TROUBLE DIAGNOSES

SQUEAK AND RATTLE TROUBLE DIAGNOSES

PFP:00000

Work Flow

AIS000F0



CUSTOMER INTERVIEW

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

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

SQUEAK AND RATTLE TROUBLE DIAGNOSES

DUPLICATE THE NOISE AND TEST DRIVE

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

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

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

CHECK RELATED SERVICE BULLETINS

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

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

LOCATE THE NOISE AND IDENTIFY THE ROOT CAUSE

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

REPAIR THE CAUSE

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

CAUTION:

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

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

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

URETHANE PADS [1.5 mm (0.059 in) thick]

Insulates connectors, harness, etc.

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

71L02: 15 × 25 mm (0.59 × 0.98 in)

INSULATOR (Foam blocks)

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

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

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

SQUEAK AND RATTLE TROUBLE DIAGNOSES

INSULATOR (Light foam block)

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

FELT CLOTHTAPE

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

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

UHMW (TEFLON) TAPE

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

SILICONE GREASE

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

Note: Will only last a few months.

SILICONE SPRAY

Use when grease cannot be applied.

DUCT TAPE

Use to eliminate movement.

CONFIRM THE REPAIR

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

Generic Squeak and Rattle Troubleshooting

AIS000F1

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

INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

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

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

CAUTION:

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

CENTER CONSOLE

Components to pay attention to include:

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

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

DOORS

Pay attention to the:

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

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

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

GW

SQUEAK AND RATTLE TROUBLE DIAGNOSES

TRUNK

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

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

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

SUNROOF/HEADLINER

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

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

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

SEATS

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

Cause of seat noise include:

1. Headrest rods and holder
2. A squeak between the seat pad cushion and frame
3. The rear 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 noise can be difficult to isolate since they cannot be reached from the interior of the vehicle. The best method is to secure, move or insulate one component at a time and test drive the vehicle. Also, engine RPM or load can be changed to isolate the noise. Repairs can usually be made by moving, adjusting securing, or insulating the component causing the noise.

SQUEAK AND RATTLE TROUBLE DIAGNOSES

Diagnostic Worksheet

AIS000F2



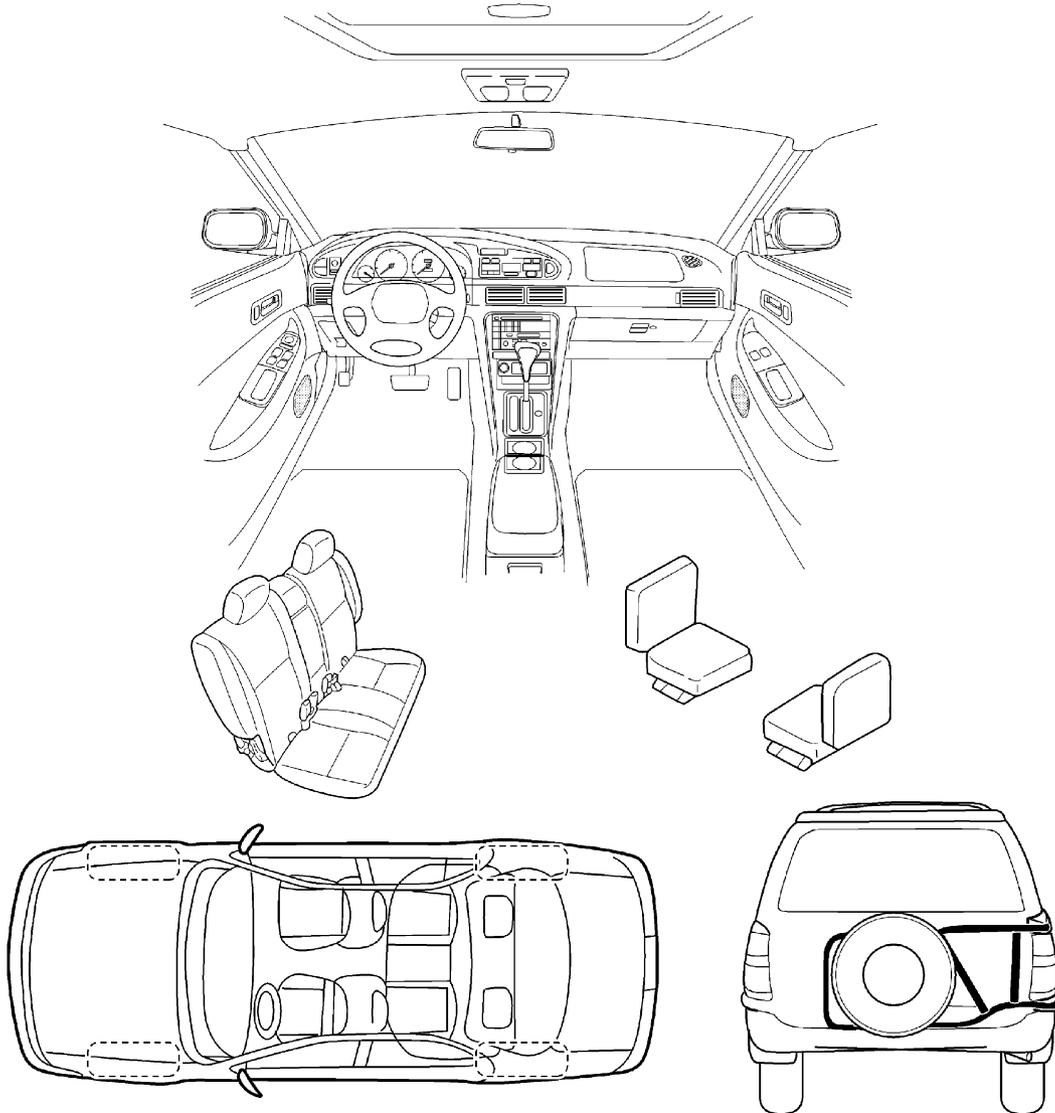
SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

Dear Nissan Customer:

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

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

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



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

SBT843

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

SQUEAK AND RATTLE TROUBLE DIAGNOSES

SQUEAK & RATTLE DIAGNOSTIC WORKSHEET- page 2

Briefly describe the location where the noise occurs:

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

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

III. WHEN DRIVING:

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

IV. WHAT TYPE OF NOISE?

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

TO BE COMPLETED BY DEALERSHIP PERSONNEL

Test Drive Notes:

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

VIN: _____ Customer Name: _____

W.O. #: _____ Date: _____

SBT844

This form must be attached to Work Order

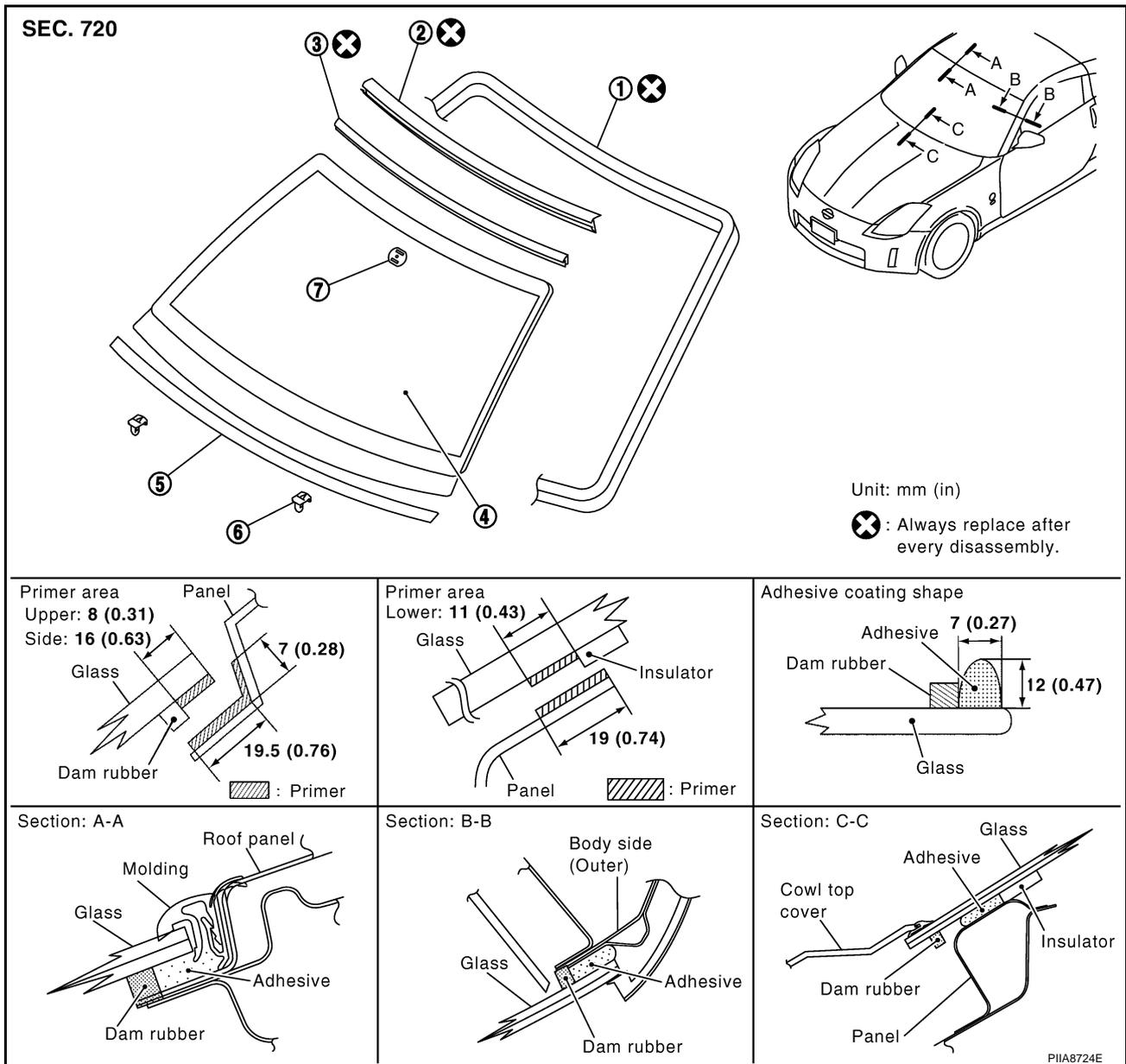
WINDSHIELD GLASS

WINDSHIELD GLASS

PFP:72712

Removal and Installation

AIS000F3



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

REMOVAL

- Open the soft top.
 - Remove the front pillar finisher. Refer to [EI-26, "ROOF SIDE MOLDING"](#).
 - Remove the front pillar garnish. Refer to [EI-29, "BODY SIDE TRIM"](#).
 - Remove the roof front finisher. Refer to [EI-34, "HEADLINING"](#).
 - Remove the front wiper arms. Refer to [WW-24, "Removal and Installation for Front Wiper Arms, Adjustment for Wiper Arms Stop Location"](#).
 - Apply a protective tape around the windshield glass to protect the painted surface from damage.
- After removing moldings, remove glass using piano wire or power cutting tool and an inflatable pump bag.
- If a windshield glass is to be reused, mark the body and the glass with mating marks.

WINDSHIELD GLASS

WARNING:

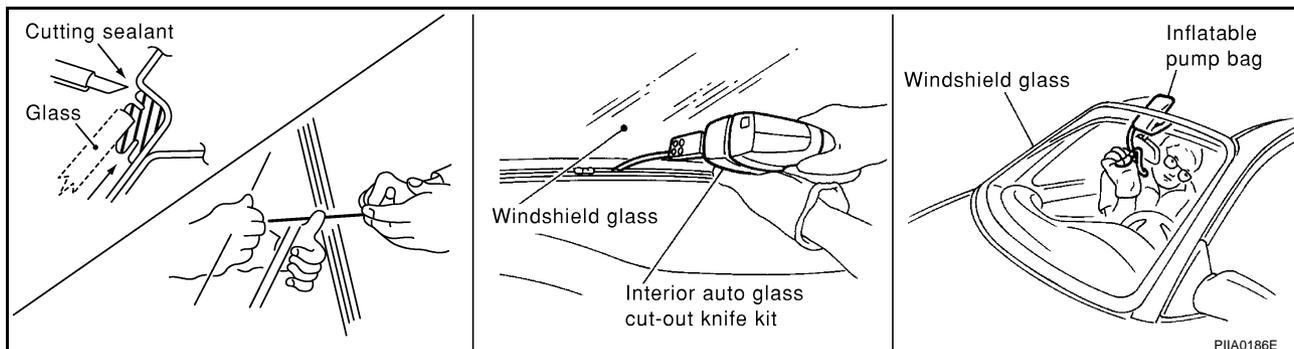
When cutting the glass from the vehicle, always wear safety glasses and heavy gloves to help prevent glass splinters from entering your eyes or cutting your hands.

CAUTION:

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

NOTE:

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



INSTALLATION

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

WARNING:

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

CAUTION:

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

Repairing Water Leaks for Windshield

Leaks can be repaired without removing and reinstalling glass.

If water is leaking between the urethane adhesive material and body or glass, determine the extent of leakage. This can be done by applying water to the windshield area while pushing glass outward.

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

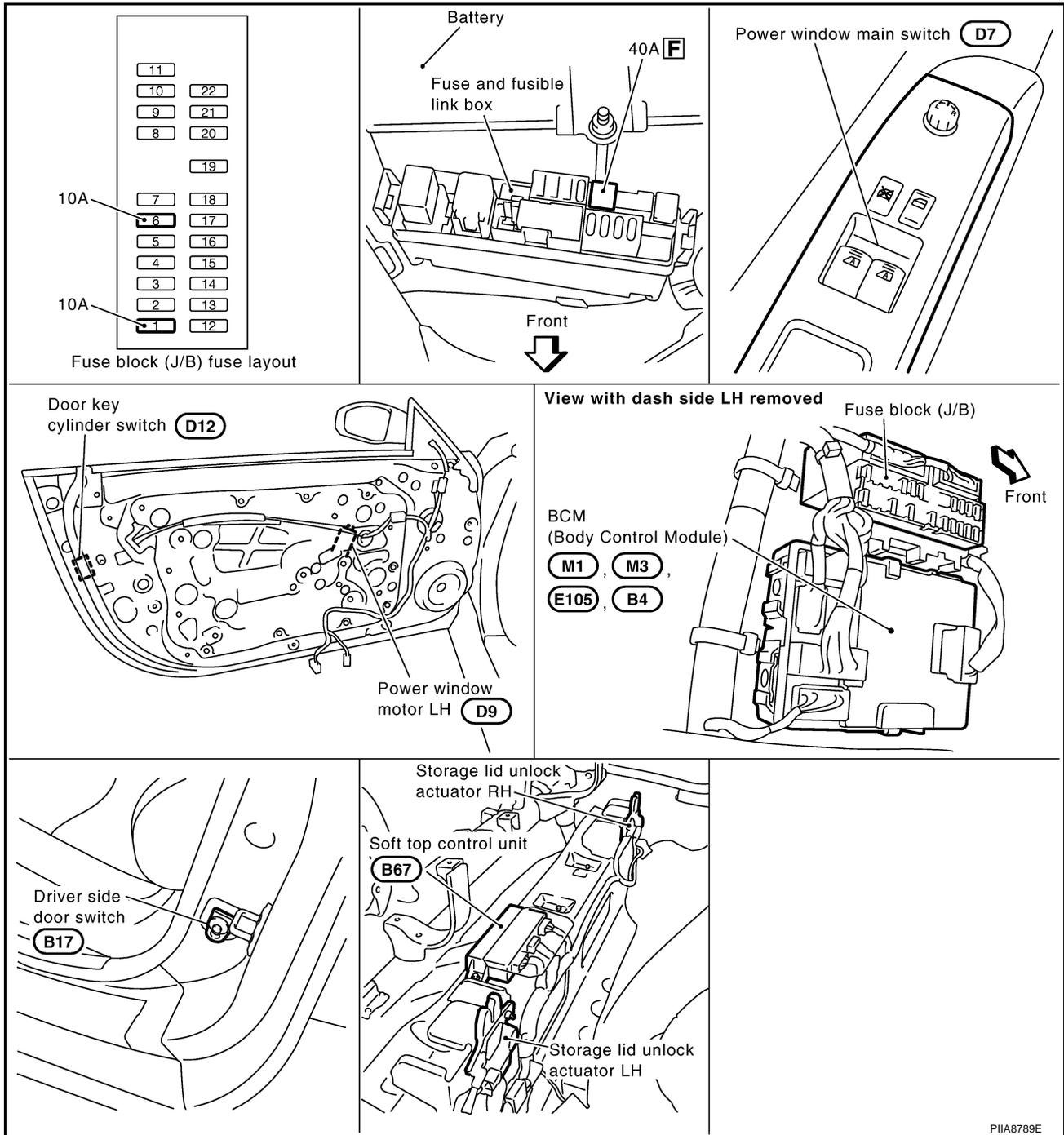
POWER WINDOW SYSTEM

POWER WINDOW SYSTEM

PFP:25401

Component Parts and Harness Connector Location

AIS000F5



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

System Description

AIS000F6

Power is supplied at all time

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

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

- through 10A fuse [No.1, located in the fuse block (J/B)]
- to BCM terminal 35.

POWER WINDOW SYSTEM

- through BCM terminal 29
- to power window main switch terminal 10.

Ground supplied

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

POWER WINDOW SYSTEM

MANUAL OPERATION

Driver Side Door

Ground is supplied

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

WINDOW UP

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

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

Ground is supplied

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

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

WINDOW DOWN

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

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

Ground is supplied

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

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

Passenger Side Door

POWER WINDOW SUB-SWITCH OPERATION

Ground is supplied

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

WINDOW UP

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

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

Ground is supplied

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

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

WINDOW DOWN

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

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

Ground is supplied

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

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

POWER WINDOW MAIN SWITCH OPERATION

Signal is sent

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

A

B

C

D

E

F

G

H

GW

J

K

L

M

POWER WINDOW SYSTEM

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

POWER WINDOW SERIAL LINK

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

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

- Driver side door switch signal.

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

- Passenger side door switch signal.

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

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

AUTO OPERATION

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

POWER WINDOW LOCK

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

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

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

RETAINED POWER OPERATION

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

Power is supplied for 45 seconds

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

Ground is always supplied

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

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

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

RAP signal period can be changed by CONSULT-II. Refer to [GW-26. "CONSULT-II Inspection Procedure"](#) .

