SECTION GW

GLASSES, WINDOW SYSTEM & MIRRORS

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PRECAUTIONS

PFP:00001

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

AIS004V5

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

WARNING:

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

Handling for Adhesive and Primer

AIS001G1

- 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.
- Open the seal of the primer and adhesive just before application. Do not use the remainder.
- Before application, be sure to shake the primer container to stir the content. If any floating materials are found, do not use it.
- If any primer or adhesive contacts the skin, wipe it off with white 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

AIS001G2

- If each local control unit (LCU) connector is left disconnected for at least 1 minute, the BCM stores a communication inactive. After reconnecting the connector, any of the following steps shall be done. “Disconnect the BCM battery power supply”, Execute Erase memory with CONSULT–II.

When you read wiring diagrams, refer to the following:

- GI-14, "How to Read Wiring Diagrams" in GI section
- PG-2, "POWER SUPPLY ROUTING" in PG section

When you perform trouble diagnosis, refer to the following:

- GI-10, "HOW TO FOLLOW TEST GROUPS IN TROUBLE DIAGNOSES" in GI section
- GI-26, "How to Perform Efficient Diagnosis for an Electrical Incident" in GI section

Check for any service bulletins before servicing the vehicle.

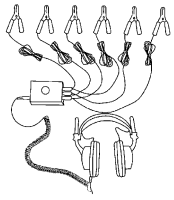
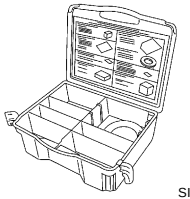
PREPARATION

PFP:00002

Special Service Tools

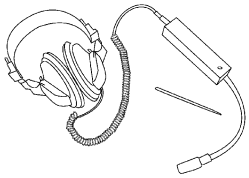
AIS001G3

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

Tool number (Kent-Moore No.) Tool name	Description
(J39570) Chassis ear  SIIA0993E	Locating the noise
(J43980) NISSAN Squeak and Rattle Kit  SIIA0994E	Repairing the cause of noise

Commercial Service Tools

AIS001G4

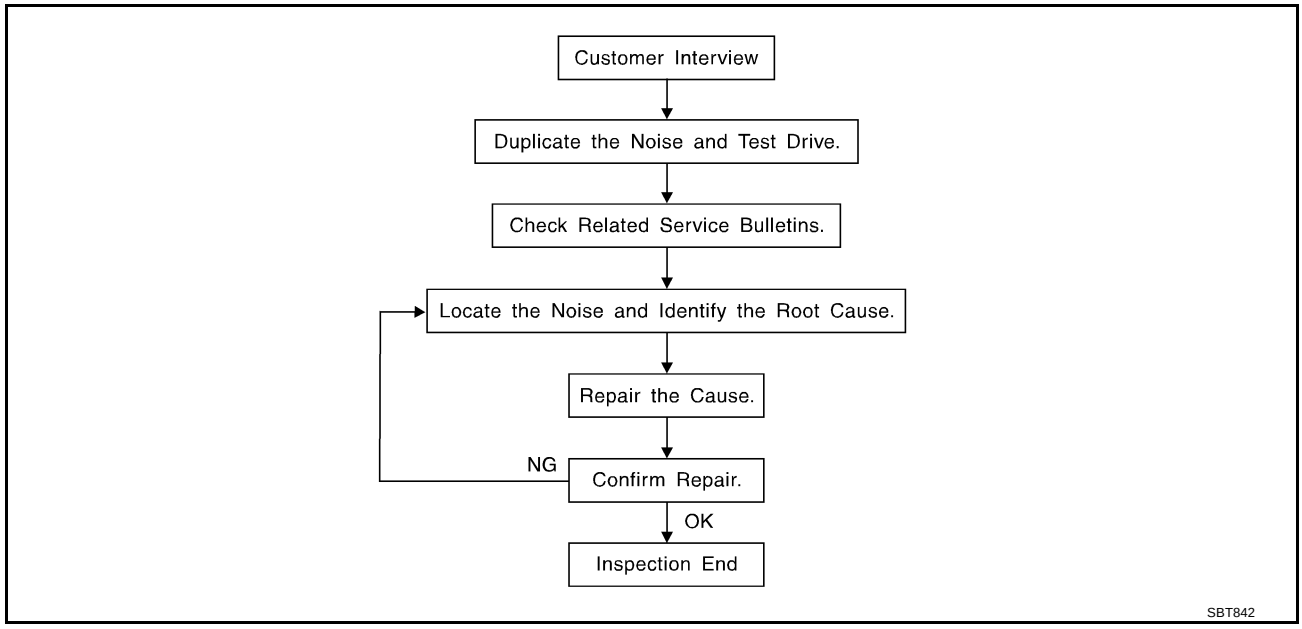
Tool name	Description
Engine ear  SIIA0995E	Locating the noise

SQUEAK AND RATTLE TROUBLE DIAGNOSES

PFP:00000

Work Flow

AIS001G5



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-7, "Generic Squeak and Rattle Troubleshooting" . 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.

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: J39570, Engine Ear and mechanics stethoscope).
2. Narrow down the noise to a more specific area and identify the cause of the noise by:

- removing the components in the area that you suspect the noise is coming from.
  Do not use too much force when removing clips and fasteners, otherwise clips and fastener can be broken or lost during the repair, resulting in the creation of new noise.
- tapping or pushing/pulling the component that you suspect is causing the noise.
  Do not tap or push/pull the component with excessive force, otherwise the noise will be eliminated only temporarily.
- feeling for a vibration with your hand by touching the component(s) that you suspect is (are) causing the noise.
- placing a piece of paper between components that you suspect are causing the noise.
- looking for loose components and contact marks.
  Refer to GW-7, "Generic Squeak and Rattle Troubleshooting" .

REPAIR THE CAUSE

- If the cause is a loose component, tighten the component securely.
- If the cause is insufficient clearance between components:

– separate components by repositioning or loosening and retightening the component, if possible.
– insulate components with a suitable insulator such as urethane pads, foam blocks, felt cloth tape or urethane tape. A Nissan Squeak and Rattle Kit (J43980) is available through your authorized Nissan Parts Department.

CAUTION:
Do not use excessive force as many components are constructed of plastic and may be damaged.
Always check with the Parts Department for the latest parts information.
The following materials are contained in the Nissan Squeak and Rattle Kit (J43980). Each item can be ordered separately as needed.
URETHANE PADS [1.5 mm (0.059 in) thick]
Insulates connectors, harness, etc.
76268-9E005: 100 × 135 mm (3.94 × 5.31 in)/76884-71L01: 60 × 85 mm (2.36 × 3.35 in)/76884-71L02: 15 × 25 mm (0.59 × 0.98 in)
INSULATOR (Foam blocks)
Insulates components from contact.Can be used to fill space behind a panel.
73982-9E000: 45 mm (1.77 in) thick, 50 × 50 mm (1.97 × 1.97 in)/73982-50Y00: 10 mm (0.39 in) think, 50 × 50 mm (1.97×1.97 in)

INSULATOR (Light foam block)
80845-71L00: 30 mm (1.18 in) thick, 30 × 50 mm (1.18 × 1.97 in)
FELT CLOTH TAPE
Used to insulate where movement does not occur. Ideal for instrument panel applications.
68370-4B000: 15 × 25 mm (0.59 × 0.98 in) pad/68239-13E00: 5 mm (0.20 in) wide tape roll
The following materials, not found in the kit, can also be used to repair squeaks and rattles.
UHMW(TEFLON) TAPE
Insulates where slight movement is present. Ideal for instrument panel applications.
SILICONE GREASE
Used 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

AIS001G6

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

INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

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

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

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

CENTER CONSOLE

Components to pay attention to include:

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

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

DOORS

Pay attention to the:

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

Tapping or moving the components or pressing on them while driving to duplicate the conditions can isolate many of these incidents. You can usually insulate the areas with felt cloth tape or insulator foam blocks from the Nissan Squeak and Rattle Kit (J43980) to repair the noise.

TRUNK

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

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

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

SUNROOF/HEADLINING

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

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

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

SEATS

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

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

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

UNDERHOOD

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

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

These 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.

Diagnostic Worksheet

AIS001G7

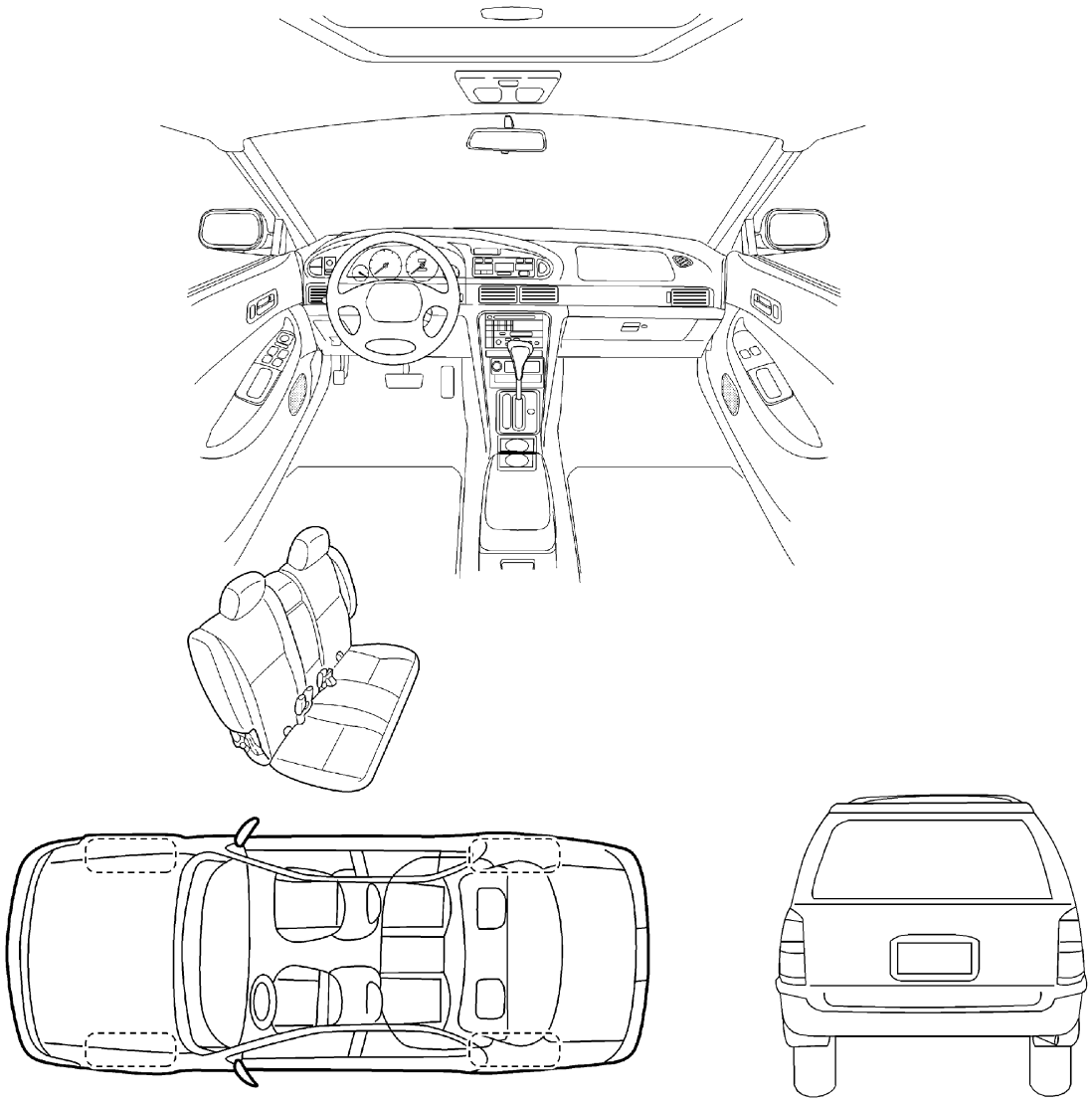
INFINITI

SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

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

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

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



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

SBT860

SQUEAK & RATTLE DIAGNOSTIC WORKSHEET- page 2

Briefly describe the location where the noise occurs:

_____

_____

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

- ❑ anytime
- ❑ 1st time in the morning
- ❑ only when it is cold outside
- ❑ only when it is hot outside
- ❑ after sitting out in the sun
- ❑ when it is raining or wet
- ❑ dry or dusty conditions
- ❑ 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	❑	❑	_____
- Noise verified on test drive	❑	❑	
- Noise source located and repaired	❑	❑	_____
- Follow up test drive performed to confirm repair	❑	❑	_____

VIN: _____ Customer Name: _____

W.O. #: _____ Date: _____

This form must be attached to Work Order

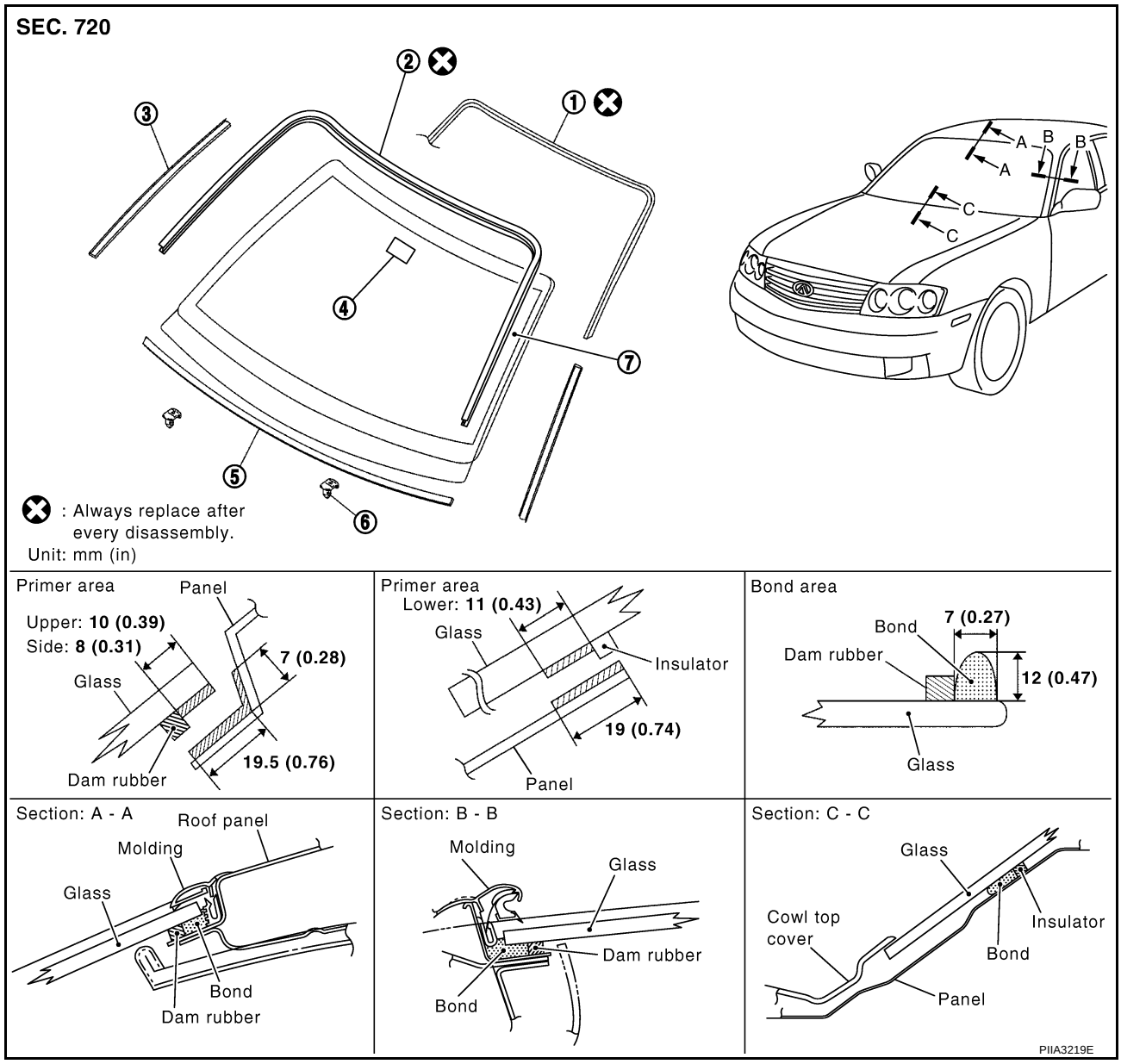
SBT844

WINDSHIELD GLASS

PFP:72712

Removal and Installation

AIS001G8



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

REMOVAL

1. Remove front pillar garnish. Refer to EI-34, "BODY SIDE TRIM" .
2. Remove headlining. Refer to EI-39, "HEADLINING"
3. Remove body side welt on the front pillar. Refer to EI-34, "BODY SIDE TRIM" .
4. Remove windshield molding. Refer toEI-23, "WINDSHIELD MOLDING"
5. Remove cowl top cover. Refer toEI-20, "COWL TOP"
6. Apply a protective tape around the windshield glass to protect the painted surface from damage.
7. Remove glass using piano wire or power cutting tool and an inflatable pump bag.

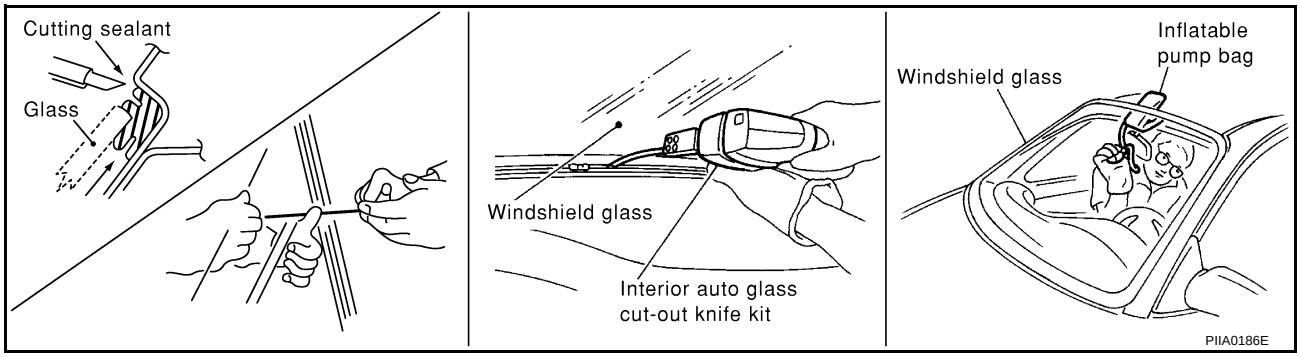
- If a windshield glass is to be reused, mark the body and the glass with mating marks.

WARNING:

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

CAUTION:

- **When a windshield glass is to be reused, do not use a cutting knife or power cutting tool.**
- **Be careful not to scratch the glass when removing.**
- **Do not set or stand 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

Leaks can be repaired without removing and reinstalling glass.
If water is leaking between the urethane adhesive material and body or glass, determine the extent of leakage. This can be done by applying water to the windshield area while pushing glass outward.
To stop the leak, apply primer (if necessary) and then urethane adhesive to the leak point.

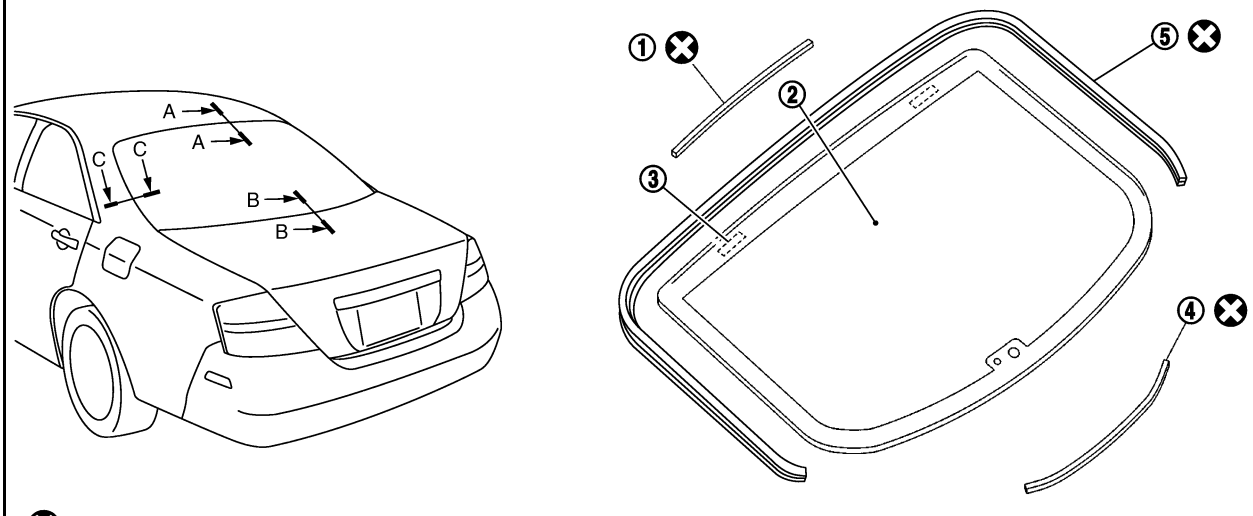
REAR WINDOW GLASS AND MOLDING

PFP:79712

Removal and Installation

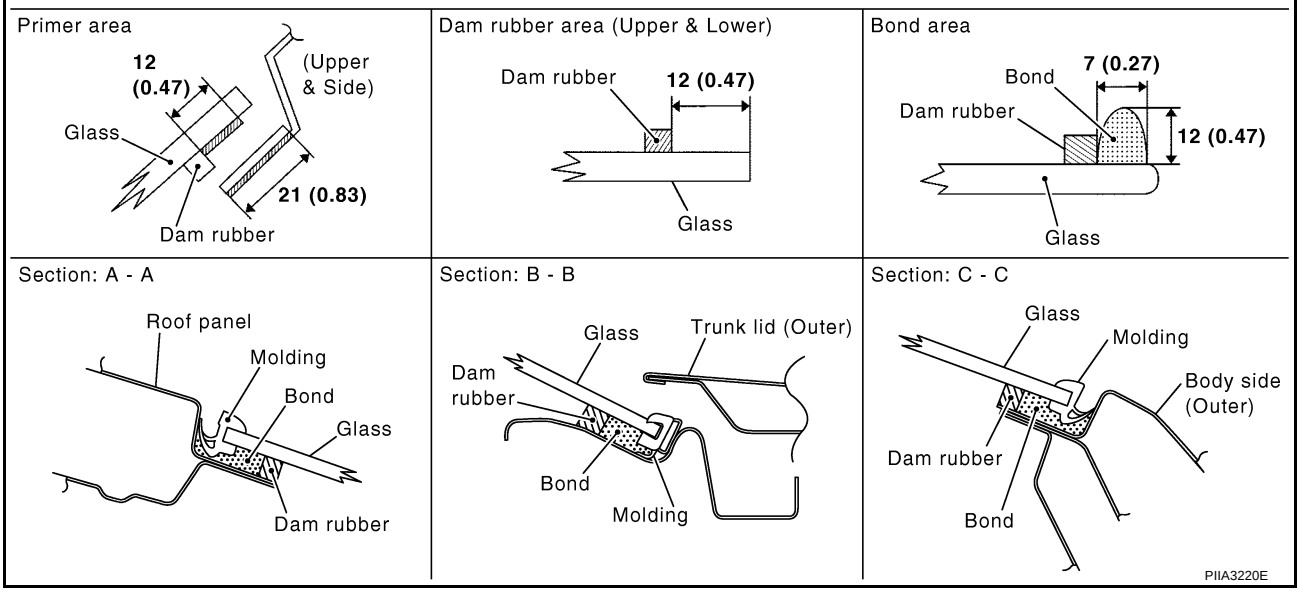
AIS001G9

SEC. 797



: Always replace after every disassembly.

Unit: mm (in)



1. Dam rubber (upper)
2. Rear window glass
3. Spacer
4. Dam rubber (lower)
5. Rear window molding

REMOVAL

1. Remove rear pillar finisher upper. Refer to EI-34, "BODY SIDE TRIM"
2. Remove headlining Refer to EI-39, "HEADLINING" .
3. Remove the rear parcel shelf finisher. Refer toEI-36, "REAR PARCEL SHELF FINISHER"
4. Remove the connectors and grounds for the rear defogger and printed antenna.

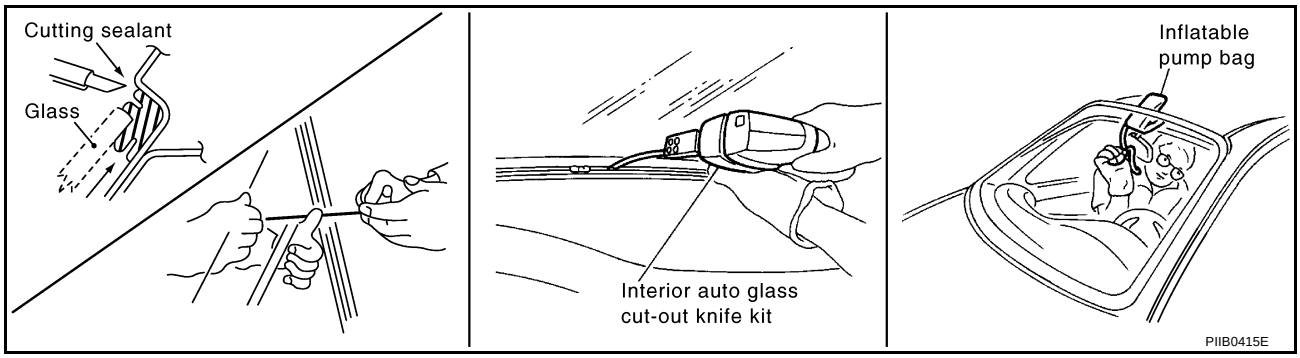
- After removing moldings, remove glass using piano wire or power cutting tool and an inflatable pump bag.
- If a rear window glass is reused, mark the body and the glass with mating marks.

WARNING:

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

CAUTION:

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



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 rear window in case of an accident.**

CAUTION:

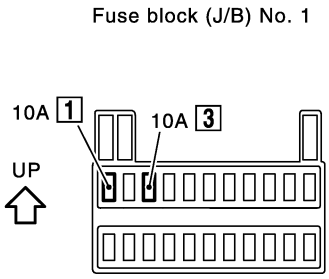
- **Do not use an adhesive which is past its usable term. Shelf life of this product is limited to six months after the date of manufacture. Carefully adhere to the expiration or manufacture date printed on the box.**
- **Keep primers and adhesive in a cool, dry place. Ideally, they should be stored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

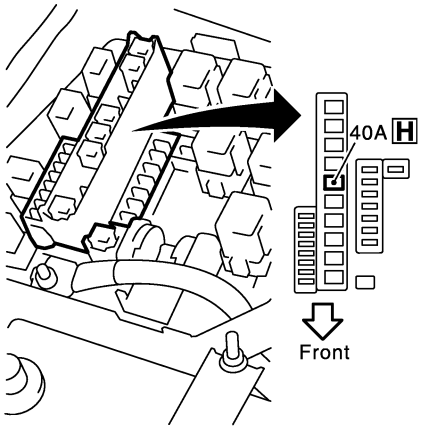
POWER WINDOW SYSTEM

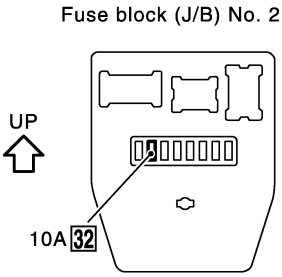
PFP:25401

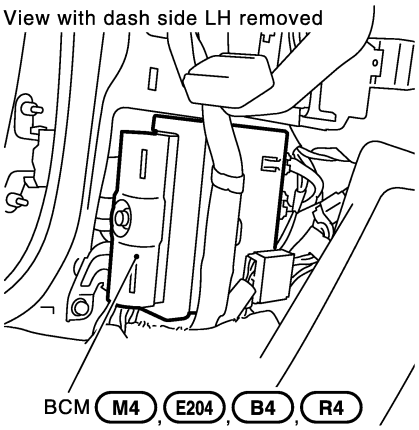
Component Parts and Harness Connector Location

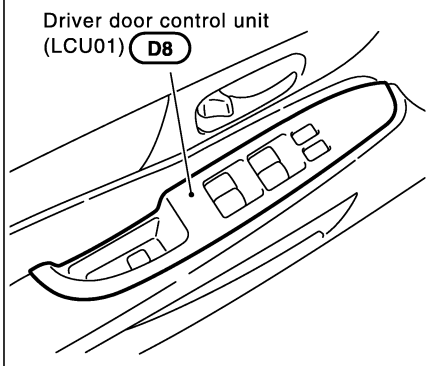
AIS001GA

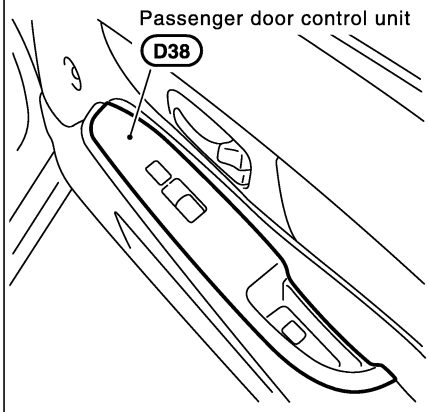


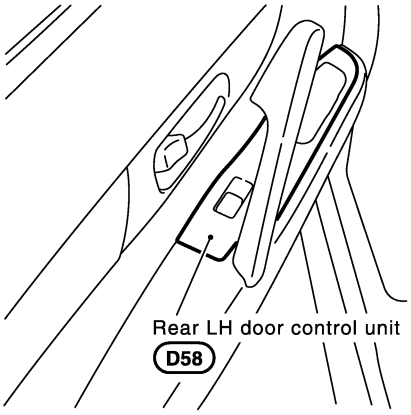


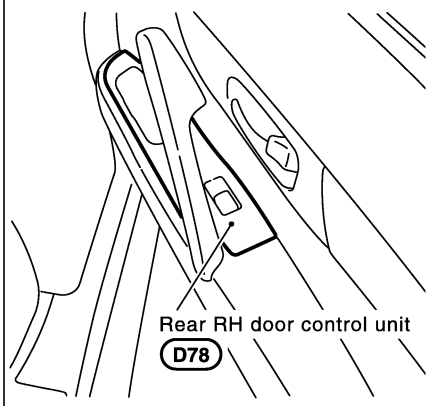


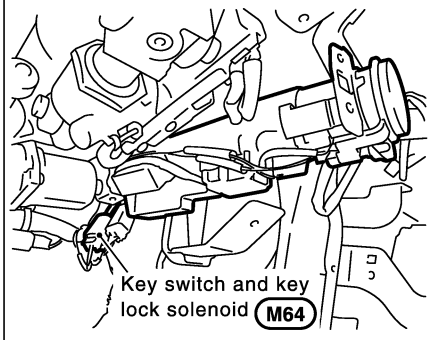


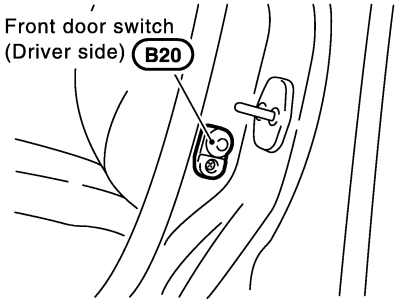


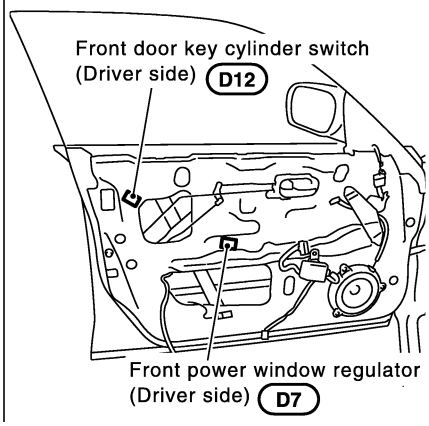


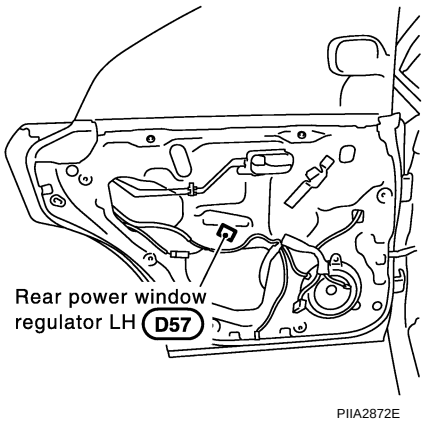












System Description

AIS001MS

Power is supplied at all time

- through 10A fuse [No.3,located in the fuse block (J/B)]
- to BCM terminal 105
- through 40A fusible link (letter H, located in the fuse and fusible link box)
- to circuit breaker-1 and circuit breaker-2
- through circuit breaker-1
- to driver door control unit (LCU01) terminal 14
- to rear LH door control unit terminal 10.
- through circuit breaker-2
- to passenger door control unit terminal 10
- to rear RH door control unit terminal 10.

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

- though 10A [No.1,located in the fuse block (J/B)]
- to BCM terminal 68

Ground supplied

- to BCM terminals 56 and 113
- through body grounds M24 and M114.
- to driver door control unit (LCU01) terminal 15
- through body grounds M24 and M114.
- to passenger door control unit terminal 11
- through body grounds M24 and M114.
- to rear LH door control unit terminal 11
- through body grounds B17 and B57.
- to rear RH door control unit terminal 11
- through body grounds B217 and B256.

MANUAL OPERATION

Front Driver Side Door

Ground is supplied

- to driver door control unit (LCU01) terminal 15
- through body grounds M24 and M114

WINDOW UP

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

- to front power window regulator (driver side) terminal 1
- through driver door control unit (LCU01) terminal 18.

Ground is supplied

- to front power window regulator (driver side) terminal 2
- through driver door control unit (LCU01) terminal 11.

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

WINDOW DOWN

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

- to front power window regulator (driver side) terminal 2
- through driver door control unit (LCU01) terminal 11.

Ground is supplied

- to front power window regulator (driver side) terminal 1
- through driver door control unit (LCU01) terminal 18.

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

Front Passenger Side Door

FRONT POWER WINDOW SUB-SWITCH OPERATION
Ground is supplied

- to passenger door control unit terminal 11
- through body grounds M24 and M114.

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

- to front power window regulator terminal 1
- through passenger door control unit terminal 14.

Ground is supplied

- to front power window regulator terminal 2
- through passenger door control unit terminal 3.

Then, the motor raises the window until the switch is released.
WINDOW DOWN
When the front power window sub-switch is pressed in the down position
Power is supplied

- to front power window regulator terminal 2
- through passenger door control unit terminal 3.

Ground is supplied

- to front power window regulator terminal 1
- through passenger door control unit terminal 14.

Then, the motor lowers the window until the switch is released.
FRONT POWER WINDOW MAIN SWITCH OPERATION
Signal is sent

- to passenger door control unit terminal 15
- through driver door control unit (LCU01) terminal 5.

The operation of power window after receive the signal is as same as operate the front power window sub-switch.

Rear Door LH

REAR POWER WINDOW SUB-SWITCH LH OPERATION
Ground is supplied

- to rear LH door control unit terminal 11
- through body grounds B17 and B57.

WINDOW UP
When the rear power window sub-switch LH is pressed in the up position
Power is supplied

- to rear power window regulator LH terminal 1
- through rear LH door control unit terminal 14.

Ground is supplied

- to rear power window regulator LH terminal 2
- through rear LH door control unit terminal 3.

Then, the motor raises the window until the switch is released.
WINDOW DOWN
When the rear power window sub-switch LH is pressed in the down position
Power is supplied

- to rear power window regulator LH terminal 2
- through rear LH door control unit terminal 3.

Ground is supplied

- to rear power window regulator LH terminal 1
- through rear LH door control unit terminal 14.