ANTI-PINCH SYSTEM

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

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

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

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

POWER WINDOW SYSTEM

POWER WINDOW CONTROL BY THE KEY CYLINDER SWITCH

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

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

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

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

AUTOMATIC WINDOW ADJUSTING FUNCTION

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

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

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

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

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

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

A

B

C

D

E

F

G

H

GW

J

K

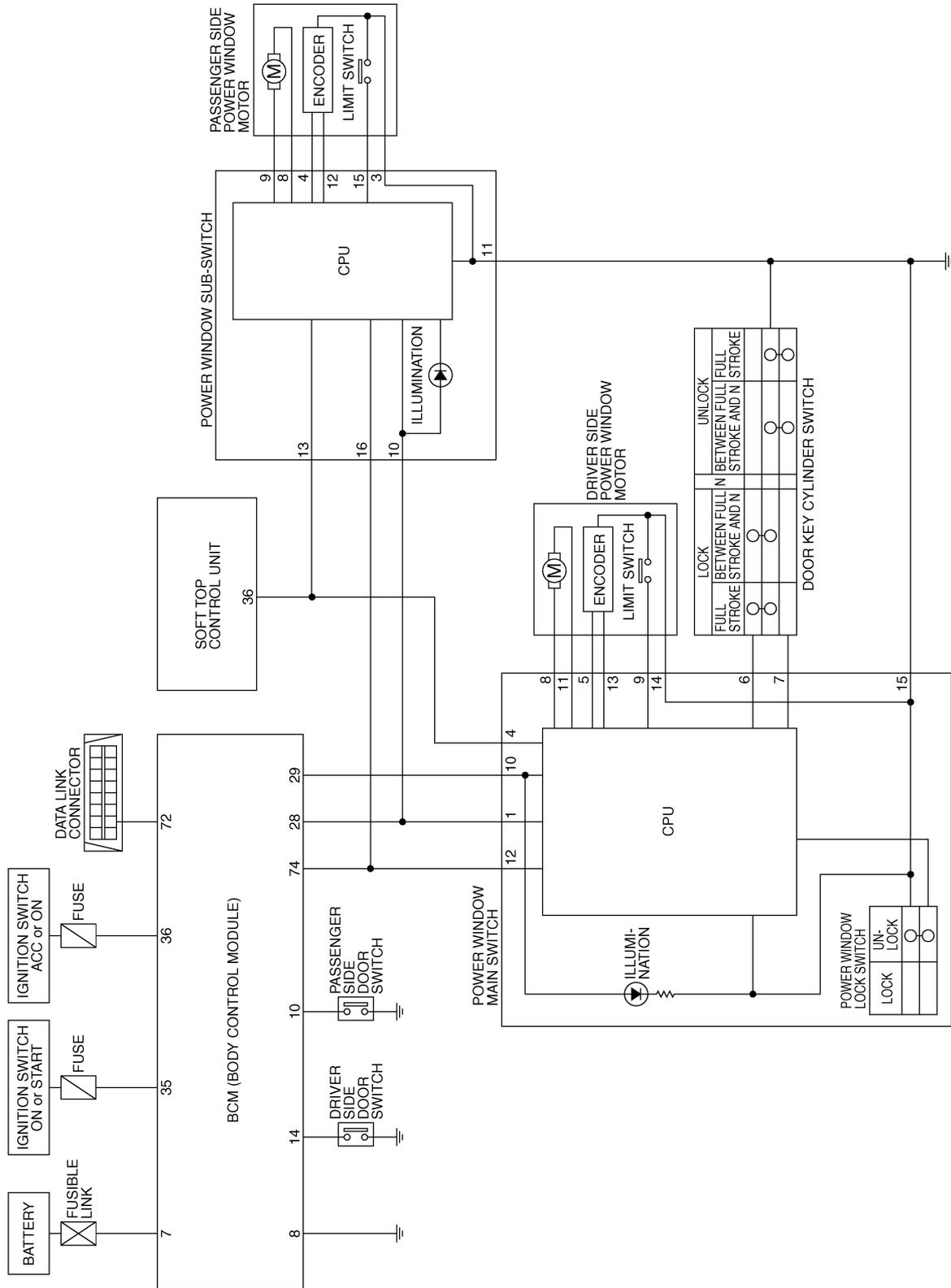
L

M

POWER WINDOW SYSTEM

Schematic

AIS003XQ



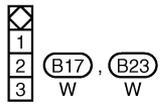
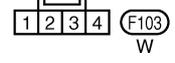
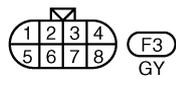
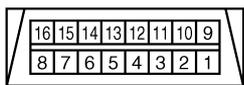
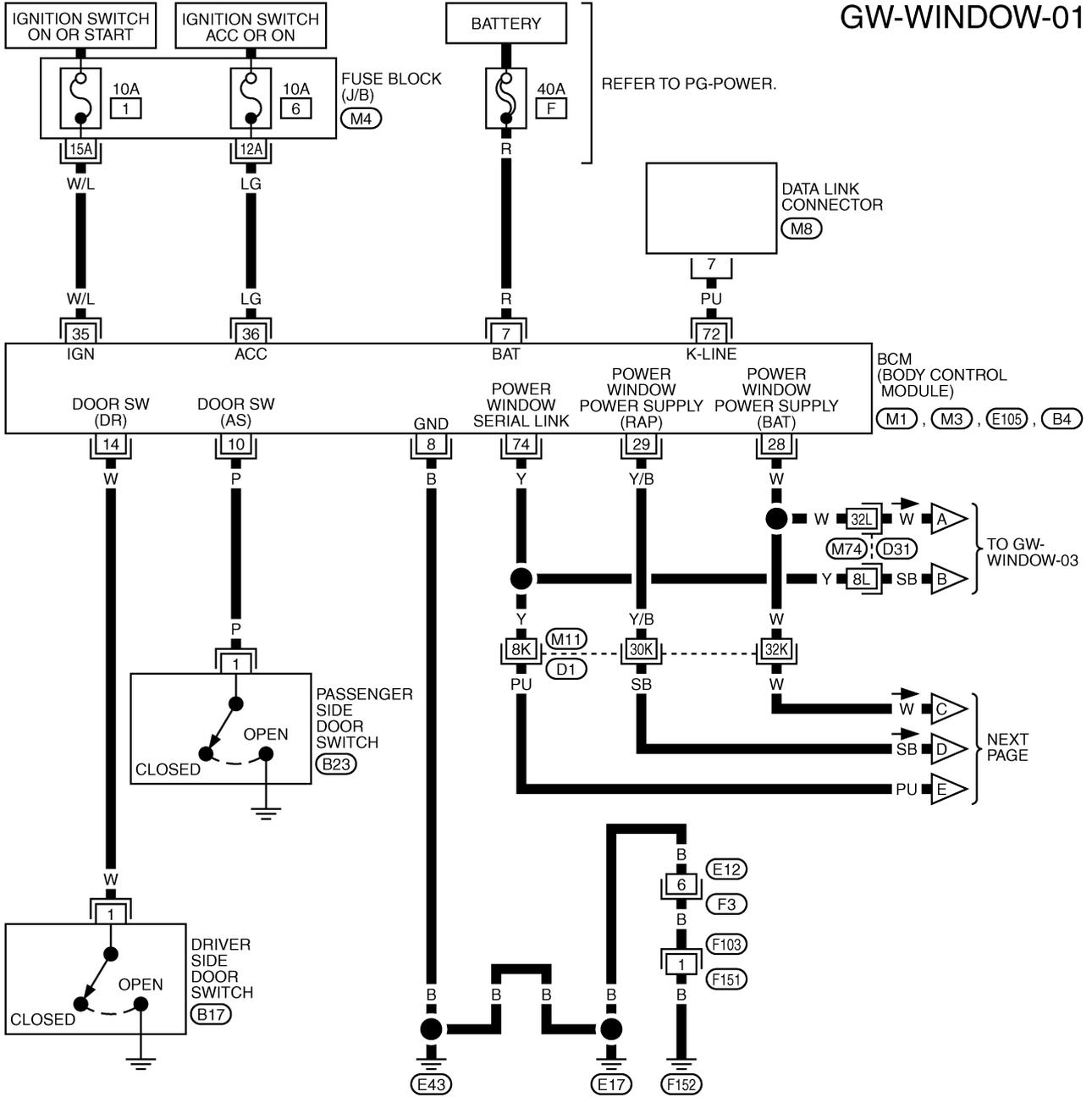
TIWT0501E

POWER WINDOW SYSTEM

Wiring Diagram – WINDOW –

AIS003XR

GW-WINDOW-01



REFER TO THE FOLLOWING.

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

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

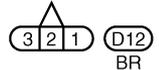
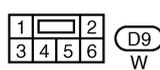
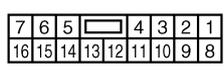
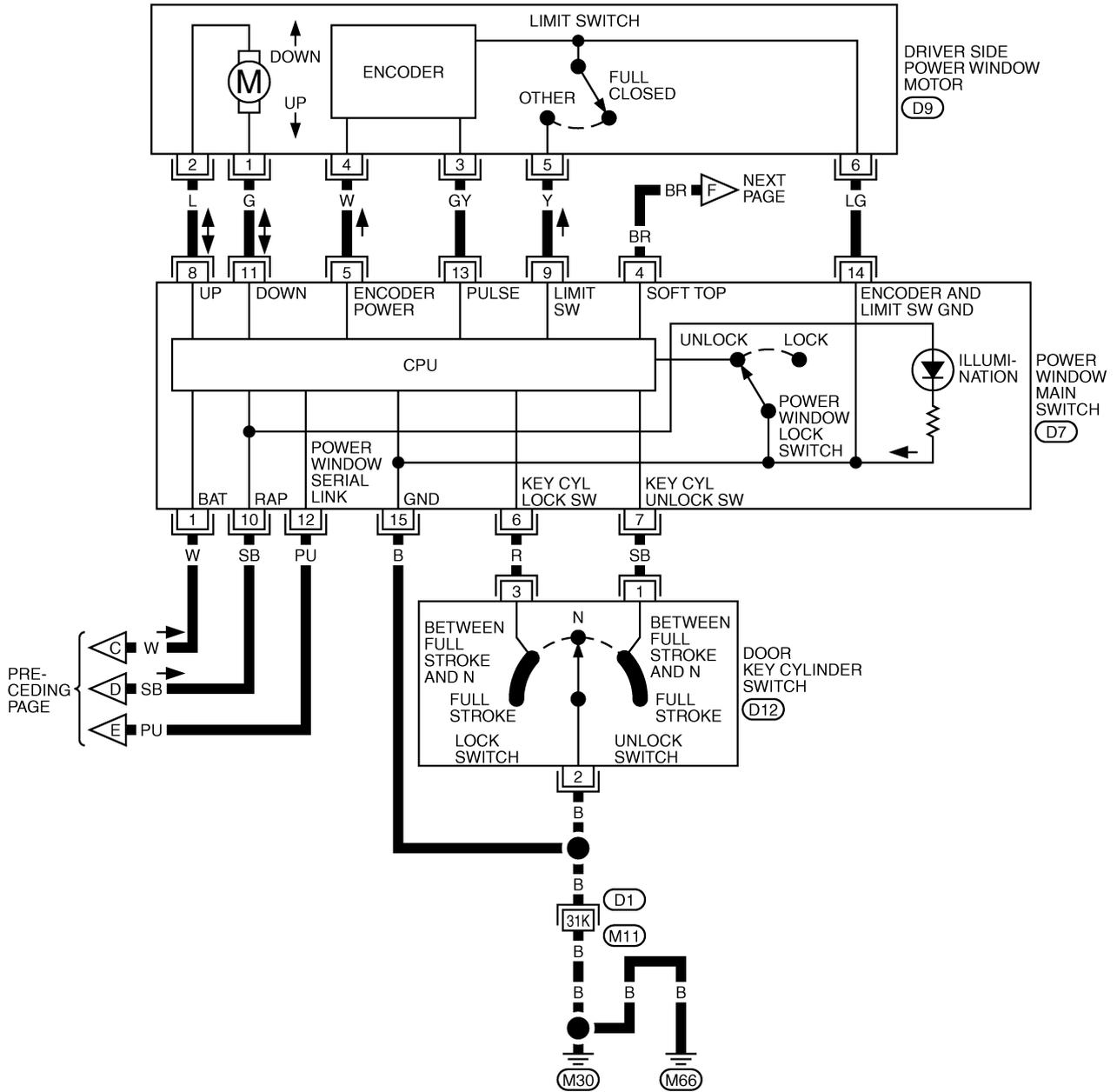
(M1), (M3), (E105), (B4) -ELECTRICAL UNITS

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

GW

POWER WINDOW SYSTEM

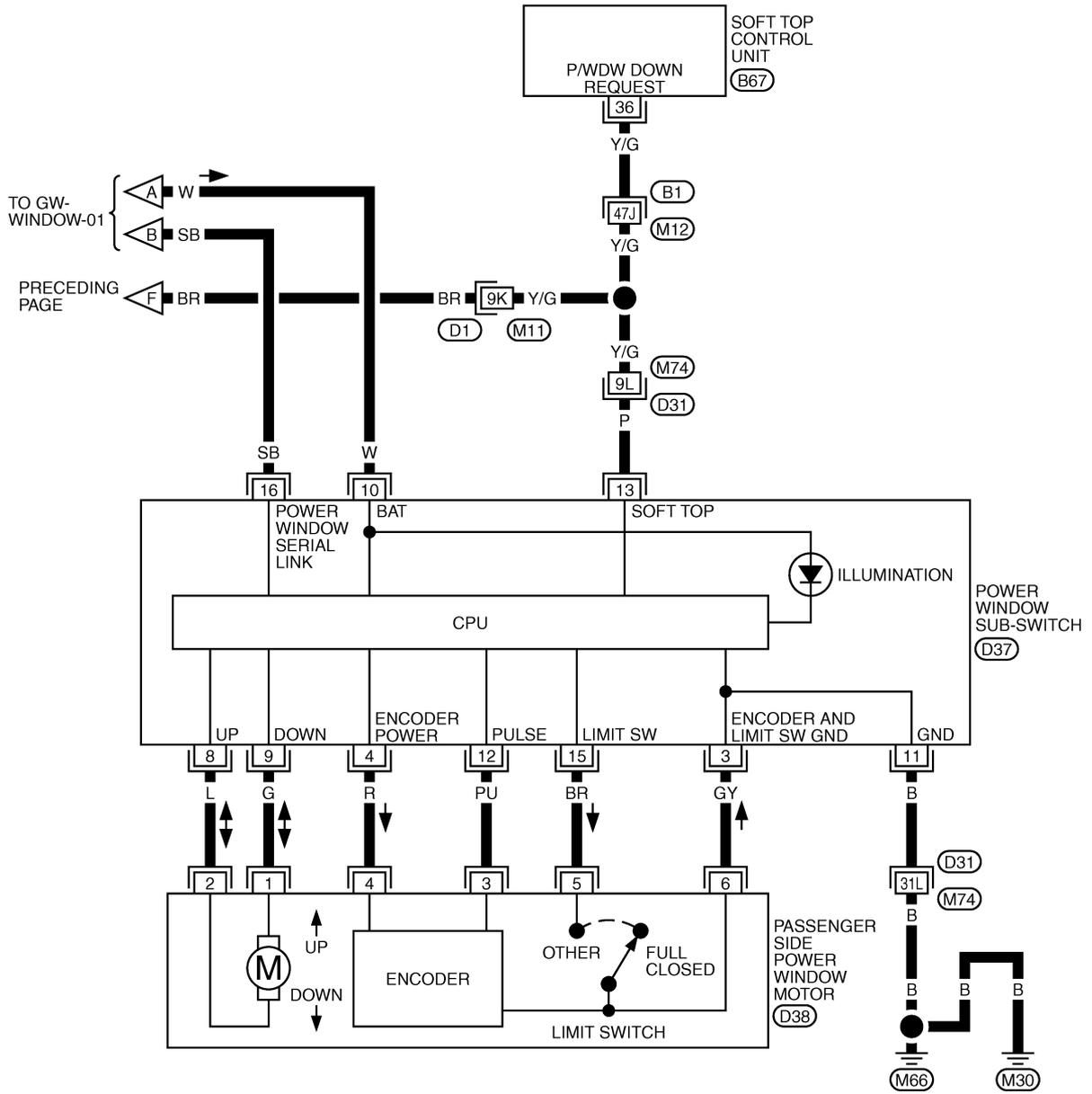
GW-WINDOW-02



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

POWER WINDOW SYSTEM

GW-WINDOW-03



25	24	23	22	21	20	19	18	17		
36	35	34	33	32	31	30	29	28	27	26

(B67)
W

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

(D37)
W

1	2		
3	4	5	6

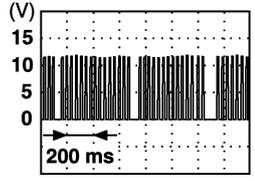
(D38)
W

REFER TO THE FOLLOWING.
(B1), (D1), (D31) -SUPER
MULTIPLE JUNCTION (SMJ)

POWER WINDOW SYSTEM

Terminal and Reference Value for BCM

AIS000FC

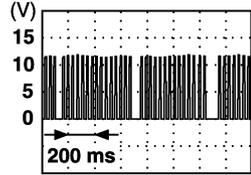
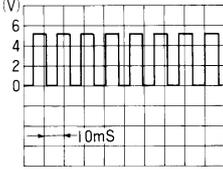
TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (Approx.)
7	R	BAT power supply	—	Battery voltage
8	B	Ground	—	0
10	P	Passenger side door switch	ON (open)	0
			OFF (closed)	5
14	W	Driver side door switch	ON (open)	0
			OFF (closed)	5
28	W	Power window switch power supply	—	Battery voltage
29	Y/B	Rap signal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

Terminal and Reference Value for Power Window Main Switch

AIS000FD

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (ApproX.)
1	W	BAT power supply	—	Battery voltage
4	BR	Power window down request signal	When soft top open/close function starts and window down function is operating.	0
			Except the above	5
5	W	Encoder power supply	—	10
6	R	Key cylinder switch lock	Key position (Neutral → Locked)	5 → 0
7	SB	Key cylinder switch unlock	Key position (Neutral → Unlocked)	5 → 0
8	L	Driver side power window motor UP signal	When power window motor UP operation.	Battery voltage
9	Y	Limit switch signal	Driver side door window is between fully-open and just before fully-closed position (ON).	0
			Driver side door window is between just before fully-closed position and fully-closed position (OFF).	5

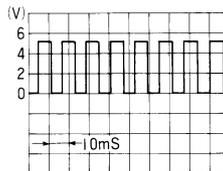
POWER WINDOW SYSTEM

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

A
B
C
D
E
F
G
H
GW

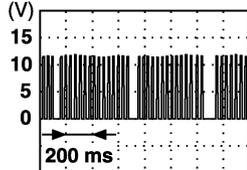
Terminal and Reference Value for Power Window Sub-Switch

AIS000FE

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (Approx)
3	GY	Limit switch and encoder ground	—	0
4	R	Encoder power supply	—	10
8	L	Passenger side power window motor UP signal	When power window motor UP operation.	Battery voltage
9	G	Passenger side power window motor DOWN signal	When power window motor DOWN operation.	Battery voltage
10	W	BAT power supply	—	Battery voltage
11	B	Ground	—	0
12	PU	Encoder pulse signal	When power window motor operates.	 OCC3383D
13	P	Power window down request signal	When soft top open/close function starts and window down function is operating.	0
			Except the above	5

J
K
L
M

POWER WINDOW SYSTEM

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

POWER WINDOW SYSTEM

Work Flow

AIS001MK

1. Check the symptom and customer's requests.
2. Understand the outline of system. Refer to [GW-13, "System Description"](#) .
3. Perform the preliminary check. Refer to [GW-25, "Preliminary Check"](#) .
4. According to the trouble diagnosis chart, repair or replace the cause of the malfunction. Refer to [GW-28, "Trouble Diagnoses Symptom Chart"](#) .
5. Does power window system operate normally? If Yes, GO TO 6, If No, GO TO 4.
6. INSPECTION END

Preliminary Check

AIS001ML

FUSE CHECK

1. CHECK FUSE

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

NOTE:

Refer to [GW-13, "Component Parts and Harness Connector Location"](#) .

OK or NG

OK >> GO TO 2.

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

2. CHECK POWER SUPPLY CIRCUIT

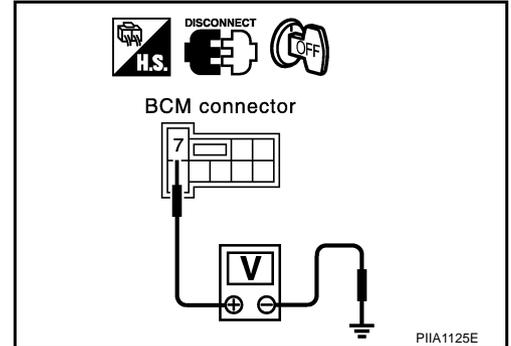
1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check voltage between BCM connector E105 terminal 7 and ground.

7 (R) – Ground : Battery voltage.

OK or NG

OK >> GO TO 3.

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



3. CHECK GROUND CIRCUIT

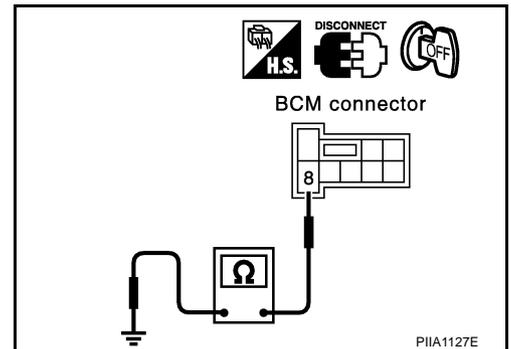
Check continuity between BCM connector E105 terminal 8 and ground.

8 (B) – Ground : Continuity should exist.