Then, the motor lowers the window until the switch is released.
POWER WINDOW MAIN SWITCH OPERATION
Signal is sent

- to rear LH door control unit terminal 15
- through driver door control unit (LCU01) terminal 5.

The operation of power window after receive the signal is as same as operate the rear power window sub-switch LH

Rear Door RH

REAR POWER WINDOW SUB-SWITCH RH OPERATION
Ground is supplied

- to rear RH door control unit terminal 11
- through body grounds B217 and B256.

WINDOW UP
When the rear power window sub-switch RH is pressed in the up position
Power is supplied

- to rear power window regulator RH terminal 1
- through rear RH door control unit terminal 14.

Ground is supplied

- to rear power window regulator RH terminal 2
- through rear RH door control unit terminal 3.

Then, the motor raises the window until the switch is released.
WINDOW DOWN
When the rear power window sub-switch RH is pressed in the down position
Power is supplied

- to rear power window regulator RH terminal 2
- through rear RH door control unit terminal 3.

Ground is supplied

- to rear power window regulator RH terminal 1
- through rear RH door control unit terminal 14.

Then, the motor lowers the window until the switch is released.
POWER WINDOW MAIN SWITCH OPERATION
Signal is sent

- to rear RH door control unit terminal 15
- through driver door control unit (LCU01) terminal 5.

The operation of power window after receive the signal is as same as operate the rear power window sub-switch RH.

AUTO OPERATION

The power window AUTO feature enables the driver to open or close the driver's and passenger's side window without holding the window switch in the down or up position.
The AUTO feature only operates on the driver's and passenger's side windows.

POWER WINDOW LOCK

The power window lock is designed to lock operation of all windows except for driver side door window.
When the lock position, power window lock signal is sent by using power window local data line from driver door control unit (LCU01) to each door control unit.

RETAINED POWER OPERATION

When the ignition switch is turned to the “OFF” position, power window switch for all doors in the way can be operated until approximately 45 seconds.
The retained power operation is canceled when the driver or passenger side door is opened.

ANTI-PINCH SYSTEM

Driver door control unit (LCU01) and passenger door control unit monitor the power window regulator motor operation and the power window position (full closed or other) by the signals from encoder and limit switch in power window regulator motor.
When driver door control unit (LCU01) and passenger door control unit detect interruption during the following close operation in the each door.

- automatic close operation when ignition switch is in the “ON” position.
- automatic close operation during power window timer operation.

Driver door control unit (LCU01) and passenger door control unit power window regulator motor for open and the power window will be lowered about 150 mm(5.91 in).

POWER WINDOW CONTROL BY THE KEY CYLINDER SWITCH

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

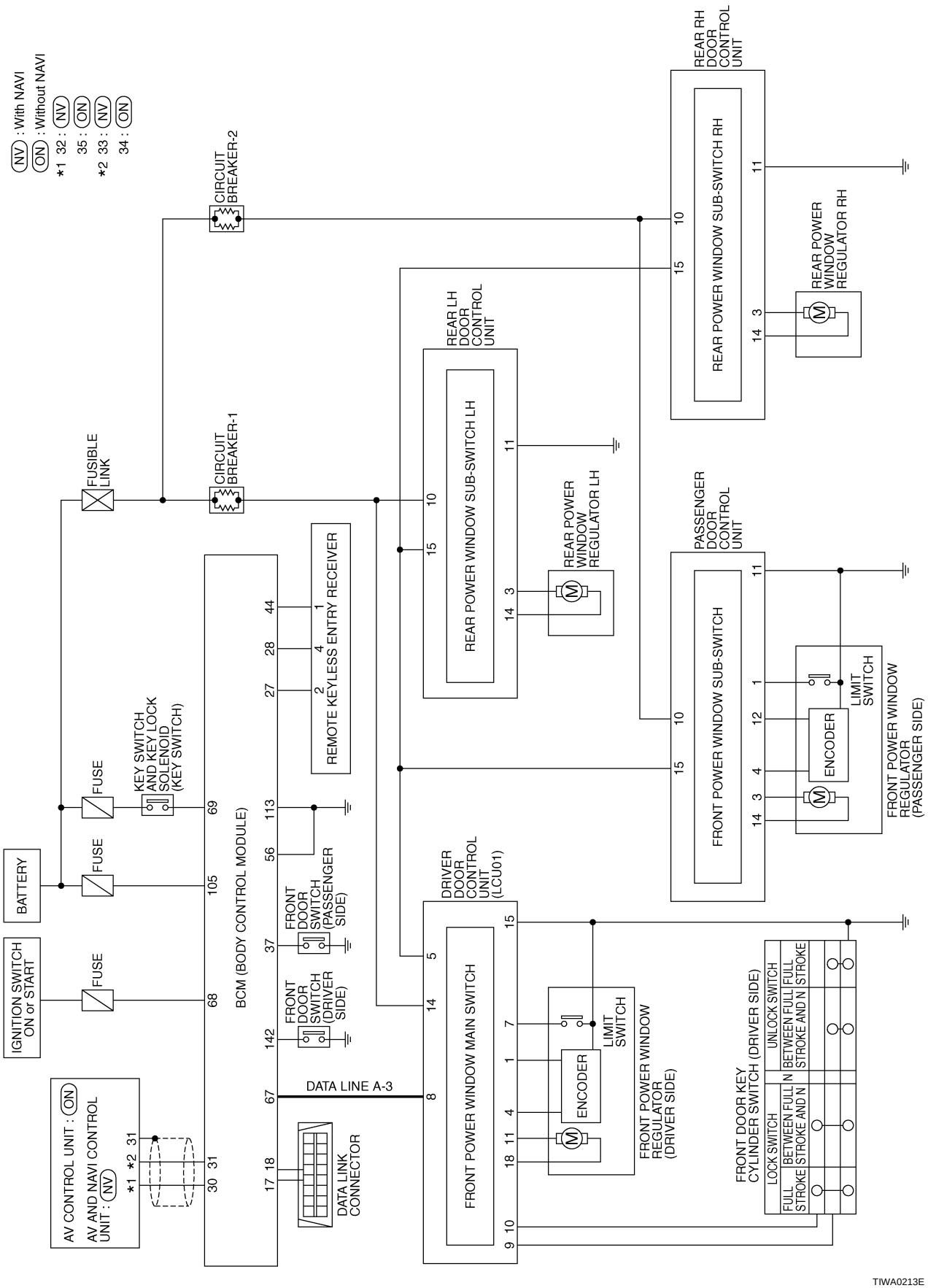
- Power window can be opened as the door key cylinder is kept fully turning to the UNLOCK position.
- Power window can be closed as the door key cylinder is kept fully turning to the LUCK position.

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

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

Schematic

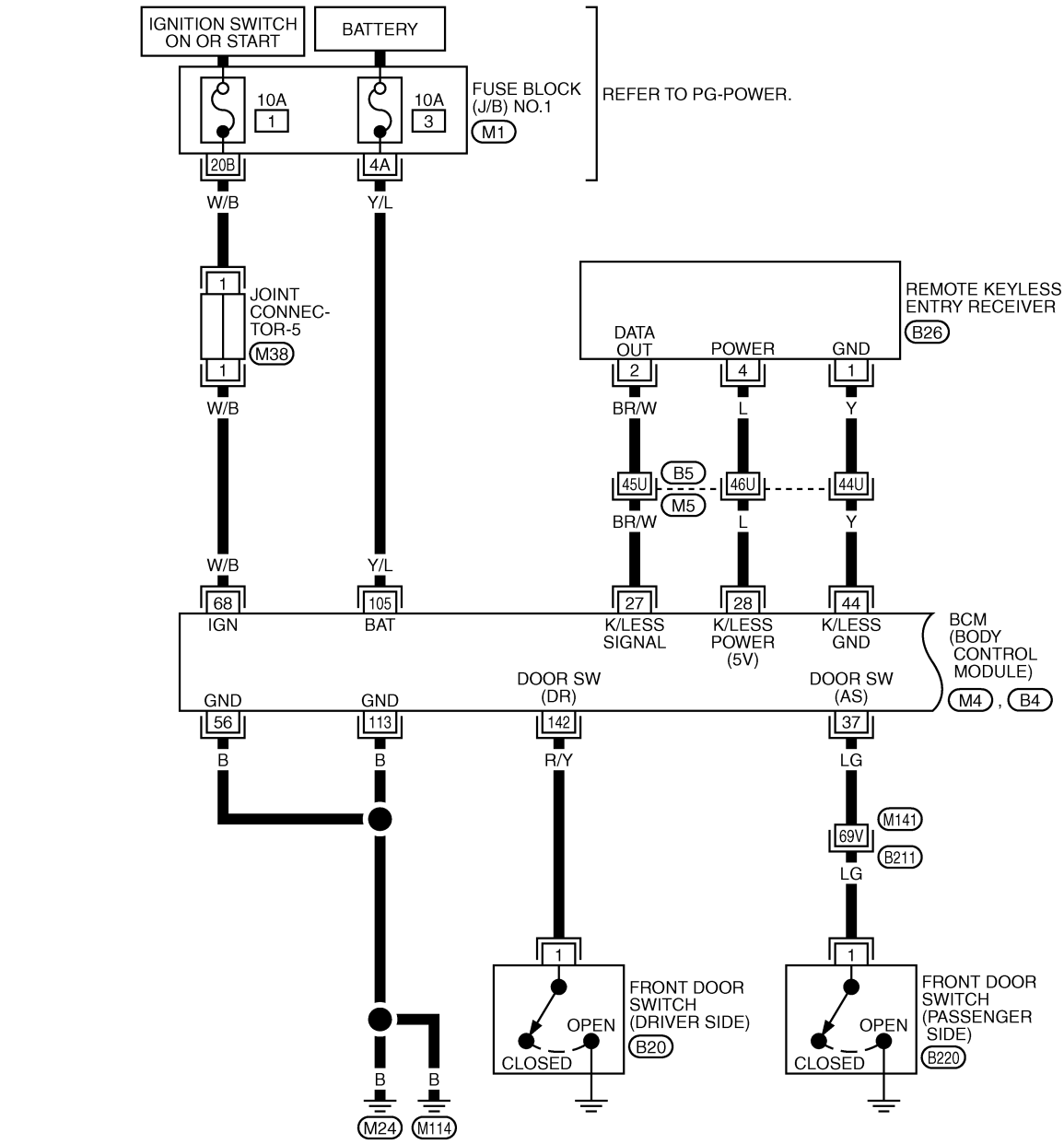
AIS001MT

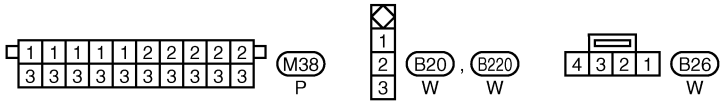


Wiring Diagram — WINDOW —

AIS001MU

GW-WINDOW-01





REFER TO THE FOLLOWING.

M5 , B211 -SUPER MULTIPLE JUNCTION (SMJ)

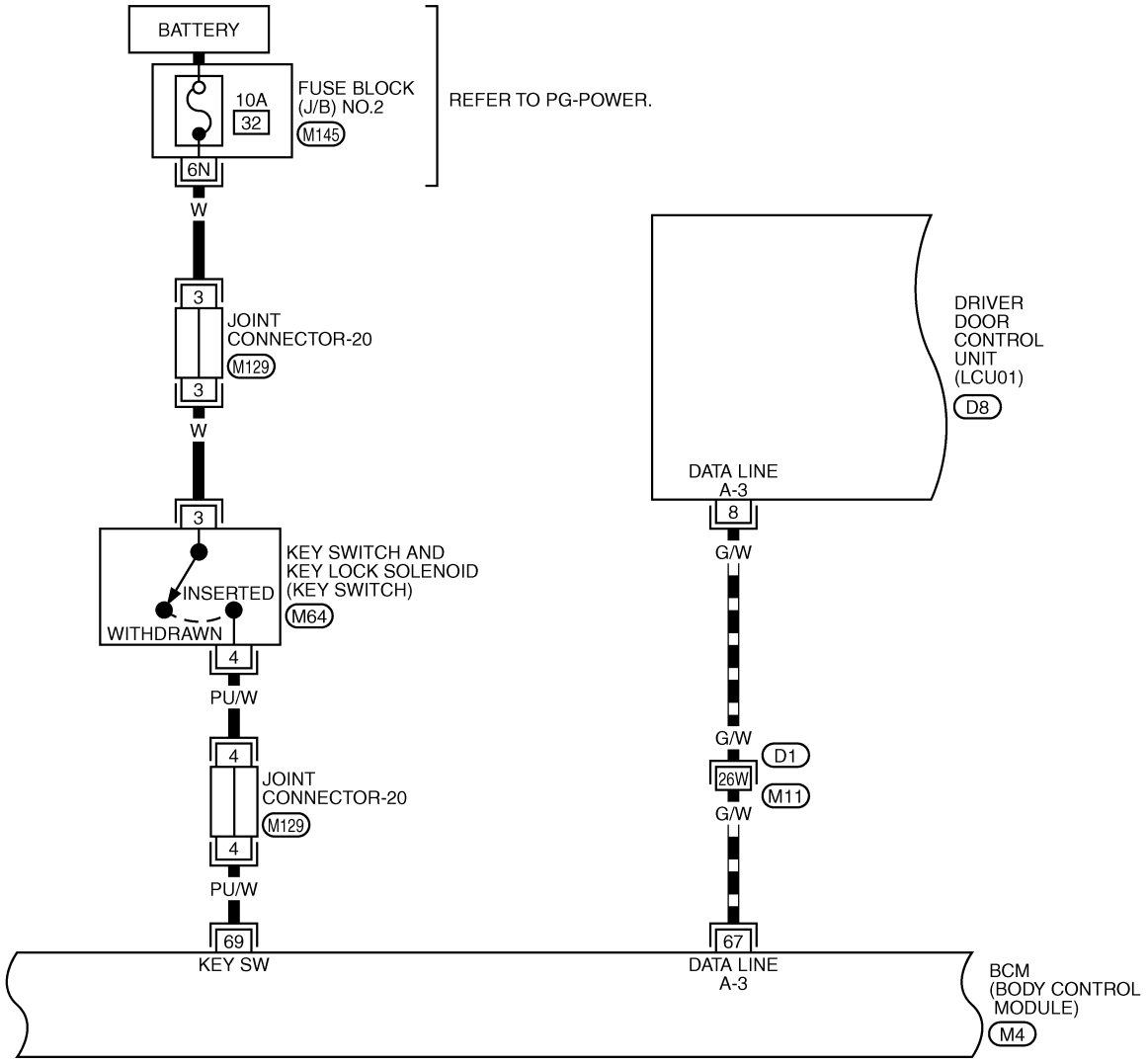
M1 -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

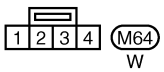
M4 , B4 -ELECTRICAL UNITS

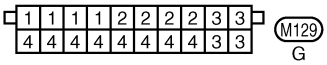
TIWA0214E

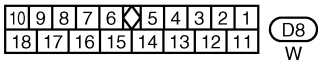
GW-WINDOW-02

: DATA LINE









REFER TO THE FOLLOWING.

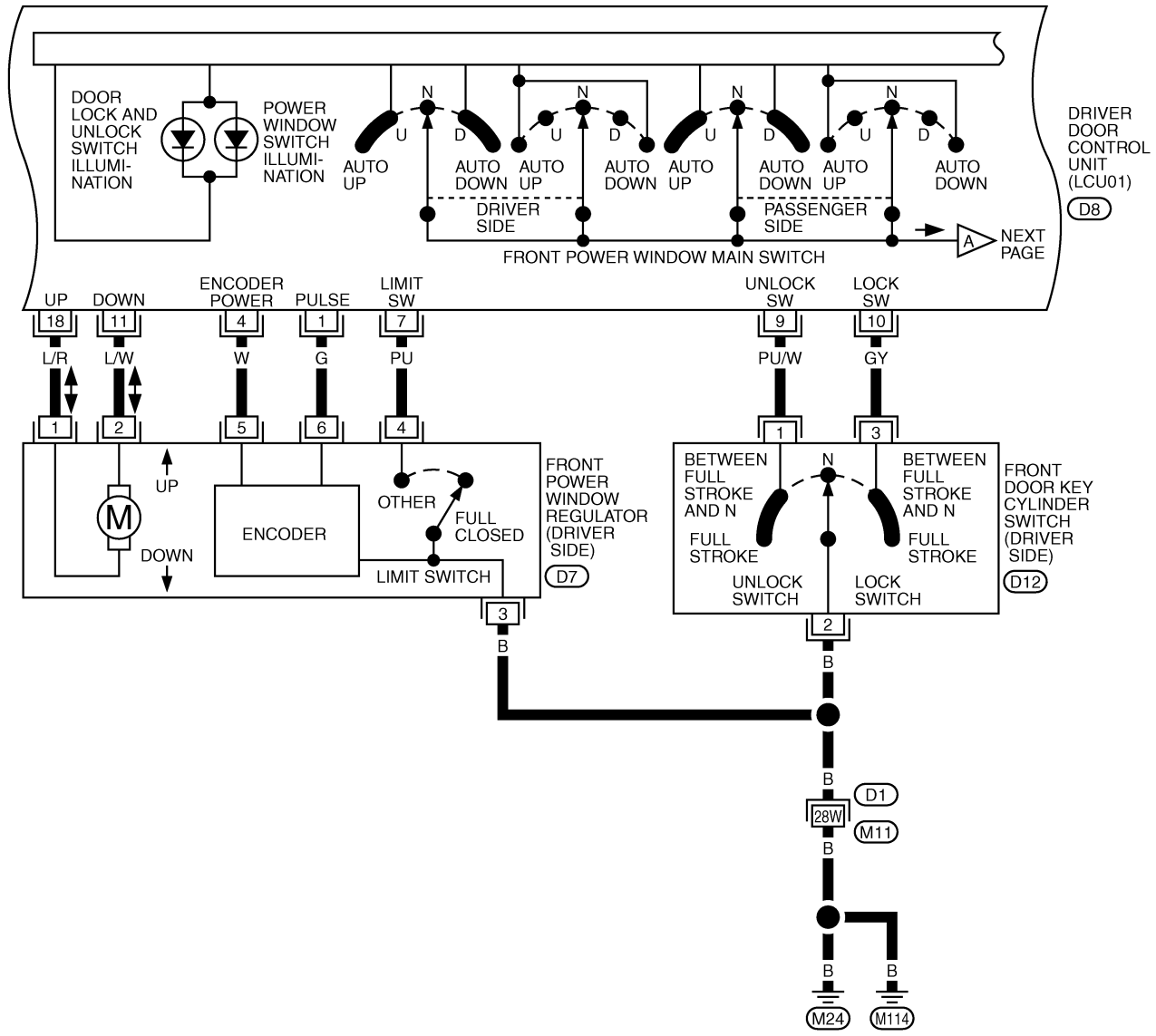
D1 -SUPER MULTIPLE JUNCTION (SMJ)

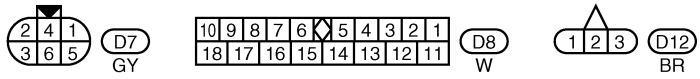
M145 -FUSE BLOCK-JUNCTION BOX (J/B) NO.2

M4 -ELECTRICAL UNITS

TIWA0215E

GW-WINDOW-03

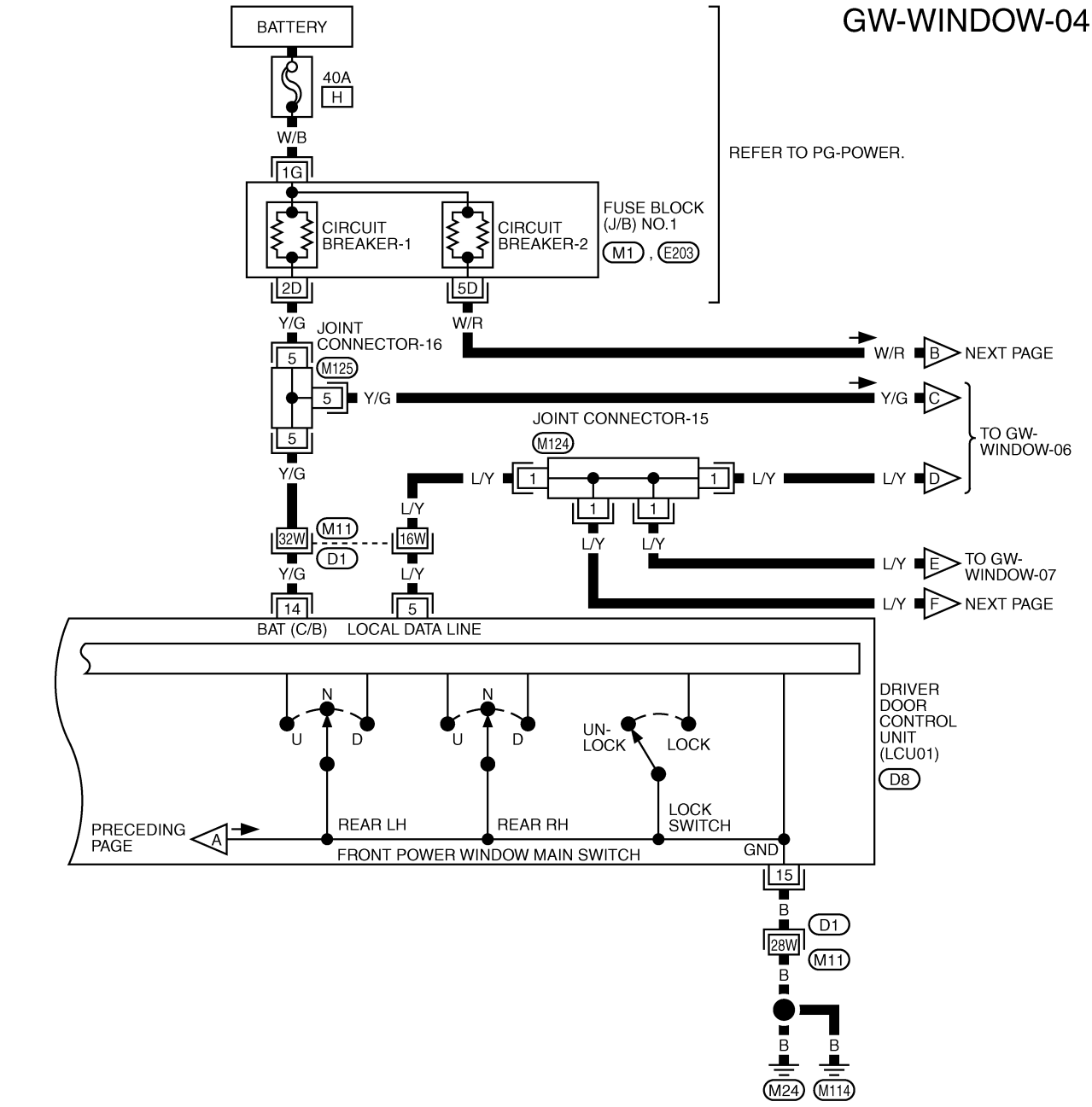


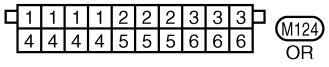


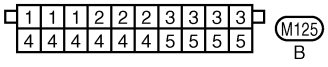
REFER TO THE FOLLOWING.

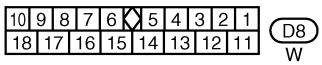
D1 -SUPER MULTIPLE JUNCTION (SMJ)

TIWA0216E









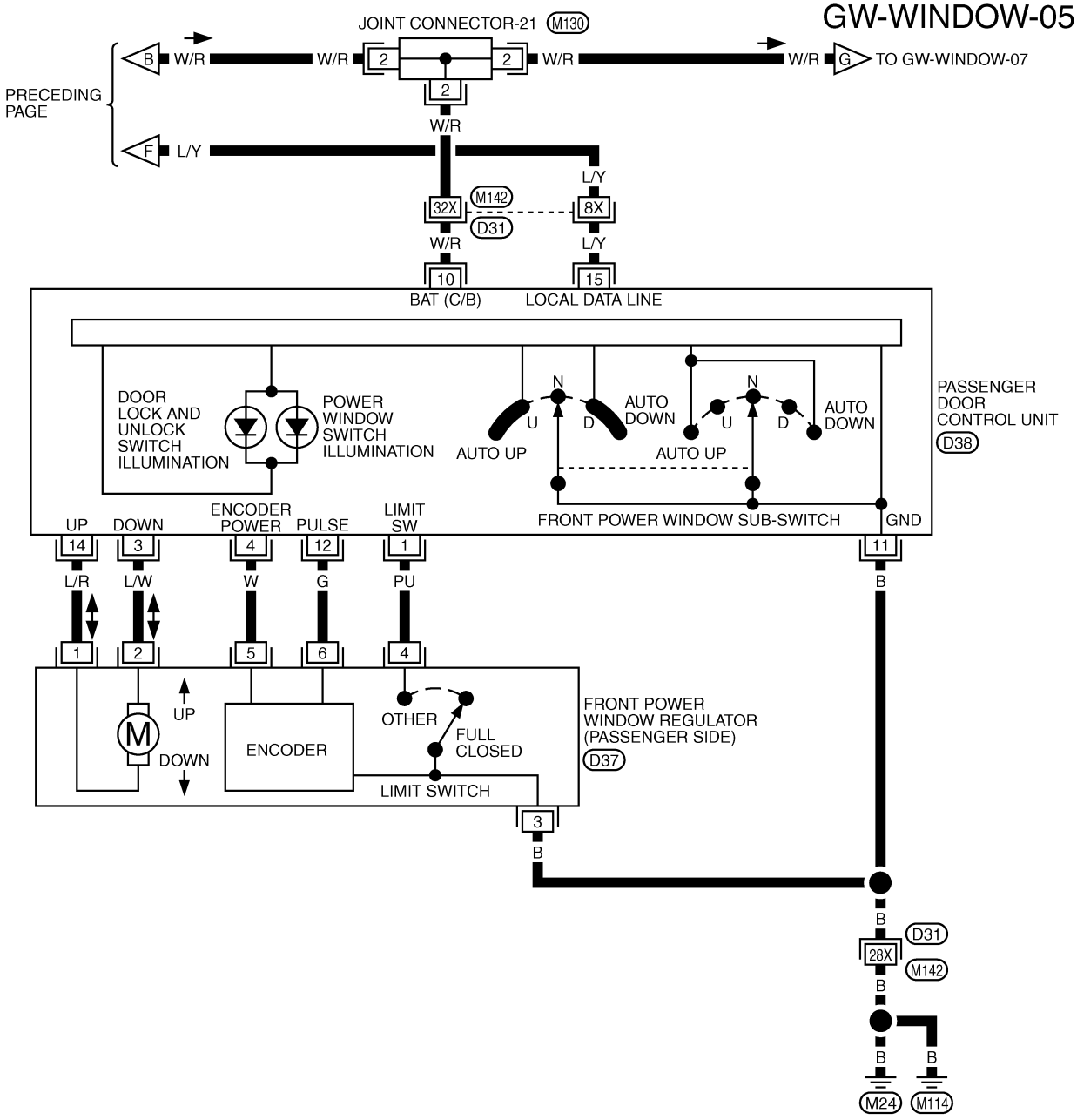
REFER TO THE FOLLOWING.

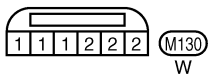
D1 -SUPER MULTIPLE JUNCTION (SMJ)

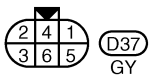
M1 , E203 -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

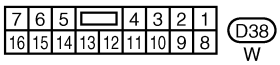
TIWA0217E

GW-WINDOW-05





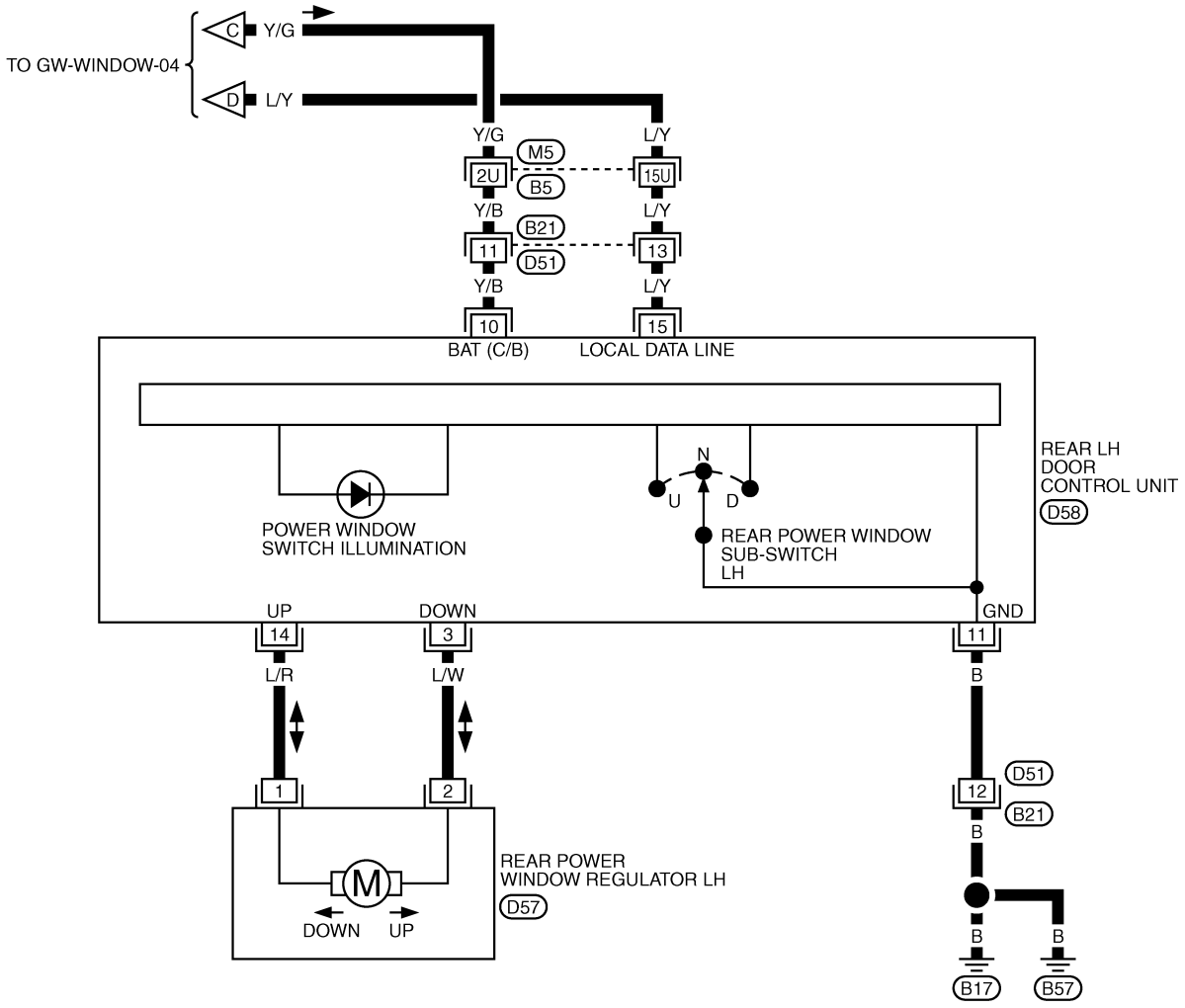


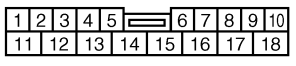


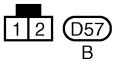
REFER TO THE FOLLOWING.
D31 -SUPER MULTIPLE JUNCTION (SMJ)

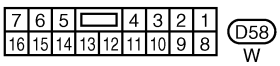
TIWA0218E

GW-WINDOW-06







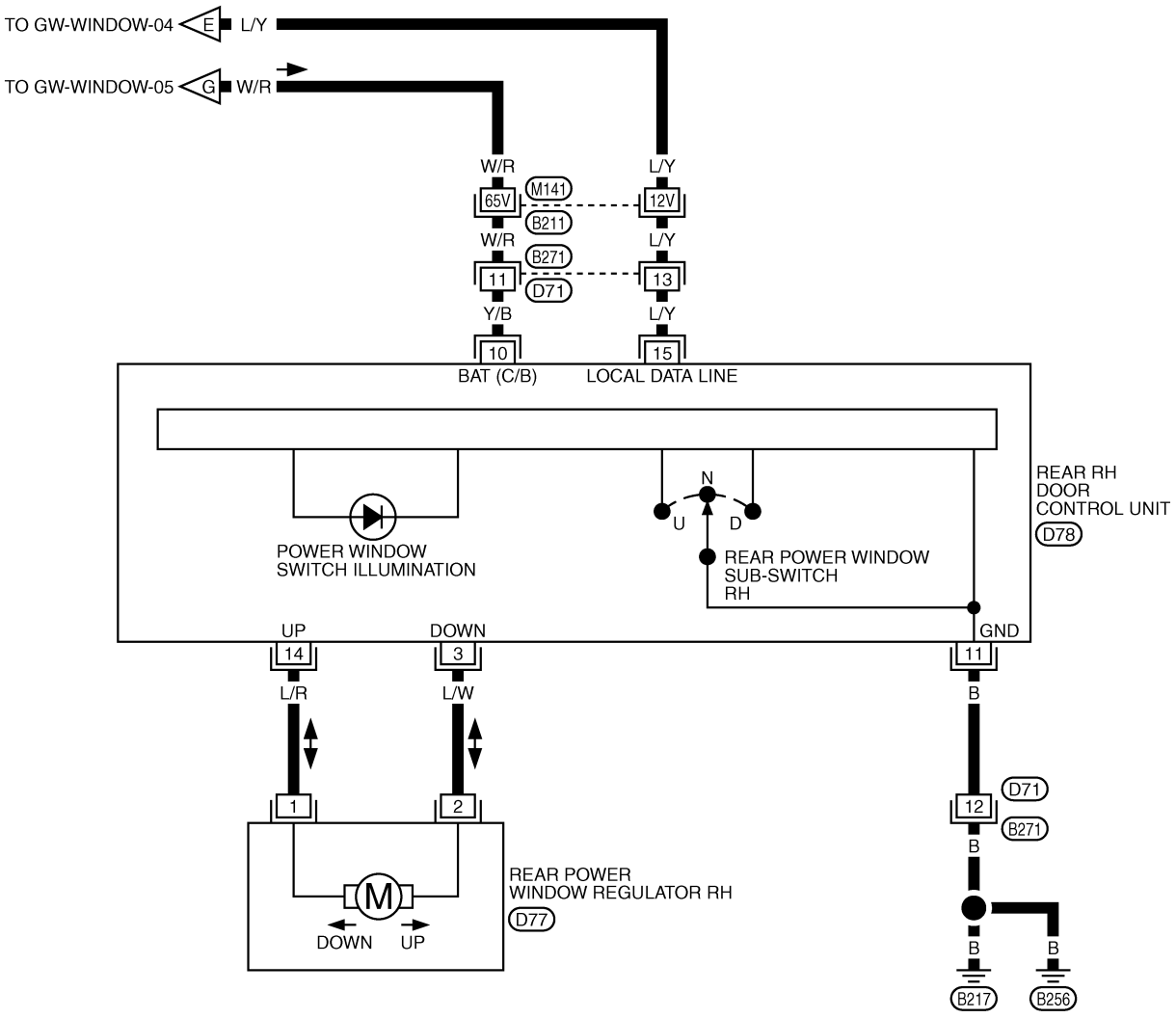


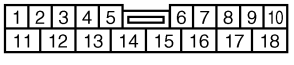
REFER TO THE FOLLOWING.