OK or NG

OK >> Power supply and ground circuit are OK.

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



POWER WINDOW SYSTEM

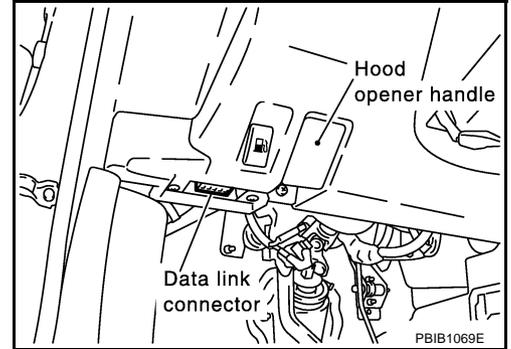
AIS000FF

CONSULT-II Inspection Procedure

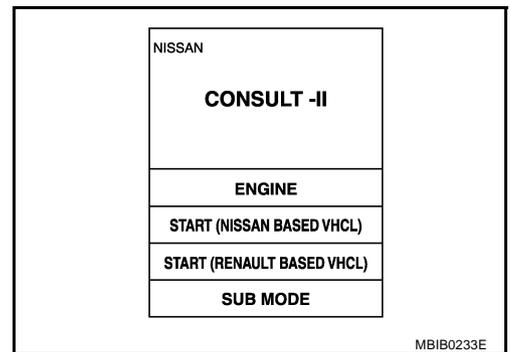
CAUTION:

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

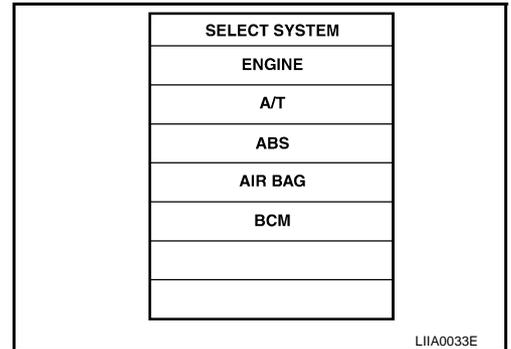
1. Turn ignition switch "OFF".
2. Connect "CONSULT-II" and CONSULT-II CONVERTER to the data link connector.



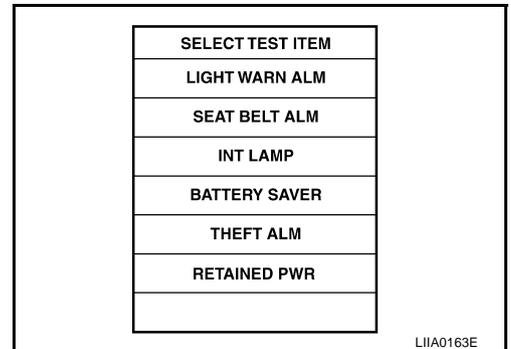
3. Turn ignition switch "ON".
4. Touch "START (NISSAN BASED VHCL)".



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

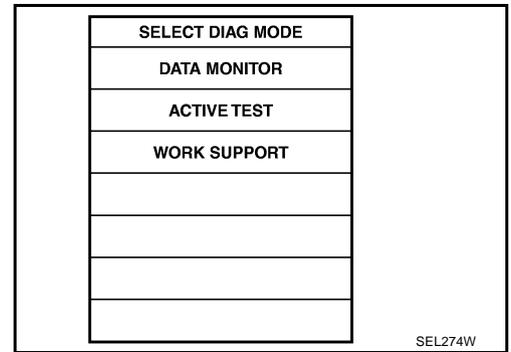


6. Touch "RETAINED PWR".



POWER WINDOW SYSTEM

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



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

WORK SUPPORT

Work item	Description
RETAINED PWR	Rap signal's power supply period can be changed by mode setting. Selects rap signal's power supply period between three steps ● MODE 1 (45 sec.) / MODE 2 (OFF) / MODE 3 (2 min.).

DATE MONITOR

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

ACTIVE TEST

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

GW

POWER WINDOW SYSTEM

AIS000FG

Trouble Diagnoses Symptom Chart

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

Symptom	Diagnoses / service procedure	Reference page
None of the power windows can be operated using any switch.	1. Preliminary check	GW-25
	2. Power window switch power supply circuit check	GW-29
	3. Power window serial link check	GW-41
	4. Replace BCM.	BCS-15
Driver side power window cannot be operated	1. Preliminary check	GW-25
	2. Driver side power window motor circuit check	GW-31
	3. Power window main switch power supply and ground circuit check	GW-43
	4. Replace the power window main switch.	EI-27
Passenger side power window cannot be operated.	1. Preliminary check	GW-25
	2. Passenger side power window motor circuit check	GW-31
	3. Power window sub-switch power supply and ground circuit check	GW-45
	4. Power window serial link check	GW-41
	5. Replace BCM.	BCS-15
Anti-pinch system does not operate normally (driver side).	1. Preliminary check	GW-25
	2. Limit switch adjusting	GW-51
	3. Limit switch circuit check (driver side)	GW-32
	4. Encoder circuit check (driver side)	GW-35
	5. 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 not enough. 	—
Anti-pinch system does not operate normally (passenger side).	1. Preliminary check	GW-25
	2. Limit switch adjusting	GW-51
	3. Limit switch circuit check (passenger side)	GW-34
	4. Encoder circuit check (passenger side)	GW-37
	5. 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 not enough. 	—
Power window retained power operation does not operate properly.	1. Preliminary check	GW-25
	2. Check the retained power operation mode setting.	GW-27
	3. Door switch check	GW-40
	4. Replace BCM.	BCS-15

POWER WINDOW SYSTEM

Symptom	Diagnoses / service procedure	Reference page
Automatic window adjusting function does not operate.	1. Preliminary check	GW-25
	2. Door switch check	GW-40
	3. Limit switch adjusting	GW-51
	4. Limit switch circuit check (driver side)	GW-32
	5. Limit switch circuit check (passenger side)	GW-34
	6. Power window serial link check	GW-41
	7. Replace BCM.	BCS-15
Does not operate by the key cylinder switch.	1. Preliminary check	GW-25
	2. Door key cylinder switch check	GW-47
	3. Driver side power window motor circuit check	GW-31
	4. Power window switch power supply and ground circuit check	GW-29
	5. Replace the power window main switch.	EI-27
Power window lock switch does not function.	1. Preliminary check	GW-25
	2. Power window serial link check	GW-41
	3. Replace the power window main switch.	EI-27

Power Window Switch Power Supply Circuit Check

AIS000FH

1. CHECK POWER SUPPLY CIRCUIT

Check voltage between BCM connector and ground.

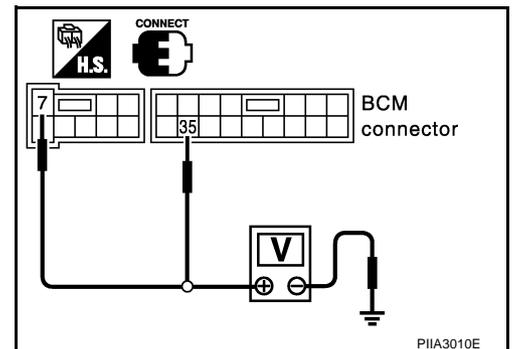
Terminals		(-)	Ignition switch position	
(+)			OFF	ON
Connector	Terminal (Wire color)	Ground	Battery voltage	Battery voltage
E105	7 (R)		0V	Battery voltage
M1	35 (W/L)			

OK or NG

OK >> GO TO 2.

NG >> Check the following.

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



POWER WINDOW SYSTEM

2. CHECK POWER WINDOW MOTOR POWER SUPPLY CIRCUIT

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

BCM – Power window main switch

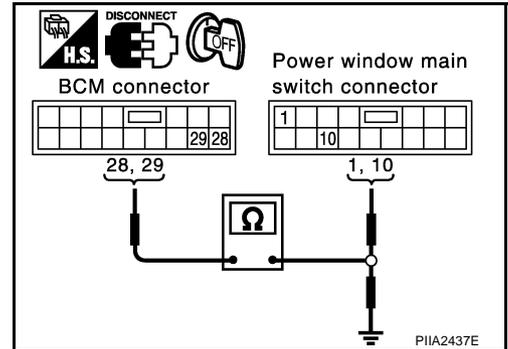
28 (W) – 1 (W) : Continuity should exist.

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

BCM – Ground

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

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



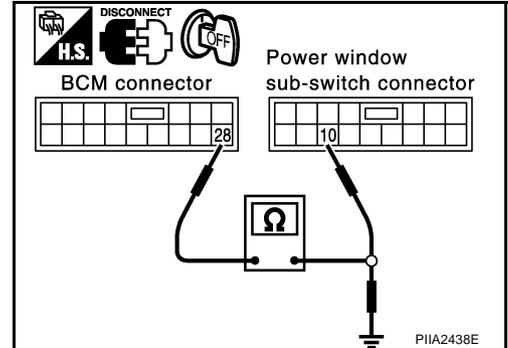
4. Check continuity between BCM connector M1 terminal 28, power window sub-switch connector D37 terminal 10, and between BCM connector M1 terminal 28 and ground.

BCM – Power window sub-switch

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

BCM – Ground

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



OK or NG

OK >> GO TO 3.

NG >> Repair or replace harness.

3. CHECK BCM OUTPUT SIGNAL

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

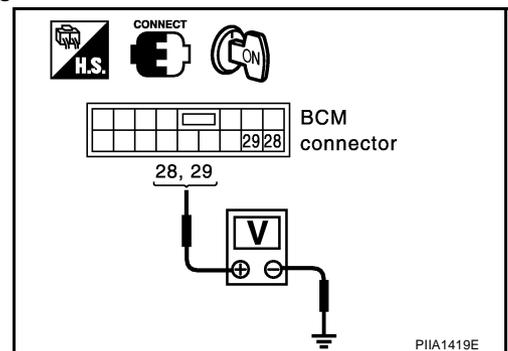
28 (W) – Ground : Battery voltage

29 (Y/B) – Ground : Battery voltage

OK or NG

OK >> INSPECTION END

NG >> Replace BCM.



POWER WINDOW SYSTEM

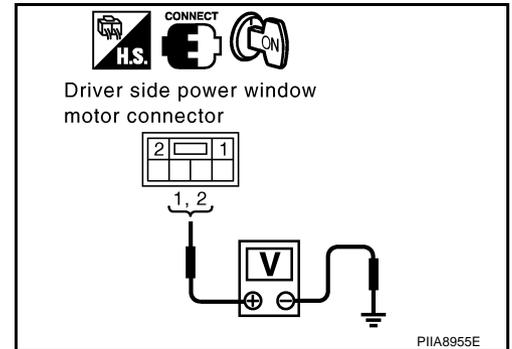
Drive Side Power Window Motor Circuit Check

AIS000FI

1. CHECK POWER WINDOW MAIN SWITCH OUTPUT SIGNAL

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

Terminals		Condition	Voltage (V) (Approx.)	
(+)	(-)			
Connector	Terminal (Wire color)	Ground	Closing	
D9	1 (G)		Opening	Battery voltage
	2 (L)		Closing	Battery voltage
			Opening	0



OK or NG

- OK >> Replace driver side power window motor.
 NG >> GO TO 2.

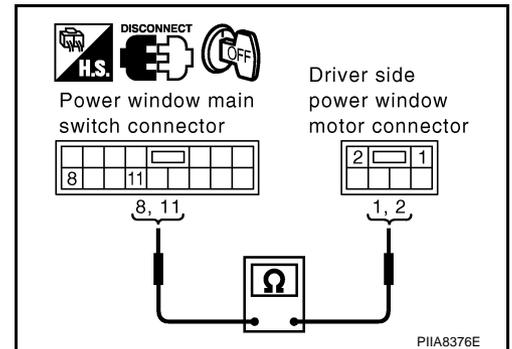
2. CHECK POWER WINDOW MAIN SWITCH CIRCUIT

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

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

OK or NG

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



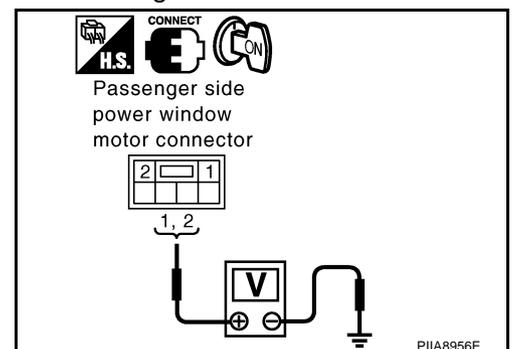
Passenger Side Power Window Motor Circuit Check

AIS000FJ

1. CHECK POWER WINDOW SUB-SWITCH OUTPUT SIGNAL

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

Terminals		Condition	Voltage (V) (Approx.)	
(+)	(-)			
Connector	Terminal (Wire color)	Ground	Closing	
D38	1 (G)		Opening	Battery voltage
	2 (L)		Closing	Battery voltage
			Opening	0



OK or NG

- OK >> Replace passenger side power window motor.
 NG >> GO TO 2.

POWER WINDOW SYSTEM

2. CHECK POWER WINDOW MOTOR (PASSENGER SIDE) CIRCUIT

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

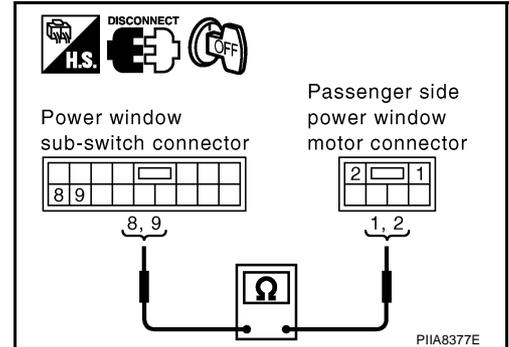
9 (G) – 1 (G) : Continuity should exist.

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

OK or NG

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

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



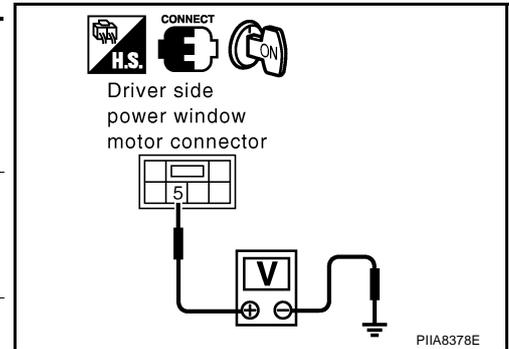
AIS000FL

Limit Switch Circuit Check (Driver Side)

1. CHECK DRIVER DOOR LIMIT SWITCH SIGNAL

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

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



OK or NG

OK >> Limit switch circuit is OK.

NG >> GO TO 2.

2. CHECK LIMIT SWITCH GROUND CIRCUIT

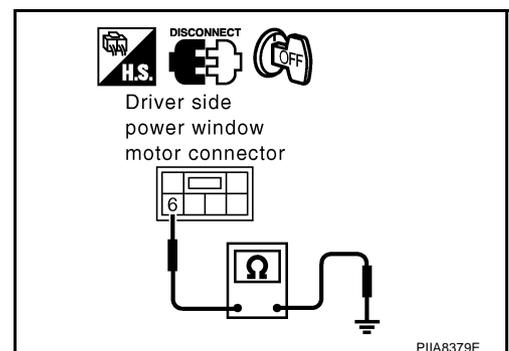
1. Turn ignition switch OFF.
2. Disconnect driver side power window motor connector.
3. Check continuity between driver side power window motor connector D9 terminal 6 and ground.

6 (LG) – Ground : Continuity should exist.

OK or NG

OK >> GO TO 4.

NG >> GO TO 3.



POWER WINDOW SYSTEM

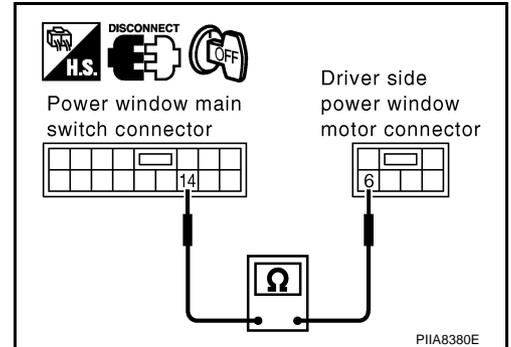
3. CHECK HARNESS CONTINUITY

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

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

OK or NG

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



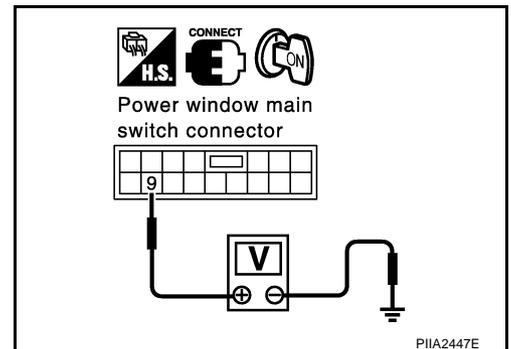
4. CHECK POWER WINDOW MAIN SWITCH OUTPUT SIGNAL

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

9 (Y) – Ground : Approx. 5V

OK or NG

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



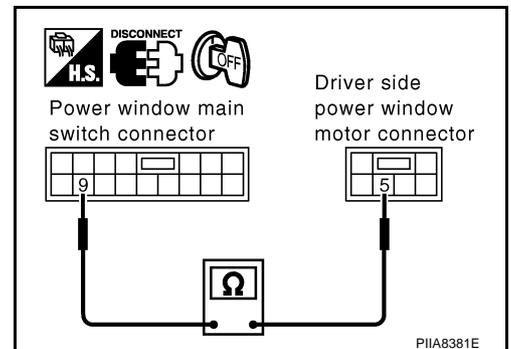
5. CHECK HARNESS CONTINUITY

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

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

OK or NG

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



POWER WINDOW SYSTEM

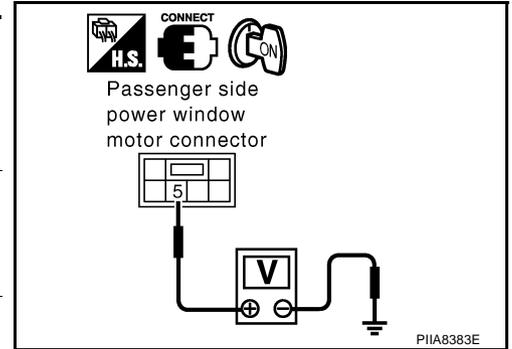
AIS00140

Limit Switch Circuit Check (Passenger Side)

1. CHECK POWER WINDOW LIMIT SWITCH SIGNAL

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

Terminals		Condition	Voltage (V) (Approx.)
(+)	(-)		
Connector	Terminal (Wire color)	Ground	
	D38		
		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.

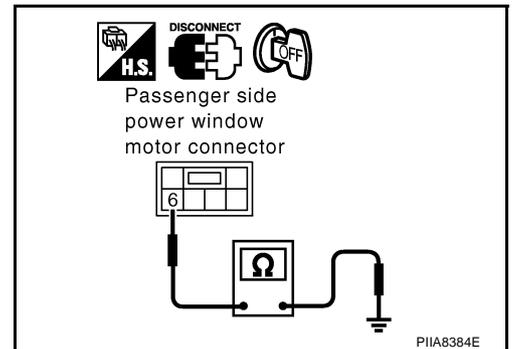
2. CHECK LIMIT SWITCH GROUND CIRCUIT

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

6 (GY) – Ground : Continuity should exist.