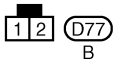
M5 -SUPER MULTIPLE JUNCTION (SMJ)

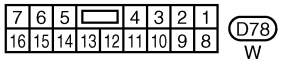
TIWA0219E

GW-WINDOW-07





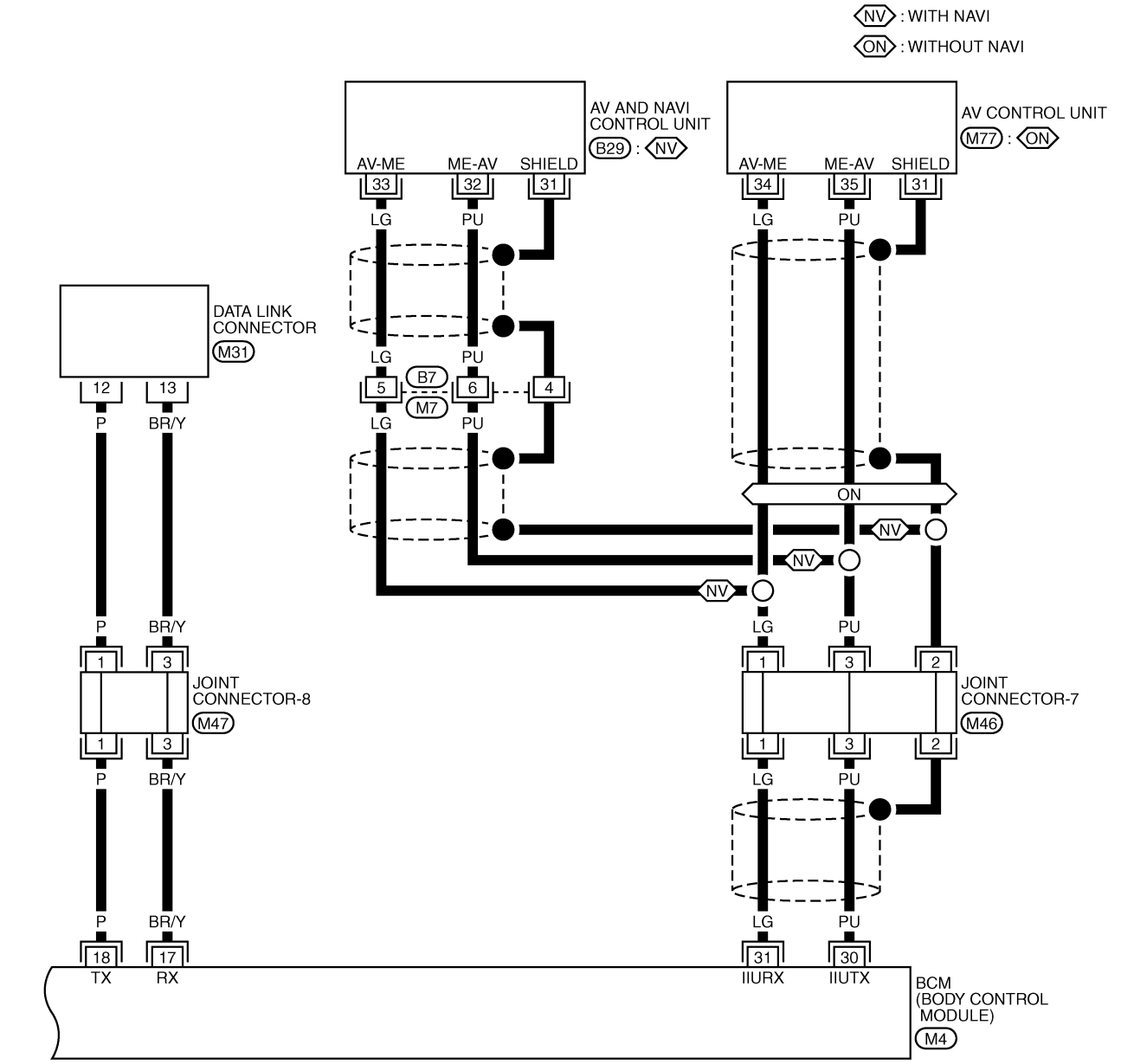


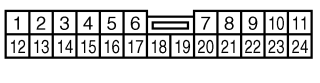


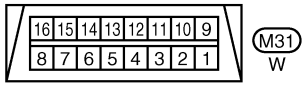
REFER TO THE FOLLOWING.
B211 -SUPER MULTIPLE JUNCTION (SMJ)

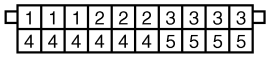
TIWA0220E

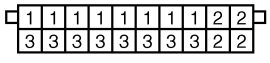
GW-WINDOW-08

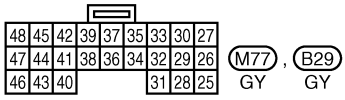










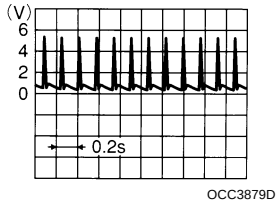
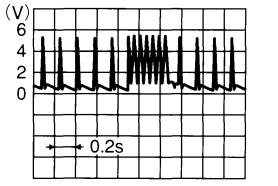
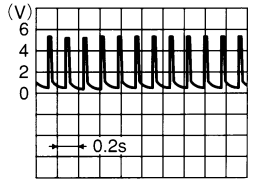
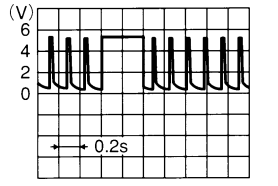


REFER TO THE FOLLOWING.
M4 -ELECTRICAL UNITS

TIWA0221E

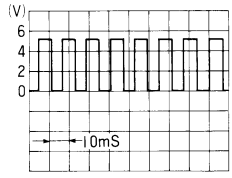
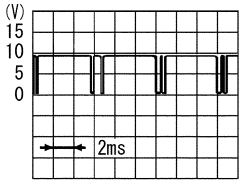
Terminals and Reference Value for BCM

AIS001MV

TERMINAL	WIRE COLOR	ITEM	CONDITION		Voltage (V) (Approx.)
17	BR/Y	Date link connector RX	—		—
18	P	Date link connector TX	—		—
27	BR/W	Remote keyless entry receiver signal	Vehicle key is removed	State of reception waiting	 OCC3879D
				Keyfob switch is pushed	 OCC3880D
			Vehicle key is inserted		0
28	L	Remote keyless entry receiver power supply	Vehicle key is removed	State of reception waiting	 OCC3881D
				Keyfob switch is pushed	 OCC3882D
			Vehicle key is inserted		0
30	PU	Monitor 1	—		—
31	LG	Monitor 2	—		—
37	LG	Passenger side door switch	ON (Open) → OFF (Close)		0 → Battery voltage
44	Y	Remoter keyless entry receiver ground	—		0
56	B	Ground	—		0
67	G/W	Date line A-3	—		—
68	W/B	Ignition switch ON or START	Ignition switch (ON or START position)		Battery voltage
69	PU/W	Key-in detection	Vehicle key is inserted (ON)		Battery voltage
			Vehicle key is removed (OFF)		0
105	Y/L	BAT power supply	—		Battery voltage
113	B	Ground	—		0
142	R/Y	Driver side door switch	ON (Open) → OFF (Close)		0 → Battery voltage

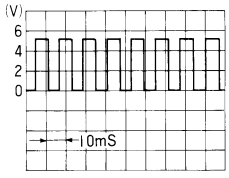
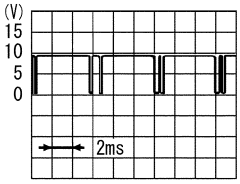
Terminals and Reference Value for Driver Door Control Unit

AIS001MW

TERMINAL	WIRE COLOR	ITEM	CONDITION	Voltage (V) (Approx.)
1	G	Encoder pulse signal	When power window motor operates	 OCC3383D
4	W	Encoder power supply	When ignition switch ON or power window timer operates	10
5	L/Y	Local data line	When ignition switch ON or power window timer operates	 SIIA0591J
7	PU	Limit switch signal	Driver side door window is in a position between fully-open and just before fully-closed position (ON)	0
			Driver side door window is in a position between just before fully-closed position and fully-closed position (OFF)	5
8	G/W	Data line A-3	—	—
9	PU/W	Key cylinder switch unlock signal	Key position (Neutral → Unlock)	5 → 0
10	GY	Key cylinder switch lock signal	Key position (Neutral → Lock)	5 → 0
11	L/W	Driver side power window motor DOWN signal	When power window motor DOWN operates	Battery voltage
14	Y/G	BAT power supply	—	Battery voltage
15	B	Ground	—	0
18	L/R	Driver side power window motor UP signal	When power window motor UP operates	Battery voltage

Terminals and Reference Value for Passenger, Rear LH, RH Door Control Unit

AIS001MX

TERMINAL	WIRE COLOR	ITEM	CONDITION	Voltage (V) (Approx.)
(1)	PU	Limit switch signal	Passenger side door window is in a position between fully-open and just before fully-closed position (ON)	0
			Passenger side door window is in a position between just before fully-closed position and fully-closed position (OFF)	5
3	L/W	Power window motor DOWN signal	When power window motor DOWN operates	Battery voltage
(4)	W	Encoder power supply	When ignition switch ON or power window timer operates	10
10	(W/R) Y/B	BAT power supply	—	Battery voltage
11	B	Ground	—	0
(12)	G	Encoder pulse signal	When power window motor operates	 OCC3383D
14	L/R	Power window motor UP signal	When power window motor UP operates	Battery voltage
15	L/Y	Local data line	When ignition switch ON or power window timer operates	 SIIA0591J

( ): Passenger door control unit

Trouble Diagnosis Symptom Chart

AIS001MY

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

Symptom	Diagnostic procedure.	Refer to page
None of the power windows can be operated using any switch	Check the following. ● 40A fusible link (letter H, located in fuse and fusible link box) ● Harness for open and short between fuse and driver control unit (LCU01). ● Harness for open and short between BCM and driver door control unit (LCU01). Refer to BL-76, "COMMUNICATION DIAGNOSIS" ● Driver door control unit (LCU01) ● Driver door control unit power and ground circuit check. ● BCM	—
One or more power windows cannot be operated using front power window main switch	1. Driver door control unit circuit check	GW-43
	2. Communication signal circuit check	GW-33
Driver side power window cannot be operated but other windows can be operated	1. Driver door control unit circuit check	GW-43
	2. Front power window regulator (driver side) circuit check	GW-34
Passenger side power window cannot be operated	1. Passenger door control unit circuit check	GW-43
	2. Communication signal circuit check	GW-33
	3. Front power window regulator (passenger side) check	GW-35
Rear LH or RH power window cannot be operated	1. Rear door control unit (LH or RH) circuit check	GW-44
	2. Communication signal circuit check	GW-33
	3. Rear power window regulator LH or RH check	GW-36
Anti-pinch system does not operate normally. (driver side)	1. Limit switch is adjusted	GW-48
	2. Limit switch check (driver side)	GW-37
	3. Encoder switch check (driver side)	GW-39
	4. Door window sliding part malfunction. ● A foreign material adheres to window glass or glass run rubber. ● Glass run rubber wear or deformation. ● Sash is tilted too much, or not enough.	—
	5. Replace driver door control unit	EI-31
Anti-pinch system does not operate normally. (passenger side)	1. Limit switch is adjusted	GW-48
	2. Limit switch check (passenger side)	GW-38
	3. Encoder switch check (passenger side)	GW-41
	4. Door window sliding part malfunction. ● A foreign material adheres to window glass or glass run rubber. ● Glass run rubber wear or deformation. ● Sash is tilted too much, or not enough.	—
	5. Replace passenger door control unit	EI-31

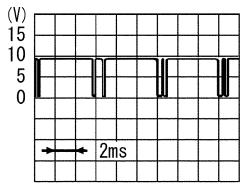
Symptom	Diagnostic procedure.	Refer to page
Power window timer function does not operate properly	1. Door switch check	GW-45
	2. Communication signal circuit check	GW-33
	Check the following ● harness for open and short between BCM and driver door control unit (LCU01). Refer to BL-76, "COMMUNICATION DIAGNOSIS" ● BCM ● Key switch check	—
Does not operate by the key cylinder switch.	1. Door key cylinder switch circuit check.	GW-45
	2. Driver door control unit circuit check	GW-43
	3. Replace driver door control unit	EI-31

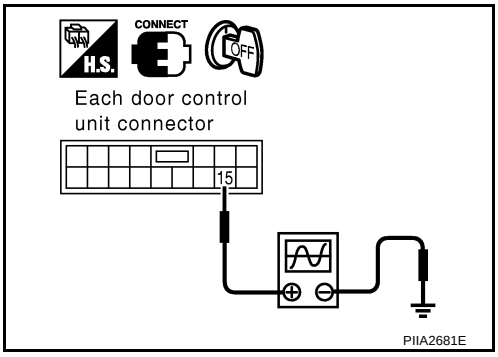
Communication Signal Circuit Check

AIS001MZ

1. CHECK COMMUNICATION SIGNAL

1. Turn ignition switch OFF.
2. Check the signal between malfunctioning door control unit connector and ground with oscilloscope.

Connector	Terminals (Wire color)		signal
	(+)	(–)	
D38 (passenger) D58 (rear LH) D78 (rear RH)	15 (L/Y)	Ground	 SIIA0591J



PIIA2681E

OK or NG

OK >> Communication signal is OK.
NG >> GO TO 2

2. CHECK COMMUNICATION CIRCUIT

1. Disconnect driver door control unit (LCU01) and malfunctioning door control unit connector.
2. Check continuity between driver door control unit (LCU01) and malfunctioning door control unit connector.

– Driver door control unit (LCU01) connector D8 terminal 5 and passenger door control unit connector D38 terminal 15.

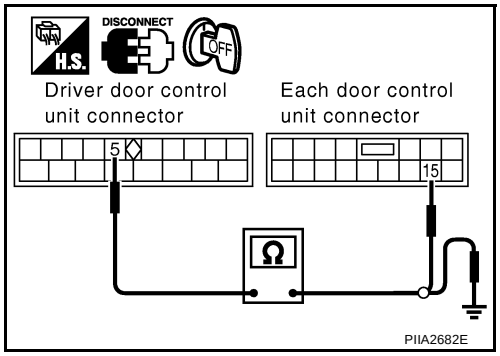
5 (L/Y) – 15 (L/Y) : Continuity should exist.

– Driver door control unit (LCU01) connector D8 terminal 5 and rear LH door control unit connector D58 terminal 15.

5 (L/Y) – 15 (L/Y) : Continuity should exist.

– Driver door control unit (LCU01) connector D8 terminal 5 and rear RH door control unit connector D78 terminal 15.

5 (L/Y) – 15 (L/Y) : Continuity should exist.



3. Check continuity between driver door control unit (LCU01) connector D8 terminal 5 and body ground.

5 (L/Y) – Ground : Continuity should not exist.

OK or NG

OK >> Replace driver door control unit (LCU01).
NG >> Repair or replace harness between driver door control unit (LCU01) and malfunctioning door control unit.

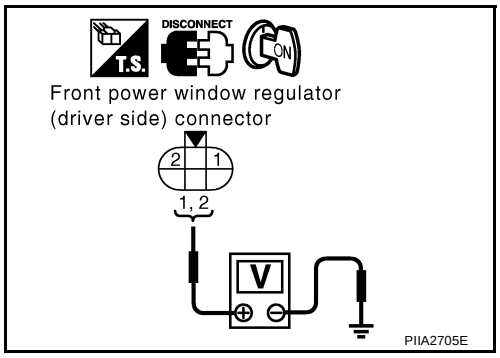
Front Power Window Regulator Circuit Check (Driver Side)

AIS001N0

1. CHECK DRIVER DOOR CONTROL UNIT OUTPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect front power window regulator (driver side) connector.
3. Turn ignition switch ON.
4. Check voltage between front power window regulator (driver side) connector and ground.

Connector	Terminals (Wirer color)		Condition	Voltage (V) (Approx.)
	(+)	(–)		
D7	1 (L/R)	Ground	Closing	Battery voltage
			Opening	0
	2 (L/W)		Closing	0
			Opening	Battery voltage



OK or NG

OK >> Replace front power window regulator (driver side).
NG >> GO TO 2

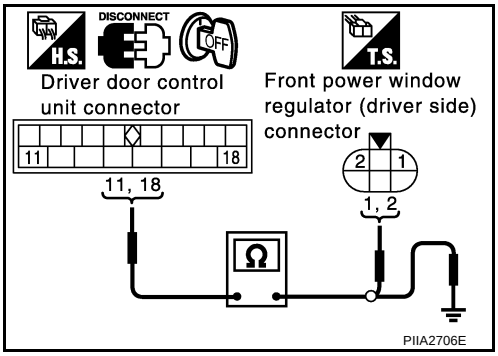
2. CHECK DRIVER DOOR CONTROL UNIT CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect driver door control unit (LCU01) connector.
3. Check continuity between front power window regulator (driver side) connector D7 terminals 1, 2 and driver door control unit (LCU01) connector D8 terminals 11, 18.

18 (L/R) – 1 (L/R) :Continuity should exist.
11 (L/W) – 2 (L/W) :Continuity should exist.

4. Check continuity between driver door control unit (LCU01) connector D8 terminals 11,18 and ground.

11 (L/W) – Ground :Continuity should not exist.
18 (L/R) – Ground :Continuity should not exist.



OK or NG

OK >> Replace driver door control unit (LCU01).
NG >> Repair or replace harness between driver door control unit (LCU01) and front power window regulator (driver side).

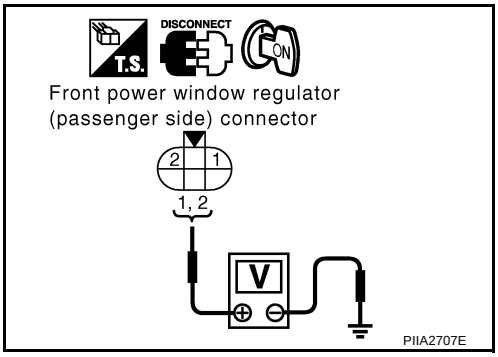
Front Power Window Regulator Circuit Check (Passenger Side)

AIS001N1

1. CHECK PASSENGER DOOR CONTROL UNIT OUTPUT SIGNAL

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

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(–)		
D37	1 (L/R)	Ground	Closing	Battery voltage
			Opening	0
	2 (L/W)		Closing	0
			Opening	Battery voltage



OK or NG

OK >> Replace power window regulator (passenger side).
NG >> GO TO 2

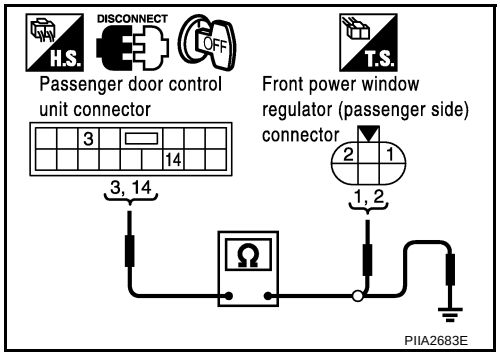
2. CHECK FRONT POWER WINDOW REGULATOR (PASSENGER SIDE) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect passenger door control unit connector.
3. Check continuity between passenger door control unit connector D38 terminals 3, 14 and front power window regulator (passenger side) connector D37 terminals 1, 2.

3 (L/W) – 2 (L/W) :Continuity should exist.
14 (L/R) – 1 (L/R) :Continuity should exist.

4. Check continuity between passenger door control unit connector D38 terminals 3, 14 and ground.

3 (L/W) – Ground :Continuity should not exist.
14 (L/R) – Ground :Continuity should not exist.



OK or NG

OK >> Replace passenger door control unit.
NG >> Repair or replace harness between passenger door control unit and front power window regulator (passenger side).

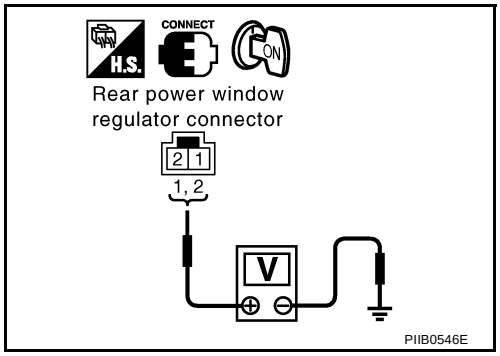
Rear Power Window Regulator LH or RH Circuit Check

AIS001N2

1. CHECK REAR DOOR CONTROL UNIT LH OR RH OUTPUT SIGNAL

1. Turn ignition switch ON.
2. Check voltage between rear power window regulator LH or RH connector D57 (LH) or D77 (RH) terminals 1, 2 and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(–)		
D57 (LH) D77 (RH)	1 (L/R)	Ground	Closing	Battery voltage
			Opening	0
	2 (L/W)		Closing	0
			Opening	Battery voltage



OK or NG

OK >> Replace rear power window regulator LH or RH.
NG >> GO TO 2

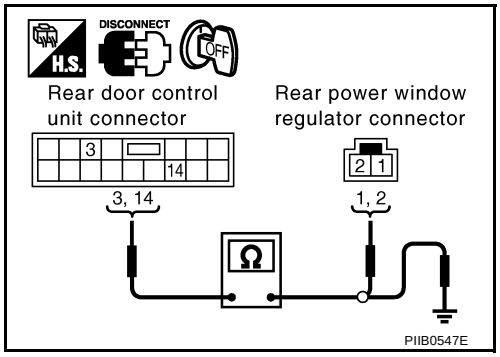
2. CHECK REAR POWER WINDOW REGULATOR LH OR RH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect rear door control unit LH or RH and rear power window regulator LH or RH connector.
3. Check continuity between rear door control unit LH or RH connector D58 (LH) or D78 (RH) terminals 3, 14 and rear power window regulator LH or RH connector D57 (LH) or D77 (RH) terminals 1, 2.

3 (L/W) – 2 (L/W) :Continuity should exist.
14 (L/R) – 1 (L/R) :Continuity should exist.

4. Check continuity between rear door control unit LH or RH connector D58 (LH) or D78 (RH) terminals 3, 14 and ground.

3 (L/W) – Ground :Continuity should not exist.
14 (L/R) – Ground :Continuity should not exist.



OK or NG

OK >> Replace rear door control unit LH or RH.
NG >> Repair or replace harness between rear door control unit LH or RH and rear power window regulator LH or RH.

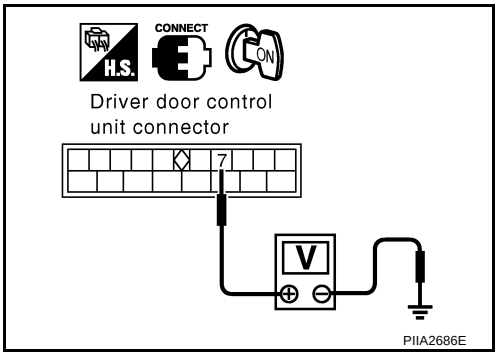
Limit Switch Check (Driver Side)

AIS001N3

1. CHECK DRIVER DOOR LIMIT SWITCH SIGNAL

1. Turn ignition switch ON.
2. Check voltage between driver door control unit (LCU01) connector and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(–)		
D8	7 (PU)	Ground	Driver side door window is in a position between fully-open and just before fully-closed position (ON).	0
			Driver side door window is in a position between just before fully-closed position and fully-closed position (OFF).	5



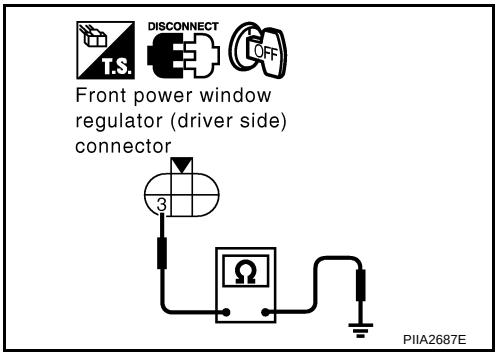
OK or NG

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

2. CHECK LIMIT SWITCH GROUND CIRCUIT

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

3 (B) – Ground : Continuity should exist.



OK or NG

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

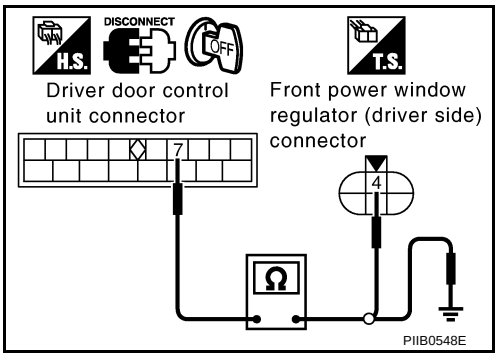
3. CHECK HARNESS CONTINUITY

1. Disconnect driver door control unit (LCU01) connector.
2. Check continuity between driver door control unit (LCU01) connector D8 terminal 7 and front power window regulator (driver side) connector D7 terminal 4.

7 (PU) – 4 (PU) : Continuity should exist.

3. Check continuity between driver door control unit (LCU01) connector D8 terminal 7 and ground.

7 (PU) – Ground : Continuity should not exist.



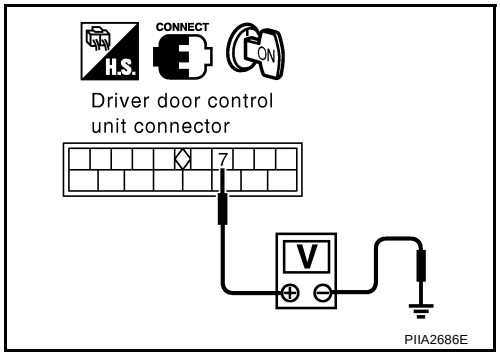
OK or NG

OK >> GO TO 4.
NG >> Repair or replace harness between driver door control unit (LCU01) and front power window regulator (driver side).

4. CHECK DRIVER DOOR CONTROL UNIT OUTPUT SIGNAL

1. Connect driver door control unit (LCU01) connector.
2. Turn ignition switch ON.
3. Check voltage between driver door control unit (LCU01) connector D8 terminal 7 and ground.

7(PU) – Ground : Approx. 5V



OK or NG

OK >> Replace front power window regulator (driver side).
NG >> Replace driver door control unit (LCU01).

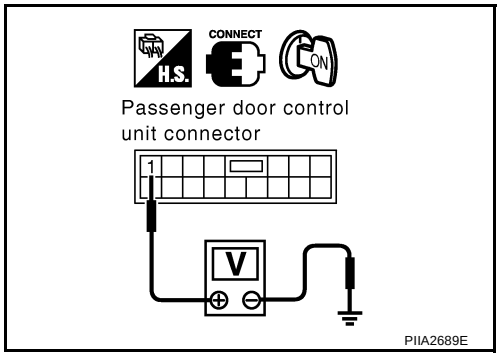
Limit Switch Check (Passenger Side)

AIS001N4

1. CHECK PASSENGER DOOR LIMIT SWITCH SIGNAL

1. Turn ignition switch ON.
2. Check voltage between passenger door control unit connector and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(–)		
D38	1 (PU)	Ground	Passenger side door window is in a position between fully-open and just before fully-closed position (ON).	0
			Passenger side door window is in a position between just before fully-closed position and fully-closed position (OFF).	5



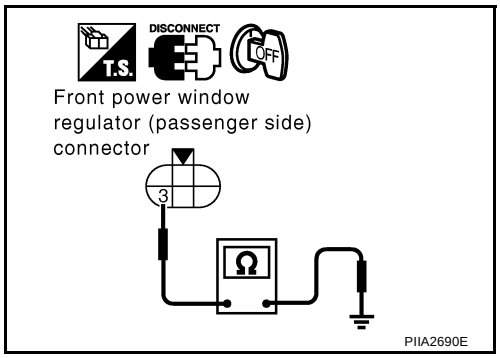
OK or NG

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

2. CHECK LIMIT SWITCH GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect front power window regulator (passenger side) connector.
3. Check continuity between front power window regulator (passenger side) connector D37 terminal 3 and ground.

3 (B) – Ground : Continuity should exist.



OK or NG

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

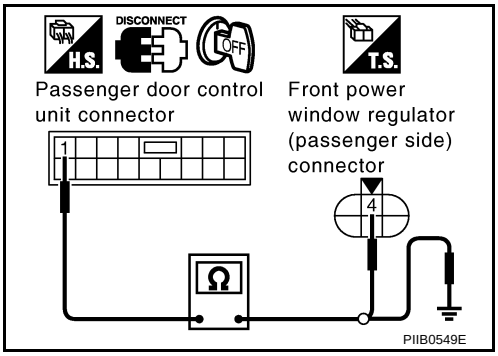
3. CHECK HARNESS CONTINUITY

1. Disconnect passenger door control unit connector.
2. Check continuity between passenger door control unit connector D38 terminal 1 and front power window regulator (passenger side) connector D37 terminal 4.

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

3. Check continuity between passenger door control unit connector D38 terminal 1 and ground.

1 (PU) – Ground : Continuity should not exist.



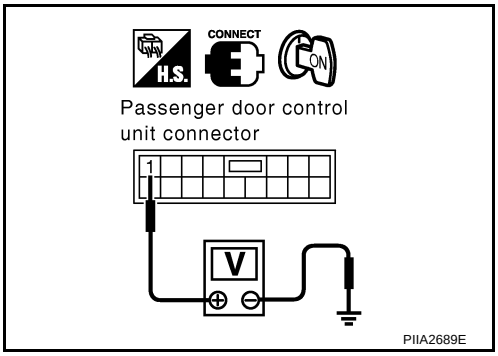
OK or NG

OK >> GO TO 4.
NG >> Repair or replace harness between passenger door control unit and front power window regulator (passenger side).

4. CHECK PASSENGER DOOR CONTROL UNIT OUTPUT SIGNAL

1. Connect passenger door control unit connector.
2. Turn ignition switch ON.
3. Check voltage between passenger door control unit connector D38 terminal 1 and ground.

1 (PU) – Ground : Approx. 5V



OK or NG

OK >> Replace front power window regulator (passenger side).
NG >> Replace passenger door control unit.

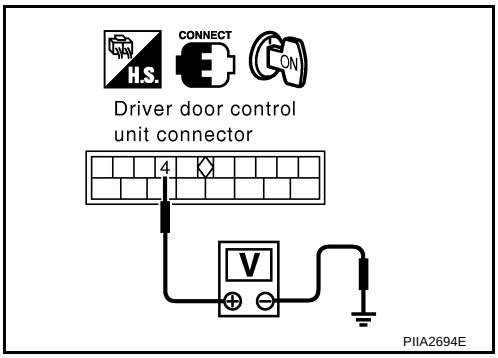
Encoder Switch Check (Driver Side)

AIS001N5

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

1. Turn ignition switch ON.
2. Check voltage between driver door control unit (LCU01) connector D8 terminal 4 and ground.

4 (W) – Ground : Approx. 10V



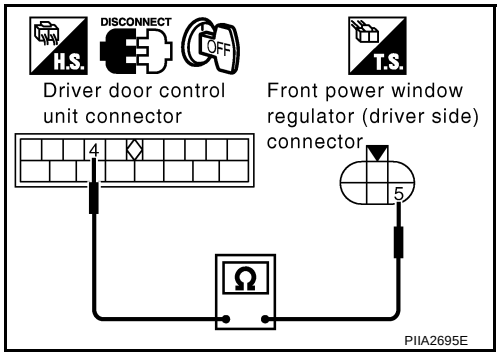
OK or NG

OK >> GO TO 2.
NG >> Replace driver door control unit (LCU01).

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect driver door control unit (LCU01) and front power window regulator (driver side) connector.
3. Check continuity between driver door control unit (LCU01) connector D8 terminal 4 and front power window regulator (driver side) connector D7 terminal 5.

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



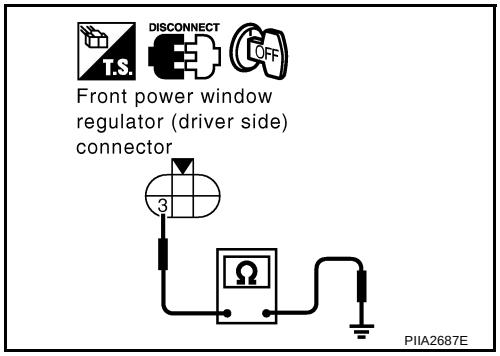
OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness between driver door control unit (LCU01) and front power window regulator (driver side).

3. CHECK ENCODER GROUND

Check continuity between front power window regulator (driver side) connector D7 terminal 3 and ground.

3 (B) – Ground : Continuity should exist.

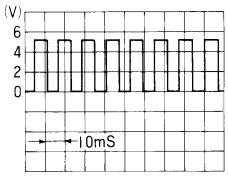


OK or NG

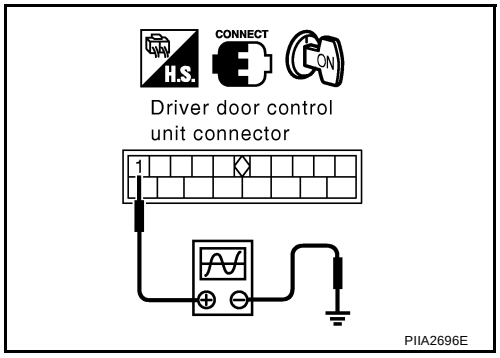
OK >> GO TO 4.
NG >> Repair or replace harness.

4. CHECK ENCODER SIGNAL

1. Connect driver door control unit (LCU01) and front power window regulator (driver side) connector.
2. Turn ignition switch ON.
3. Check the signal between driver door control unit (LCU01) connector and ground with oscilloscope.

Connector	Terminals (Wire color)		Condition	Signal
	(+)	(–)		
D8	1 (G)	Ground	Opening	

OCC3383D



OK or NG

OK >> Encoder switch circuit is OK.
NG >> GO TO 5

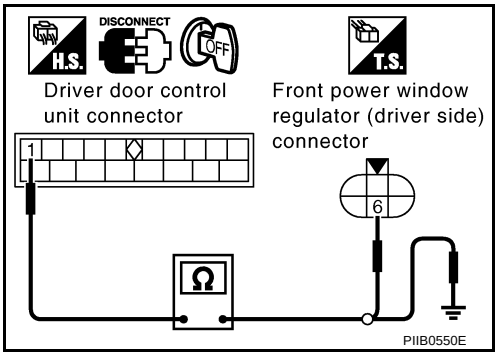
5. CHECK ENCODER CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect driver door control unit (LCU01) and front power window regulator (driver side) connector.
3. Check continuity between driver door control unit (LCU01) connector D8 terminal 1 and front power window regulator (driver side) connector D7 terminal 6.

1 (G) – 6 (G) : Continuity should exist.

4. Check continuity between driver door control unit (LCU01) connector D8 terminal 1 and ground.

1 (G) – Ground : Continuity should not exist.



OK or NG

OK >> Replace front power window regulator (driver side)
NG >> Repair or replace harness between driver door control unit (LCU01) and front power window regulator (driver side).

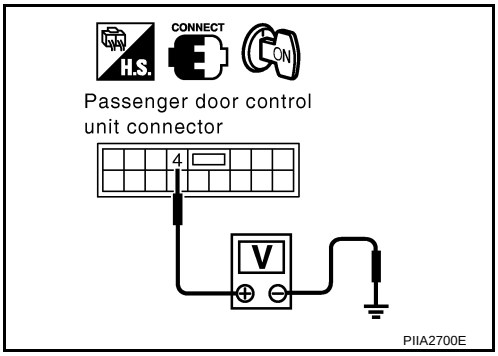
Encoder Switch Check (Passenger Side)

AIS001N6

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

1. Turn ignition switch ON.
2. Check voltage between passenger door control unit connector D38 terminal 4 and ground.

4 (W) – Ground : Approx. 10V



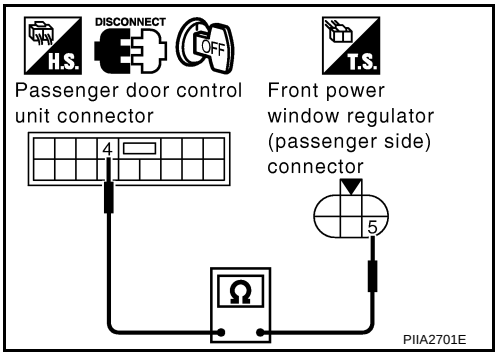
OK or NG

OK >> GO TO 2.
NG >> Replace passenger door control unit.