OK or NG

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



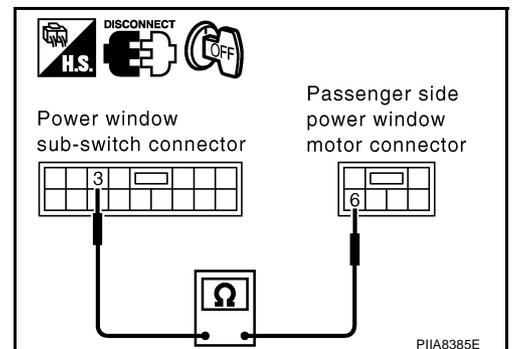
3. CHECK HARNESS CONTINUITY

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

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

OK or NG

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



POWER WINDOW SYSTEM

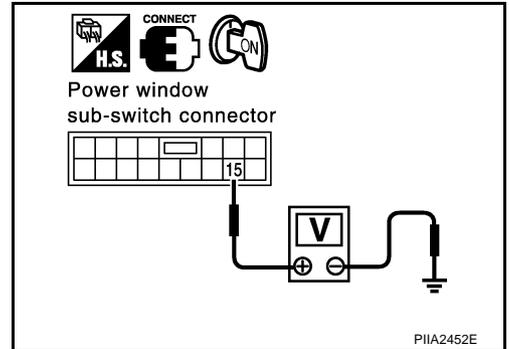
4. CHECK POWER WINDOW SUB-SWITCH OUTPUT SIGNAL

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

15 (BR) – Ground : Approx. 5V

OK or NG

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



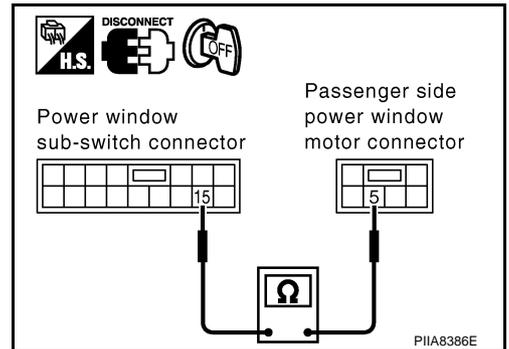
5. CHECK HARNESS CONTINUITY

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

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

OK or NG

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



Encoder Circuit Check (Driver Side)

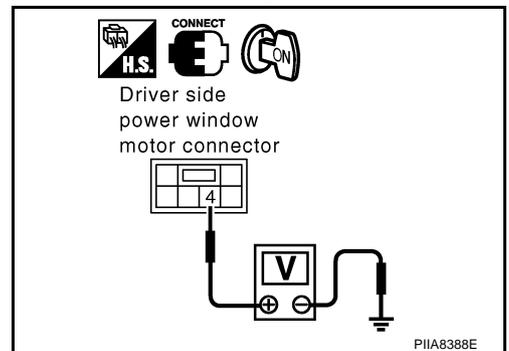
1. CHECK DRIVER SIDE POWER WINDOW MOTOR POWER SUPPLY

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

4 (W) – Ground : Approx. 10V

OK or NG

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

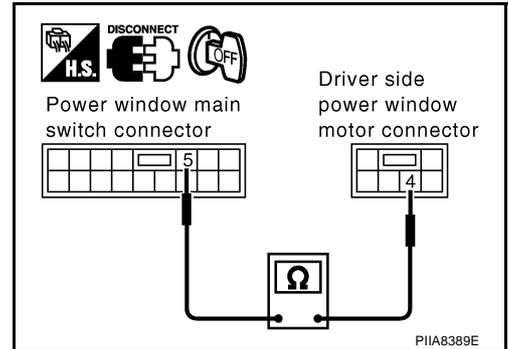


POWER WINDOW SYSTEM

2. CHECK HARNESS CONTINUITY

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

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



OK or NG

OK >> Replace power window main switch.

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

3. CHECK ENCODER GROUND

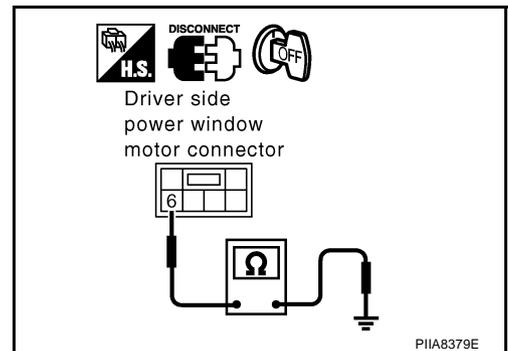
1. Turn ignition switch OFF.
2. Disconnect driver side power window motor connector.
3. Check continuity between driver side power window motor connector D9 terminal 6 and ground.

6 (LG) – Ground : Continuity should exist.

OK or NG

OK >> GO TO 5.

NG >> GO TO 4.



4. CHECK ENCODER GROUND CIRCUIT

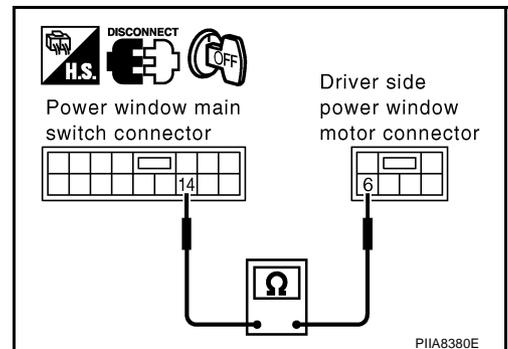
1. Disconnect power window main switch connector.
2. Check continuity between power window main switch connector D7 terminal 14 and driver side power window motor connector D9 terminal 6.

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

OK or NG

OK >> Replace power window main switch.

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

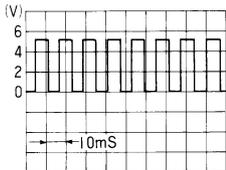


POWER WINDOW SYSTEM

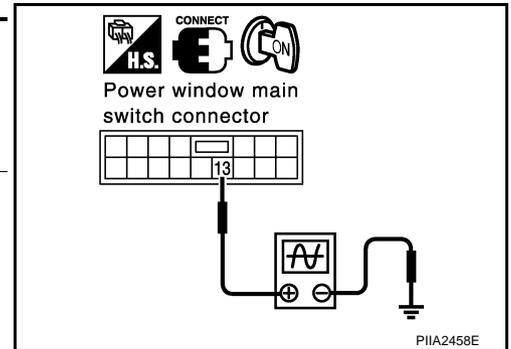
5. CHECK ENCODER SIGNAL

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

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



OCC3383D



OK or NG

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

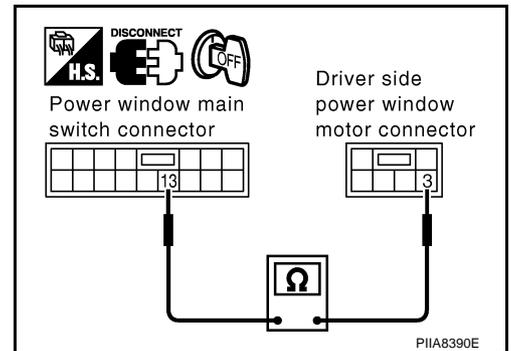
6. CHECK ENCODER CIRCUIT

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

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

OK or NG

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



Encoder Circuit Check (Passenger Side)

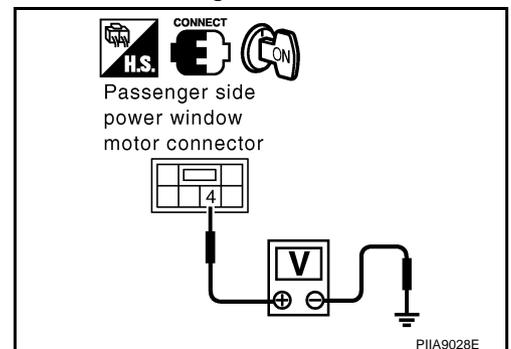
1. CHECK PASSENGER SIDE POWER WINDOW MOTOR POWER SUPPLY

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

4 (R) – Ground : Approx. 10V

OK or NG

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

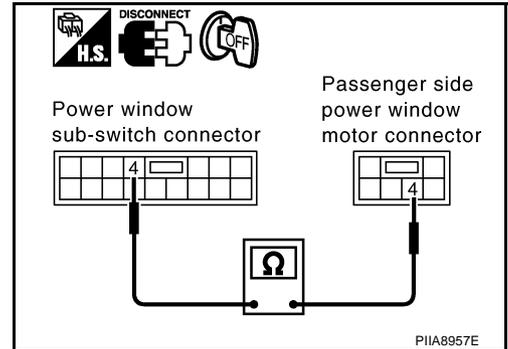


POWER WINDOW SYSTEM

2. CHECK HARNESS CONTINUITY

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

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



OK or NG

OK >> Replace power window sub-switch.

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

3. CHECK ENCODER GROUND

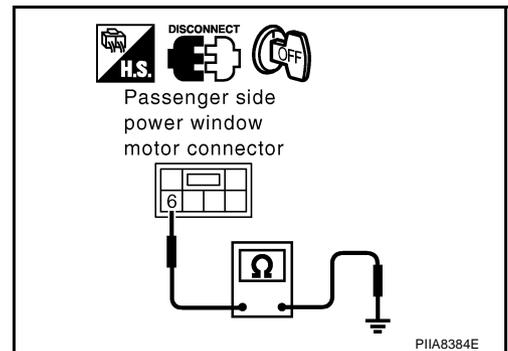
1. Turn ignition switch OFF.
2. Disconnect passenger side power window motor connector.
3. Check continuity between passenger side power window motor connector D38 terminal 6 and ground.

6 (GY) – Ground : Continuity should exist.

OK or NG

OK >> GO TO 5.

NG >> GO TO 4.



4. CHECK ENCODER GROUND CIRCUIT

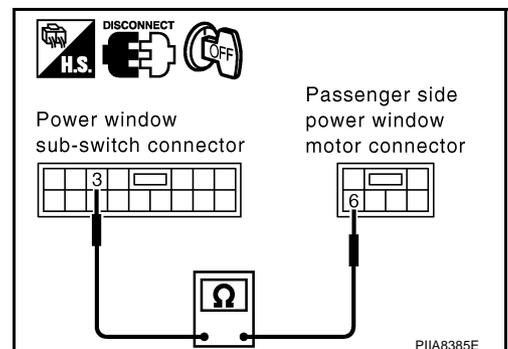
1. Disconnect power window sub-switch connector.
2. Check continuity between power window sub-switch connector D37 terminal 3 and passenger side power window motor connector D38 terminal 6.

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

OK or NG

OK >> Replace power window sub switch.

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

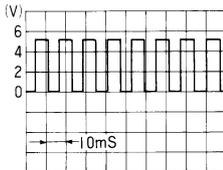


POWER WINDOW SYSTEM

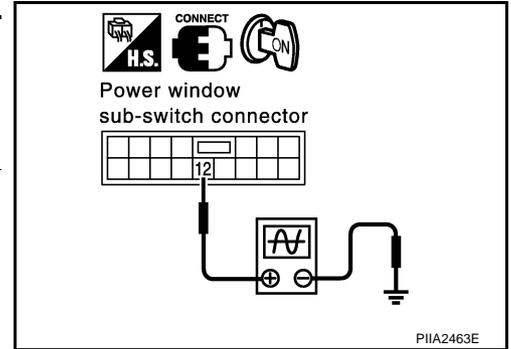
5. CHECK ENCODER SIGNAL

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

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



OCC3383D



OK or NG

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

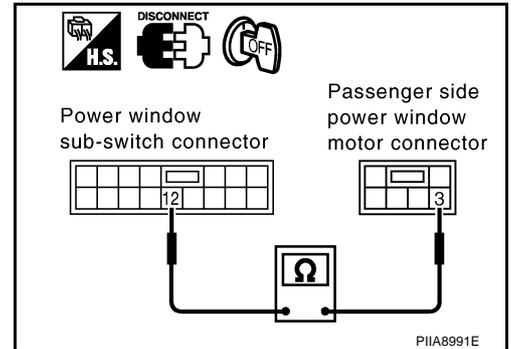
6. CHECK ENCODER CIRCUIT

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

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

OK or NG

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



POWER WINDOW SYSTEM

AIS000FN

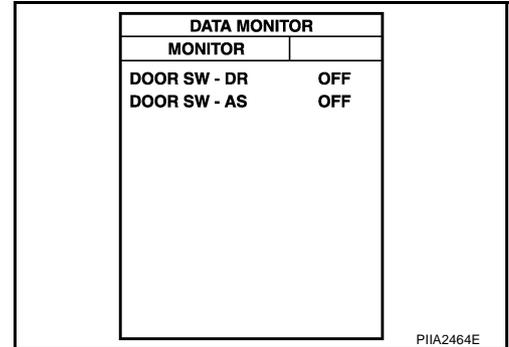
Door Switch Check

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT-II

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

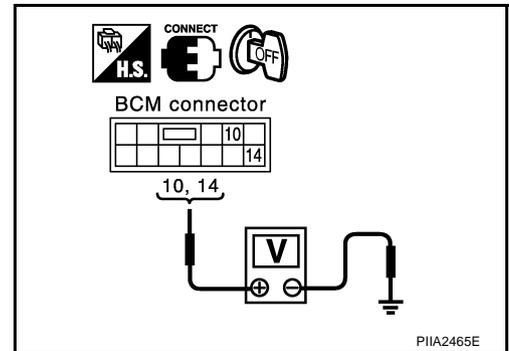
Monitor item	Condition
DOOR SW-DR	OPEN : ON
	CLOSE : OFF
DOOR SW-AS	OPEN : ON
	CLOSE : OFF



Without CONSULT-II

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

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



OK or NG

OK >> Door switch is OK.

NG >> GO TO 2.

2. CHECK DOOR SWITCH CIRCUIT

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

Driver side door

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

Passenger side door

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

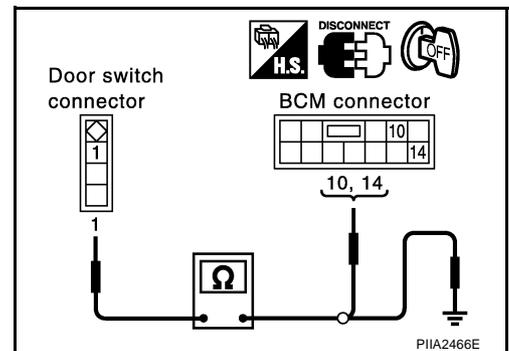
- Check continuity between door switch connector B17, B23 terminals 1 and ground.

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

OK or NG

OK >> GO TO 3.

NG >> Repair or replace harness.



POWER WINDOW SYSTEM

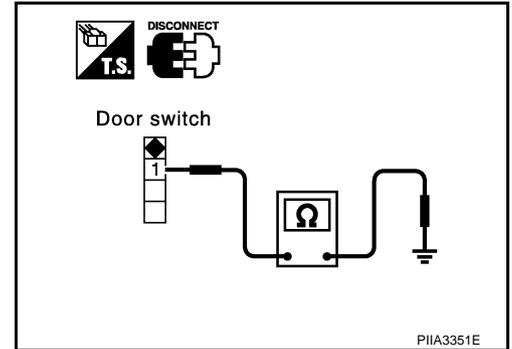
3. CHECK DOOR SWITCH

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

Terminal		Door switch	Continuity
1	Ground	Pushed	No
		Released	Yes

OK or NG

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



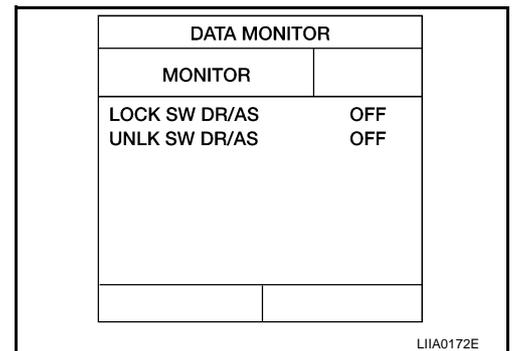
Power Window Serial Link Check

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

With CONSULT-II

Check door lock and unlock switch ("LOCK SW DR/AS", "UNLK SW DR/AS") in DATA MONITOR mode with CONSULT-II. Refer to [BL-28, "DATA MONITOR"](#).

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



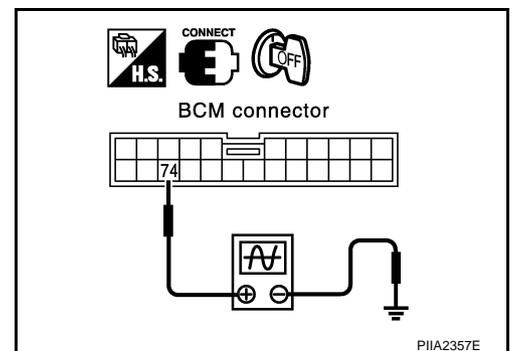
Without CONSULT-II

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

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

OK or NG

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

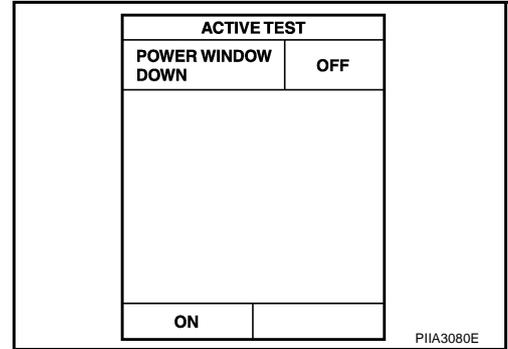


POWER WINDOW SYSTEM

2. CHECK BCM OUTPUT SIGNAL

Check power window serial link ("POWER WINDOW DOWN") in "ACTIVE TEST" mode with CONSULT-II. Refer to [BL-61, "Work Support"](#).

When "ACTIVE TEST" is perform, are the window of driver side and passenger side lowered?.



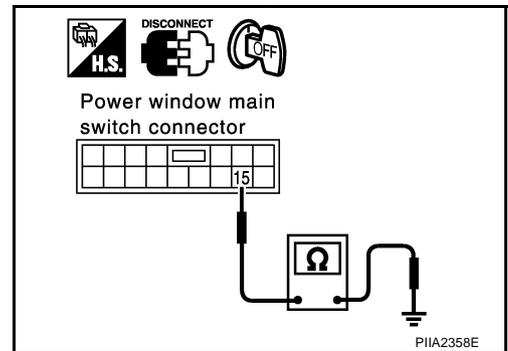
OK or NG

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

3. CHECK POWER WINDOW SWITCH GROUND

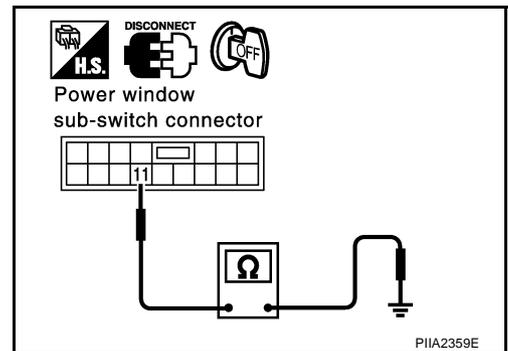
1. Turn ignition switch OFF.
2. Disconnect power window main switch and power window sub-switch connector.
3. Check continuity between power window main switch connector D7 terminals 15 and ground.

15 (B) – Ground : Continuity should exist.



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

11 (B) – Ground : Continuity should exist.



OK or NG

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

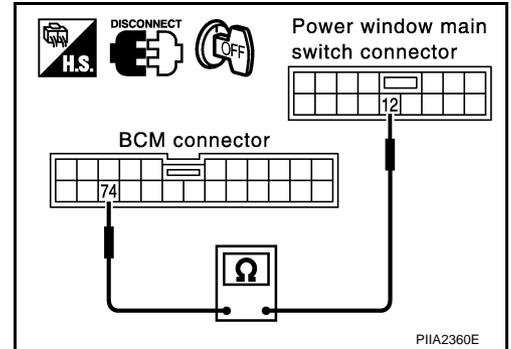
POWER WINDOW SYSTEM

4. CHECK POWER WINDOW SERIAL LINK CIRCUIT

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

74 (Y) – 12 (PU)

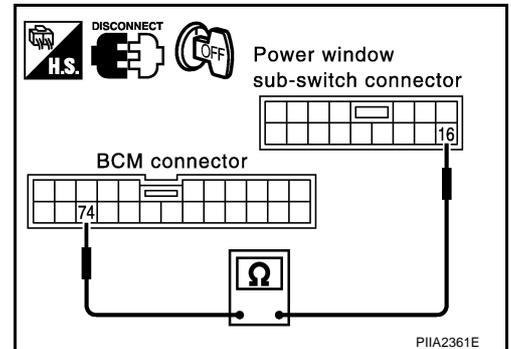
: Continuity should exist.



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

74 (Y) – 16 (SB)

: Continuity should exist.



OK or NG

OK >> Replace power window main switch.

NG >> Repair or replace harness.

Power Window Main Switch Power Supply and Ground Circuit Check

AIS001MI

1. CHECK POWER SUPPLY CIRCUIT

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

1 (W) – Ground

: Battery voltage.

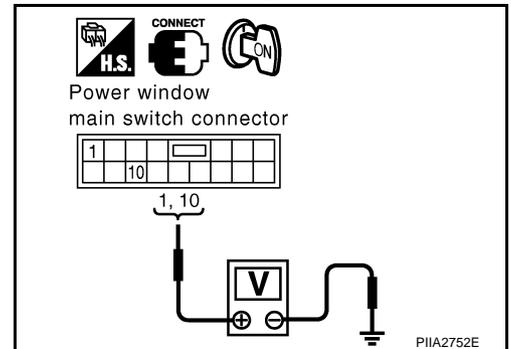
10 (SB) – Ground

: Battery voltage.

OK or NG

OK >> GO TO 2.

NG >> GO TO 3.



POWER WINDOW SYSTEM

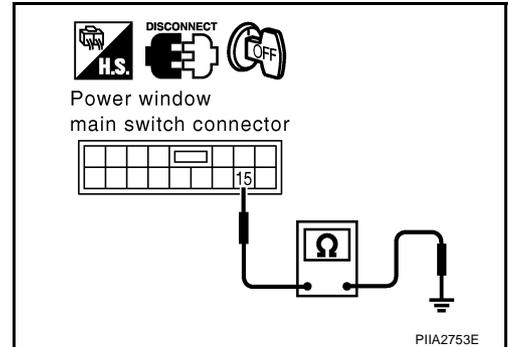
2. CHECK GROUND CIRCUIT

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

15 (B) – Ground : Continuity should exist.

OK or NG

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



3. CHECK POWER WINDOW MAIN SWITCH POWER SUPPLY CIRCUIT

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

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

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

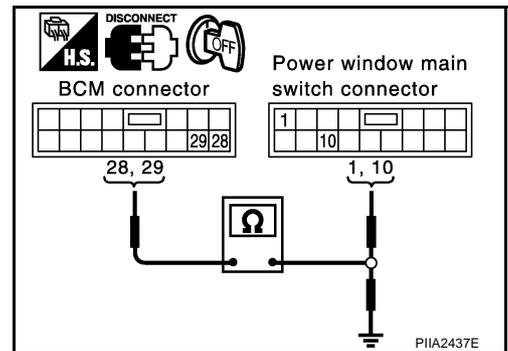
4. Check continuity between BCM connector M1 terminals 28, 29 and ground.

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

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

OK or NG

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



4. CHECK BCM OUTPUT SIGNAL

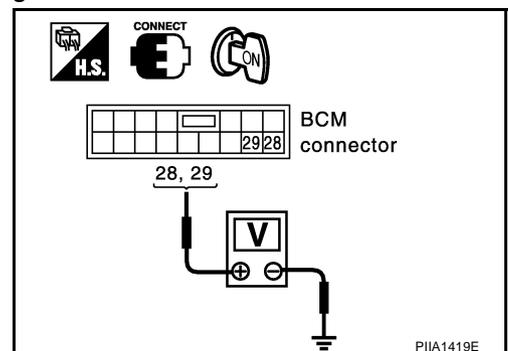
1. Connect BCM connector.
2. Turn ignition switch ON.
3. Check voltage between BCM connector M1 terminals 28, 29 and ground.

28 (W) – Ground : Battery voltage

29 (Y/B) – Ground : Battery voltage

OK or NG

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



POWER WINDOW SYSTEM

Power Window Sub-switch Power Supply and Ground Circuit Check

AIS001MJ

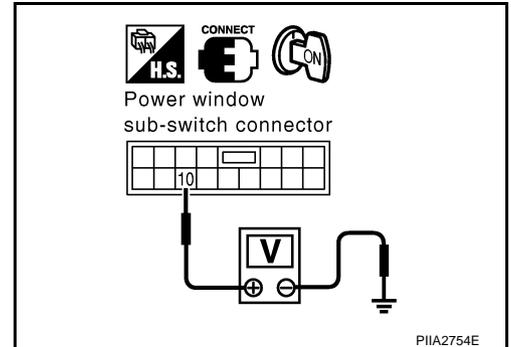
1. CHECK POWER SUPPLY CIRCUIT

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

10 (W) – Ground : Battery voltage

OK or NG

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



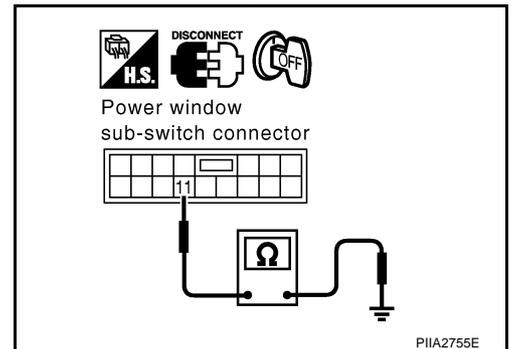
2. CHECK GROUND CIRCUIT

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

11 (B) – Ground : Continuity should exist.

OK or NG

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



3. CHECK POWER WINDOW SUB-SWITCH POWER SUPPLY CIRCUIT

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

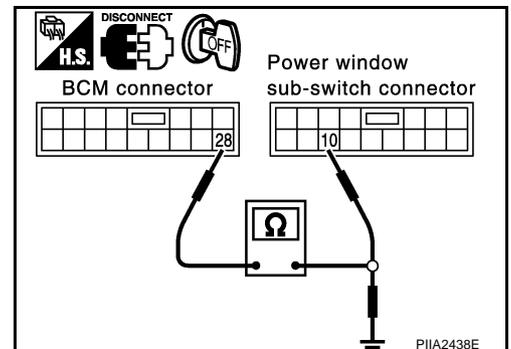
28 (W) – 10 (W) : Continuity should exist.

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

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

OK or NG

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



POWER WINDOW SYSTEM

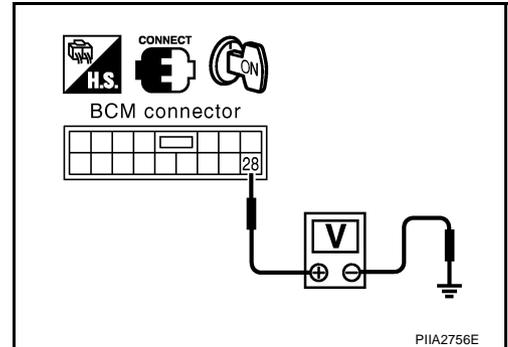
4. CHECK BCM OUTPUT SIGNAL

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

28 (W) – Ground : Battery voltage

OK or NG

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



POWER WINDOW SYSTEM

AIS001PS

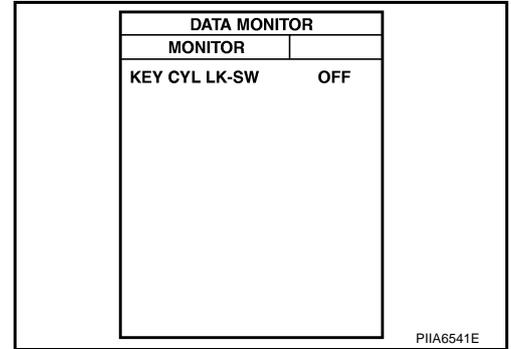
Door Key Cylinder Switch Check

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

With CONSULT-II

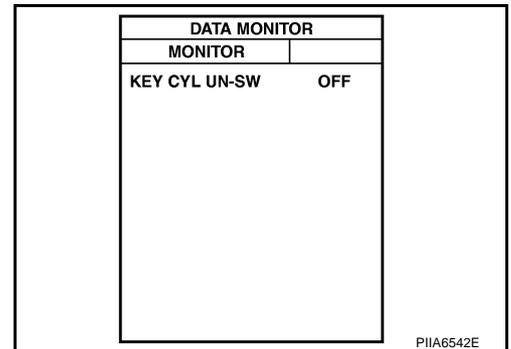
- Check door key cylinder switch ("KEY CYL LK SW") in "DATA MONITOR" mode with CONSULT-II.

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



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

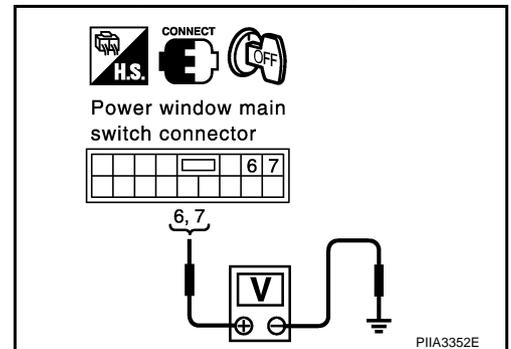
"KEY CYL UN-SW" should be "ON" when key inserted in door key cylinder was turned to unlock.



Without CONSULT-II

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

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



OK or NG

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

POWER WINDOW SYSTEM

2. CHECK DOOR KEY CYLINDER SWITCH CIRCUIT

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

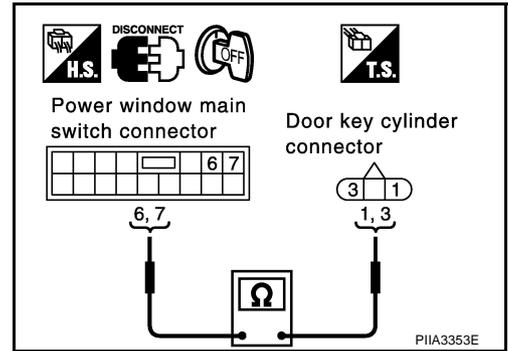
6 (R) – 3 (R) : Continuity should exist.

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

OK or NG

OK >> GO TO 3.

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



3. CHECK DOOR KEY CYLINDER SWITCH GROUND

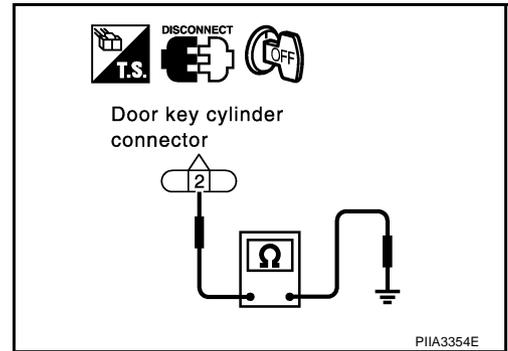
Check continuity between door key cylinder switch connector D12 terminal 2 and ground.

2 (B) – Ground : Continuity should exist.

OK or NG

OK >> GO TO 4.

NG >> Repair or replace harness.



4. CHECK DOOR KEY CYLINDER SWITCH

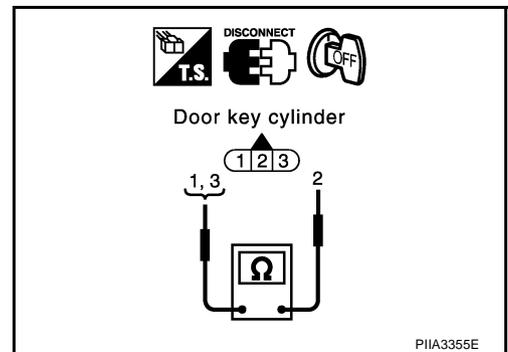
Check continuity between door key cylinder switch terminals 1, 3 and 2.

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

OK or NG

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

NG >> Replace door key cylinder switch.



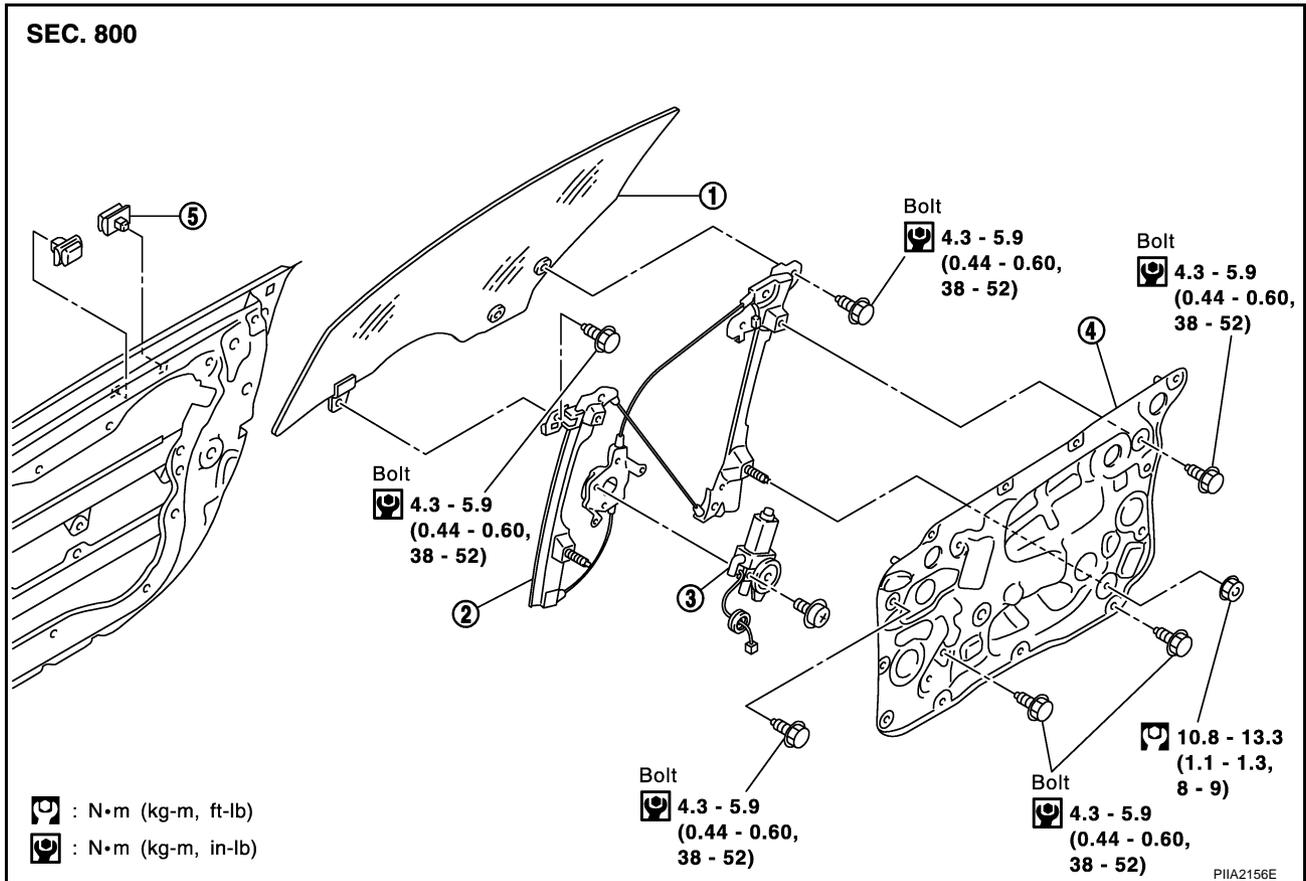
FRONT DOOR GLASS AND REGULATOR

FRONT DOOR GLASS AND REGULATOR

PFP:80300

Removal and Installation

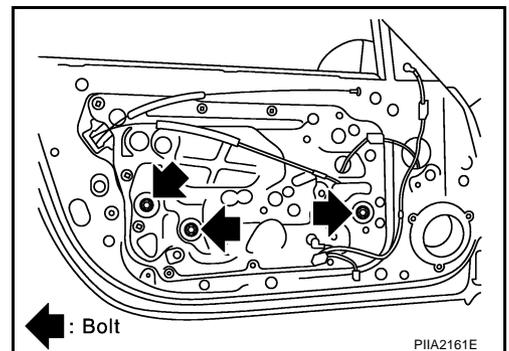
AIS000FO



- | | | |
|--------------------|-----------------------|-----------------------|
| 1. Door glass | 2. Regulator assembly | 3. Power window motor |
| 4. Module assembly | 5. Glass stabilizer | |

REMOVAL

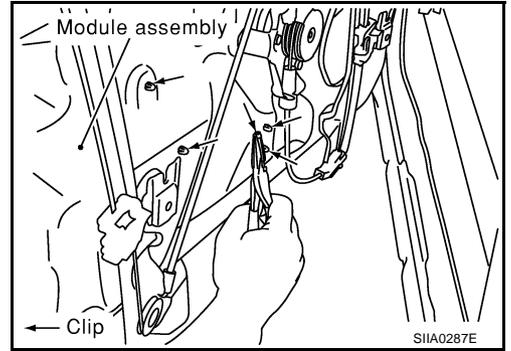
1. Remove front door finisher. Refer to [EI-27, "DOOR FINISHER"](#).
2. Operate power window main switch to raise/lower door window until glass mounting bolts can be seen.
3. Remove the glass mounting bolts.



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

FRONT DOOR GLASS AND REGULATOR

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



INSTALLATION

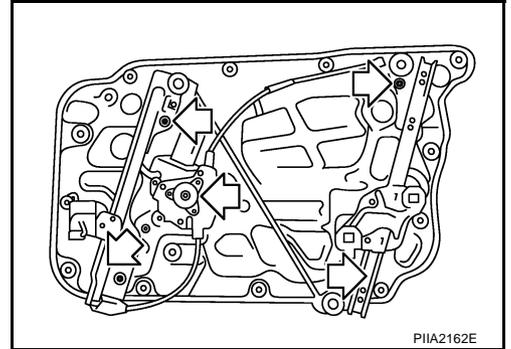
Install in the reverse order of removal.

INSPECTION AFTER REMOVAL

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

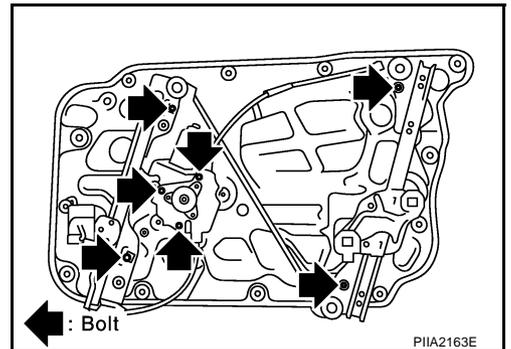
- Wire wear
- Regulator deformation
- Grease condition for each sliding part

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



DISASSEMBLY AND ASSEMBLY

Remove power window motor and guide rail from module assembly.



FRONT DOOR GLASS AND REGULATOR

SETTING AFTER INSTALLATION

Setting of Limit Switch

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

- Removal and installation of regulator.
- Removal and installation of motor from regulator.

Resetting

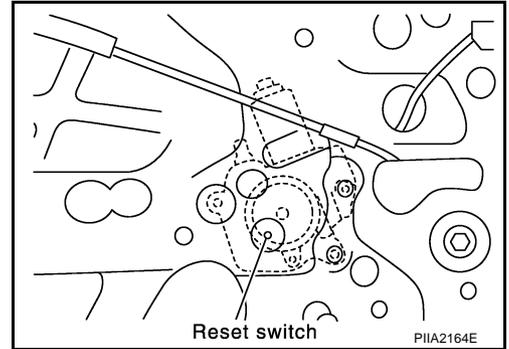
After installing each component to vehicle, follow the steps below.

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

CAUTION:

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

Do not operate the door switch is turning on.



FITTING INSPECTION

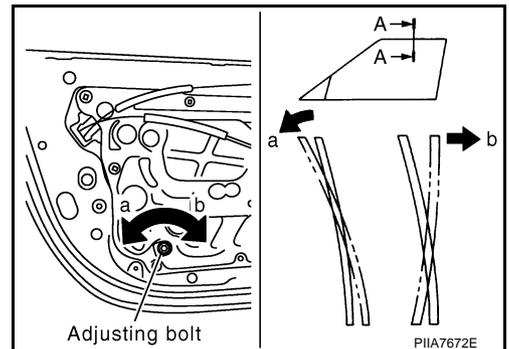
- Check that glass is securely fit into glass run groove.
- Lower glass slightly [approx. 10 to 20 mm (0.39 to 0.79 in)] and check the distance between the edge of glass and the weatherstrip. If the distance is not constant, adjust the glass position by loosening and tightening following bolts.