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect passenger door control unit and front power window regulator (passenger side) connector.
3. Check continuity between driver door control unit (LCU01) connector D38 terminal 4 and front power window regulator (passenger side) connector D37 terminal 5.

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



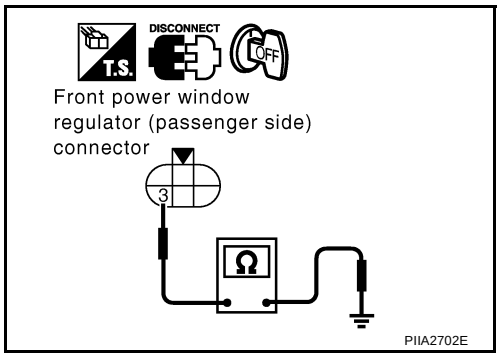
OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness between passenger door control unit and front power window regulator (passenger side).

3. CHECK ENCODER GROUND

Check continuity between front power window regulator (passenger side) connector D37 terminal 3 and ground.

3 (B) – Ground : Continuity should exist.

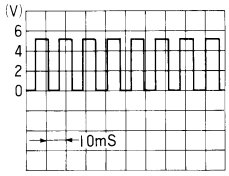


OK or NG

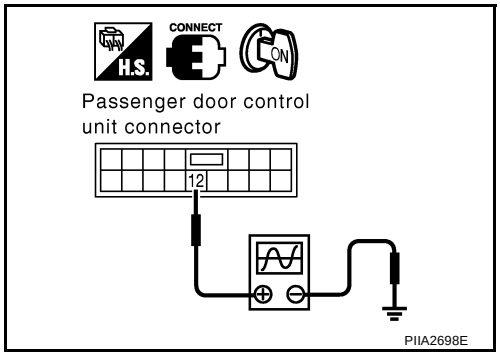
OK >> GO TO 4.
NG >> Repair or replace harness.

4. CHECK ENCODER SIGNAL

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

Connector	Terminals (Wire color)		Condition	Signal
	(+)	(–)		
D38	12 (G)	Ground	Opening	

OCC3383D



OK or NG

OK >> Encoder switch circuit is OK.
NG >> GO TO 5

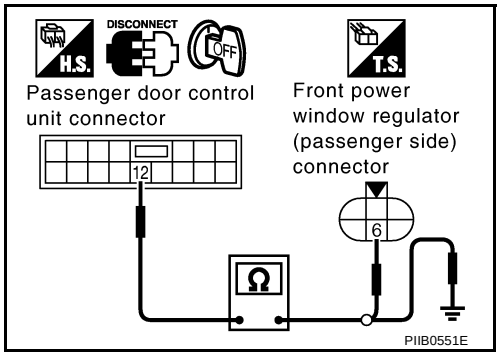
5. CHECK ENCODER CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect passenger door control unit and front power window regulator (passenger side) connector.
3. Check continuity between passenger door control unit connector D38 terminal 12 and front power window regulator (passenger side) connector D37 terminal 6.

12 (G) – 6 (G) : Continuity should exist.

4. Check continuity between passenger door control unit connector D38 terminal 12 and ground.

12 (G) – Ground : Continuity should not exist.



OK or NG

OK >> Replace front power window regulator (passenger side)
NG >> Repair or replace harness between passenger door control unit and front power window regulator (passenger side).

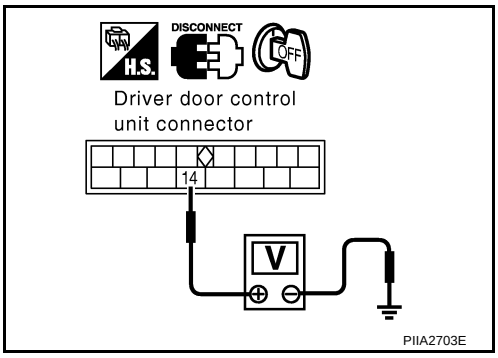
Driver Door Control Unit Circuit Check

AIS001N8

1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect driver door control unit (LCU01) connector.
3. Check voltage between driver door control unit (LCU01) connector D8 terminal 14 and ground.

14 (Y/G) – Ground **:Battery voltage**



OK or NG

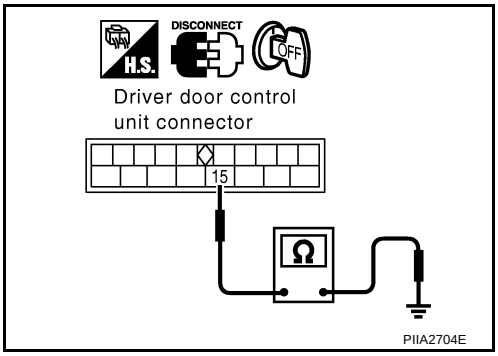
OK >> GO TO 2.
NG >> Check the following.

- 40A fusible link (letter H. located in fuse and fusible link box).
- Harness for open or short between driver control unit (LCU01) and fuse.

2. CHECK GROUND CIRCUIT

Check continuity between driver door control unit (LCU01) connector D8 terminal 15 and ground.

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



OK or NG

OK >> INSPECTION END
NG >> Repair or replace harness.

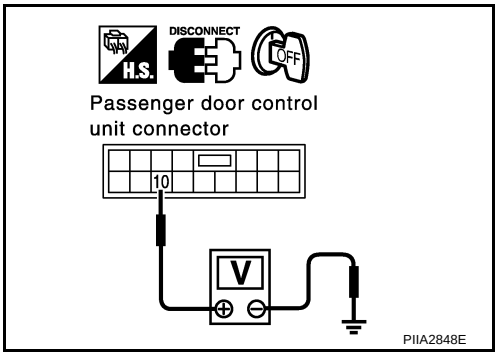
Passenger Door Control Unit Circuit Check

AIS001NR

1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect passenger door control unit connector.
3. Check voltage between passenger door control unit connector D38 terminal 10 and ground.

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



OK or NG

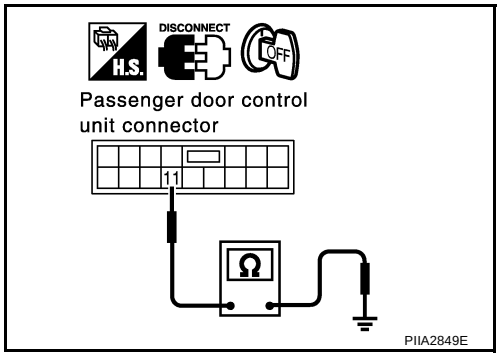
OK >> GO TO 2.
NG >> Check the following.

- 40A fusible link (letter H, located in fuse and fusible link box).
- Harness for open or short between passenger control unit and fuse.

2. CHECK GROUND CIRCUIT

Check continuity between passenger door control unit connector D38 terminal 11 and ground.

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



OK or NG

OK >> INSPECTION END
NG >> Repair or replace harness.

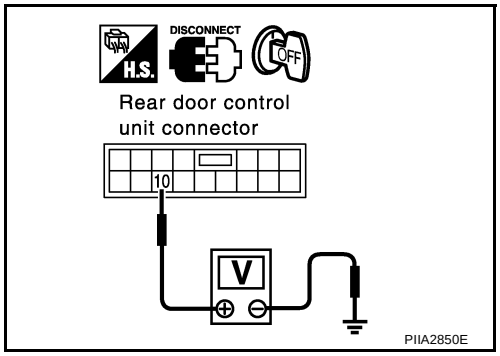
Rear Door Control Unit (LH or RH) Circuit Check

AIS001NS

1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect rear door control unit connector.
3. Check voltage between rear door control unit LH or RH connector D58 or D78 terminal 10 and ground.

10 (Y/B) – Ground **:Battery voltage**



OK or NG

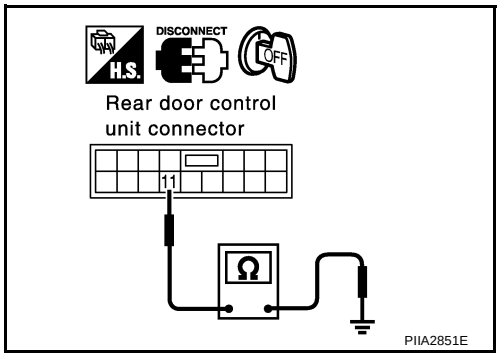
OK >> GO TO 2.
NG >> Check the following.

- 40A fusible link (letter H, located in fuse and fusible link box).
- Harness for open or short between rear control unit LH or RH and fuse.

2. CHECK GROUND CIRCUIT

Check continuity between rear door control unit LH or RH connector D58 or D78 terminal 11 and ground.

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



OK or NG

OK >> INSPECTION END
NG >> Repair or replace harness.

Door Switch Check

AIS001NU

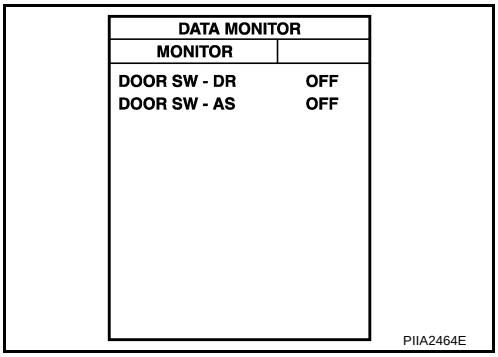
1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT-II

- Check door switch in “DATE MONITOR” mode with CONSULT-II.

When door is opened :DOOR SW ON

When door is closed :DOOR SW OFF



Without CONSULT-II

- Check all door switches in switch monitor mode.
  Refer to Remote keyless entry system BL-79, "SWITCH MONITOR" .

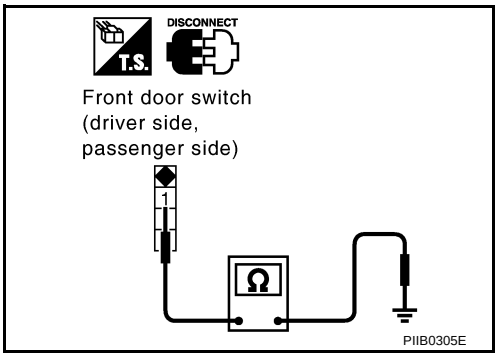
OK or NG

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

2. CHECK DOOR SWITCH

1. Turn ignition switch OFF.
2. Disconnect door switch connector.
3. Check continuity between following terminals and ground.

Door switch connector		Terminals (Wire color)	Condition	Continuity
Front door switch (driver side)	B20	1 (R/Y) – Ground	Pressed	No
			Released	Yes
Front door switch (passenger side)	B220	1 (LG) – Ground	Pressed	No
			Released	Yes



OK or NG

OK >> Check harness for open and short between door switch and BCM.
NG >> Check door switch ground condition.

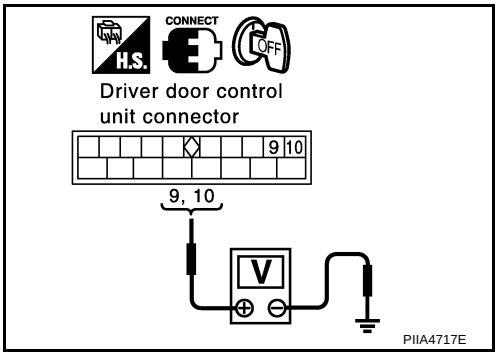
Door Key Cylinder Switch Check

AIS002MV

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

Check voltage between driver door control unit (LCU01) connector and ground.

Connector	Terminals (Wire color)		Key position	Voltage (V) (Approx.)
	(+)	(–)		
D8	9 (PU/W)	Ground	Neutral/Unlock	5
			Lock	0
	10 (GY)		Neutral/Lock	5
			Unlock	0



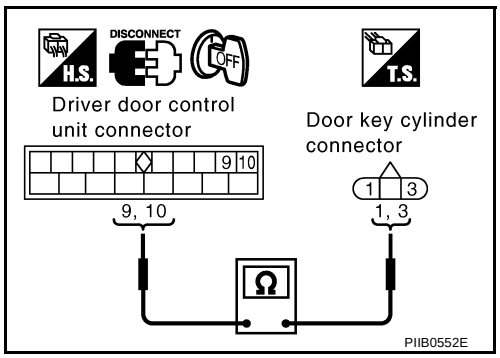
OK or NG

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

2. CHECK DOOR KEY CYLINDER SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect driver door control unit (LCU01) and front door key cylinder switch connector.
3. Check continuity between driver door control unit (LCU01) connector D8 terminal 9, 10 and front door key cylinder switch connector D12 terminals 1, 3.

9 (PU/W) – 1 (PU/W) :Continuity should exist.
10 (GY) – 3 (GY) :Continuity should exist.



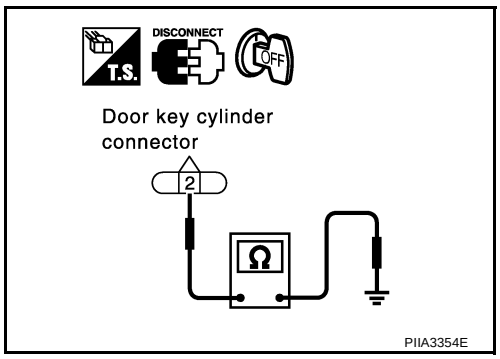
OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness between driver door control unit (LCU01) and front door key cylinder switch.

3. CHECK DOOR KEY CYLINDER SWITCH GROUND

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

2 (B) – Ground :Continuity should exist.



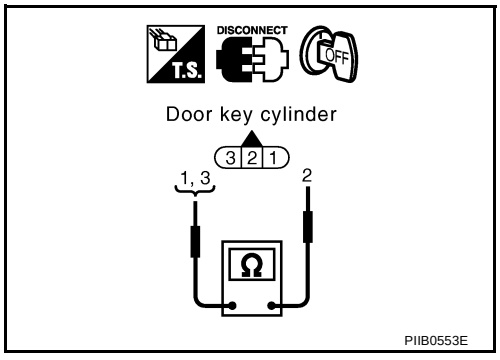
OK or NG

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

4. CHECK DOOR KEY CYLINDER SWITCH

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

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



OK or NG

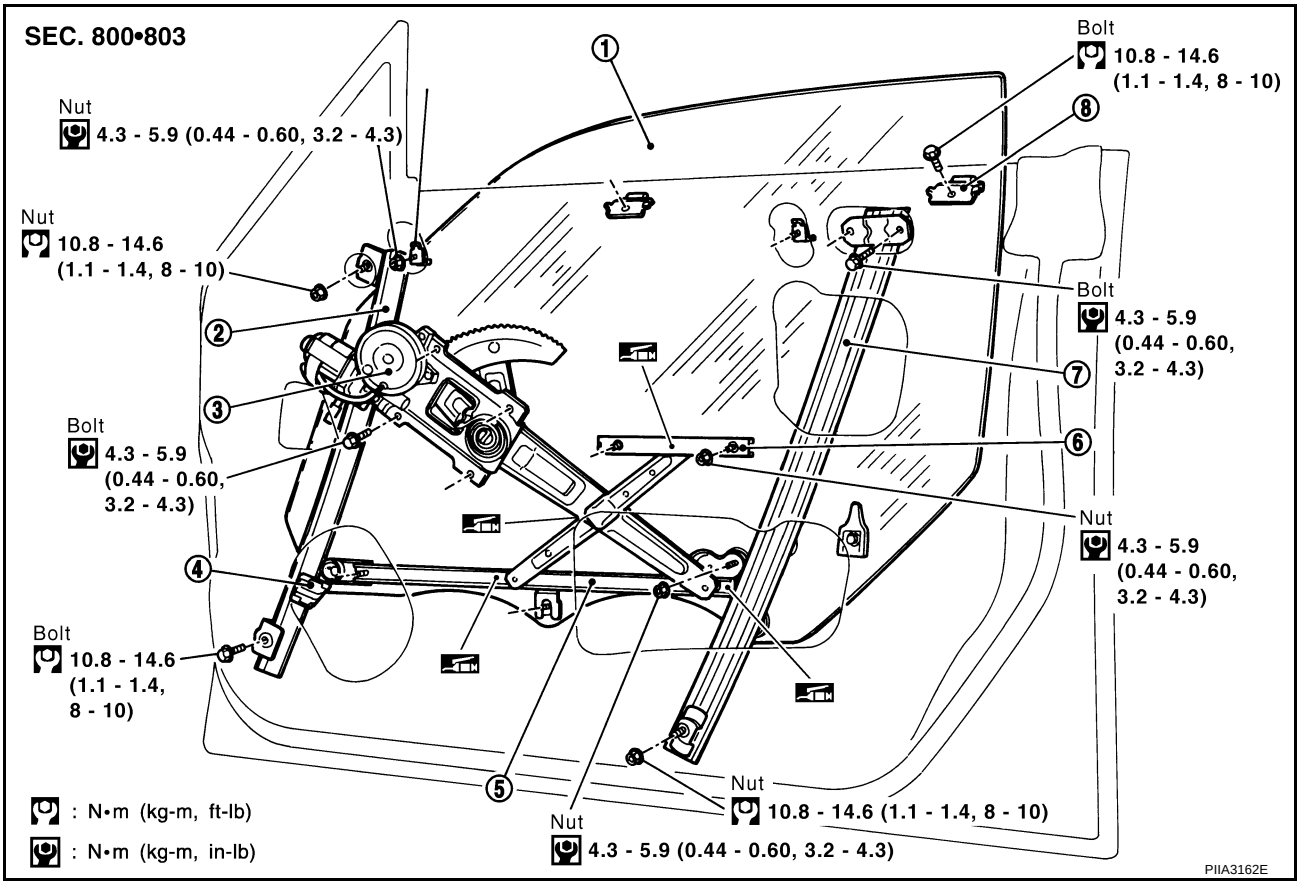
OK >> Check the condition of the harness and the connector.
NG >> Replace door key cylinder switch.

FRONT DOOR GLASS AND REGULATOR

PFP:80300

Removal and Installation

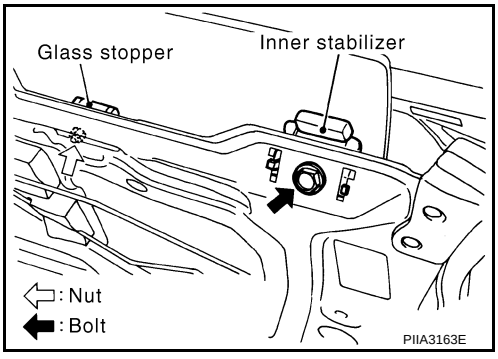
AIS001GP



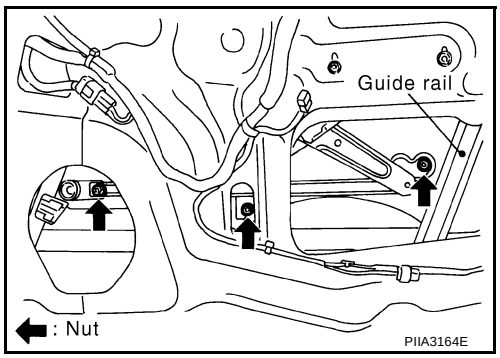
1. Door glass (Front)
2. Guide channel
3. Regulator assembly
4. Glass guide
5. Main channel
6. Sub channel
7. Guide rail
8. Inner stabilizer

REMOVAL

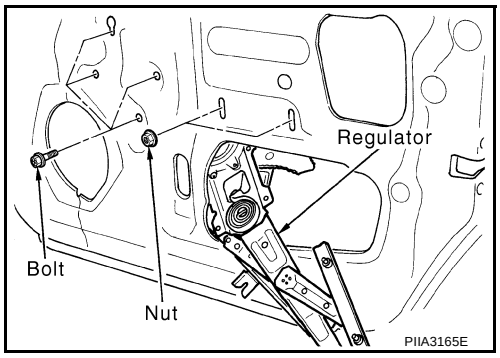
1. Remove front door finisher. Refer to EI-31, "DOOR FINISHER" .
2. Remove door speaker. Refer to AV-30, "Removal and Installation of Door Speaker" .
3. Remove front door outside molding. Refer to EI-27, "DOOR OUTSIDE MOLDING" .
4. Remove door sealing screen assembly.
5. Remove door cover inner.
6. Remove glass stopper and inner stabilizer.



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



9. While holding door window, raise it at the rear end to pull the glass out of guide rail.
10. Remove glass guide from glass channel while lifting the whole.
11. Pull out back guide roller from the guide rail and detach glass.
12. Remove bolt and nut of guide rail then remove guide rail.
13. Disconnect harness connector and clip harness.
14. Remove bolt of regulator assembly then remove regulator assembly.
15. Remove bolt and nut of guide channel then remove guide channel.



INSPECTION AFTER REMOVAL

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

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

INSTALLATION

Install in the reverse order of removal.

SETTING AFTER INSTALLATION

Setting of Limit Switch

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

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

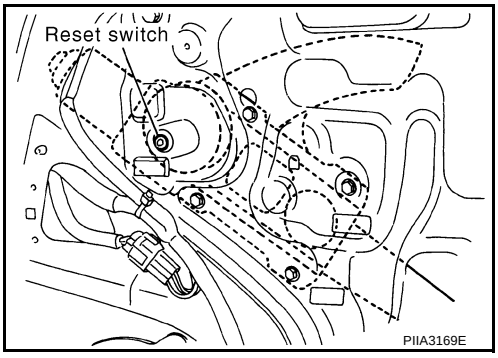
Resetting

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

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

CAUTION:

Do not operate the glass automatically to raise the glass to the top dead center.



FITTING INSPECTION

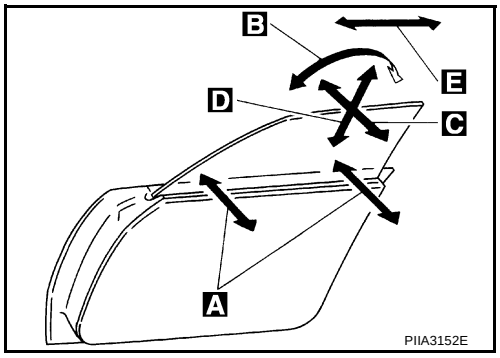
- Check that the glass is securely fit into the glass run groove.
- Lower the glass slightly [approx. 10 to 20 mm (0.39 to 0.79 in)] and check that the clearance to the sash is parallel. If the clearance between the glass and sash is not parallel, loosen the regulator mounting bolts, guide rail mounting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

Door Glass Fitting Adjustment

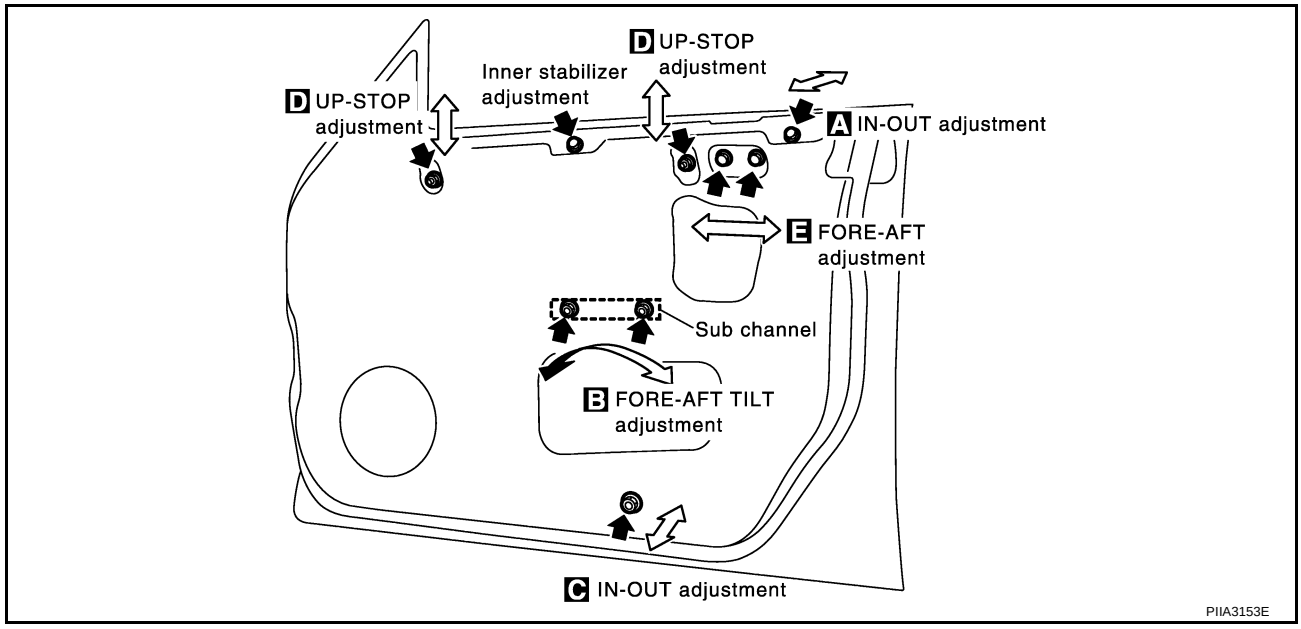
AIS001Q0

The door glass is properly adjusted using the following five methods:
[A] In-out adjustment (at the glass waist).
[B] Fore-aft tilt adjustment.
[C] In-out tilt adjustment.
[D] Up-stop adjustment.
[E] Fore-aft adjustment.

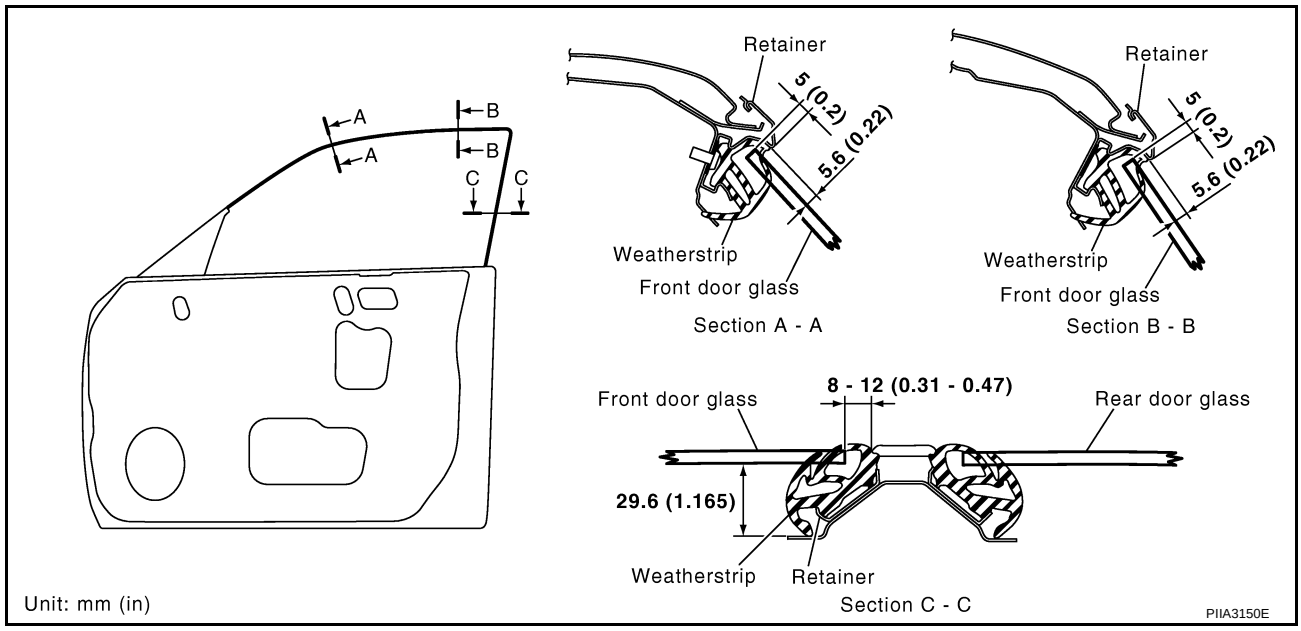
NOTE:
When adjusting the door glass, it is not necessary to remove the outside door molding.



ADJUSTMENT LOCATIONS



ADJUSTMENT STANDARD CLEARANCE

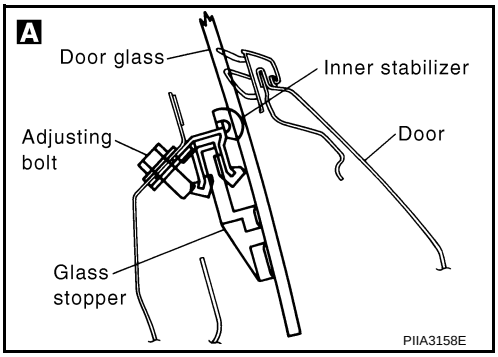


[A] IN-OUT ADJUSTMENT (AT THE GLASS WAIST)

1. Raise door glass until glass stopper is in contact with inner stabilizer, just before the window stops.
2. Loosen adjusting bolts.
3. Lightly press door glass upper end outward so that glass outer surface contacts outer. With glass held in that position, press inner stabilizer to glass inner surface and tighten adjusting bolt.

CAUTION:

Make sure nap portions of stabilizers are clean and free from oil, grease, etc.

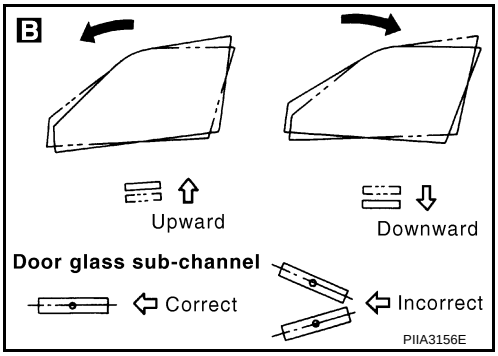


[B] FORE-AFT TILT ADJUSTMENT

- Adjust front glass sub-channel at the glass and retainer holder/body side weatherstrip location.
- For sub-channel adjustment procedures, refer to figure at right as a guide.

CAUTION:

- **Make sure door glass sub-channel is horizontal.**
- **The fore-aft tilt adjustment must be made at the same time the fore-aft adjustment [E] is made.**

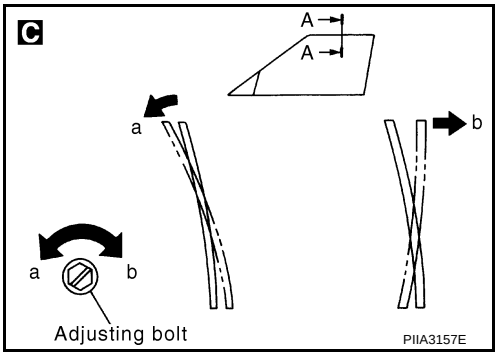


[C] IN-OUT TILT ADJUSTMENT (AT GUIDE RAIL)

1. Adjust door glass-to-holder clearance to 0 to 3.5 mm (0 to 0.138 in) with the adjusting bolts.

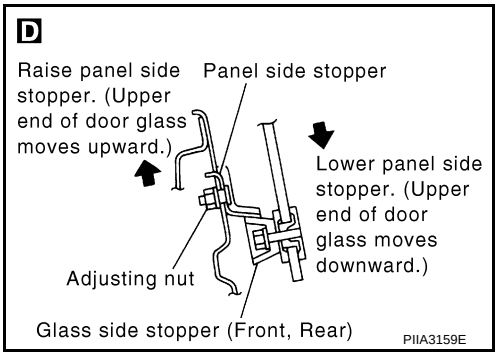
CAUTION:

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



[D] UP-STOP ADJUSTMENT

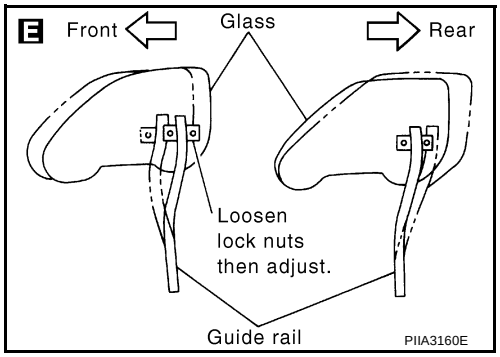
1. Adjust panel side stopper height so that clearance at upper edge of door is standard measurement to 0 to 3.5mm(0 to 0.138 in). Make sure front and rear glass side stoppers lightly contact front and rear panel side stoppers, then tighten adjusting nuts.
2. If stoppers do not contact each other, adjust sub-channel nut. Refer to “[B] Fore-aft tilt adjustment”.
3. Open and close doors to make sure upper end of door glass does not contact holder.



[E] FORE-AFT ADJUSTMENT

1. Adjust guide rail in the fore-aft direction so that clearance between upper edge of door glass and holder is constant at the midpoint of holder specified dimension to 0 to 3.5mm(0 to 0.138 in) when door is closed or opened.
2. If outer perimeter of door glass interferes with holder when door is opened or closed, refer to “[B] Fore-aft adjustment” for procedures.

CAUTION:
When loosening guide rail lock nut, prevent adjusting bolt from turning by holding it with a standard screwdriver.

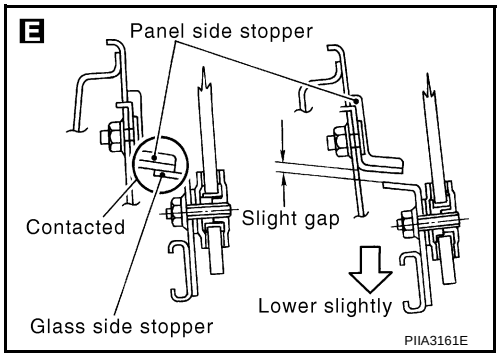


3. Lower the glass slightly until the glass side stopper comes off the panel side stopper.

CAUTION:
Do not lower the glass excessively.

- **After completing door glass adjustment, retighten all lock nuts.**

CAUTION:
While tightening lock nuts, hold adjusting bolts using a standard screwdriver to prevent them from turning.