- Regulator mounting bolt and nut
- Glass and guide rail mounting bolt

- Raise the glass fully and adjust the glass top end and roof weatherstrip fitting with the adjusting bolt at the lower of the regulator rear rail. If water leaks, repair the fitting. Refer to [RF-115, "Repairing Method for Water Leakage Around Doors"](#).

NOTE:

- Turn the adjusting bolt clockwise to move the door glass upper end outward.
- Turn the adjusting bolt counterclockwise to move the door glass upper end inward.



INSIDE MIRROR

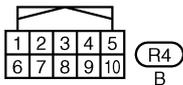
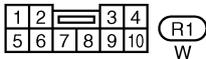
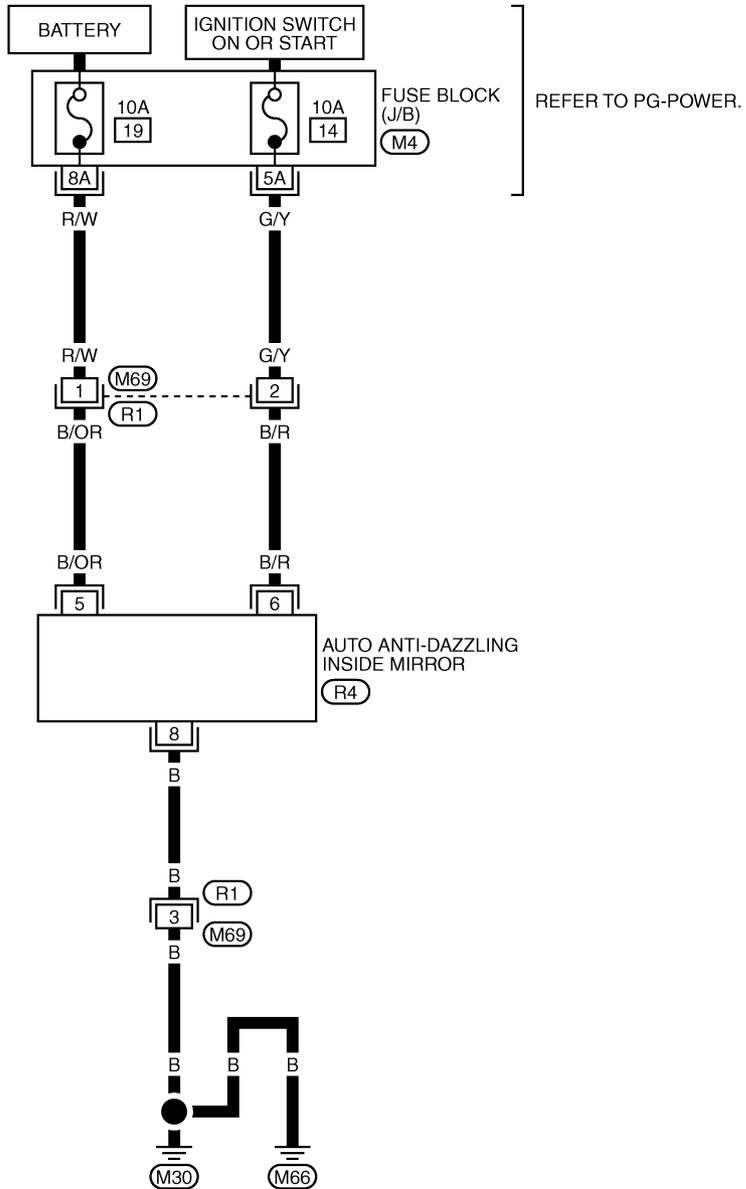
PF9:96321

INSIDE MIRROR

Wiring Diagram -I/MIRR-

AIS000FQ

GW-I/MIRR-01



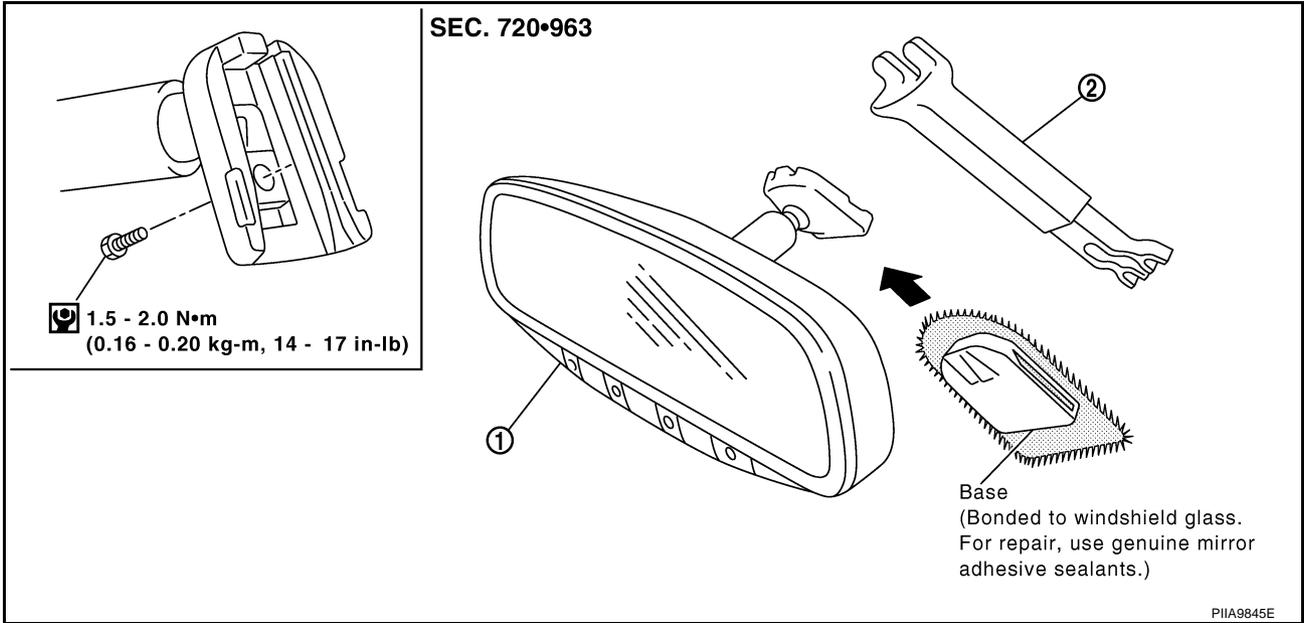
REFER TO THE FOLLOWING.

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

INSIDE MIRROR

Removal and Installation

AIS000FR



1. Inside mirror

2. Inside mirror finisher

REMOVAL

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

INSTALLATION

Install in the reverse order of removal.

CAUTION:

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

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

GW

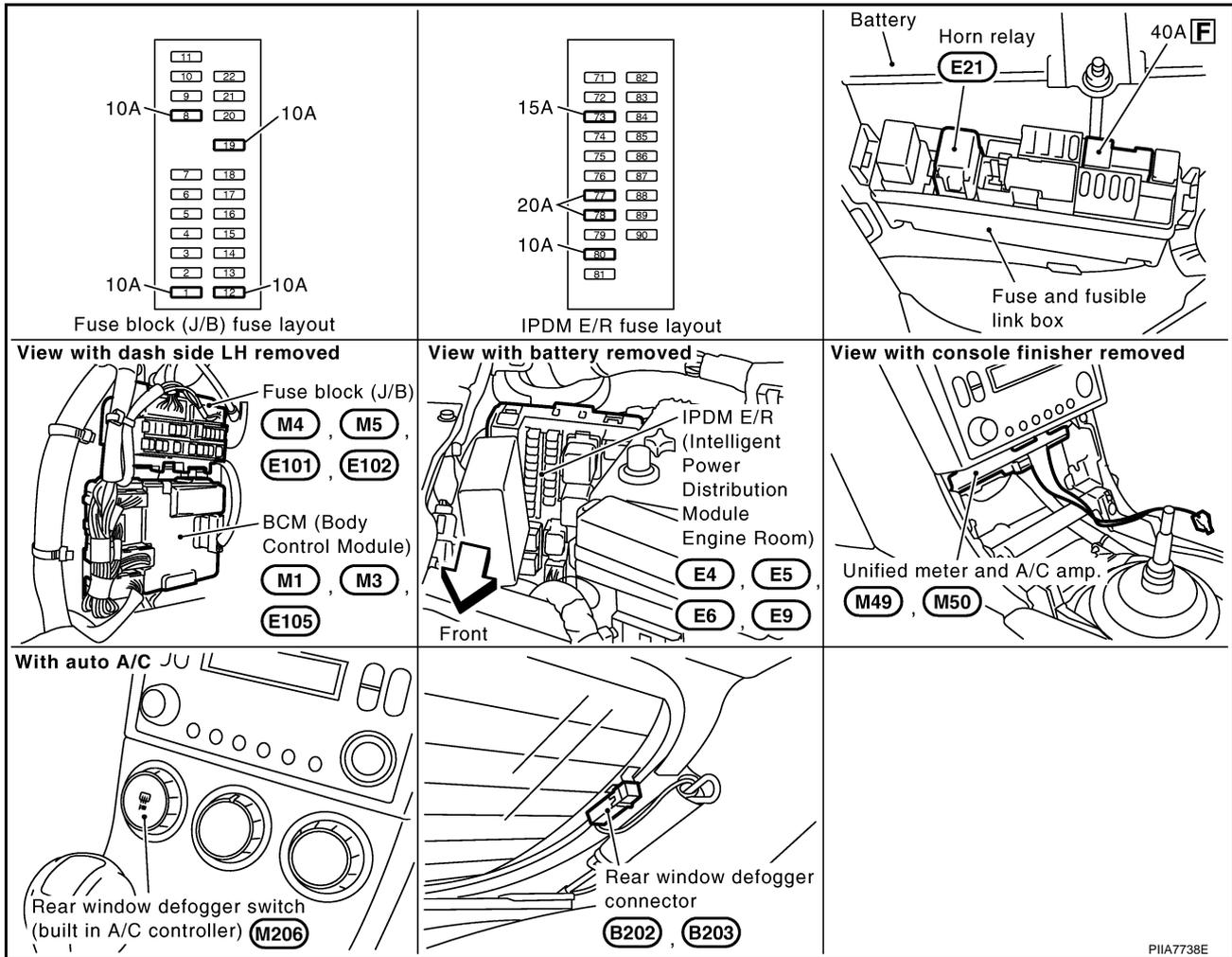
REAR WINDOW DEFOGGER

REAR WINDOW DEFOGGER

PFP:25350

Component Parts and Harness Connector Location

AIS003XN



PIIA7738E

System Description

AIS000FT

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

Power is at all times supplied

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

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

- through 10A fuse [No. 1, located in the fuse block (J/B)]
- to BCM terminal 35.
- through 10A fuse [No. 12, located in the fuse block (J/B)]
- to unified meter and A/C amp. terminal 22 and rear window defogger relay terminal 1.
- and then through unified meter and A/C amp.
- to A/C controller (rear window defogger switch) terminal 84.
- through unified meter and A/C amp.
- to A/C controller (rear window defogger switch) terminal 72.

REAR WINDOW DEFOGGER

Ground is supplied

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

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

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

Then ground is supplied

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

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

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

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

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

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

- to rear window defogger terminal 1
- through rear window defogger relay terminal 5.

Rear window defogger terminal 2 is grounded through body ground B5, B6 and T14.

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

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

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

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

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

Then ground is supplied

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

This energizes rear window defogger indicator.

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

REAR WINDOW DEFOGGER

CAN Communication System Description

AIS00108

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

CAN Communication Unit

AIS0040Z

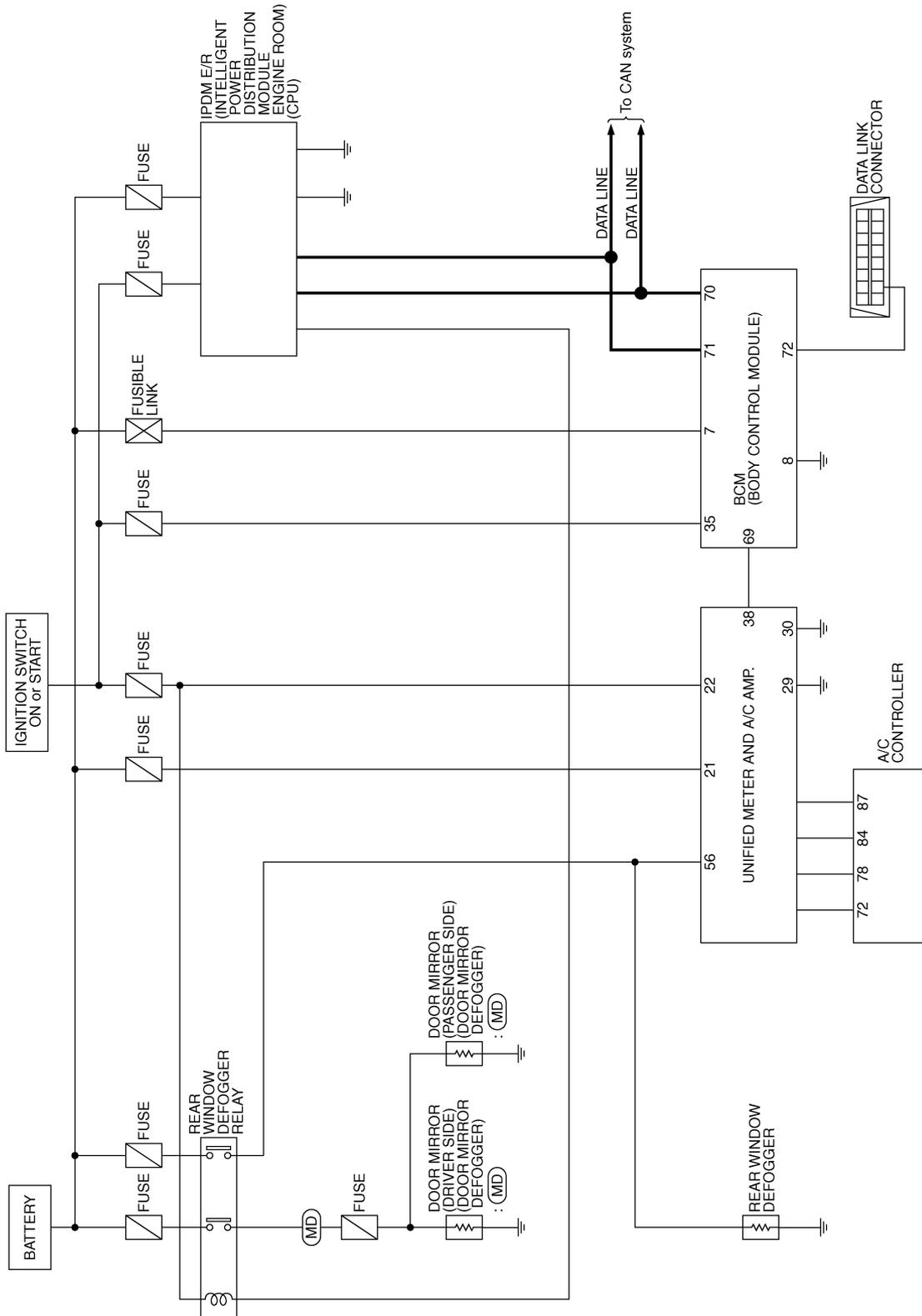
Refer to [LAN-4, "CAN Communication Unit"](#) .

REAR WINDOW DEFOGGER

Schematic – DEF –

AIS003XO

(MD) : With mirror defogger



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

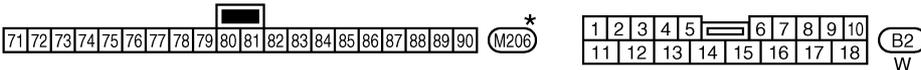
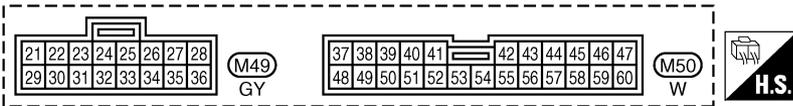
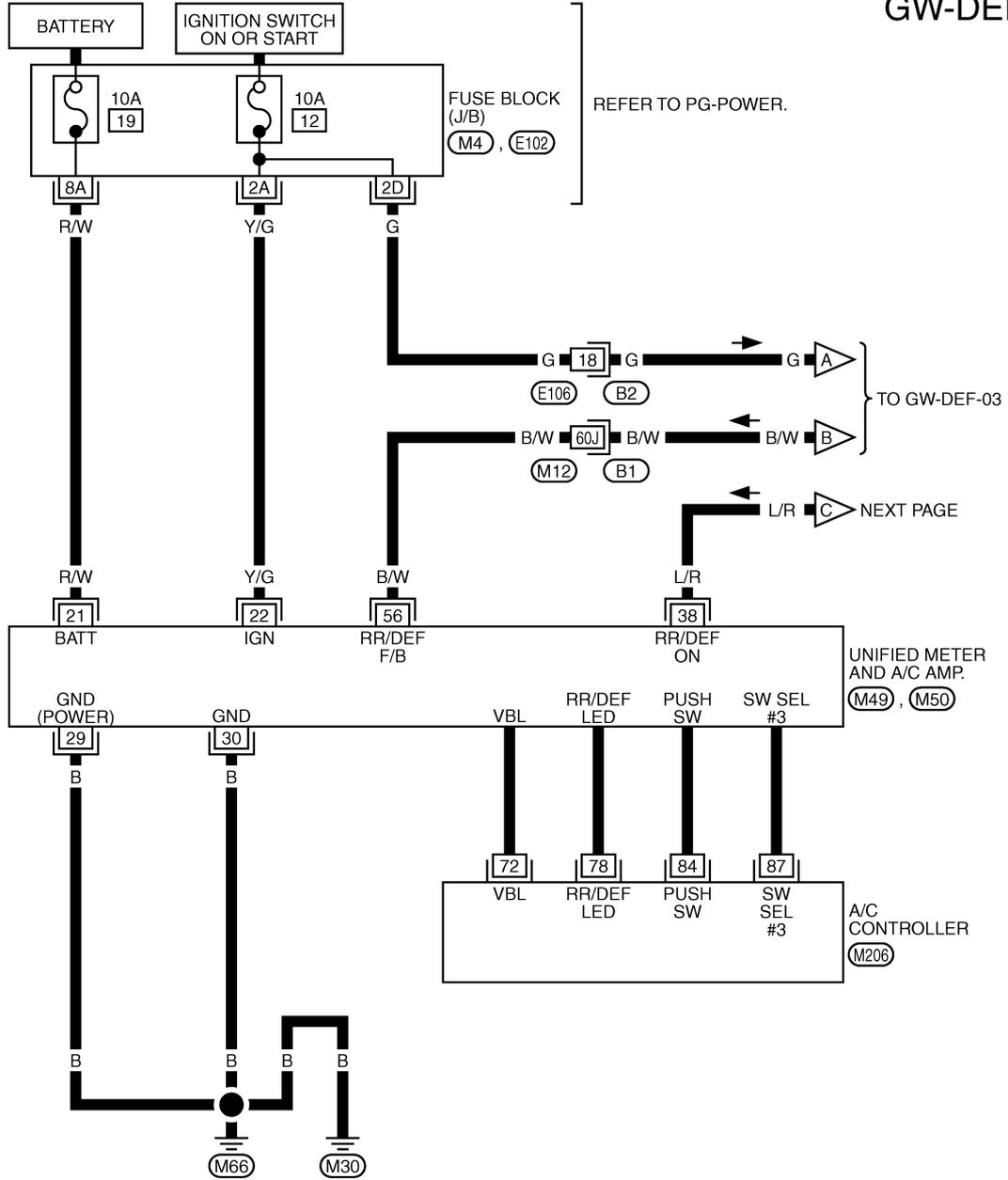
GW