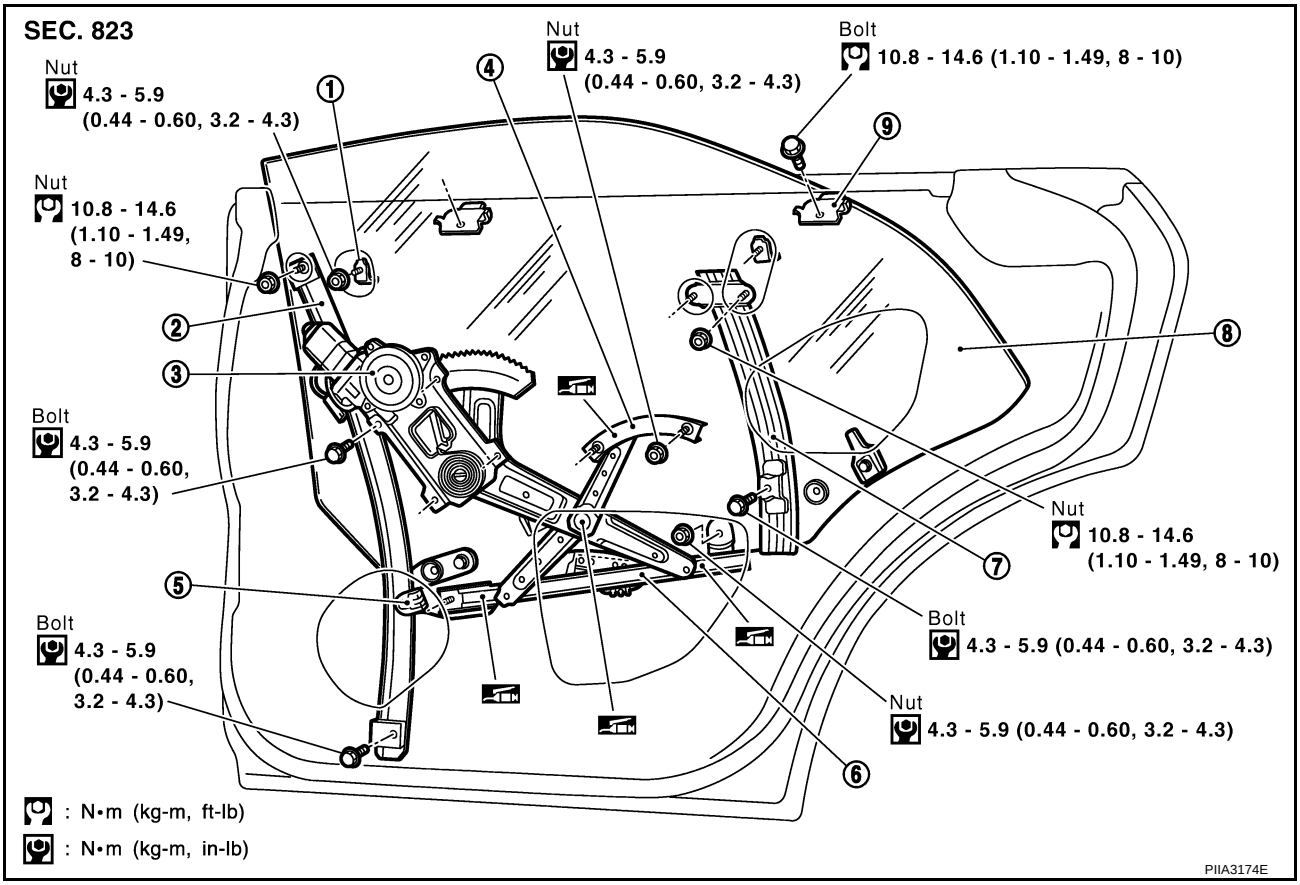


REAR DOOR GLASS AND REGULATOR

PFP:82300

Removal and Installation

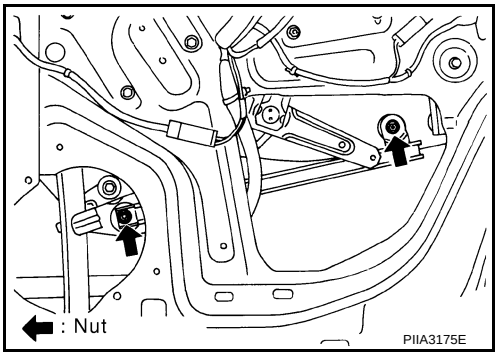
AIS001GQ



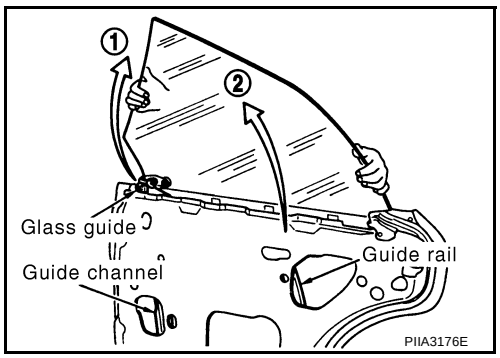
1.	Glass stopper	2.	Guide channel	3.	Regulator assembly
4.	Sub-channel	5.	Glass guide	6.	Main channel
7.	Guide rail	8.	Door glass assembly (Rear)	9.	Inner stabilizer

REMOVAL

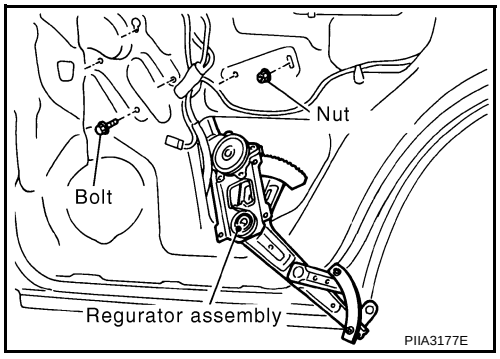
1. Remove rear door finisher. Refer to EI-31, "DOOR FINISHER"
2. Remove rear door speaker. Refer to AV-30, "Removal and Installation of Door Speaker"
3. Remove rear door outside molding. Refer to EI-27, "DOOR OUTSIDE MOLDING"
4. Remove door screen assembly.
5. Remove glass stopper and inner stabilizer.
6. Operate power window sub-switch to raise/lower door window until glass mounting bolts can be seen.
7. Remove glass mounting nuts.



8. Remove glass guide from glass channel while lifting the whole.



9. Pull out back guide roller from guide rail and detach glass.
10. Remove the harness connector routed on the frame assembly, then remove the harness clip from the back.
11. Remove bolt of sub-channel and regulator then remove regulator assembly.
12. Remove bolt of guide channel then remove guide channel.



INSPECTION AFTER REMOVAL

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

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

FITTING INSPECTION

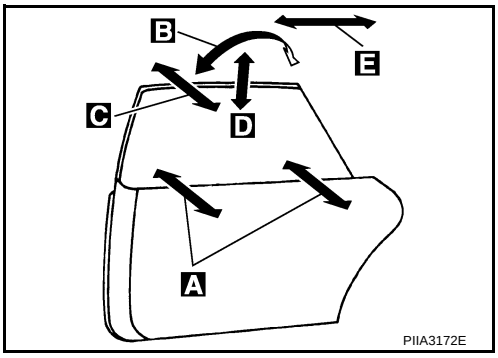
- Check that the glass is securely fit into the glass run groove.
- Lower the glass slightly [approx. 10 to 20 mm (0.39 to 0.79 in)], and check that the clearance to the sash is parallel. If the clearance between the glass and sash is not parallel, loosen the regulator mounting bolts, guide rail mounting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

Door Glass Fitting Adjustment

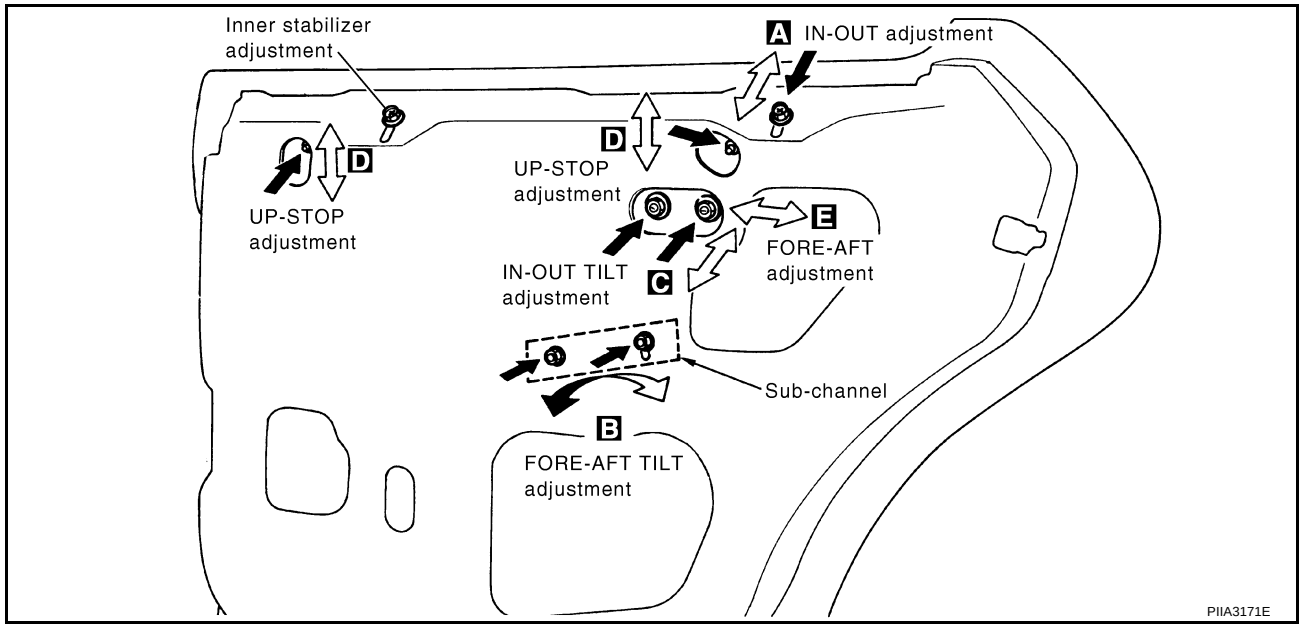
AIS001Q1

The door glass is properly adjusted using the following five methods:
[A] In-out adjustment (at the glass waist).
[B] Fore-aft tilt adjustment.
[C] In-out tilt adjustment.
[D] Up-stop adjustment.
[E] Fore-aft adjustment.

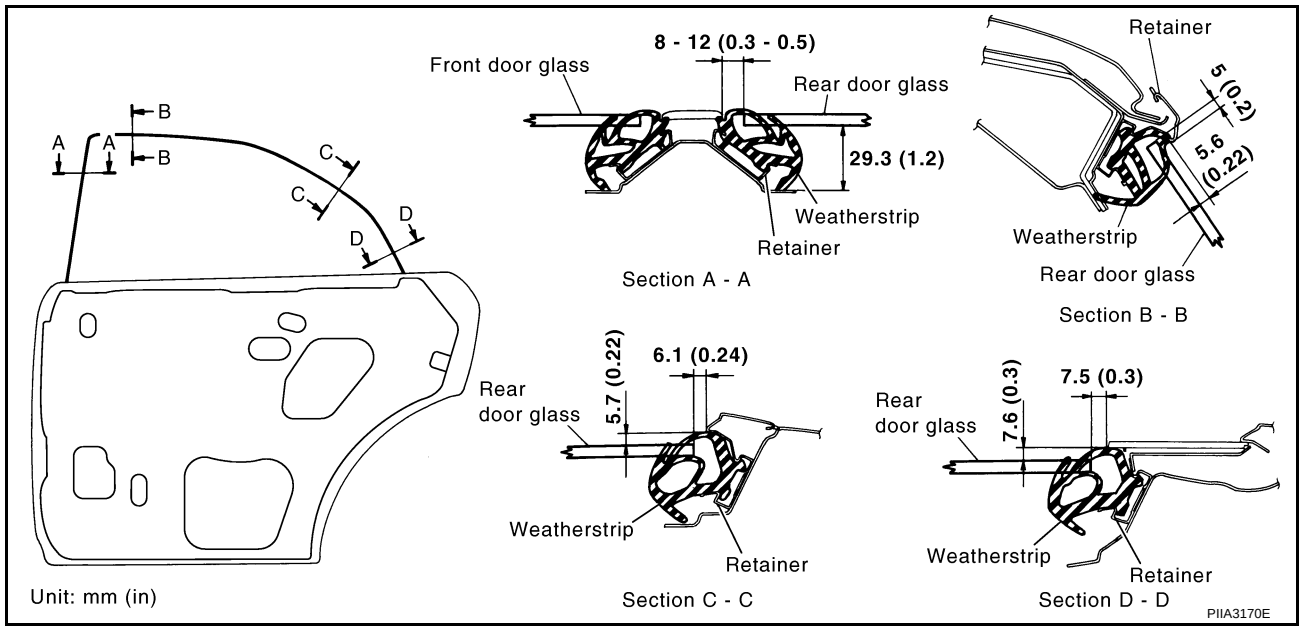
NOTE:
When adjusting the door glass, it is not necessary to remove the outside door molding.



ADJUSTMENT LOCATIONS



ADJUSTMENT STANDARD CLEARANCE

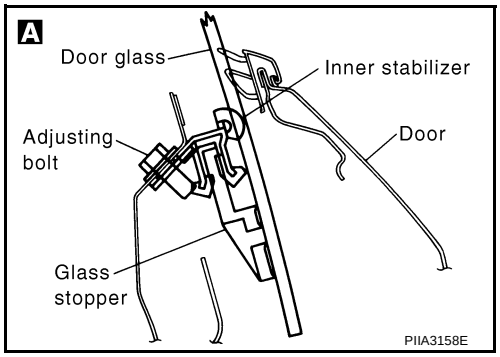


[A] IN-OUT ADJUSTMENT (AT THE GLASS WAIST)

1. Raise door glass until glass stopper is in contact with inner stabilizer, just before the window stops.
2. Loosen adjusting bolts.
3. Lightly press door glass upper end outward so that glass outer surface contacts outer. With glass held in that position, press inner stabilizer to glass inner surface and tighten adjusting bolt.

CAUTION:

Make sure nap portions of stabilizers are clean and free from oil, grease, etc.

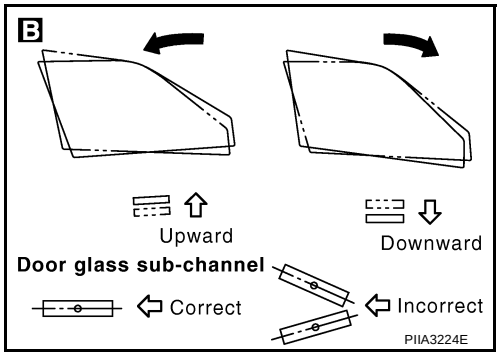


[B] FORE-AFT TILT ADJUSTMENT

- Adjust front glass sub-channel at the glass and retainer holder/body side weatherstrip location.
- For sub-channel adjustment procedures, refer to figure at right as a guide.

CAUTION:

- **Make sure door glass sub-channel is horizontal.**
- **The fore-aft tilt adjustment must be made at the same time the fore-aft adjustment [E] is made.**

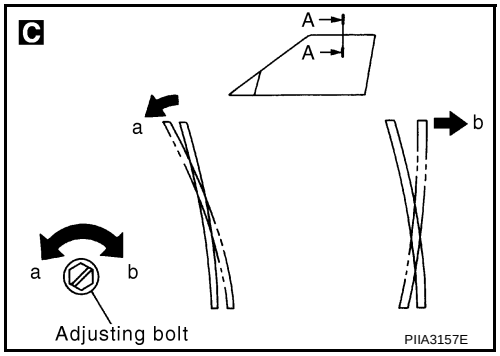


[C] IN-OUT TILT ADJUSTMENT (AT GUIDE RAIL)

1. Adjust door glass-to-holder clearance to 0 to 3.5 mm (0 to 0.138 in) with the adjusting bolts.

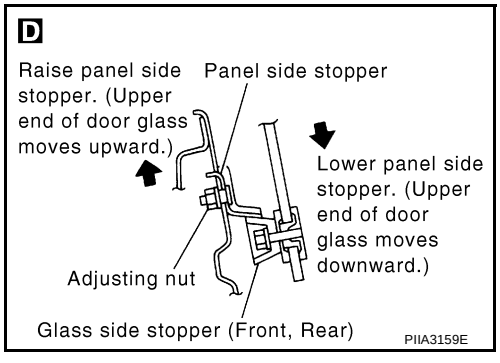
CAUTION:

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



[D] UP-STOP ADJUSTMENT

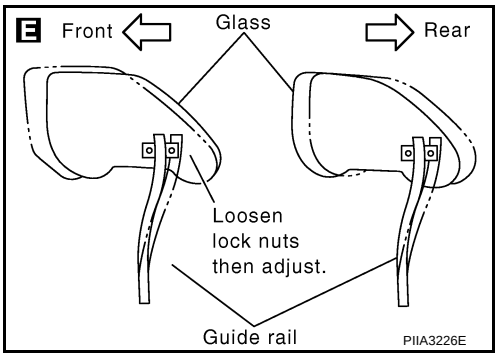
1. Adjust panel stopper height so that clearance at upper edge of door is standard measurement to 0 to 3.5 mm (0 to 0.138 in). Make sure front and rear glass stoppers lightly contact front and rear panel stoppers, then tighten adjusting nuts.
2. If stoppers do not contact each other, adjust sub-channel nut. Refer to “[B] Fore-aft tilt adjustment”.
3. Open and close doors to make sure upper end of door glass does not contact holder.



[E] FORE-AFT ADJUSTMENT

1. Adjust guide rail in the fore-aft direction so that clearance between upper edge of door glass and holder is constant at the midpoint of holder specified dimension to 0 to 3.5 mm (0 to 0.138 in) when door is closed or opened.
2. If outer perimeter of door glass interferes with holder when door is opened or closed, refer to “[B] Fore-aft adjustment” for procedures.

CAUTION:
When loosening guide rail lock nut, prevent adjusting bolt from turning by holding it with a standard screwdriver.

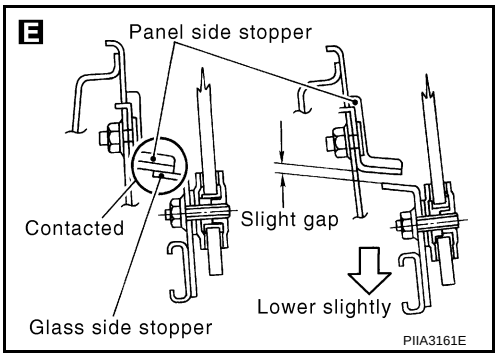


3. Lower the glass slightly until the glass side stopper comes off the panel side stopper.

CAUTION:
Do not lower the glass excessively.

- After completing door glass adjustment, retighten all lock nuts.

CAUTION:
While tightening lock nuts, hold adjusting bolts using a standard screwdriver to prevent them from turning.



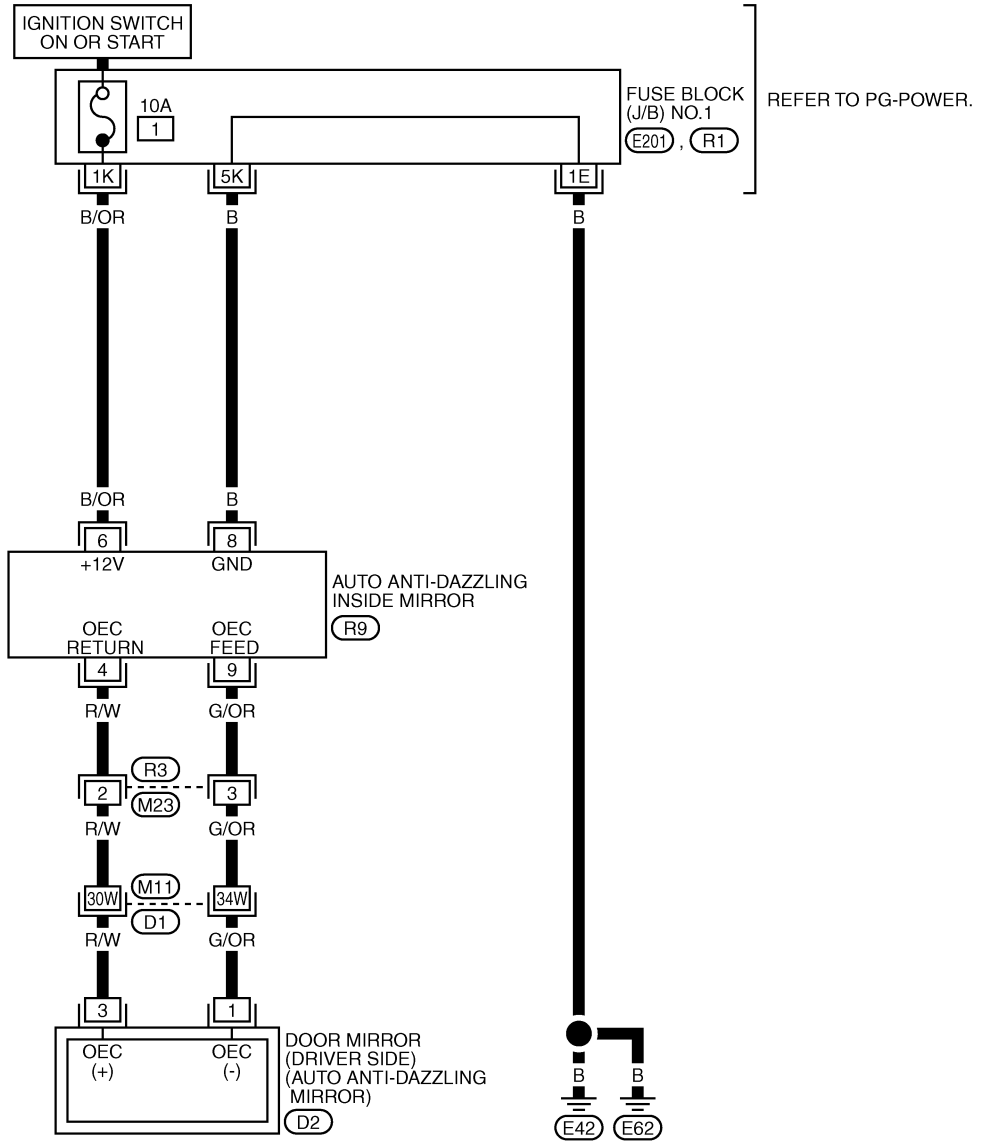
INSIDE MIRROR

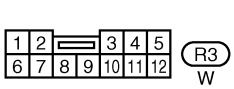
PFP:96321

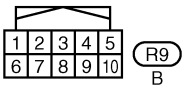
Wiring Diagram–I/MIRR–

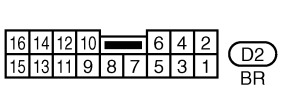
AIS001GR

GW-I/MIRR-01









REFER TO THE FOLLOWING.

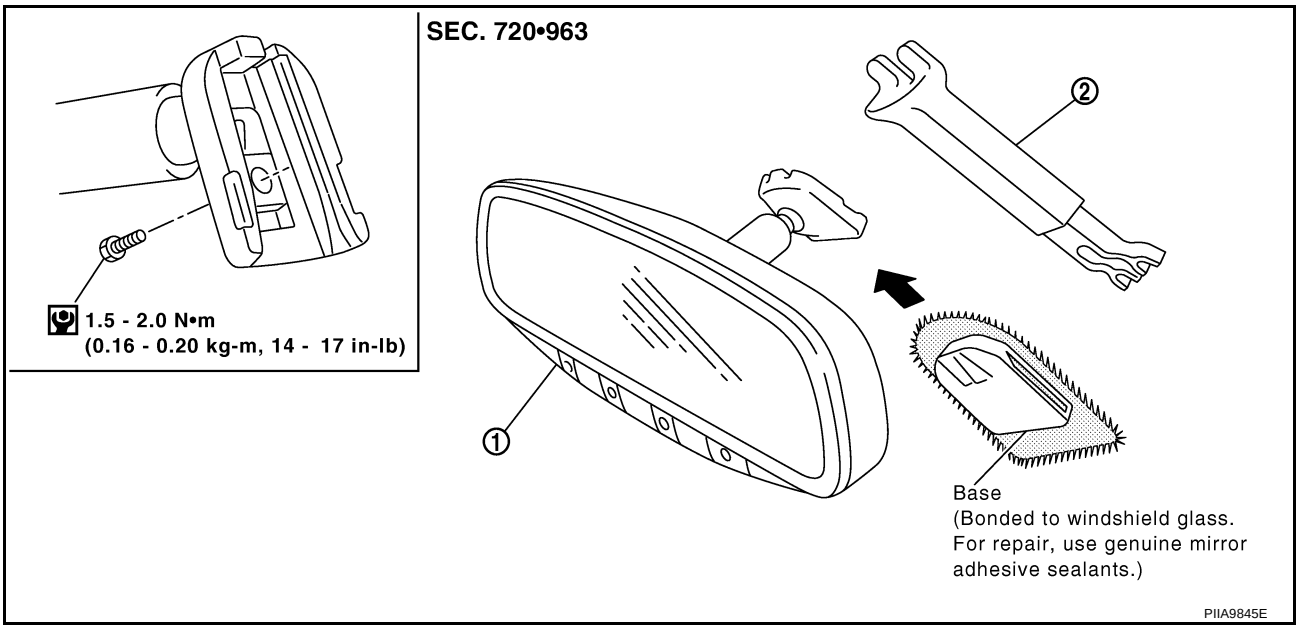
D1 -SUPER MULTIPLE JUNCTION (SMJ)

E201 , R1 -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

TIWA0228E

Removal and Installation

AIS001GS



1. Inside mirror
2. Inside mirror finisher

REMOVAL

1. Remove inside mirror finisher.
2. Remove screw of inside mirror base.
3. Slide inside mirror upward to remove, and disconnect the connector.

INSTALLTION

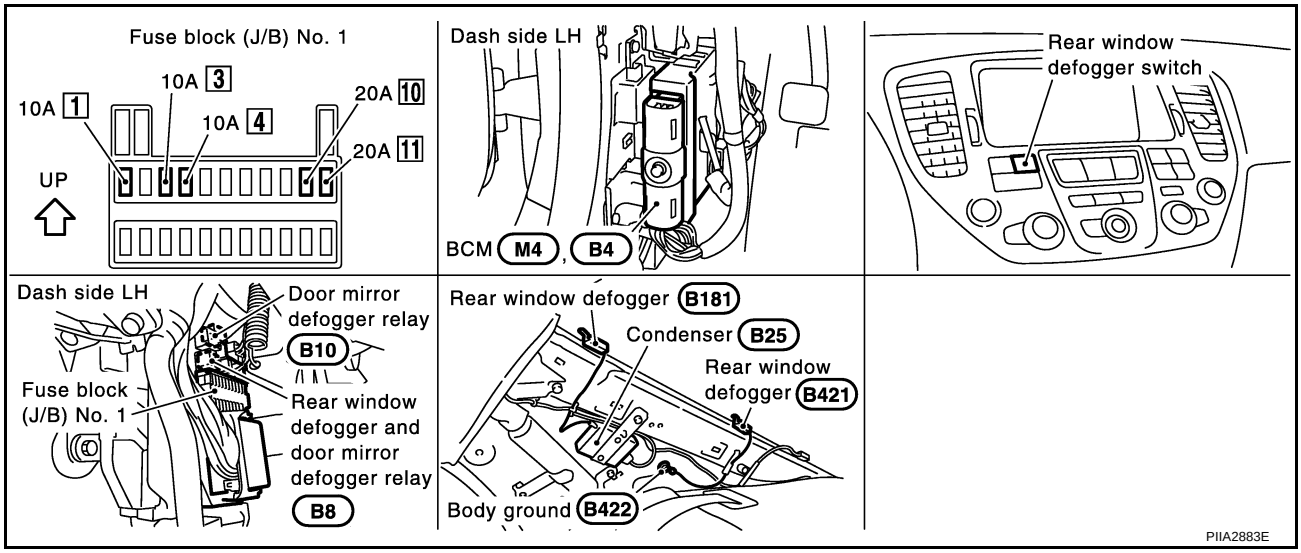
Install in the reverse order of removal.

REAR WINDOW DEFOGGER

PFP:25350

Component Parts and Harness Connector Location

AIS001GU



System Description

AIS001GT

The rear window defogger system is controlled by the BCM (Body Control Module), The rear window defogger is operated only for approximately 15 minutes.
Power is supplied at all times

- through 20A fuse[NO.10, located in the fuse block (J/B)],
- to the rear window defogger and door mirror defogger relay terminal 6,
- through 20A fuse[NO.11, located in the fuse block (J/B)],
- to the rear window defogger and door mirror defogger relay terminal 3,
- through 10A fuse[NO.3, located in the fuse block (J/B)],
- to BCM terminal 105.

With the ignition switch in the ACC or ON position,
Power is supplied

- through 10A fuse[NO.4, located in the fuse block (J/B)]
- to the door mirror defogger relay terminal 5.

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

- through 10A fuse[NO.1, located in the fuse block (J/B)],
- to BCM terminal 68, and
- to the rear window defogger and door mirror defogger relay terminal 1.

When the rear defogger switch in the multifunction switch is ON,
Ground is supplied

- to multifunction switch (rear window defogger switch) terminal 5,
- through BCM terminal 10,
- through BCM terminal 56,
- through body grounds M24 and M114.

Then BCM recognizes that rear window defogger switch is turned to ON,
Ground is supplied

- to the rear window defogger and door mirror defogger relay terminal 2,
- through BCM terminal 144,
- through BCM terminal 56,
- through body grounds M24 and M114.

With power and ground supplied rear window defogger and door mirror defogger relay is energized.
When rear window defogger and door mirror defogger relay is turned ON,

Power is supplied.

- through rear window defogger and door mirror defogger relay terminal 5 and 7,
- through condenser terminal 1,
- to rear window defogger terminal 2.

Ground is supplied

- to rear window defogger terminal 1,
- through body ground B422.

This power and ground supplied rear window defogger filaments heat and defog the rear window.
When rear window defogger and door mirror defogger relay is turned ON, power is supplied.

- through rear window defogger and door mirror defogger relay terminal 5 and 7,
- to door mirror defogger relay terminal 2.

Ground is supplied

- to Door mirror defogger relay terminal 1,
- through body ground B17 and B57.

When door mirror defogger relay is energized.
When door mirror defogger relay is turned ON, power is supplied.

- through door mirror defogger relay terminal 3,
- to door mirror defogger terminal (Driver side and Passenger side) 6.

Ground is supplied

- to door mirror defogger (Driver side and Passenger side) terminal 5.
- through body grounds M24 and M114.

With power and grounds supplied, door mirror defogger filaments heat and defog the mirror.
When rear window defogger and door mirror defogger relay is turned ON, power is supplied.

- through rear window defogger and door mirror defogger relay terminal 5 and 7,
- to multifunction switch (rear window defogger switch) terminal 6.

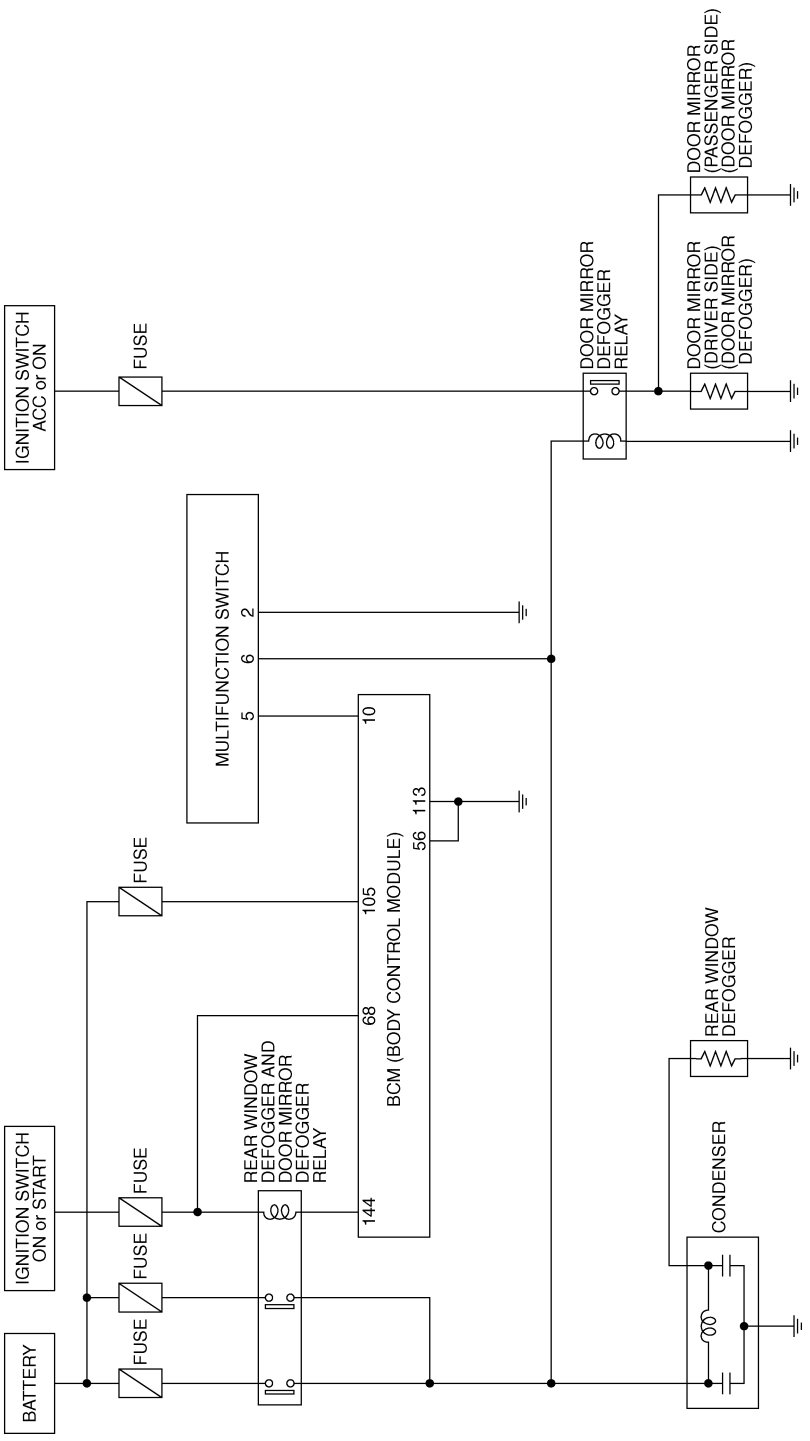
Ground is supplied

- to multifunction switch (rear window defogger switch) terminal 2,
- through body ground M24 and M114.

Then rear window defogger switch indicator is illuminated.

Schematic

AIS001GV

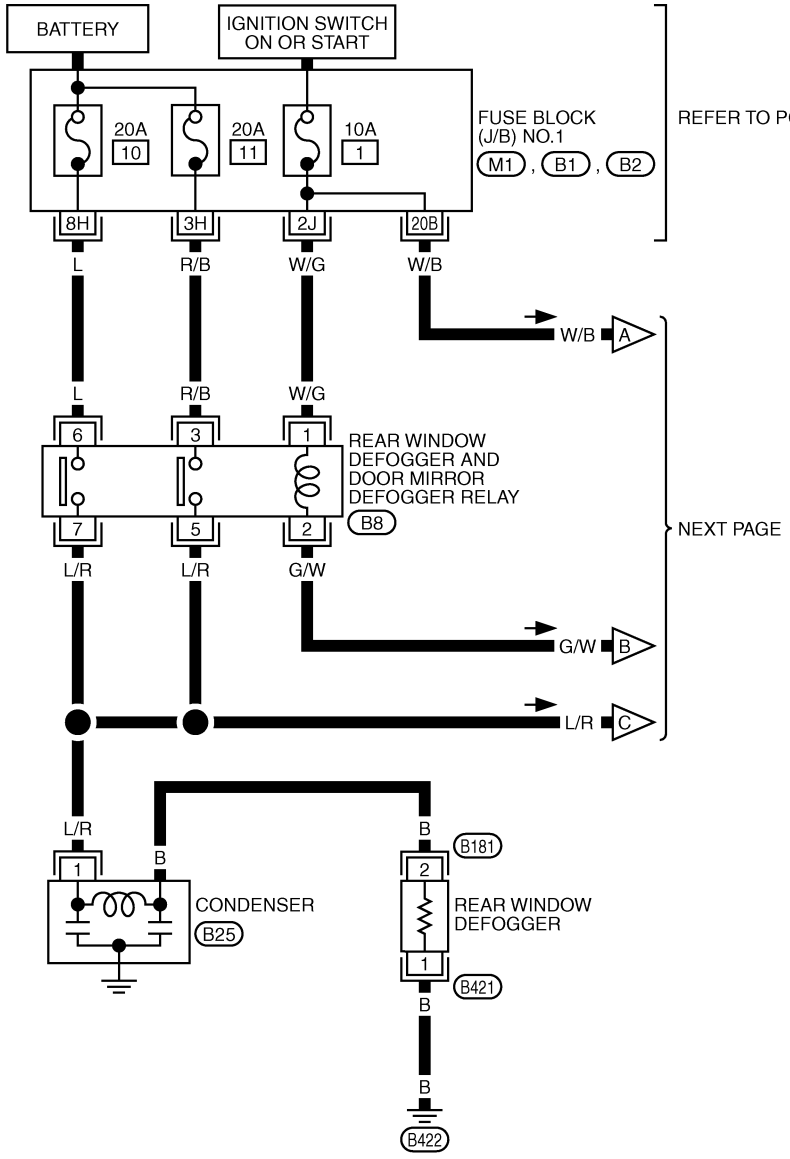


TIWM0036E

Wiring Diagram — DEF —

AIS001GW

GW-DEF-01

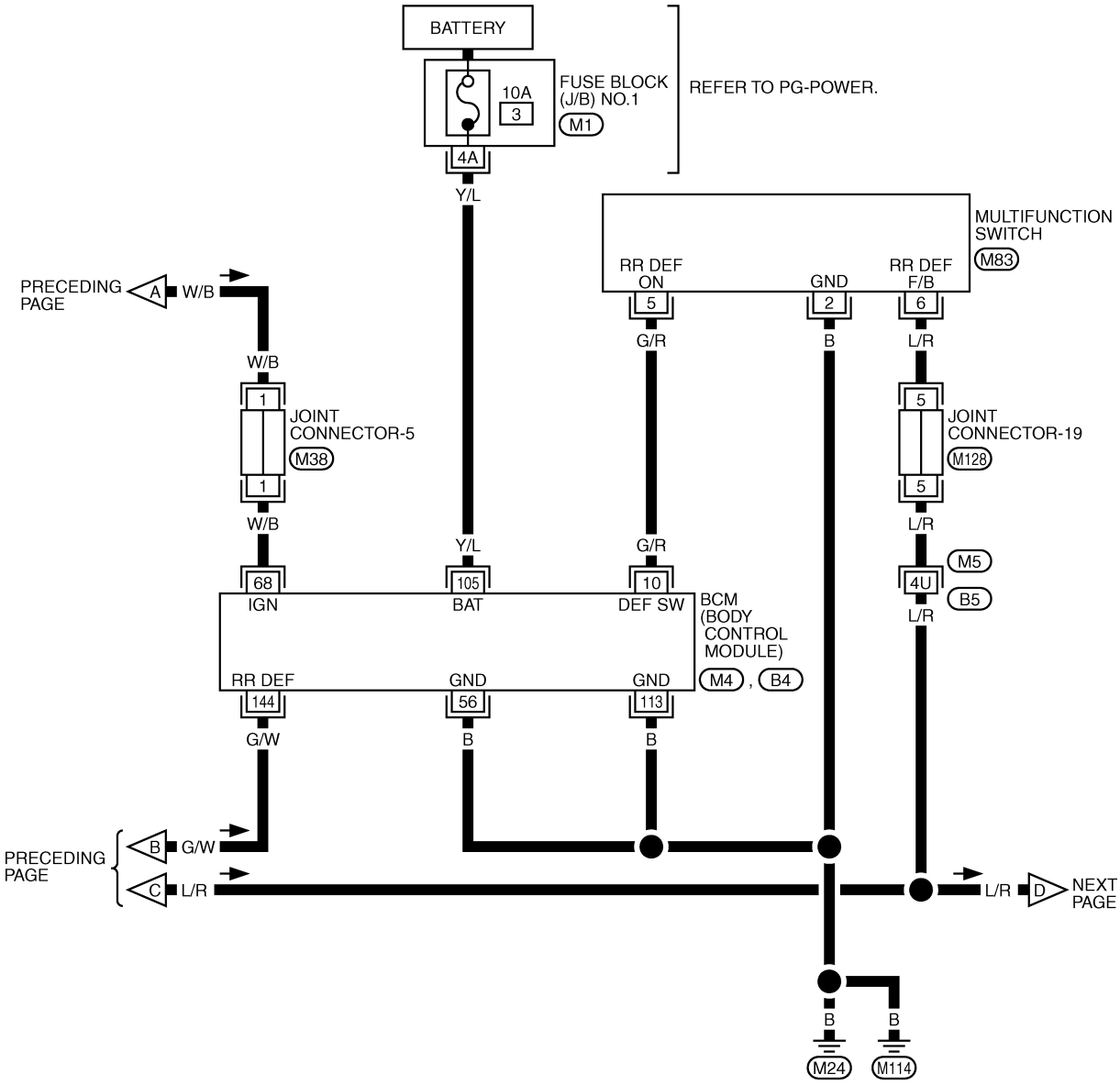


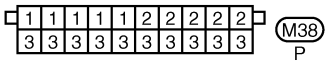
∗: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

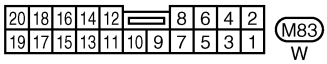
REFER TO THE FOLLOWING.
M1 , B1 , B2 -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

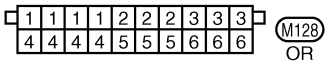
TIWA0230E

GW-DEF-02









REFER TO THE FOLLOWING.

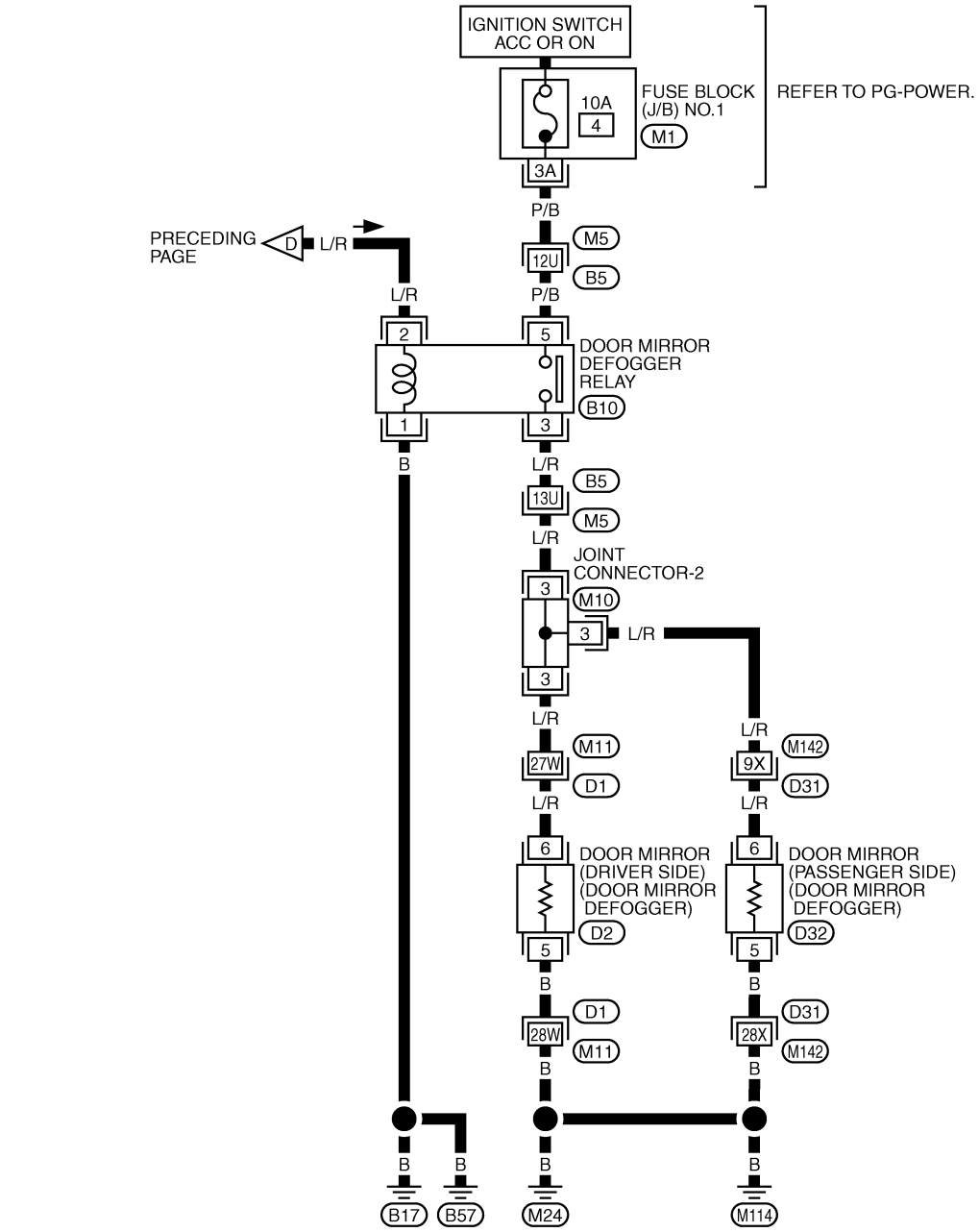
M5 -SUPER MULTIPLE JUNCTION (SMJ)

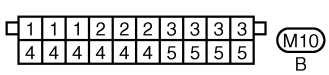
M1 -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

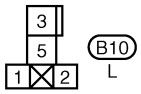
M4 , B4 -ELECTRICAL UNITS

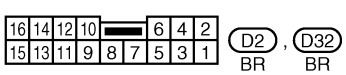
TIWA0231E

GW-DEF-03









REFER TO THE FOLLOWING.

M5 , D1 , D31 -SUPER MULTIPLE JUNCTION (SMJ)

M1 -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

TIWA0232E

Terminals and reference value for BCM

AIS001O1

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
10	G/R	Rear defogger switch signal	Rear defogger switch ON	0V
			Rear defogger switch OFF	Approx.5V
56	B	Ground	–	0V
68	W/B	IGN power supply	Ignition switch ON or START	Battery voltage
105	Y/L	BAT power supply	–	Battery voltage
113	B	Ground	–	0V
144	G/W	Rear window defogger and door mirror defogger relay control signal	Rear defogger switch ON	0V
			Rear defogger switch OFF	Battery voltage

Work Flow

AIS001GX

1. Check the symptom and customer's requests.
2. Understand the outline of system. Refer to GW-60, "System Description" .
3. The preliminary check. Refer to GW-66, "Preliminary Check" .
4. According to the trouble diagnosis chart, repair or replace the cause of the malfunction. Refer to GW-69, "Trouble Diagnoses Symptom Chart" .
5. Does rear defogger operate normally? OK: GO TO 6. NG: GO TO 4.
6. Inspection end.

Preliminary Check

AIS002MW

POWER SUPPLY AND GROUND CIRCUIT INSPECTION

1. FUSE INSPECTION

- Check that any of the following fuses in the BCM is blown.

Unit	Terminal NO.	Power source	Fuse NO.
BCM	105	BAT power supply	#3
	68	IGN power supply	#1

NOTE:

Refer toGW-60, "Component Parts and Harness Connector Location" .

OK or NG?

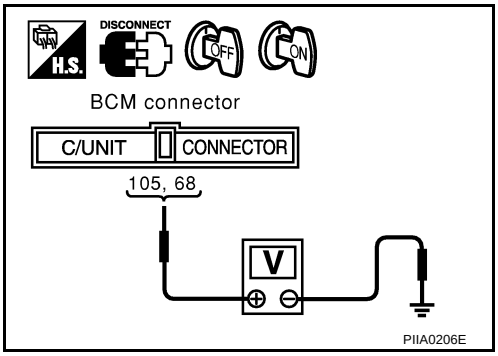
OK >> GO TO 2.

NG >> If fuse is blown, be sure to eliminate cause of problem before installing new fuse. Refer to PG-2, "POWER SUPPLY ROUTING" .

2. POWER SUPPLY CIRCUIT INSPECTION (BCM)

1. Turn ignition switch OFF.
2. Disconnect the BCM connector M4, check voltage between connector terminal (refer to the “Chart” below”) of the harness connector and ground.

Terminals			Power source	Condition	Voltage (V) (Approx.)
(+)		(–)			
Connector	Terminal (Wire color)				
M4	105(Y/L)	Ground	BAT power supply	Ignition switch OFF	Battery voltage
	68(W/B)	Ground	IGN power supply	Ignition switch ON	Battery voltage



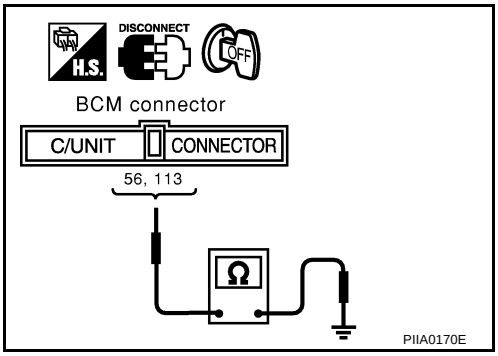
OK or NG?

OK >> GO TO 3.
NG >> Check harness for open and short between BCM and fuse.

3. GROUND CIRCUIT INSPECTION (BCM)

Check continuity between BCM connector M4 terminals and ground.

56 (B) – Ground :Continuity should exist.
113 (B) – Ground :Continuity should exist.



OK or NG?

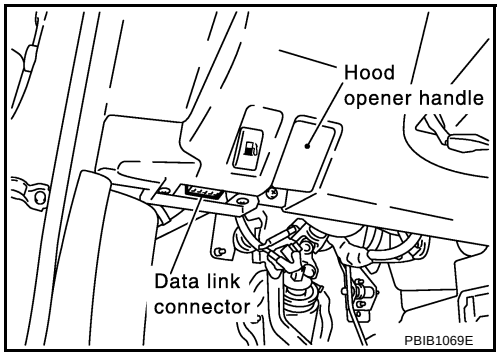
OK >> System is OK.
NG >> Repair or replace harness.

CONSULT-II Function

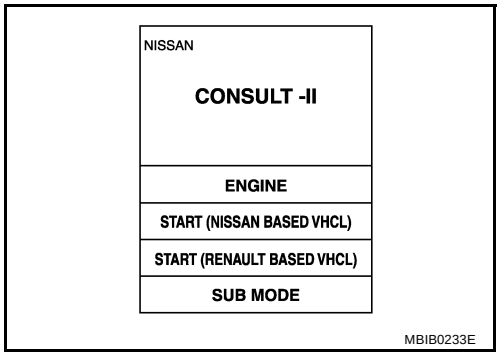
AIS001Q5

CONSULT-II BASIC OPERATION PROCEDURE

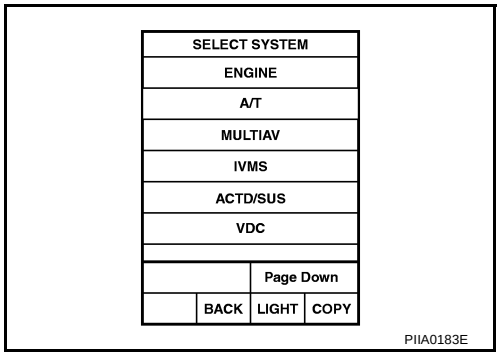
1. Turn ignition switch “OFF”.
2. Connect “CONSULT-II” and CONSULT-II CONVERTER to data link connector.



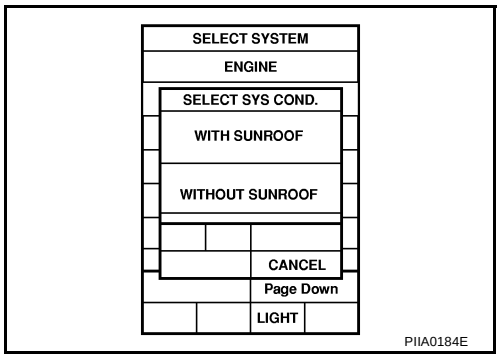
3. Turn ignition switch “ON”.
4. Touch “START(NISSAN BASED VHCL)”.



5. Touch “IVMS”on the “SELECT SYSTEM” screen.
   If IVMS is not indicated, go to GI-38, "CONSULT-II Data Link Connector (DLC) Circuit" .



6. Check the model specification, and touch either “WITH SUN-ROOF” or “WITHOUT SUNROOF” on the “SELECT SYS COND” screen.
7. Touch “OK”. If the selection is wrong, touch “CANCEL”.
8. Select the desired part to be diagnosed on the “SELECT TEST ITEM” screen.



DATA MONITOR

Display Item List

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

ACTIVE TEST

Display Item List

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

Trouble Diagnoses Symptom Chart

AIS001O3

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

Symptom	Diagnoses / service procedure	Refer to page
Rear window defogger and door mirror defogger do not operate.	1, Rear window defogger switch circuit check.	GW-69
	2, Rear window defogger and door mirror defogger circuit check.	GW-70
	3, Replace BCM	–
Rear window defogger does not operate, but door mirror defogger operates.	1, Rear window defogger circuit check.	GW-72
	2, Filament check.	GW-76
Door mirror defogger does not operated, but rear window defogger operates.	1, Door mirror defogger power supply circuit check.	GW-73
Driver side door mirror defogger does not operated, but door mirror defogger operates	1, Driver side door mirror defogger circuit check.	GW-74
Passenger side door mirror defogger does not operated, buy door mirror defogger operates.	1, Passenger side door mirror defogger circuit check.	GW-75

Rear Window Defogger Switch Circuit Check

AIS001O5

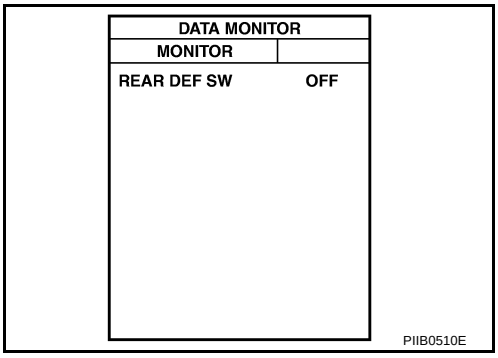
1. REAR WINDOW DEFOGGER (MULTIFUNCTION) SWITCH INSPECTION

With CONSULT-II

Check rear window switch "**REAR DEF SW** " in "DATA MONITOR" mode with CONSULT-II.

When rear window defogger switch ON

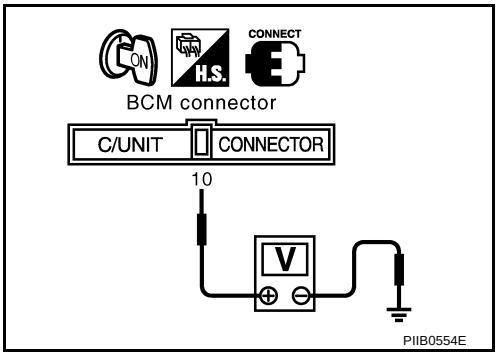
REAE DEF SW : ON



With out CONSULT-II

1. Turn ignition switch ON.
2. Check voltage between BCM connector M4 terminal 10(G/R) and ground.

Connector	Terminal (Wire color) (+)	Terminal (Wire color) (–)	Condition	Voltage (V) (Approx.)
M4	10 (G/R)	Ground	When rear window defogger switch is pressed.	0
			When rear window defogger switch is OFF.	5



OK or NG

OK >> Rear window defogger switch check is OK.

NG >> GO TO 2

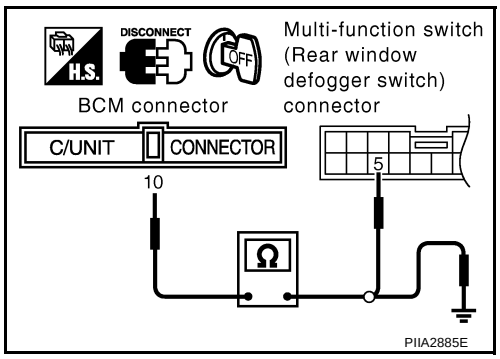
2. REAR WINDOW DEFOGGER SWITCH SIGNAL CIRCUIT INSPECTION

1. Disconnect BCM connector and multifunction switch (rear window defogger with) connector.
2. Check continuity between BCM connector M4 terminal 10(G/R) and multifunction switch (rear defogger switch) connector M83 terminal 5(G/R).

10 (G/R) – 5(G/R) :Continuity should exist

3. Check continuity between BCM harness connector M4 terminal 10(G/R) and ground

10 (G/R) – ground :Continuity should not exist



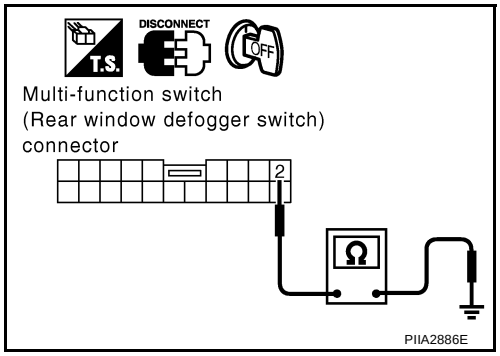
OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness between BCM and multifunction switch (rear window defogger switch).

3. MULTIFUNCTION (REAR WINDOW DEFOGGER) SWITCH GROUND HARNESS INSPECTION

Check continuity between multifunction (rear window defogger) switch connector M83 terminal 2 (B) and ground.

2(B) – ground :Continuity should exist



OK or NG

OK >> Replace multifunction switch.
NG >> Repair or replace harness between multifunction (rear window defogger) switch and ground.

Rear Window Defogger and Door Mirror Defogger Circuit Check

AIS001O6

1. CHECK FUSE

1. Turn ignition switch OFF.
2. Check if the following fuse for Fuse block (J/B) is blown.

COMPONENT PARTS	TERMINAL NO. (SIGNAL)	AMPERE	FUSE NO.
Fuse block (J/B)	2J (IGN power supply)	10A	#1

NOTE:
Refer to GW-60, "Component Parts and Harness Connector Location" .

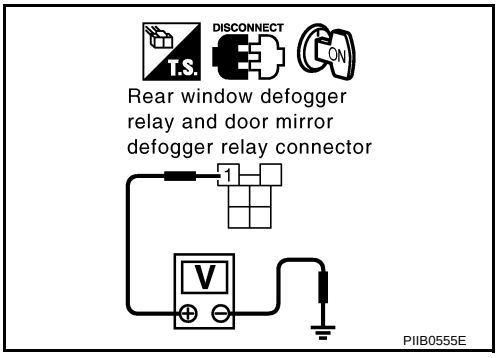
OK or NG

OK >> GO TO 2.
NG >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse, refer to PG-2, "POWER SUPPLY ROUTING" .

2. REAR WINDOW DEFOGGER AND DOOR MIRROR DEFOGGER RELAY POWER SUPPLY CIRCUIT INSPECTION

1. Disconnect rear window defogger and door mirror defogger relay.
2. Turn ignition switch ON.
3. Check voltage between rear window defogger and door mirror defogger relay harness connector B8 terminal 1 (W/G) and ground.

1 (W/G) – Ground : Battery voltage



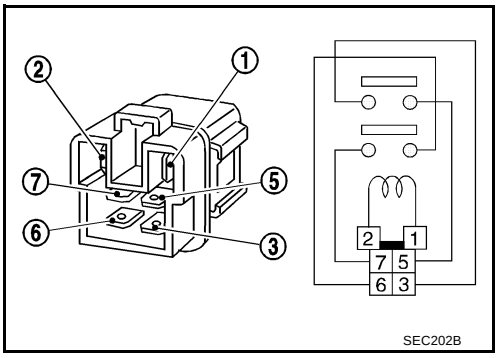
OK or NG

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

3. REAR WINDOW DEFOGGER AND DOOR MIRROR DEFOGGER RELAY INSPECTION

Check continuity between terminals 3 and 5, 6 and 7.

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



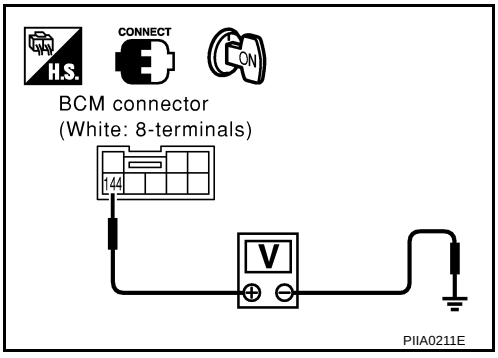
OK or NG

OK >> GO TO 4.
NG >> Replace rear window defogger and door mirror defogger relay.

4. REAR WINDOW DEFOGGER AND DOOR MIRROR DEFOGGER RELAY GROUND HARNESS INSPECTION

1. Turn ignition switch OFF.
2. Installation rear window defogger and door mirror defogger relay.
3. Turn ignition switch ON.
4. Check voltage between BCM connector terminal 144 (G/W) and ground.

144 (G/W) – Ground : Battery voltage



OK or NG

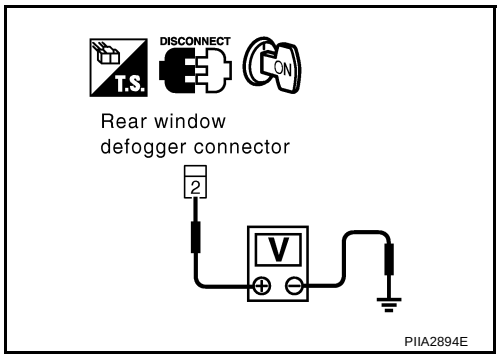
OK >> Rear window defogger and door mirror defogger circuit is OK.
NG >> Repair or replace harness between rear window defogger and door mirror defogger relay and BCM.

Rear Window Defogger Circuit Check

AIS001O7

1. REAR WINDOW DEFOGGER POWER SUPPLY CIRCUIT INSPECTION 1

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



Connector	Terminal (Wire color) (+)	Terminal (Wire color) (–)	Condition	Voltage V (Approx)
B181	2 (B)	Ground	Turn ignition switch ON. When rear window defogger switch is pressed.	Battery voltage
			Turn ignition switch OFF.	0

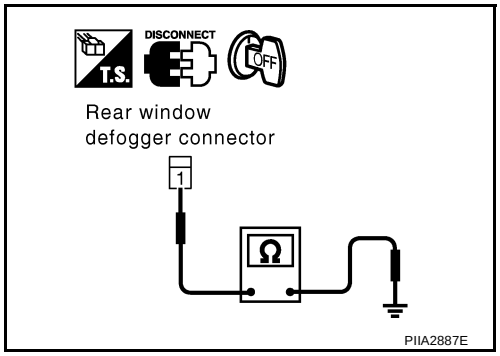
OK or NG

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

2. REAR WINDOW DEFOGGER GROUND HARNESS INSPECTION

1. Turn ignition switch OFF.
2. Check continuity between rear window defogger connector B421terminal 1 (B) and ground.

1(B) – ground :Continuity should exist

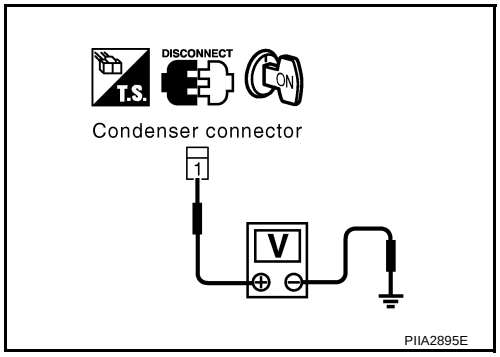


OK or NG

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

3. REAR WINDOW DEFOGGER GROUND HARNESS INSPECTION 2

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



Connector	Terminal (Wire color) (+)	Terminal (Wire color) (–)	Condition	Voltage V (Approx)
B25	1 (L/R)	Ground	When rear window defogger switch is pressed.	Battery voltage
			Turn ignition switch OFF.	0

OK or NG

OK >> Check the condenser
- If condenser is OK, repair or replace harness between condenser and rear window defogger.
- If condenser is NG, replace condenser.

NG >> Repair or replace harness between rear window defogger and door mirror defogger relay and condenser.

Door Mirror Defogger Power Supply Circuit Check

AIS001OA

1. CHECK FUSE

1. Turn ignition switch OFF.
2. Check if the following fuse for Fuse block (J/B) is blown.

COMPONENT PARTS	TERMINAL NO. (SIGNAL)	AMPERE	FUSE NO.
Fuse block (J/B)	3A (BAT power supply)	10A	#4

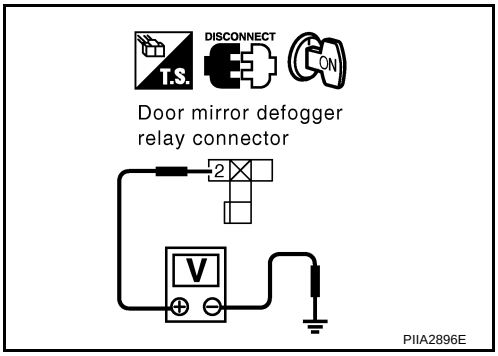
NOTE:
Refer to GW-60, "Component Parts and Harness Connector Location" .

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-2, "POWER SUPPLY ROUTING"

2. DOOR MIRROR DEFOGGER POWER SUPPLY CIRCUIT INSPECTION 1

1. Disconnect door mirror defogger relay connector.
2. Turn ignition switch ON.
3. push the rear window defogger switch.
4. Check voltage between door mirror defogger relay connector and ground.



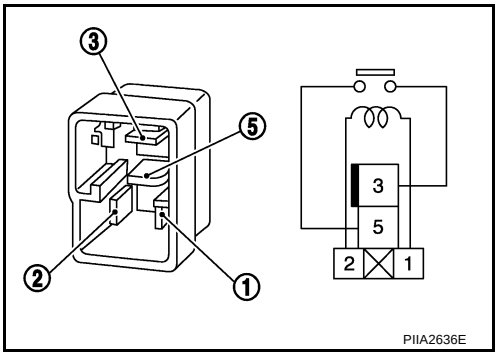
Con-nector	Terminal (Wire color)		Condition	Voltage V (Approx)
	(+)	(–)		
B10	2 (L/R)	Ground	Turn ignition switch ON. When rear window defogger switch is pressed.	Battery voltage
			Turn ignition switch OFF.	0

OK or NG

OK >> GO TO 3.
NG >> Repair or replace between harness rear window defogger and door mirror defogger relay and door mirror defogger relay.

3. DOOR MIRROR DEFOGGER RELAY INSPECTION

1. Turn ignition switch OFF.
2. Remove door mirror defogger relay.
3. Check continuity between terminals 3 and 5.



Terminal		Condition	Continuity
3	5	12V direct current supply between terminals 1 to 2	Should exist
		No current supply	Should not exist

OK or NG

OK >> GO TO 4.
NG >> Replace door mirror defogger relay.

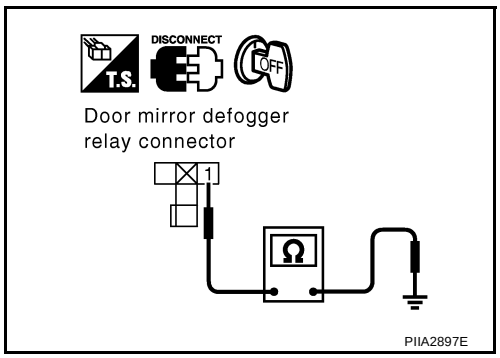
4. DOOR MIRROR DEFOGGER RELAY GROUND HARNESS INSPECTION

Check continuity between door mirror defogger relay connector B10 terminal 1 (B) and ground.

1 (B) – ground :Continuity should exist

OK or NG

OK >> GO TO 5.
NG >> Repair or replace harness between door mirror defogger relay and ground.



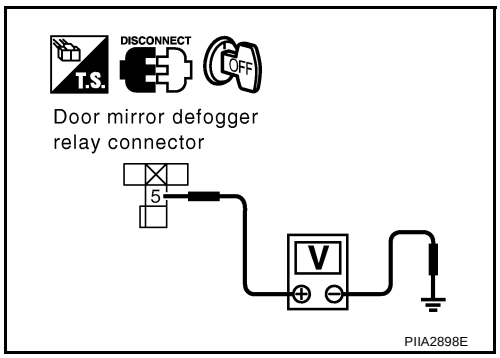
5. DOOR MIRROR DEFOGGER POWER SUPPLY CIRCUIT INSPECTION

Check voltage between door mirror defogger relay connector B10 terminal 5 (P/B) and ground.

5 (P/B) – Ground : Battery voltage

OK or NG

OK >> Check the harness for open or short between door mirror defogger relay and door mirror.
NG >> Repair or replace harness between fuse block (J/B) No.1 and door mirror defogger relay.



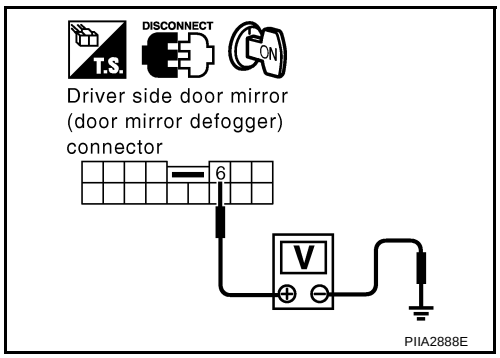
Driver Side Door Mirror Defogger Circuit Check

AIS001OB

1. DOOR MIRROR DEFOGGER POWER SUPPLY CIRCUIT INSPECTION

1. Turn ignition switch OFF.
2. Disconnect door mirror defogger connector.
3. Check voltage between driver side door mirror defogger connector and ground.

Connector	Terminal (Wire color) (+)	Terminal (Wire color) (–)	Condition	Voltage V (Approx)
D2	6(L/R)	Ground	Turn ignition switch ON. When rear window defogger switch is pressed.	Battery voltage
			Turn ignition switch OFF.	0



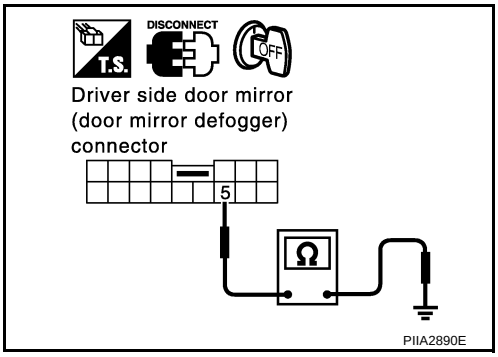
OK or NG

OK >> GO TO 2.
NG >> Repair or replace harness between door mirror defogger relay and driver side door mirror (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 5 (B) and ground.

5 (B) – Ground : Continuity should exist.



OK or NG

OK >> Check the following, if it is OK, replace driver side door mirror glass.
- Door mirror defogger firmament continuity check.
- Check the harness for open or short between door mirror defogger relay and door mirror.

NG >> Repair or replace harness between driver side door mirror (Door mirror defogger) and ground.

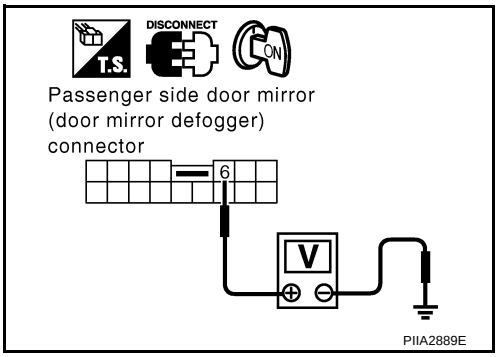
Passenger Side Door Mirror Defogger Circuit Check

AIS001OC

1. DOOR MIRROR DEFOGGER POWER SUPPLY CIRCUIT INSPECTION

1. Turn ignition switch OFF.
2. Disconnect passenger side door mirror defogger connector.
3. Check voltage between passenger side door mirror defogger connector and body ground.

Connector	Terminal (Wire color)		Condition	Voltage V (Approx)
	(+)	(–)		
D32	6 (L/R)	Ground	Turn ignition switch ON. When rear window defogger switch is pressed.	Battery voltage
			Turn ignition switch OFF.	0



OK or NG

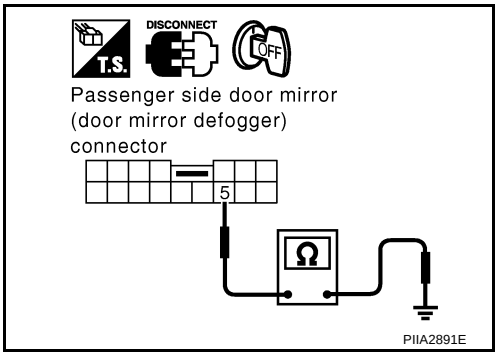
OK >> GO TO 2.

NG >> Repair or replace harness between door mirror defogger relay and passenger side door mirror (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 5 (B) and body ground.