REAR WINDOW DEFOGGER

AIS003XP

GW-DEF-01

Wiring Diagram -DEF-



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

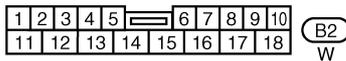
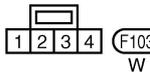
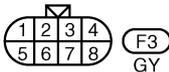
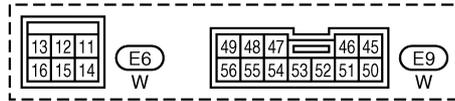
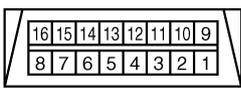
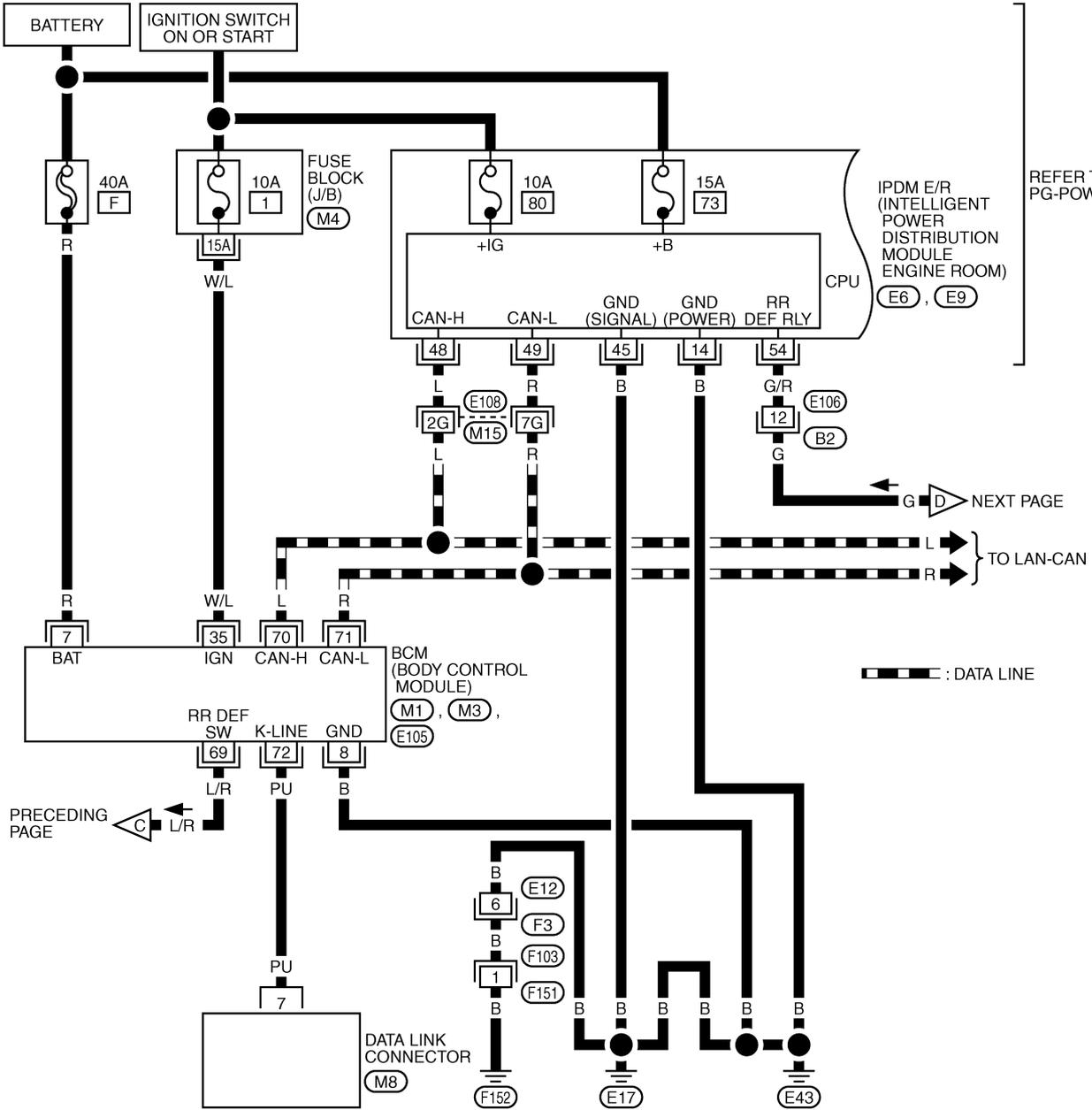
REFER TO THE FOLLOWING.

- (B1) -SUPER MULTIPLE JUNCTION (SM)
- (M4), (E102) -FUSE BLOCK-JUNCTION BOX (J/B)

TIWT0505E

REAR WINDOW DEFOGGER

GW-DEF-02

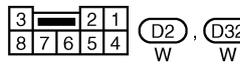
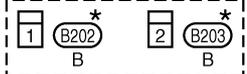
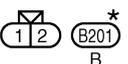
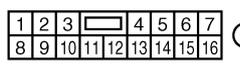
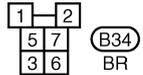
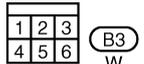
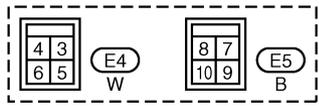
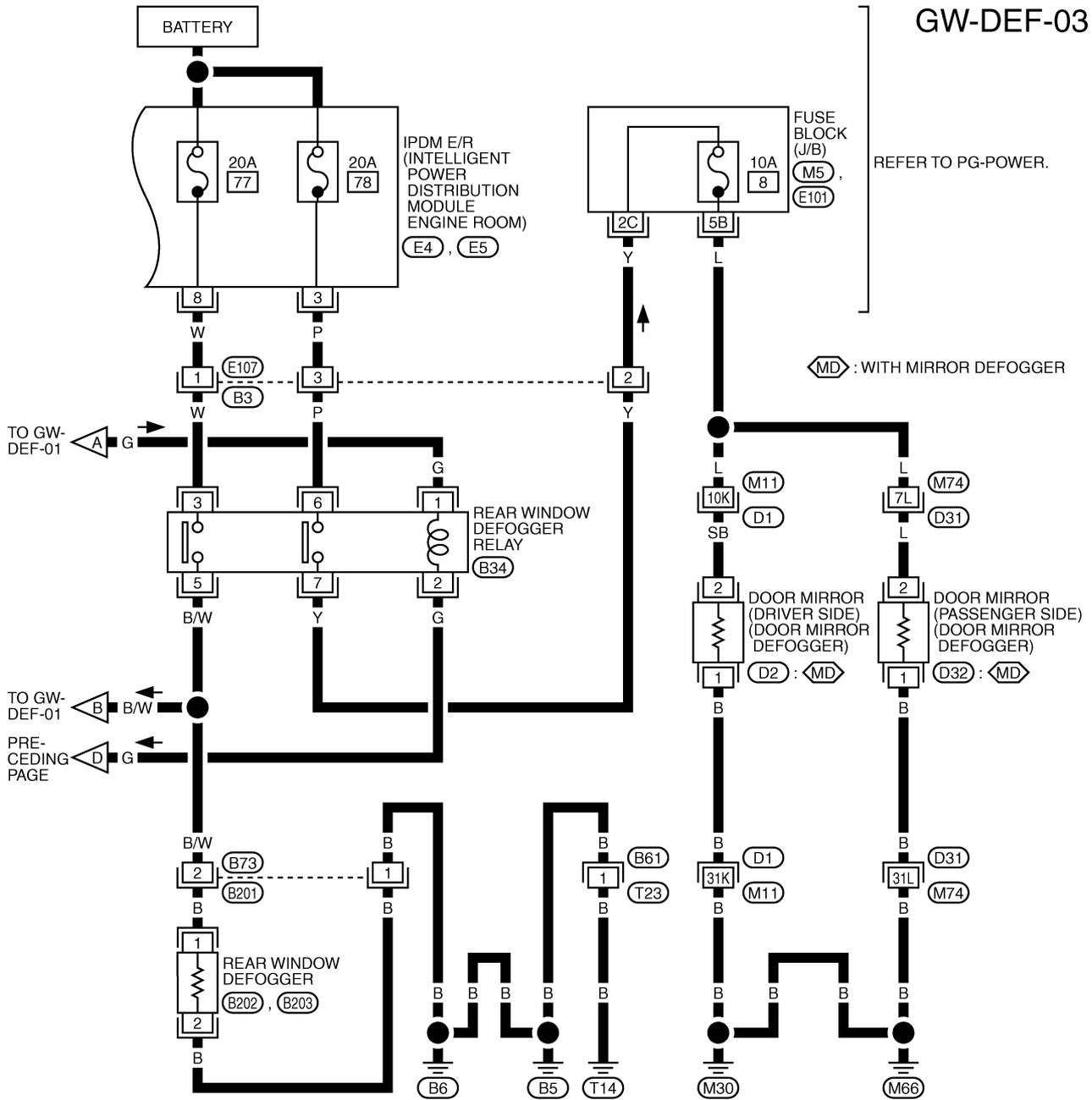


REFER TO THE FOLLOWING.

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

REAR WINDOW DEFOGGER

GW-DEF-03



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

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

REAR WINDOW DEFOGGER

Terminal and Reference Value for BCM

AIS000FX

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

Terminal and Reference Value for IPDM E/R.

AIS000FY

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

Terminal and Reference Value for Unified Meter and A/C Amp.

AIS0014K

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

REAR WINDOW DEFOGGER

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

CONSULT-II Function

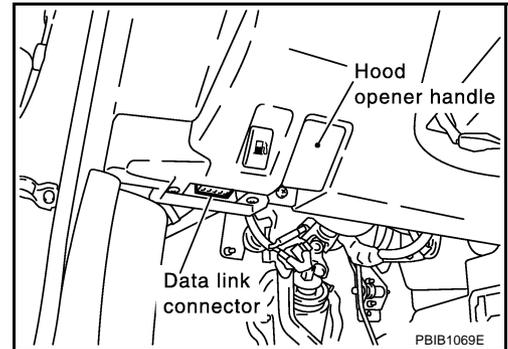
AIS000G1

CAUTION:

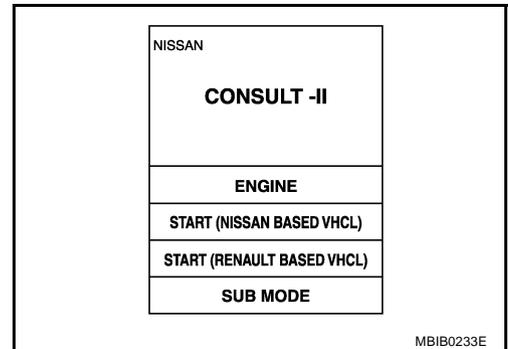
If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carry out CAN communication.

CONSULT-II BASIC OPERATION PROCEDURE

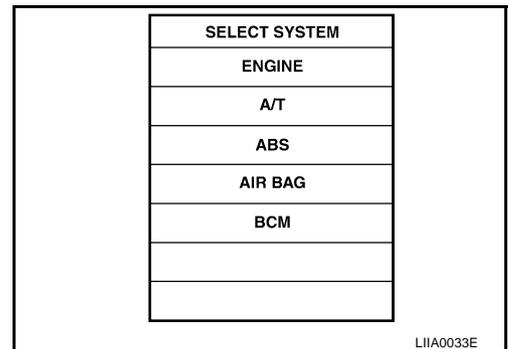
1. Turn ignition switch "OFF".
2. Connect "CONSULT-II" and CONSULT-II CONVERTER to data link connector.



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

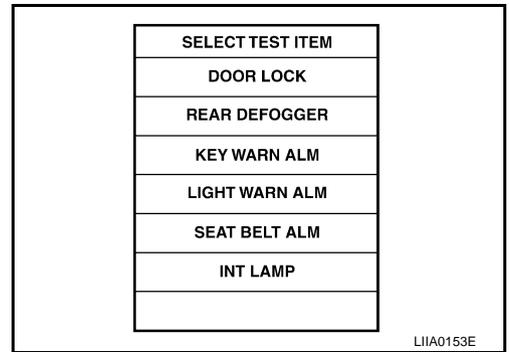


5. Touch "BCM".
If "BCM" is not indicated, go to [GI-39](#), "CONSULT-II Date Link Connector (DLC) Circuit".



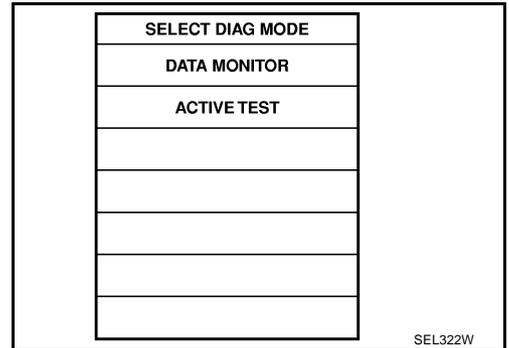
REAR WINDOW DEFOGGER

6. Touch "REAR DEFOGGER".



A
B
C

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



D
E
F
G

DATA MONITOR

Display Item List

Monitor item	Content
REAR DEF SW	Indicates [ON/OFF] condition of rear window defogger switch.
IGN ON SW	Indicates [ON/OFF] condition of ignition switch.

GW

ACTIVE TEST

Display Item List

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

J
K
L
M

REAR WINDOW DEFOGGER

AIS000FZ

Work Flow

1. Check the symptom and customer's requests.
2. Understand the outline of system. Refer to [GW-54, "System Description"](#) .
3. According to the trouble diagnosis chart, repair or replace the cause of the malfunction. Refer to [GW-64, "Trouble Diagnosis Symptom Chart"](#) .
4. Does rear window defogger operate normally? YES: GO TO 5, NO: GO TO 4.
5. INSPECTION END

Trouble Diagnosis Symptom Chart

AIS00158

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

Symptom	Diagnoses / service procedure	Refer to page
Rear window defogger and door mirror defogger do not operate (With door mirror defogger)	1. CAN communication inspection using CONSLUT-II (self-diagnosis)	BCS-13
	2. Rear window defogger switch circuit check	GW-65
	3. Rear window defogger power supply circuit check	GW-66
	4. Replace IPDM E/R.	—
Rear window defogger does not operated. (Without door mirror defogger)	1. CAN communication inspection using CONSLUT-II (self-diagnosis)	BCS-13
	2. Rear window defogger switch circuit check	GW-65
	3. Rear window defogger power supply circuit check	GW-66
	4. Rear window defogger circuit check	GW-67
	5. Filament check	GW-71
	6. Replace IPDM E/R.	PG-25
Rear window defogger does not operate but door mirror defoggers operates. (With door mirror defogger)	1. Rear window defogger circuit check	GW-67
	2. Filament check	GW-71
Both of door mirror defogger do not operate but rear window defogger operates. (With door mirror defogger)	1. Door mirror defogger power supply circuit check	GW-68
Driver side door mirror defogger does not operate.	1. Driver side door mirror defogger circuit check	GW-69
Passenger side door mirror defogger does not operate.	1. Passenger side door mirror defogger circuit check	GW-70

REAR WINDOW DEFOGGER

Rear Window Defogger Switch Circuit Check

AIS001CR

1. CHECK REAR WINDOW DEFOGGER SWITCH OPERATION

④ With CONSULT-II

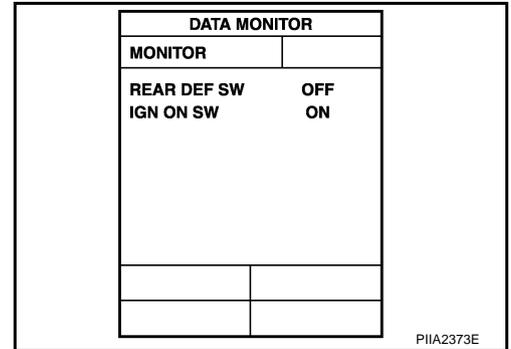
Check ("REAR DEF SW" and "IGN ON SW") in DATA MONITOR mode with CONSULT-II. Refer to [GW-63, "DATA MONITOR"](#).

When rear defogger switch is turned to ON

REAR DEF SW :ON

When ignition switch is turned to ON

IGN ON SW :ON



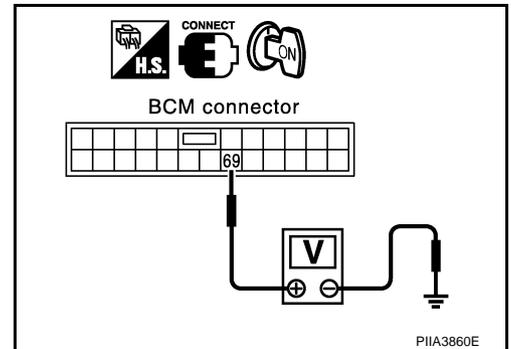
⊗ With out CONSULT-II

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

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M3	69 (L/R)	Ground	Rear window defogger switch is in ON.	0
			Rear window defogger switch is in OFF.	5

OK or NG

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



2. REAR WINDOW DEFOGGER SWITCH SIGNAL CIRCUIT HARNESS CONTINUITY INSPECTION

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

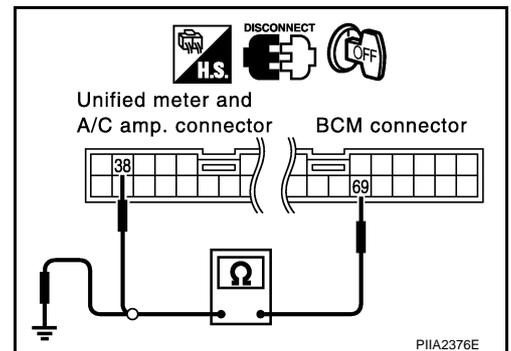
69 (L/R) – 38 (L/R) : Continuity should exist

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

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

OK or NG

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



REAR WINDOW DEFOGGER

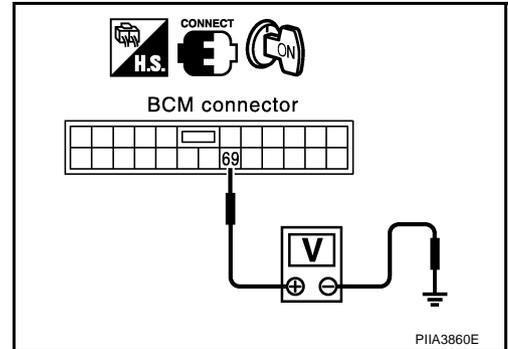
3. CHECK BCM OUTPUT SIGNAL

1. Connect BCM connector.
2. Turn ignition switch ON.
3. Check voltage between BCM connector M3 terminal 69 and ground.

69 (L/R) – Ground : Approx. 5

OK or NG

- OK >> GO TO 4.
 NG >> Check harness connection.



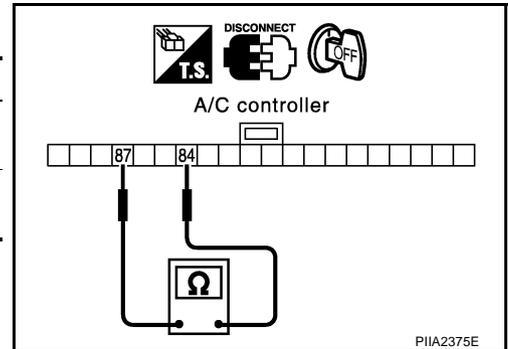
4. REAR WINDOW DEFOGGER SWITCH INSPECTION

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

Connector	Terminal	Condition	Continuity
M206	87 — 84	When rear window defogger switch is pressed.	Yes
		When rear window defogger switch is OFF.	No

OK or NG

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



Rear Window Defogger Power Supply Circuit Check

1. CHECK FUSE

Check 10A fuse [No. 12, located in fuse block (J/B)].

NOTE:

Refer to [GW-54, "Component Parts and Harness Connector Location"](#).

OK or NG

- OK >> GO TO 2.
 NG >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse, refer to [GW-54, "Component Parts and Harness Connector Location"](#).