5 (B) – Ground : Continuity should exist.



OK or NG

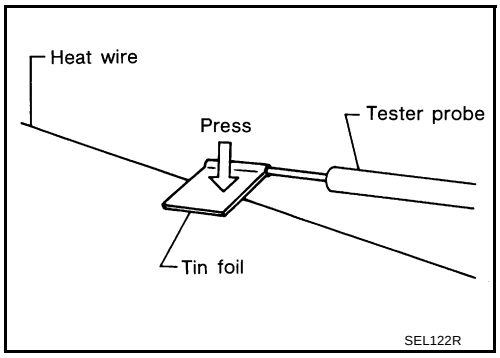
OK >> Check the following, if it is OK, replace passenger side door mirror glass.
- Door mirror defogger firmament continuity check.
- Check the harness for open or short between door mirror defogger relay and door mirror.

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

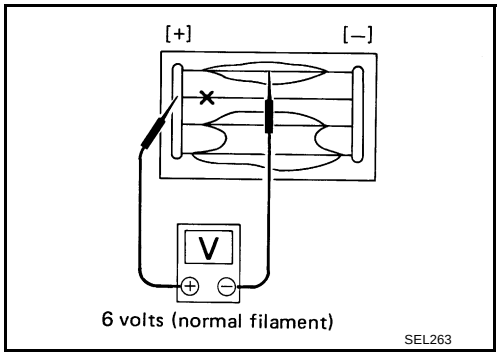
Filament Check

AIS001H3

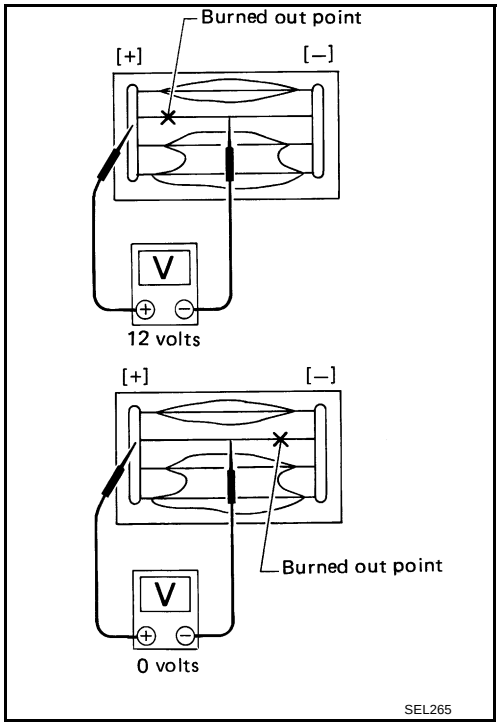
1. When measuring voltage, wrap tin foil around the top of the negative probe.Then press the foil against the wire with your finder.



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



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



Filament Repair

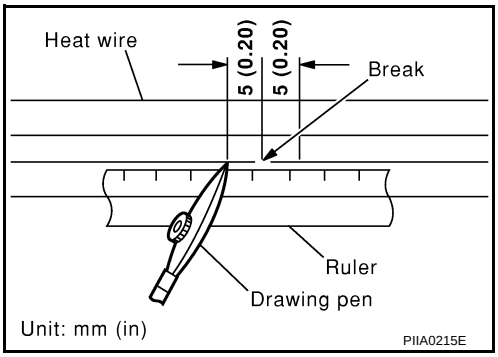
AIS001H4

REPAIR EQUIPMENT

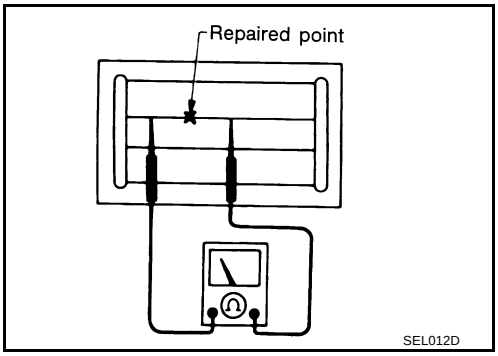
- Conductive silver composition (Dupont No.4817 or equivalent)
- Ruler 30 cm(11.8in) long
- Drawing pen
- Heat gun
- Alcohol
- Cloth

REPAIRING PROCEDURE

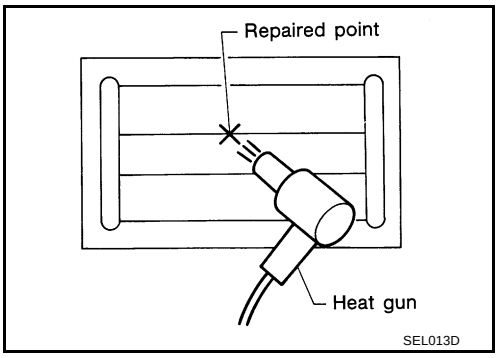
1. Wipe broken heat wire and its surrounding area clean with a cloth dampened alcohol.
2. Apply a small amount of conductive silver composition to tip of drawing pen.
   Shake silver composition container before use.
3. Place ruler on glass along broken line. Deposit conductive silver composition on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



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



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

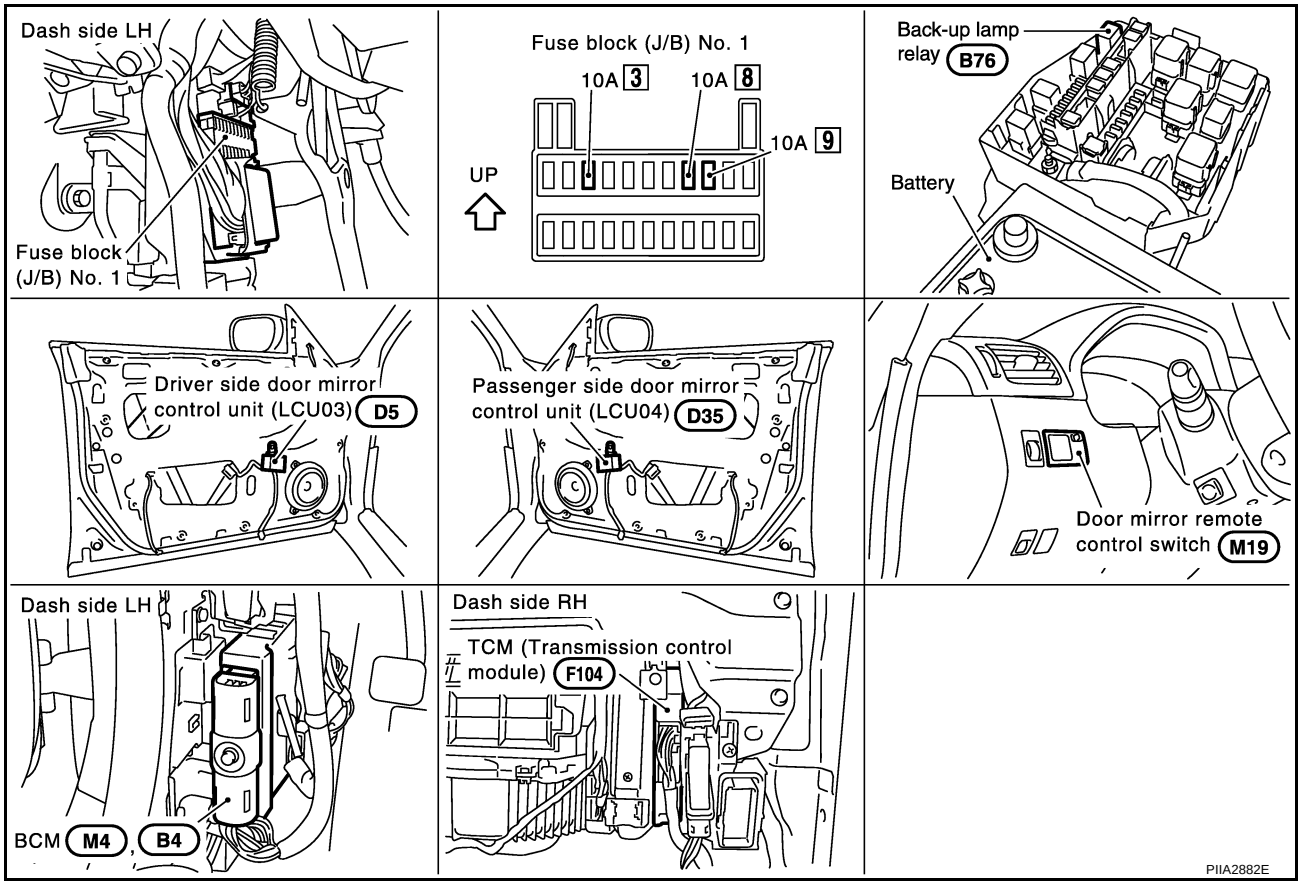


REVERSE INTERLOCK DOOR MIRROR SYSTEM

PFP:28548

Component Parts and Harness Connector Location

AIS001OH



System Description

AIS001H5

- When switching the door mirror remote control switch position (LH/RH), the system moves driver or passenger door mirror face downward, in relation to the A/T selector lever being shifted to Reverse Position.
- The mirror position with the reverse gear engaged can be adjusted and the adjusted mirror position can be stored in memory (2 positions).
- With reverse gear-linked operation signal, the driver side door mirror control unit (LCU 03) and passenger side door mirror control unit (LCU 04) installed on the door panel drives and controls the motors (UP/DOWN, LH/RH).
- Using the self-diagnostic function and CONSULT-II, system diagnosis can be performed.

OUTLINE OF OPERATION

Operation Conditions

If all of the following conditions are satisfied, starts operating after approximately 0.5 seconds.

- Ignition switch is in ON position.
- Set the door mirror remote control switch to the right position, or left position.
- A/T selector lever is in R position.

NOTE:

- If the conditions for reverse gear-linked operation are satisfied during manual operation, the manual operation is interrupted and switched to the reverse gear-linked operation.

Operation Angle

Fixed operation angle

	Facing downward	Facing unwearied
Driver-side	7°	1°
Passenger-side	7°	1°

End of Operation

If the following conditions is satisfied, the reverse gear-linked operation is stopped.

- When the set angle is reached.
- When no operation signal or no operation end signal can be received for approximately 2 seconds or more after BCM actually outputs the reverse gear-linked operation signal.
- After receiving the operation signal from the door mirror control unit, when BCM has stayed in the status for 60 seconds.

Return Operation

If one of the following conditions is satisfied, the mirror face returns upward.

- When the ignition switch is turned OFF.
- When the A/T selector lever is shifted to any position except R position.
- When the door mirror remote control switch is in the neutral position.

NOTE:

- After the above operation, if no operation conditions previously mentioned are satisfied, shifting the A/T selector lever to R position will not move the mirror face downward.

End of Return Operation

- Mirror face returns to the original position.
- When no operation signal or no operation end signal can be received for approximately 2 seconds or more after BCM actually outputs the reverse gear-linked operation signal.
- After receiving the operation signal from the door mirror control unit, when BCM has stayed in the status for 60 seconds.

MIRROR POSITION MEMORY FUNCTIONS

Equipped with a function which allows memorizing the desired mirror face positions (2 positions each for LH/RH door mirror).

Memory Operation Conditions

The seat and steering wheel positions are in accordance with memory 1 or memory 2 in the automatic drive position control. Refer to SE-13, "AUTOMATIC DRIVE POSITIONER" .

Memory Operation Procedure

1. Turn ignition switch ON.
2. Shift the A/T selector lever to R position.
3. Switch the door mirror remote control switch to right or left, and set the mirror face to the desired angle.
4. Press the setting button, and within 5 seconds, press the memory switch which stores the current seat and steering wheel positions for 0.5 seconds or more.
5. If the memory switch with certain positions stored is used, it turns off for 0.5 seconds after the operation, and after that it illuminates continuously (for Pyrex. 5 seconds).
6. If a memory switch with no positions stored is used, it illuminates (for Pyrex. 5 seconds) after the memory switch operation.

POWER SUPPLY

Power is supplied at all times

- through 10A fuse[No.8,located in the fuse block (J/B)]
- to driver side door mirror control unit terminal No.8 and passenger side door mirror remote control unit terminal No.8.
- through 10A fuse[No.3,located in the fuse block (J/B)]
- to BCM terminal No.105.

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

- through 10A fuse[No.9,located in the fuse block (J/B)]
- to back-up lamp relay terminal No. 2 and 5.

With the ignition switch in the ON or START position and selector lever is in R position, power is supplied

- though back-up lamp relay terminal No.3
- to TCM terminal No.141.

MIRROR CONTROL SWITCH TO OPERATION

If the changeover switch with RH positions,
Ground is supplied

- to BCM terminal No.21
- through the door mirror remote control switch terminal No.5,
- through door mirror remote control switch terminal No.7
- through grounds M25 and M115,

BCM recognizes that changeover switch is RH positions.
If the changeover switch with LH positions,
Ground is supplied

- to BCM terminal No.24
- through the door mirror remote control switch terminal No.6,
- through door mirror remote control switch terminal No.7
- through grounds M25 and M115

BCM recognizes that changeover switch is LH positions.
When mirror switch is selected to right,
Ground is supplied

- through BCM terminal No.29
- to the door mirror remote control switch terminal No.1,
- through door mirror remote control switch terminal No.7
- through grounds M25 and M115,

BCM recognizes that mirror switch is selected to right.
When mirror switch is selected to left,
Ground is supplied

- to BCM terminal No.25
- through the door mirror remote control switch terminal No.2,
- through door mirror remote control switch terminal No.7
- through grounds M25 and M115,

BCM recognizes that mirror switch is selected to left.
When mirror switch is selected to up,
Ground is supplied

- to BCM terminal No.32
- through the door mirror remote control switch terminal No.3,
- through door mirror remote control switch terminal No.7
- through grounds M25 and M115,

BCM recognizes that mirror switch is selected to up.
When mirror switch is selected to down,
Ground is supplied

- to BCM terminal No.34
- through the door mirror remote control switch terminal No.4,
- through door mirror remote control switch terminal No.7
- through grounds M25 and M115,

BCM recognizes that mirror switch is selected to down.
BCM is connected to driver side door mirror control unit (LCU03) and passenger side door mirror control unit (LCU04) as DATA LINE A–2 and DATA LINE A–3.

Then signal inputs to driver side door mirror control unit and passenger side door mirror control unit terminal No.7 from BCM terminal No.61 and No.67 by DATA LINE A–2 and DATA LINE A–3.
If the changeover switch with LH positions, signal is transmitted to LCU03.
If the changeover switch with RH positions, signal is transmitted to LCU04.

MEMORY MIRROR OPERATION

BCM transmits the memory switch (1 or 2) ON signal to the door mirror control unit.
BCM is connected to driver side door mirror control unit (LCU03) and passenger side door mirror control unit (LCU04) as DATA LINE A–2 and DATA LINE A–3.
Then signal input to driver side door mirror control unit and passenger side door mirror control unit terminal No.7 from BCM terminal No.61 and No.67 by DATA LINE A–2 and DATA LINE A–3.
When door mirror control unit receives the signal of memory switch from BCM, control unit operations the door mirror according to memory data.
Power is supplied

- through door mirror control unit terminal No. 1
- to the door mirror terminal No. 16, and then

signal is transmitted (upper and down)

- through door mirror terminal No. 14
- to door mirror control unit terminal No. 5,

LCU recognizes an upper and down position according to the voltage.
and also signal is transmitted (left and right)

- through door mirror terminal No. 12
- to door mirror control unit terminal No. 6,

an left and right position is recognized according to the voltage.

DOOR MIRROR MOTOR TO OPERATION

When mirror motor up signal is transmitted from BCM to door mirror control unit,
Power is supplied

- through door mirror control unit terminal No.3
- to door mirror terminal No.8.

Then ground is supplied,

- to door mirror terminal No.11
- through door mirror control unit terminal No.9
- through door mirror control unit terminal No.10
- through body ground M24 and M114.

with power and ground supplied, mirror motor is operated up side.
When mirror motor down signal is transmitted from BCM to door mirror control unit,
Power is supplied

- through door mirror control unit terminal No.9
- to door mirror terminal No.11.

Then ground is supplied

- to door mirror terminal No.8
- through door mirror control unit terminal No.3
- through door mirror control unit terminal No.10
- through body ground M24 and M114.

with power and ground supplied, mirror motor is operated down side.
When mirror motor left signal is transmitted from BCM to door mirror control unit,
Power is supplied

- through door mirror control unit terminal No.4
- to the door mirror terminal No.9.

Then ground is supplied

- to door mirror terminal No.11
- through door mirror control unit terminal No.9

- through door mirror control unit terminal No.10
- through body ground M24 and M114.

with power and ground supplied, mirror motor is operated left side.
When mirror motor right signal is transmitted from BCM to door mirror control unit,
Power is supplied

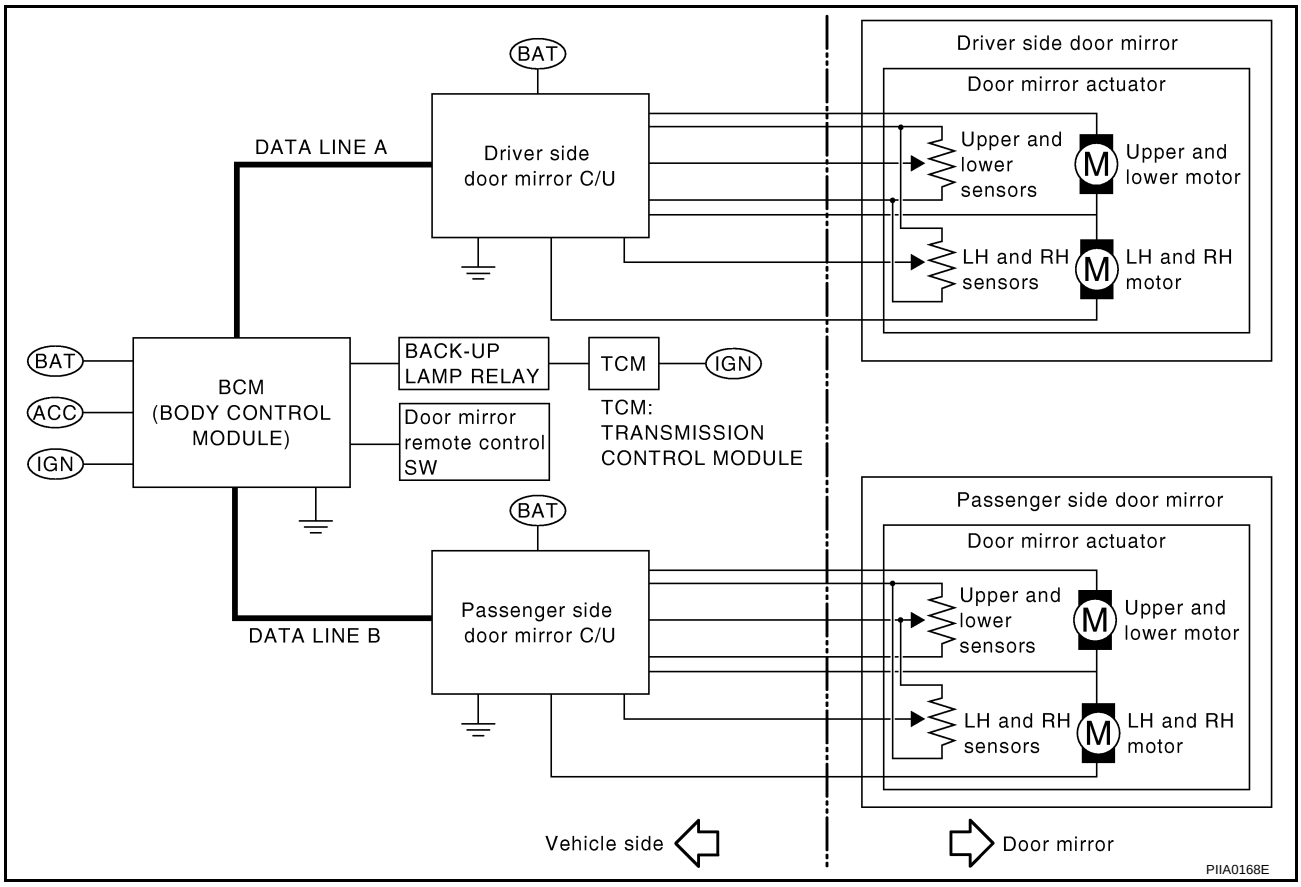
- through door mirror control unit terminal No.9
- to the door mirror terminal No.11

Then ground is supplied

- to door mirror terminal No.9
- through door mirror control unit terminal No.4
- through door mirror control unit terminal No.10
- through body ground M24 and M114.

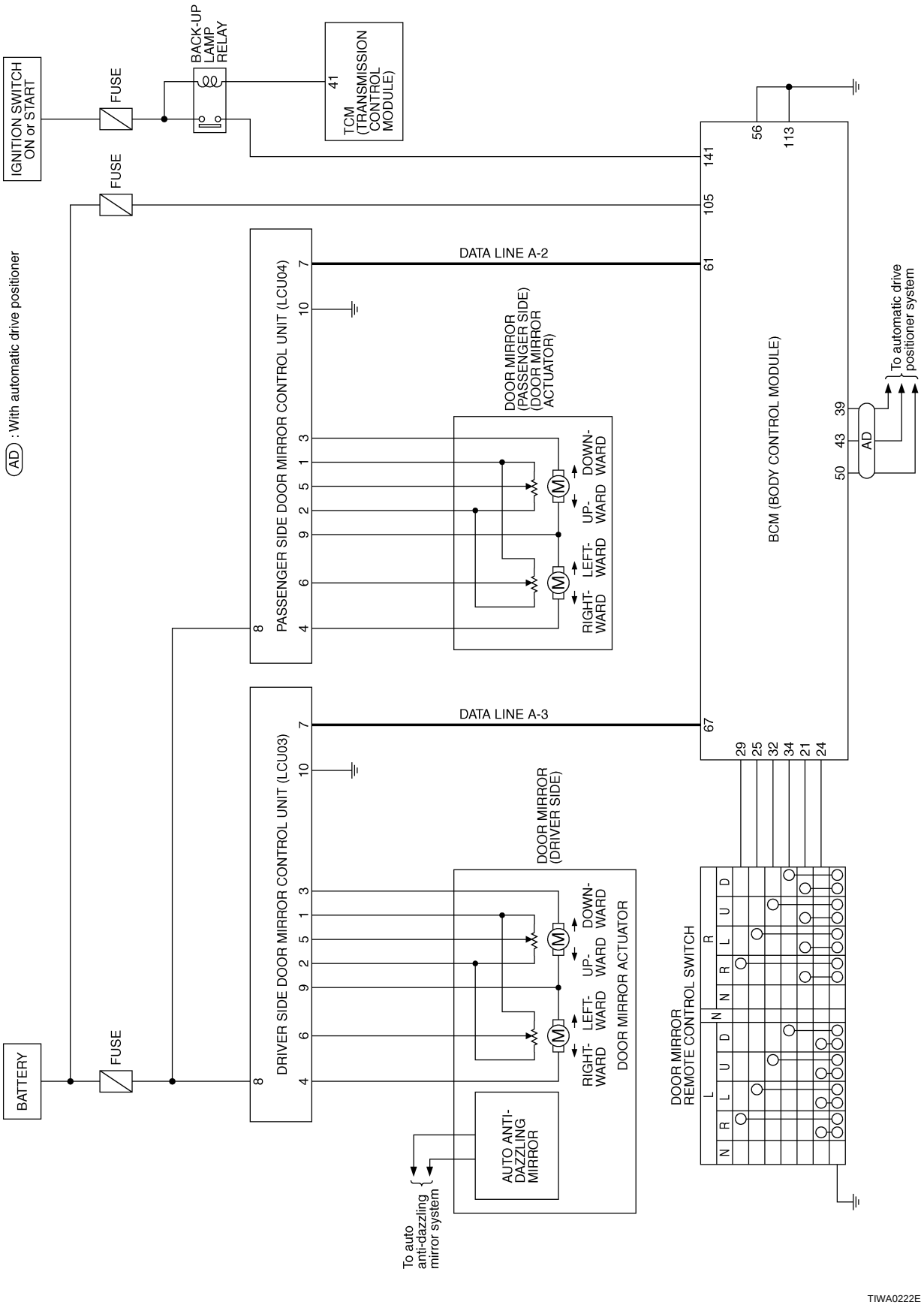
with power and ground supplied, mirror motor is operated right side.

SYSTEM DIAGRAM



Schematic

AIS001H7

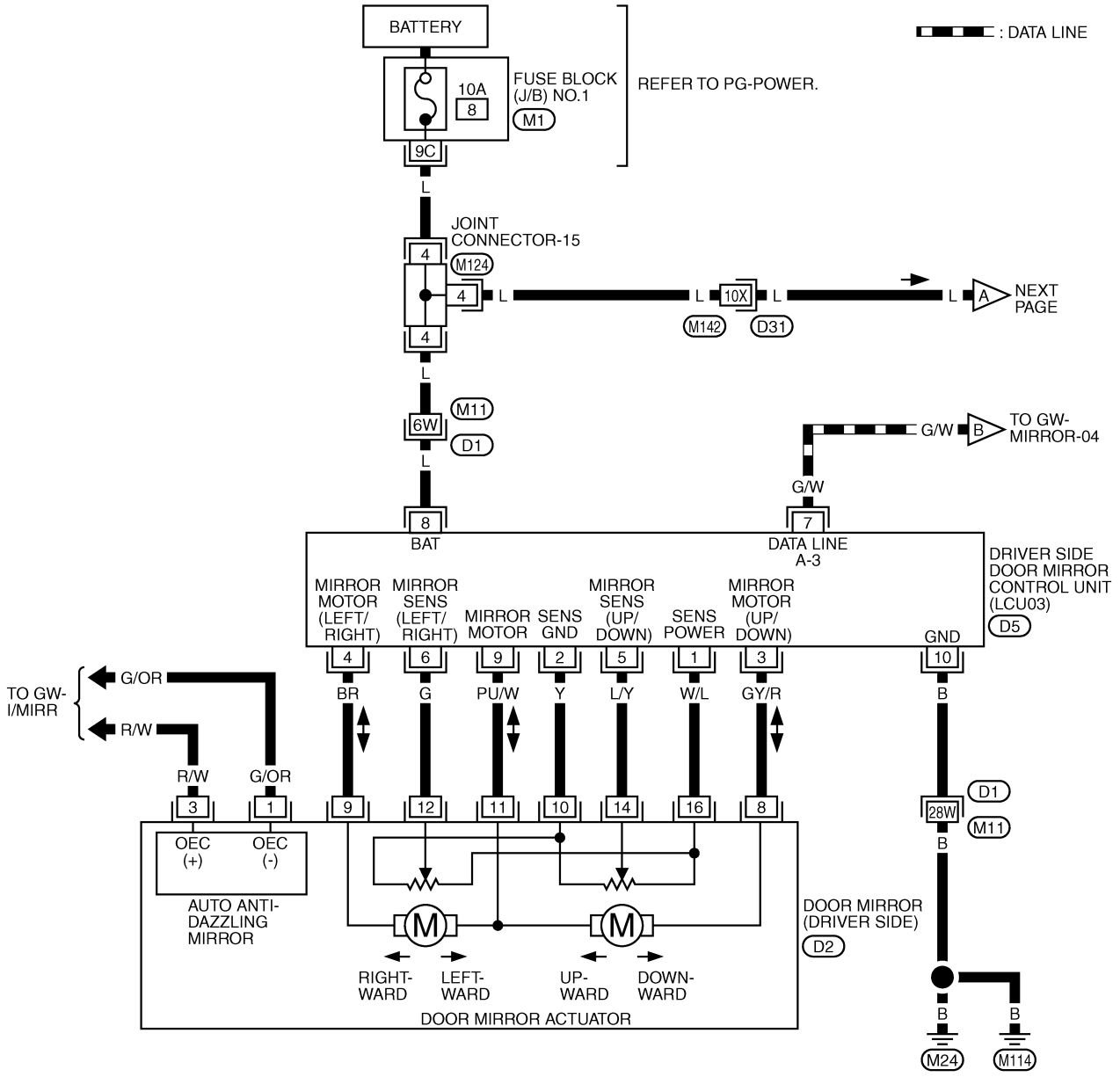


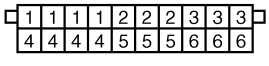
TIWA0222E

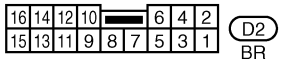
Wiring Diagram — MIRROR —

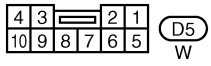
AIS001H8

GW-MIRROR-01









REFER TO THE FOLLOWING.

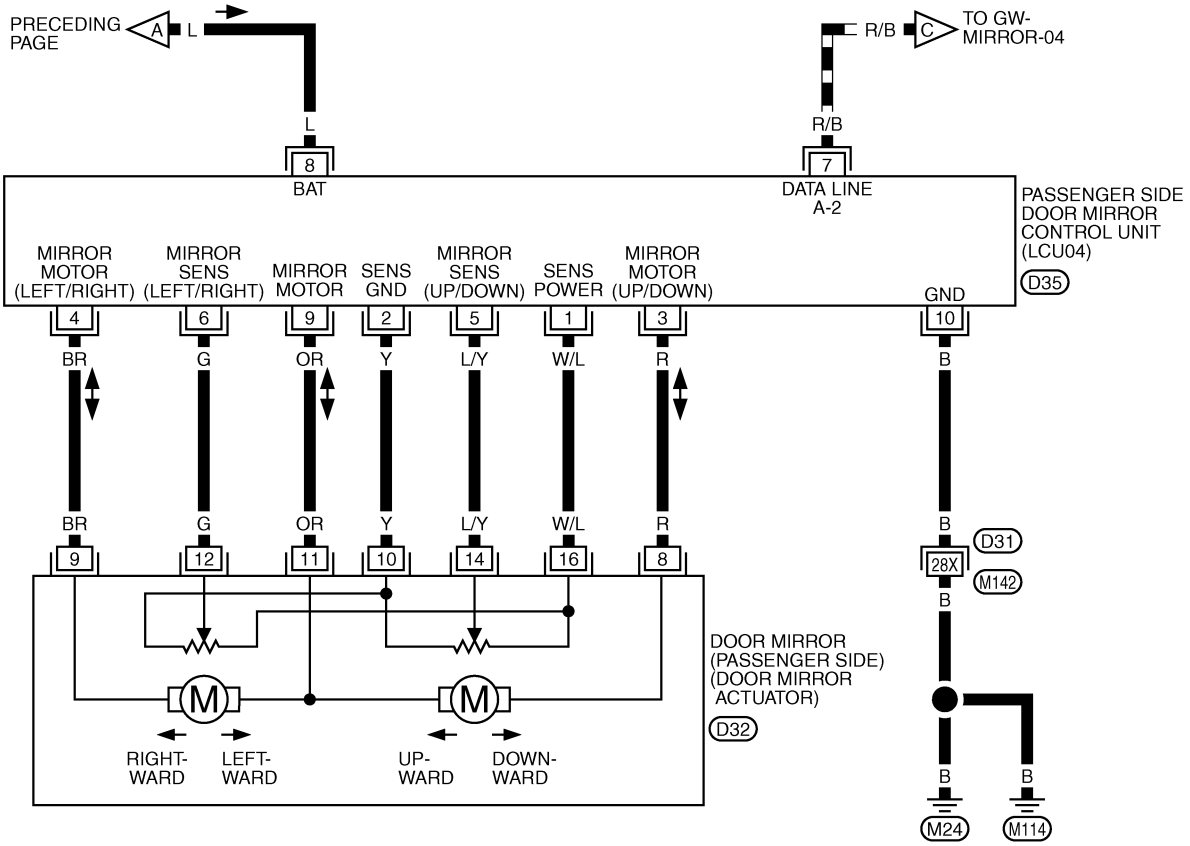
(D1) , (D31) -SUPER MULTIPLE JUNCTION (SMJ)

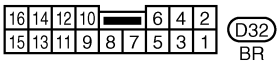
(M1) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

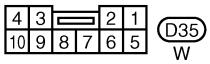
TIWA0223E

GW-MIRROR-02

: DATA LINE





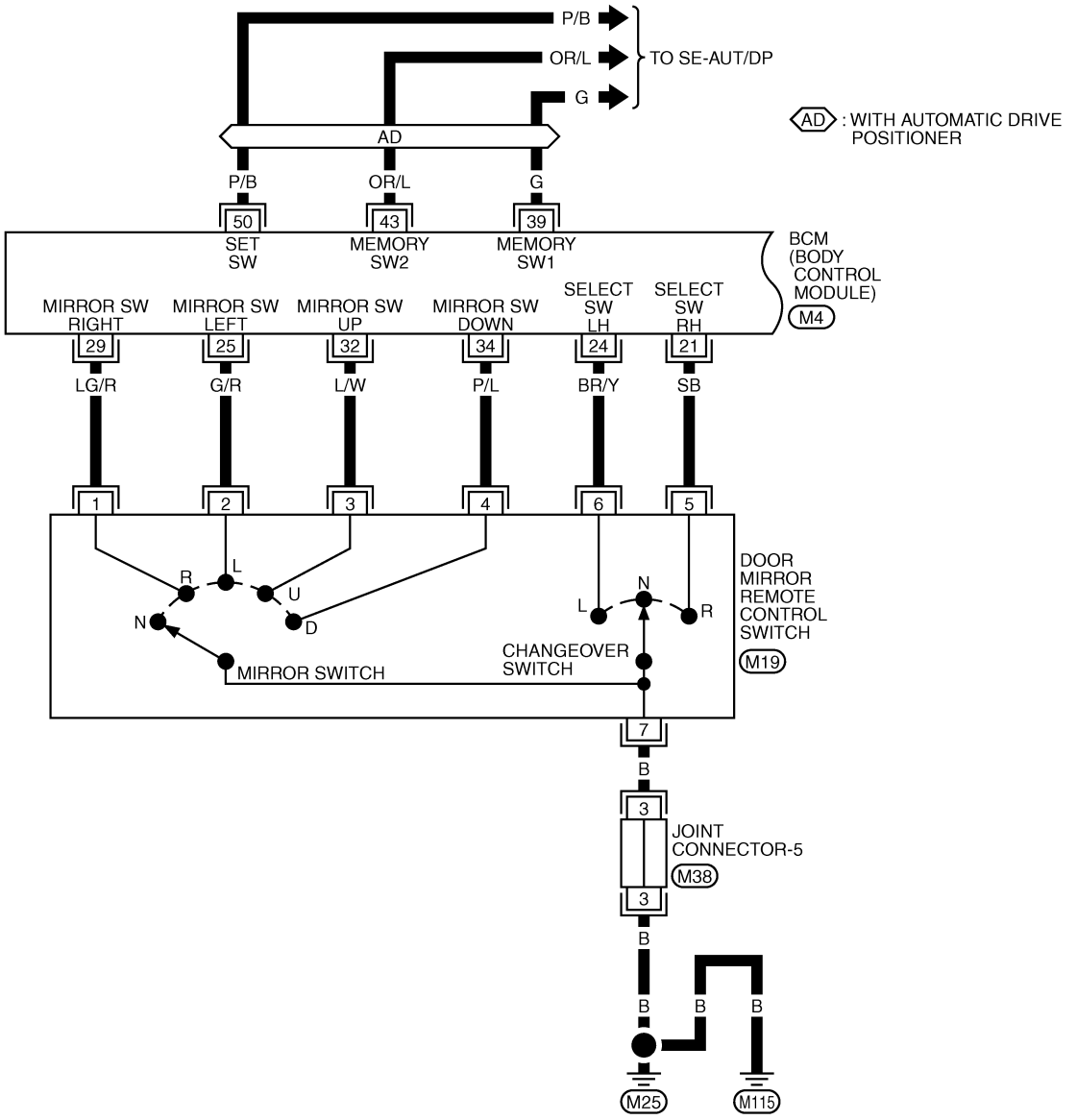


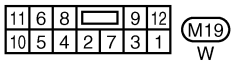
REFER TO THE FOLLOWING.