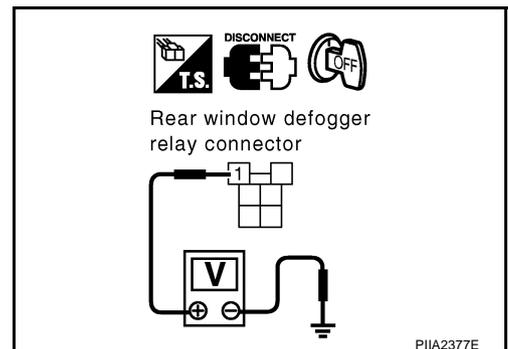
2. REAR WINDOW DEFOGGER RELAY POWER SUPPLY CIRCUIT INSPECTION

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

1 (G) – Ground : Battery voltage

OK or NG

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

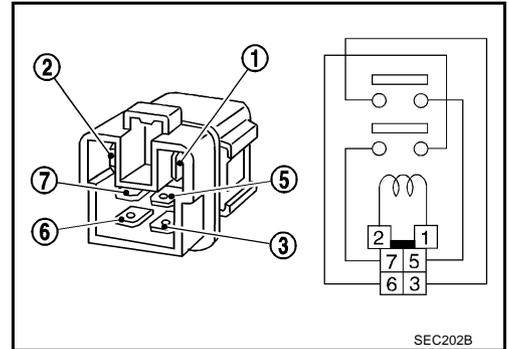


REAR WINDOW DEFOGGER

3. REAR WINDOW DEFOGGER RELAY INSPECTION

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

Terminal		Condition	Continuity
(+)	(-)		
3	5	12V direct current supply between terminals 1 and 2	Yes
		No current supply	No
6	7	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.

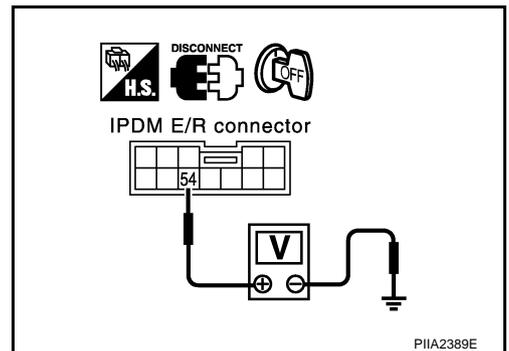
4. REAR WINDOW DEFOGGER RELAY GROUND CIRCUIT INSPECTION

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

54 (G/R) – Ground : Battery voltage

OK or NG

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

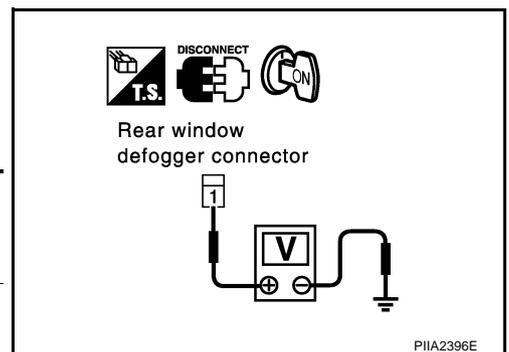


Rear Window Defogger Circuit Check

1. REAR WINDOW DEFOGGER POWER SUPPLY CIRCUIT INSPECTION

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

Con- nector	Terminal (Wire color)		Condition	Voltage (V)
	(+)	(-)		
B202	1 (B)	Ground	Turn ignition switch ON. When rear window defogger switch is in ON.	Battery voltage
			Turn ignition switch OFF.	0



OK or NG

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

REAR WINDOW DEFOGGER

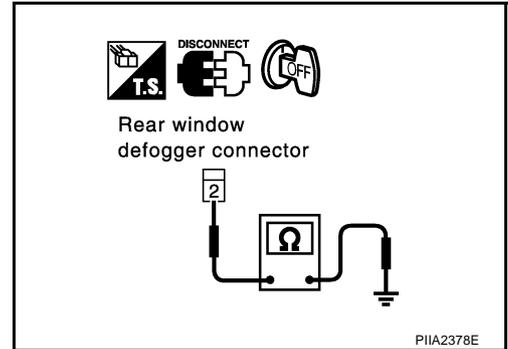
2. REAR WINDOW DEFOGGER GROUND HARNESS INSPECTION

1. Turn ignition switch OFF.
2. Disconnect rear window defogger connector.
3. Check continuity between rear window defogger connector D203 terminal 2 (B) and ground.

2(B) – Ground : Continuity should exist

OK or NG

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



Door Mirror Defogger Power Supply Circuit Check

AIS00140

1. CHECK FUSE

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

NOTE:

Refer to [GW-54, "Component Parts and Harness Connector Location"](#).

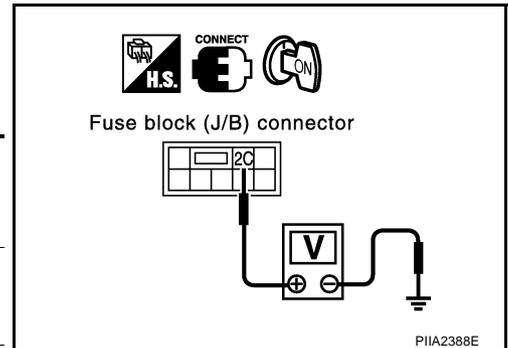
OK or NG

- OK >> GO TO 2.
 NG >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse, refer to [GW-54, "Component Parts and Harness Connector Location"](#).

2. DOOR MIRROR DEFOGGER POWER SUPPLY CIRCUIT INSPECTION 1

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

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



OK or NG

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

REAR WINDOW DEFOGGER

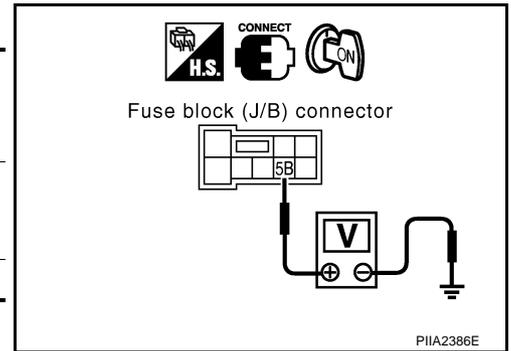
3. DOOR MIRROR DEFOGGER POWER SUPPLY INSPECTION 2

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

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

OK or NG

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



Driver Side Door Mirror Defogger Circuit Check

AIS00156

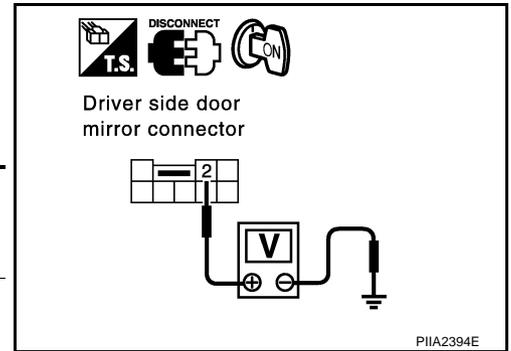
1. DOOR MIRROR DEFOGGER POWER SUPPLY CIRCUIT INSPECTION

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

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

OK or NG

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



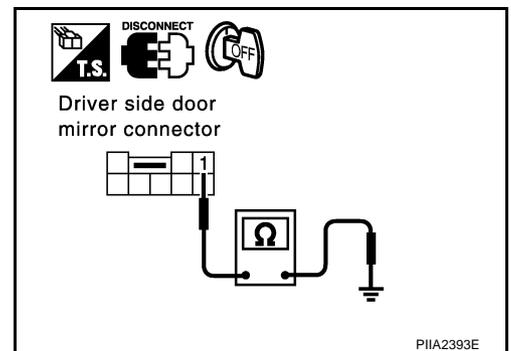
2. DOOR MIRROR DEFOGGER GROUND HARNESS INSPECTION

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

1 (B) – Ground : Continuity should exist.

OK or NG

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



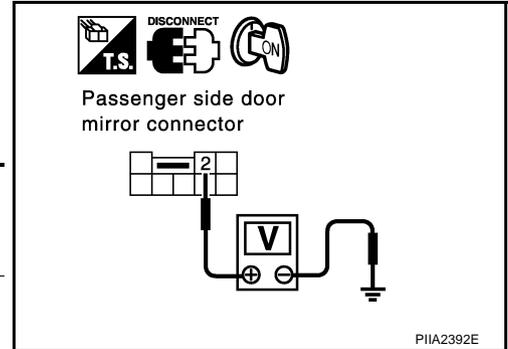
REAR WINDOW DEFOGGER

AIS00157

Passenger Side Door Mirror Defogger Circuit Check

1. DOOR MIRROR DEFOGGER POWER SUPPLY CIRCUIT INSPECTION

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



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

OK or NG

OK >> GO TO 2.

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

2. DOOR MIRROR DEFOGGER GROUND HARNESS INSPECTION

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

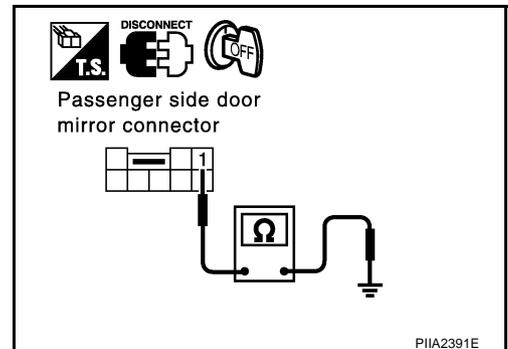
1 (B) – Ground : Continuity should exist.

OK or NG

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

- Door mirror defogger firmament continuity check.

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

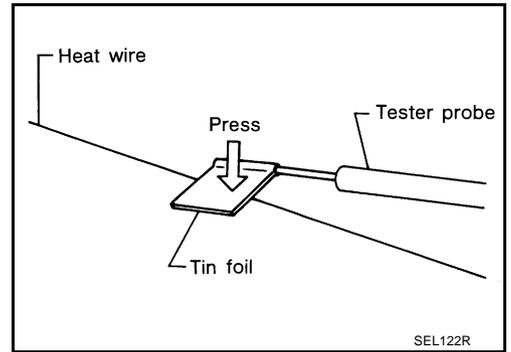


REAR WINDOW DEFOGGER

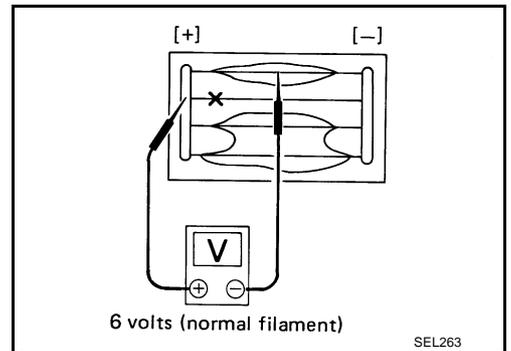
Filament Check

AIS000G3

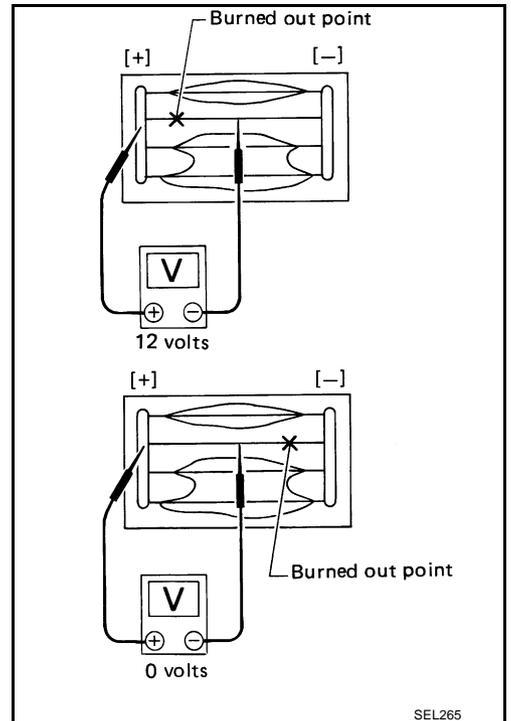
1. When measuring voltage, wrap tin foil around the top of the negative probe. Then press the foil against the wire with your finger.



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.



A
B
C
D

E
F
G
H

GW

J
K
L
M

REAR WINDOW DEFOGGER

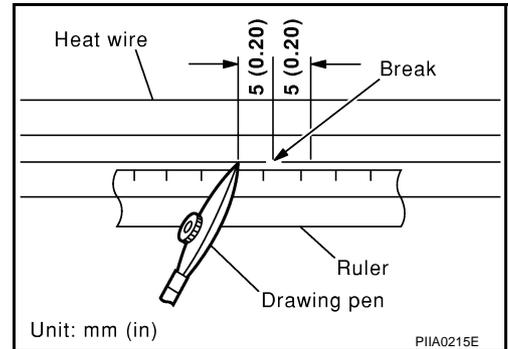
AIS000G4

Filament Repair REPAIR EQUIPMENT

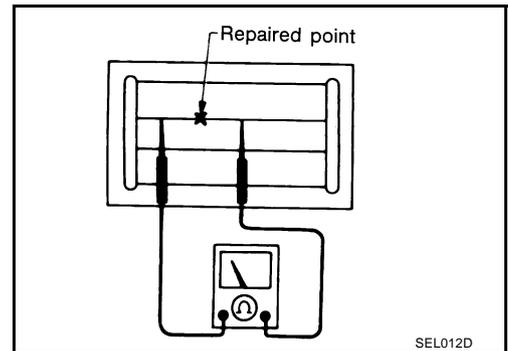
- Conductive silver composition (Dupont No. 4817 or equivalent)
- Ruler 30 cm (11.8 in) long
- Drawing pen
- Heat gun
- Alcohol
- Cloth

REPAIRING PROCEDURE

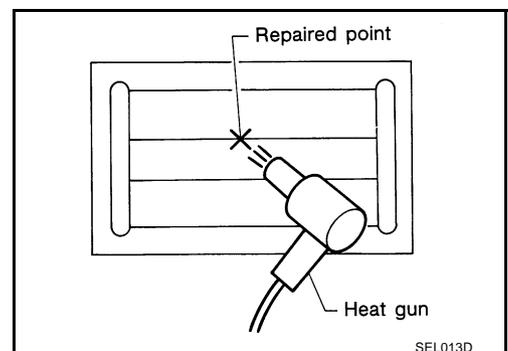
1. Wipe broken heat wire and its surrounding area clean with a cloth dampened in alcohol.
2. Apply a small amount of conductive silver composition to tip of drawing pen. Shake silver composition container before use.
3. Place ruler on glass along broken line. Deposit conductive silver composition on 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 performed 10 minutes after silver composition is deposited. Do not touch repaired area while test is being performed.



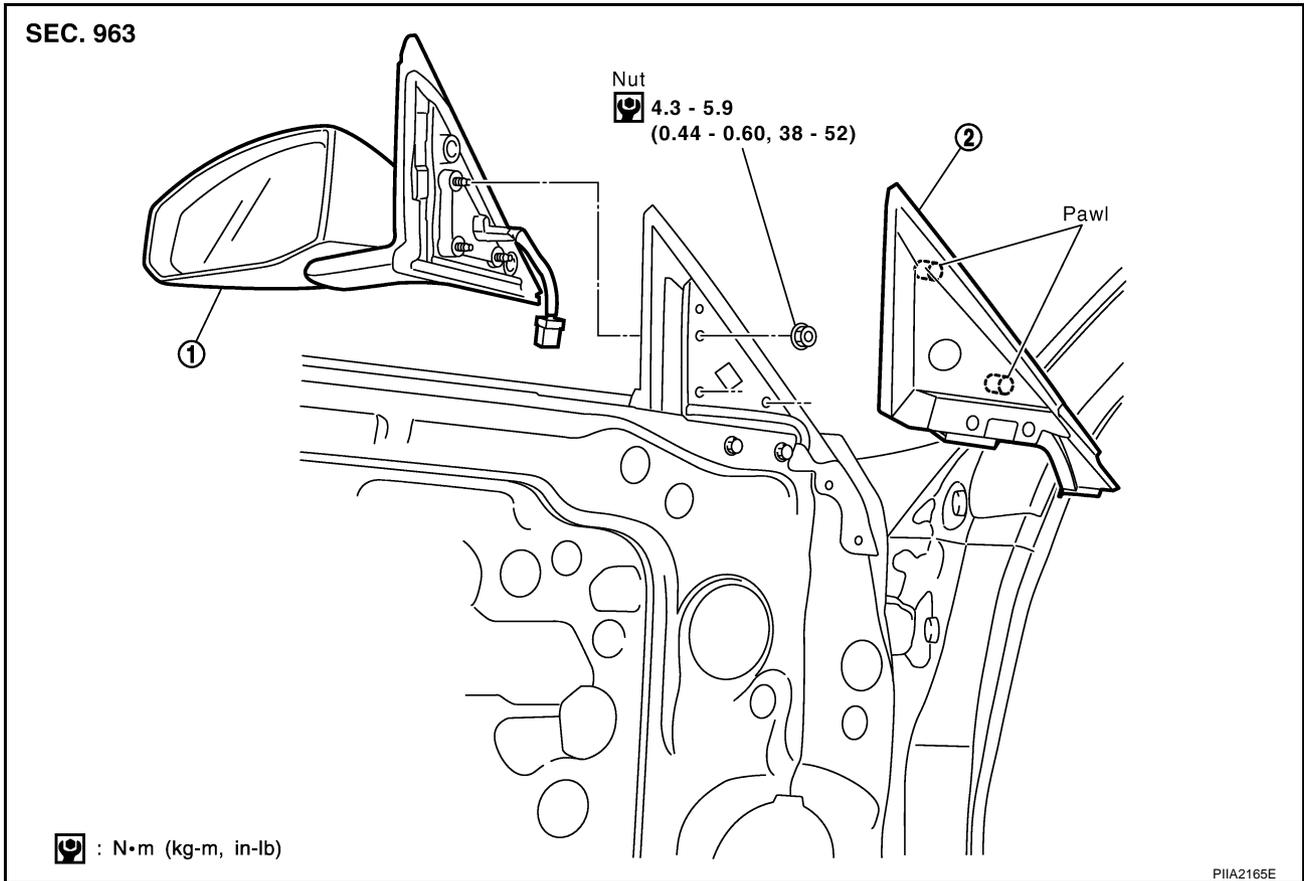
5. Apply a constant stream of hot air directly to the repaired area for approximately 20 minutes with a heat gun. A minimum distance of 3 cm (1.2 in) should be kept between repaired area and hot air outlet. If a heat gun is not available, let the repaired area dry for 24 hours.



DOOR MIRROR

Removal and Installation

AI/S000G6



1. Door mirror assembly

2. Corner cover inner

REMOVAL

1. Remove door finisher. Refer to [EI-27, "DOOR FINISHER"](#).
2. Remove corner cover inner.
3. Disconnect door mirror harness connector.
4. Remove door mirror mounting nuts, and remove door mirror assembly.

INSTALLATION

Install in the reverse order of removal.

Disassembly and Assembly DISASSEMBLY

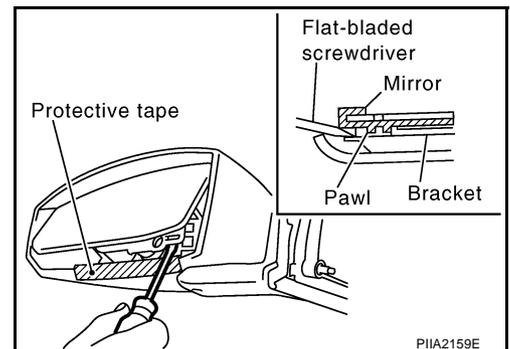
AI/S0065S

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

NOTE:

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

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



DOOR MIRROR

NOTE:

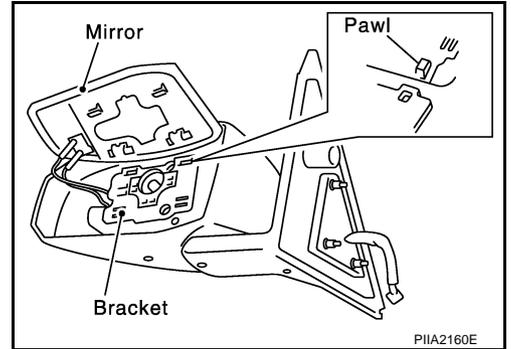
Be certain not to allow grease on sealing agent in center of mirror body assembly (actuator) or back side of mirror surface (mirror holder).

ASSEMBLY

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

NOTE:

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



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

GW

DOOR MIRROR