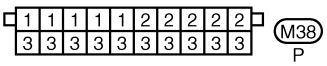
D31 -SUPER MULTIPLE JUNCTION (SMJ)

TIWA0224E

GW-MIRROR-03

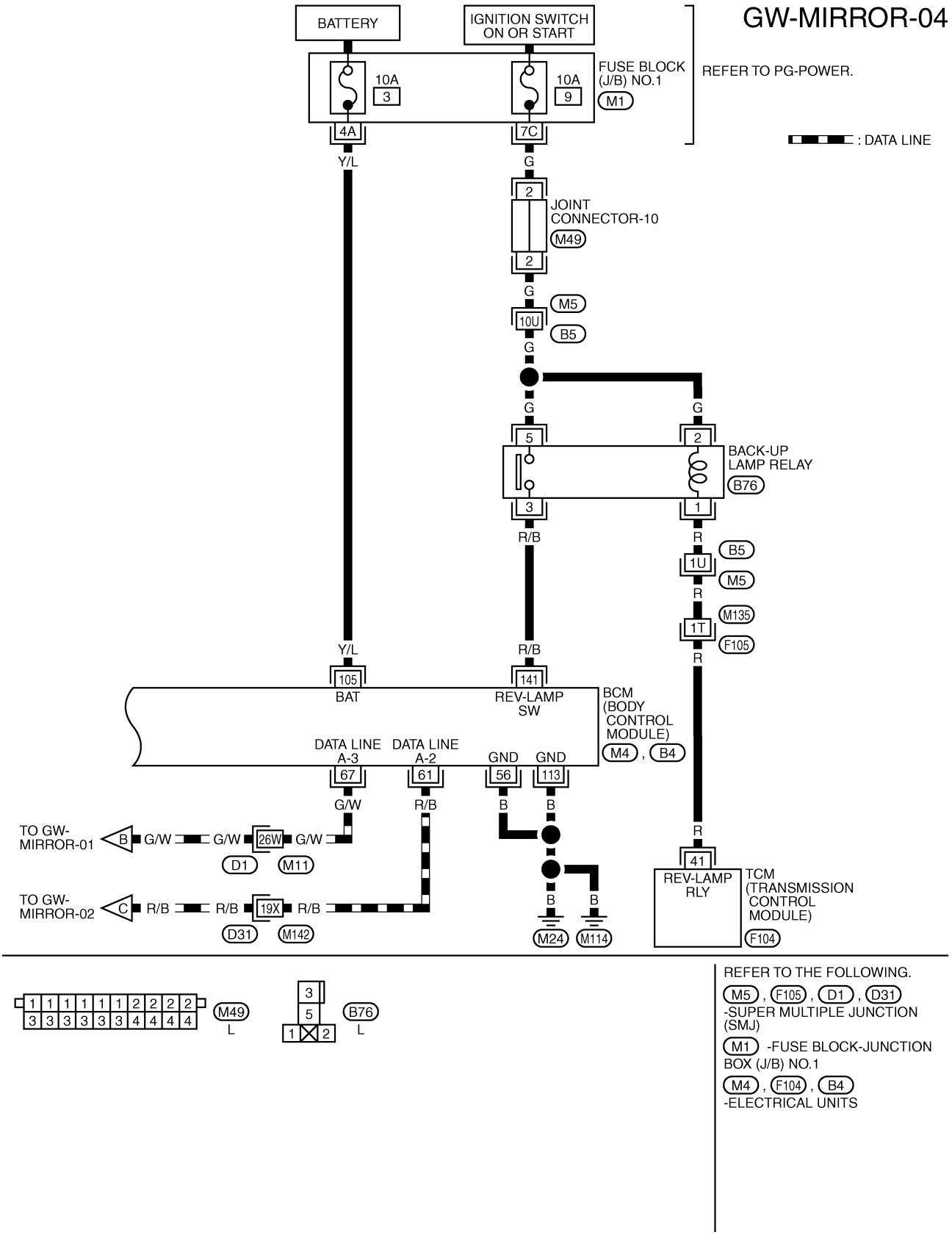






REFER TO THE FOLLOWING.
M4 -ELECTRICAL UNITS

TIWA0225E


GW-MIRROR-04
BATTERY
IGNITION SWITCH ON OR START
FUSE BLOCK (J/B) NO.1
M1
10A
3
10A
9
4A
7C
REFER TO PG-POWER.
: DATA LINE
Y/L
G
2
JOINT CONNECTOR-10
M49
2
G
M5
10U
B5
G
G
G
5
2
BACK-UP LAMP RELAY
B76
3
1
R/B
R
1U
B5
M5
R
M135
1T
F105
R
Y/L
R/B
105
141
BAT
REV-LAMP SW
BCM (BODY CONTROL MODULE)
M4 , B4
DATA LINE A-3
DATA LINE A-2
GND
GND
67
61
56
113
G/W
R/B
B
B
TO GW-MIRROR-01
B
G/W
G/W
26W
G/W
D1
M11
TO GW-MIRROR-02
C
R/B
R/B
19X
R/B
D31
M142
B
B
M24
M114
R
41
REV-LAMP RLY
TCM (TRANSMISSION CONTROL MODULE)
F104
M49
L
3
5
1
2
B76
L
REFER TO THE FOLLOWING.
M5 , F105 , D1 , D31
-SUPER MULTIPLE JUNCTION (SMJ)
M1 -FUSE BLOCK-JUNCTION BOX (J/B) NO.1
M4 , F104 , B4
-ELECTRICAL UNITS

TIWA0226E

Terminals and Reference Values for Driver Side Door Mirror Control Unit & Terminals and Reference Value for Passenger Side Door Mirror Control Unit

AIS001H9

TERMINAL		WIRE COLOR		ITEM	CONDITION	VOLTAGE (V) (Approx.)
+	–	+	–			
1	*	W/L	—	Mirror sensor power supply	—	5
2		Y	—	Ground (Mirror sensor)	—	0
3	9	GY/R (R)	PU/W (OR)	Mirror motor UP signal	When motor is activated (UP)	Battery voltage
					When motor is not activated	0
4	9	BR	PU/W (OR)	Mirror motor LH signal	When motor is activated (LH)	Battery voltage
					When motor is not activated	0
5	*	L/Y	—	Mirror sensor UP / DOWN signal	When motor is activated (UP or DOWN)	Changes between 4 (UP) – 0.5 (DOWN)
6	*	G	—	Mirror sensor LEFT / RIGHT signal	When motor is activated (LEFT or RIGHT)	Changes between 4 (RIGHT) – 0.5 (LEFT).
7		G/W (R/B)	—	Data line A-3	—	—
8		L	—	BAT power supply	—	Battery voltage
9	3	PU/W (OR)	GY/R (R)	Mirror motor DOWN signal	When motor is activated (DOWN)	Battery voltage
					When motor is not activated	0
9	4	PU/W (OR)	BR	Mirror motor RH signal	When motor is activated (RH)	Battery voltage
					When motor is not activated	0
10	*	B	—	Ground	—	0

*: Body ground
( ):Passenger side

Terminals and Reference Values for BCM

AIS001HA

TERMINAL	WIRE COLOR	ITEM	CONDITION	Voltage (V) (Approx.)
21	SB	Door mirror change over switch RIGHT signal	Set the door mirror control switch to right position.	0
			Other than above	5
24	BR/Y	Door mirror change over switch LEFT signal	Set the door mirror remote control switch to left position.	0
			Other than above	5
25	G/R	Door mirror remote control switch signal–LH operation	Set the either LH/RH door mirror face to left.	0
			Other than above	5
29	LG/R	Door mirror remote control switch signal–RH operation	Set the either LH/RH door mirror face to right.	0
			Other than above	5
32	L/W	Door mirror remote control switch signal–Upward	Set the either LH/RH door mirror face upward.	0
			Other than above	5
34	P/L	Door mirror remote control switch signal–Downward	Set the either LH/RH door mirror face downward.	0
			Other than above	5
39	G	Memory switch1 signal	Memory switch1 (ON)	0
			Memory switch1 (OFF)	5
43	OR/L	Memory switch2 signal	Memory switch2 (ON)	0
			Memory switch2 (OFF)	5
50	P/B	Set switch signal	Set switch (ON)	0
			Set switch (OFF)	5

TERMINAL	WIRE COLOR	ITEM	CONDITION	Voltage (V) (Approx.)
56	B	Ground	—	0
61	R/B	Data line A–2	—	—
67	G/W	Data line A–3	—	—
105	Y/L	BAT power supply	—	Battery voltage
113	B	Ground	—	0
141	R/B	R position signal	When the selector lever is in R position	Battery voltage
			When the selector lever is not in R position	0

Work Flow

AIS001HB

1. Check the symptom and customer's requests.
2. Understand the system description. Refer to GW-78, "System Description" .
3. Carry out the preliminary check. Refer to GW-90, "Preliminary Check" .
4. Carry out the communication inspection.
   If CONSULT-II is used, refer toGW-93, "IVMS Communication Diagnosis" .
   If CONSULT-II is not used, refer to GW-93, "IVMS COMMUNICATION INSPECTION" .
   Is the communication diagnosis result OK?
   If OK, GO TO 7.
   If NG, GO TO 5.
5. Repair or replace depending on the diagnosis result.
6. Carry out the communication diagnosis again.
   If CONSULT-II is used, refer to GW-93, "IVMS Communication Diagnosis" .
   If CONSULT-II is not used, refer toGW-93, "IVMS COMMUNICATION INSPECTION" .
   Is communication diagnosis result OK?
   If OK, GO TO 7.
   If NG, GO TO 5.
7. Perform self-diagnosis. If CONSULT-II is used, refer to GW-93, "Operation Procedure" .
   If CONSULT-II is not used, refer to GW-105, "ON BOARD DIAGNOSIS FOR AUTOMATIC DRIVE POSITIONER" .
   Is self-diagnosis result OK?
   If OK, GO TO 11.
   If NG, GO TO 8.
8. Repair or replace depending on the diagnosis result.
9. Carry out the self-diagnosis again. If CONSULT-II is used, refer to GW-93, "Operation Procedure" .
   If CONSULT-II is not used, refer to GW-105, "ON BOARD DIAGNOSIS FOR AUTOMATIC DRIVE POSITIONER" .
   Is self-diagnosis result OK?
   If OK, GO TO 11.
   If NG, GO TO 8.
10. Referring to Trouble diagnosis chart, repair or replace the cause of the malfunction. Refer to GW-107, "Symptom Chart" .
11. Does the Reverse Interlock Door Mirror System operate normally?
    If it operates normally, GO TO 12.
    If not, GO TO 10.
12. Inspection end

Preliminary Check

AIS001HC

POWER SUPPLY AND GROUND CIRCUIT CHECK

1. CHECK FUSE.

Check that any of the following fuses in BCM and door mirror control unit are blown.

Unit	Terminal No.	Power source	Fuse No.
BCM	105	BAT power supply	#3
Door Mirror Control Unit (Driver side & Passenger side)	8	BAT power supply	#8

NOTE:
Refer to GW-78, "Component Parts and Harness Connector Location" .

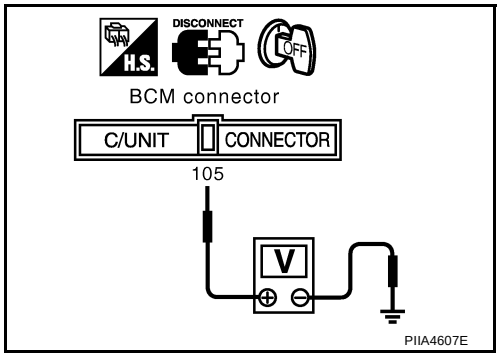
OK or NG?

OK >> GO TO 2.
NG >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.Refer to PG-2, "POWER SUPPLY ROUTING" .

2. POWER SUPPLY CIRCUIT INSPECTION(BCM)

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check voltage between BCM connector M4 terminal 105 and ground.

105 (Y/L) – Ground :Battery voltage



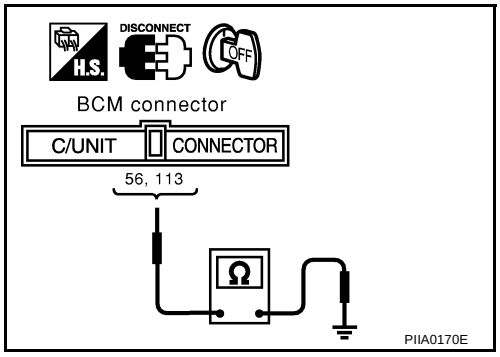
OK or NG?

OK >> GO TO 3.
NG >> Repair or replace the harnesses for BCM power supply circuit.

3. GROUND CIRCUIT INSPECTION(BCM)

1. Turn ignition switch OFF.
2. Check continuity between BCM connector M4 terminal 56, 113 and ground.

56 (B) – Ground :Continuity should exist.
113 (B) – Ground :Continuity should exist.



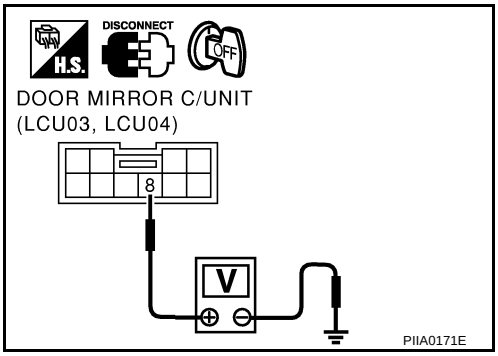
OK or NG?

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

4. CHECK POWER SUPPLY CIRCUIT (DOOR MIRROR CONTROL UNIT)

1. Turn ignition switch OFF.
2. Disconnect door mirror control unit connector.
3. Check voltage between door mirror control unit connector D5 (driver side), D35 (passenger side) terminal 8 and ground.

8 (L) – Ground **:Battery voltage**



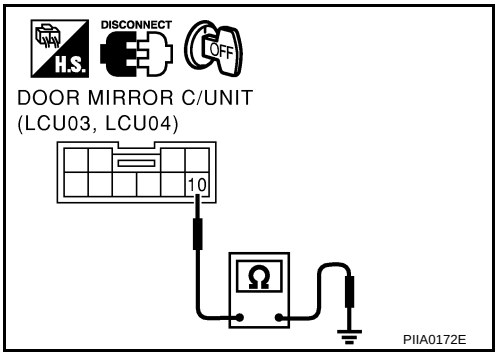
OK or NG?

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

5. CHECK GROUND CIRCUIT (DOOR MIRROR CONTROL UNIT)

Check continuity between door mirror control unit connector D5 (driver side), D35 (passenger side) terminal 10 and ground.

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



OK or NG?

OK >> Preliminary check is OK.
NG >> Repair or replace harness.

CONSULT–II Function

AIS001HD

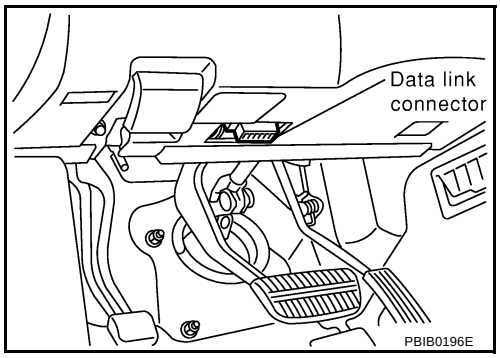
CONSULT–II executes the following functions by combining data received and command transmitted via the communication line from BCM. IVMS communication inspection, work support (only function setting of seats and steering wheel), self-diagnosis, data monitor, and active test display.

IVMS diagnosis position	Inspection item and diagnosis mode	Description
IVMS– COMM CHECK	IVMS–COMM DIAGNOSIS	Diagnose a communication malfunction, inactive communication, and sleep malfunction in the communication line between BCM and each LCU.
	WAKE–UP DIAGNOSIS	Diagnose the wake-up signals output from each LCU.
AUTO DRIVE POSITIONER	WORK SUPPORT*	Changes the setting for each function. Refer to SE-36, "SETTING CHANGE FUNCTION" .
	SELF–DIAG RESULTS	Carries out the self-diagnosis.
	DATA MONITOR	Displays the input data of BCM and each LCU on real-time basis.
	ACTIVE TEST	Sends a drive signal to a load to check the operation.
BCM PART NUMBER		Displays BCM part No.

*: Only for function setting of seat and steering wheel

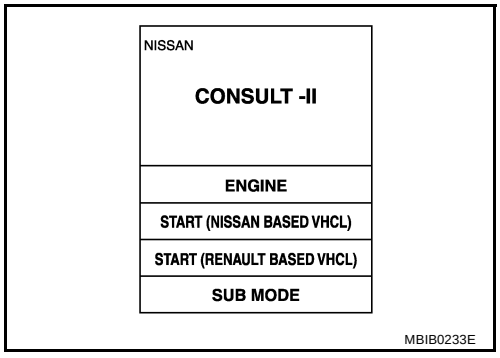
CONSULT-II BASIC OPERATION PROCEDURE

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



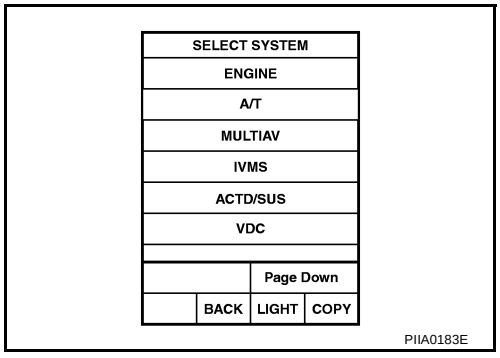
PBIB0196E

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



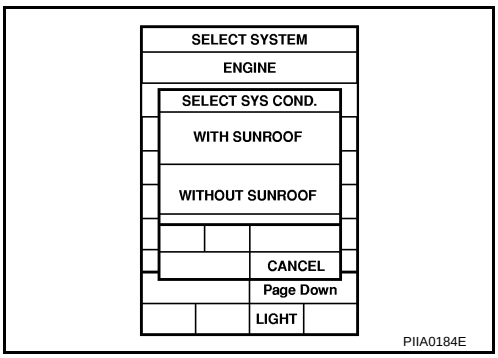
MBIB0233E

5. Touch "IVMS" on the "SELECT SYSTEM" screen.
   If “IVMS” is not indicated, go to GI-38, "CONSULT-II Data Link Connector (DLC) Circuit" .



PIIA0183E

6. Check the model specification, touch either "WITH SUNROOF" or "WITHOUT SUNROOF" on the "SELECT SYS COND" screen.
7. Touch "OK". If the selection is wrong, touch "CANCEL".
8. Select the desired part to be diagnosed on the "SELECT TEST ITEM" screen.



IVMS COMMUNICATION INSPECTION

IVMS contains the IVMS communication diagnosis and wake–up diagnosis.

IVMS Communication Diagnosis

The IVMS communication diagnosis consists of the communication diagnosis, sleep diagnosis, and inactive communication diagnosis between BCM and each local unit (LCU), and display the results on the CONSULT–II screen.

NOTE:
Sleep is a power saving function when a vehicle is stationary (all BCM related electrical equipment: OFF, and the timer: OFF).
The function also stores the communication malfunction records and inactive communication records, and displays the data on the CONSULT–II screen (Malfunction record diagnosis)

Malfunction description	CONSULT–II display item	Description
Communication malfunction	COMM DATA	● Communicating with each LCU is judged sound when the communication is normally completed and the transmitted data and received data are identically the same. In other cases, it is judged malfunctioning. If the communication is inactive, no diagnosis result is displayed.
Inactive communication	NO RESPONSE	● Communicating with each LCU is judged sound when at least one time communication is normally completed within three trials. In other cases, it is judged malfunctioning.
Sleep malfunction	SLEEP	● Check that each LCU enters sleep mode.
Communication malfunction *	PAST COMM DATA	● The records when communication signal malfunctions were continuously detected while the communication was normal are displayed. Or the records when a malfunction is detected during the past sleep mode are displayed.
Inactive communication*	PAST NO RESPONSE	● The records when inactive communications were continuously detected while the communication was normal are displayed.

*: malfunctioning item record

Operation Procedure

1. Touch "IVMS–COMM CHECK" on "SELECT TEST ITEM".
2. Touch "IVMS–COMM DIAGNOSIS" on "SELECT DIAG ITEM" screen.
3. Touch "START" on "IVMS–COMM DIAGNOSIS" screen to start the diagnosis.
4. After the diagnosis is completed, the malfunctioning system is displayed.
5. When the malfunctioning items are displayed, touch "PRINT" to record.
6. Touch "ERASE".
7. Carry out the communication inspection again to check that any malfunctioning item is displayed.
8. Check the displayed items.

Wake-Up Diagnosis

The wake-up diagnosis is carried out when BCM detects the wake-up signal from each local unit (LCU). When the switch shown on the screen is operated as instructed, each local control unit(LCU) outputs the wake-up signal. If BCM cannot detect a wake-up signal, it is judged malfunctioning. The malfunctioning local control unit(LCU) is displayed on the screen.

Operation Procedure

1. Touch "IVMS–COMM CHECK" on "SELECT TEST ITEM" screen.
2. Touch "WAKE–UP DIAGNOSIS" on "SELECT DIAG ITEM" screen.
3. Touch "START" on "WAKE–UP DIAGNOSIS" screen to start the diagnosis.
4. Touch "NEXT" to select the local control unit (LCU) to be diagnosed.
5. Check that any malfunction is displayed. If necessary, touch "PRINT" to record.
6. Carry out the inspection to the malfunctioning item.

Trouble Diagnosis Chart

Malfunctioning item	Display unit	CONSULT–II IVMS communication diagnosis content	Self-diagnosis trouble code No.	Malfunctioning system and reference
COMM DATA	One LCU is displayed.	POWER WINDOW C/U–DR "COMM DATA"	24	Replace the displayed LCU.
		DOOR MIRROR C/U–RH "COMM DATA"	27	
		DOOR MIRROR C/U–LH "COMM DATA"	37	
		POWER SEAT C/U–DR "COMM DATA"	47	
	Multiple LCUs are displayed	BCM "COMM FAIL1" ,"COMM FAIL2"	Displays in order of 24→27→37→47→ and cycles from 24.	Communication system A: Refer to GW-95 .
NO RESPONSE	One LCU is displayed.	POWER WINDOW C/U–DR "NO RESPONSE"	25	Communication system B: Refer to GW-95 .
		DOOR MIRROR C/U–RH "NO RESPONSE"	28	
		DOOR MIRROR C/U–LH "NO RESPONSE"	38	
		POWER SEAT C/U–DR "NO RESPONSE"	48	
	Multiple LCUs are displayed	BCM/HARNESS	Displays in order of 25→28→38→48→ and cycles from 25.	Communication system C: Refer to GW-95 .
SLEEP malfunction	One LCU is displayed.	POWER WINDOW C/U–DR "SLEEP"	No self-diagnosis function	Replace the displayed LCU.
		DOOR MIRROR C/U–RH "SLEEP"		
		DOOR MIRROR C/U–LH "SLEEP"		
		POWER SEAT C/U–DR "SLEEP"		
	Multiple LCUs are displayed	All the above control units are displayed.	No self-diagnosis function	Communication system A: Refer to GW-95 .

NOTE:

- For a specific local control unit (LCU), either "PAST COMM DATA" or "PAST NO RESPONSE" may be displayed instead of the above results.The data record, causes this, so erase the records.
  (The display only shows the incident records, they are not malfunctions caused during the diagnosis. One possible cause is that an intermittent incident occurred.)
- Follow the steps below to erase the memory.
  Carry out either disconnect BCM battery power supply or erase memory with CONSULT-II.
- With the battery connected, if the local control unit (LCU) connector is disconnected and left for approximately 1 minute, the BCM stores "NO RESPONSE" record.

COMMUNICATION SYSTEM A

1. BCM INSPECTION

Replace BCM with a known-good one, and carry out the communication diagnosis. Refer to GW-93, "IVMS Communication Diagnosis" .

OK or NG?

OK >> Replace BCM
NG >> GO TO 2.

2. LCU INSPECTION

1. Replace with the previously installed BCM.
2. Replace LCU with a known-good one, and carry out the communication diagnosis. Refer to GW-93, "IVMS Communication Diagnosis" .

OK or NG?

OK >> Replace LCU
NG >> Perform the following.

- Repair or replace communication harness between LCU and BCM.
- Replace with the previously installed LCU.

COMMUNICATION SYSTEM B

1. HARNESS CONNECTOR INSPECTION

Check the terminals (at the control unit and harness) on the malfunctioning LCU for disconnection, bend, loose connection, and other malfunctions.

OK or NG?

OK >> GO TO 2.
NG >> Repair the terminals and connectors.

2. LCU INSPECTION

Replace the malfunctioning LCU with a known-good one, and carry out the communication diagnosis. Refer to GW-93, "IVMS Communication Diagnosis" .

OK or NG?

OK >> Replace LCU
NG >> Perform the following.

- Repair or replace communication harness between LCU and BCM.
- Replace with the previously installed LCU.

COMMUNICATION SYSTEM C

1. HARNESS CONNECTOR INSPECTION

Check the terminals (at the control unit and harness) on BCM and LCU for disconnection, bend, loose connction, and other malfunctions.

OK or NG?

OK >> GO TO 2.
NG >> Repair the terminals and connectors.

2. BCM INSPECTION

Replace the malfunctioning BCM with a known-good one, and carry out the communication diagnosis. Refer to GW-93, "IVMS Communication Diagnosis" .

OK or NG?

OK >> Replace the BCM
NG >> Perform the following.

- Repair or replace communication harness between LCU and BCM control.
- Replace with the previously installed BCM.

SELF–DIAGNOSIS RESULTS

Operation Procedure

1. Touch "AUTO DRIVE POSITIONER" on "SELECT TEST ITEM" screen.
2. Touch "SELF–DIAG RESULTS" on "SELECT DIAG MODE" screen.
3. Touch "START" on "SELF–DIAG RESULTS" screen.
4. The seat and steering wheel automatically move, and the self-diagnosis for the seat , steering wheel and door mirror start (door mirror does not operate).
5. Within 15 seconds after the self-diagnosis for the seat, steering wheel and door mirror are completed, drive the vehicle at a speed of 7 km/h(4 MPH) or higher for the vehicle speed sensor self-diagnosis.
6. After the diagnosis is completed, the malfunctioning system is displayed.
7. When the malfunctioning items are displayed, touch "COPY" to record.
8. Touch "ERASE".
9. Perform self-diagnosis results again to check that any malfunctioning item is displayed.
10. Check the displayed items.

Display Item List

Malfunctioning system	Malfunction detecting condition
SEAT SLIDE	While the sliding motor moves the seat backward for 2.5 seconds, and then forward for 2.5 seconds, when the sliding sensor pulse change less than 2 times.
SEAT RECLINING	While the reclining motor moves the seat forward for 2.5 seconds, and then backward for 2.5 seconds, when the reclining sensor pulse change less than 2 times.
SEAT LIFTER–FR	While the lifter motor (front end) moves the seat downward for 2.5 seconds, and then upward for 2.5 seconds, when the lifter sensor (front end) pulse change less than 2 times.
SEAT LIFTER–RR	While the lifter motor (rear end) moves the seat downward for 2.5 seconds, and then upward for 2.5 seconds, when the lifter sensor (rear end) pulse change less than 2 times.
STEERING TILT	While the tilt motor moves the steering wheel upward for 1 second, and then downward for 1 second, when the tilt sensor output voltage is 0.2V or less.
STEERING TELESCO	While the telescoping motor moves the steering wheel forward for 1 second, and then backward for 1 second, when the telescoping sensor output voltage is 0.2V or less.
DOOR MIRROR–LH·UP–DOWN	When LH door mirror sensor detects 0.2V or lower, or 4.5V or higher, for 0.5 seconds or more.
DOOR MIRROR–LH·L–R	
DOOR MIRROR–RH·UP–DOWN	When RH door mirror sensor detects 0.2V or lower, or 4.5V or higher, for 0.5 seconds or more.
DOOR MIRROR–RH·L–R	
VEHICLE SPEED SENSOR	While the vehicle speed is less than 7 km/h (4 MPH) for 15 seconds after the diagnosis for the seat and steering wheel is completed.

DATA MONITOR

Display Item List

Monitor item [OPERATION or UNIT]		Contents
SLIDE SW–FR	"ON/OFF"	ON / OFF status judged from the sliding switch (FR) signal is displayed.
SLIDE SW–RR	"ON/OFF"	ON / OFF status judged from the sliding switch (RR) signal is displayed.
RECLN SW–FR	"ON/OFF"	ON / OFF status judged from the reclining switch (FR) signal is displayed.
RECLIN SW–RR	"ON/OFF"	ON / OFF status judged from the reclining switch (RR) signal is displayed.
LIFT FR SW–UP	"ON/OFF"	ON / OFF status judged from the FR lifter switch (UP) signal is displayed.
LIFT FR SW–DN	"ON/OFF"	ON / OFF status judged from the FR lifter switch (DOWN) signal is displayed.
LIFT RR SW–UP	"ON/OFF"	ON / OFF status judged from the RR lifter switch (UP) signal is displayed.
LIFT RR SW–DN	"ON/OFF"	ON / OFF status judged from the RR lifter switch (DOWN) signal is displayed.
MIR CON SW–UP	"ON/OFF"	ON / OFF status judged from the door mirror remote control switch (UP) signal is displayed.
MIR CON SW–DN	"ON/OFF"	ON / OFF status judged from the door mirror remote control switch (DOWN) signal is displayed.

Monitor item [OPERATION or UNIT]		Contents
MIR CON SW–RH	"ON/OFF"	ON / OFF status judged from the door mirror remote control switch (RIGHT) signal is displayed.
MIR CON SW–LH	"ON/OFF"	ON / OFF status judged from the door mirror remote control switch (LEFT) signal s displayed.
MIR CHNG SW–R	"ON/OFF"	ON / OFF status judged from the door mirror remote control switch (switching to RIGHT) signal is displayed.
MIR CHNG SW–L	"ON/OFF"	ON / OFF status judged from the door mirror remote control switch (switching to LEFT) signal is displayed.
SET SW	"ON/OFF"	ON / OFF status judged from the setting switch signal is displayed.
TELESCO SW–FR	"ON/OFF"	ON / OFF status judged from the telescoping switch (FR) signal is displayed.
TELESCO SW–RR	"ON/OFF"	ON / OFF status judged from the telescoping switch (RR) signal is displayed.
TILT SW–UP	"ON/OFF"	ON / OFF status judged from the tilt switch (UP) signal is displayed.
TILT SW–DOWN	"ON/OFF"	ON / OFF status judged from the tilt switch (DOWN) signal is displayed.
MEMORY SW1	"ON/OFF"	ON / OFF status judged from the seat memory switch 1 signal is displayed.
MEMORY SW2	"ON/OFF"	ON / OFF status judged from the seat memory switch 2 signal is displayed.
CANCEL SW	"ON/OFF"	Setting status is displayed with the display unit: "Active (ON) / inactive (OFF)"
DOOR SW DR	"ON/OFF"	Door open (ON) / door closed (OFF) status judged from the driver door switch is displayed.
VHCL SPEED SE	"<7km/>7km"	The present vehicle speed (less than 7 km/h (4 MPH), or 7 km/h (4MPH) or higher) is displayed.
DETENT SW	"ON/OFF"	The selector lever position "P position (ON) / other than P position (OFF)" judged from the detent switch signal is displayed.
IGN ON SW	"ON/OFF"	ON / START, ACC, or OFF status judged from the ignition switch signal is displayed.
IGN ACC SW	"ON/OFF"	ACC or ON / START, or OFF status judged from the ignition switch signal is displayed.
IGN START SW	"ON/OFF"	START, ON / ACC, or OFF status judged from the ignition switch signal is displayed.
IGN KEY SW	"ON/OFF"	Key inserted (ON) / key removed (OFF) status judged from the key detection switch is displayed.
R POSITION SW	"ON/OFF"	R position (ON) / Other than R position OFF of shift position signal from back–up lamp relay is displayed.
TILT SEN	"V"	The tilt position (voltage) judged from the tilt sensor signal is displayed.
TELESCO SEN	"V"	The telescoping position (voltage) judged from the telescoping sensor signal is displayed.
MIR/SE RH R–L	"ON/OFF"	ON (normal value)/OFF (abnormal value) *of voltage value judged from RH door mirror sensor output voltage (LH/RH) is displayed.
MIR/SE RH U–D	"ON/OFF"	ON (normal value) / OFF (abnormal value) *of voltage value judged from RH door mirror sensor output voltage (UP / DOWN) is displayed.
MIR/SE LH R–L	"ON/OFF"	ON (normal value) / OFF (abnormal value) *of voltage value judged from LH door mirror sensor output voltage (LH / RH) is displayed.
MIR/SE LH U–D	"ON/OFF"	ON (normal value) / OFF (abnormal value) *of voltage value judged from LH door mirror sensor output voltage (UP / DOWN) is displayed.
Voltage	"V"	Displays measured values by voltage probe.
Frequency	"ms,Hz,%"	Displays value measured with pulse probe.

*: Abnormal value indicates that the sensor output voltage is 0.2V or lower, or 4.5V or higher.

ACTIVE TEST

Display Item List

Test item	Description
TILT MOTOR	The tilt motor is activated by receiving the drive signal.
TELESCO MOTOR	The telescoping motor is activated by receiving the drive signal.
SEAT SLIDE	The sliding motor is activated by receiving the drive signal.
SEAT RECLINING	The reclining motor is activated by receiving the drive signal.
SEAT LIFTER FR	The front end lifter motor is activated by receiving the drive signal.
SEAT LIFTER RR	The rear end lifter motor is activated by receiving the drive signal.
MEMORY SW INDCTR	The memory switch indicator is lit by receiving the drive signal.
MIRROR MOTOR RH	The passenger side door mirror motor moves the mirror UP/DOWN and LEFT/RIGHT by receiving the drive signal.
MIRROR MOTOR LH	The driver side door mirror motor moves the mirror UP/DOWN and LEFT/RIGHT by receiving the drive signal.

1. BCM INSPECTION

Replace BCM with a known-good one, and carry out the communication diagnosis. Refer to GW-93, "IVMS Communication Diagnosis" .

OK or NG?

OK >> Replace BCM
NG >> GO TO 2.

2. LCU INSPECTION

1. Replace with the previously installed BCM.
2. Replace LCU with a known-good one, and carry out the communication diagnosis. Refer to GW-93, "IVMS Communication Diagnosis" .

OK or NG?

OK >> Replace LCU
NG >> Perform the following.

- Repair or replace communication harness between LCU and BCM.
- Replace with the previously installed LCU.

On Board Diagnosis

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BCM can check each local unit (LCU), switches, loads, and malfunctions in communication with the self-diagnosis.

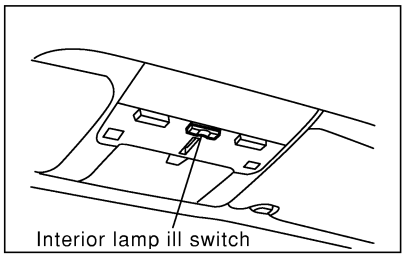
DIAGNOSIS ITEM

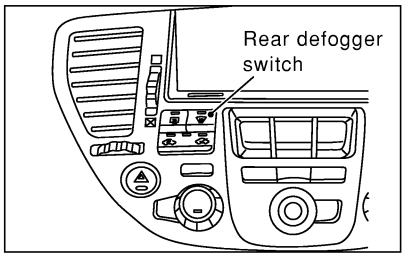
Diagnosis item	Description
Communication diagnosis	● It can check the communication line between BCM and each LCU, and also each LCU, for a communication error and malfunction.
Switch monitor	● It can check the switch systems which send data to BCM and each LCU for a malfunction.
Self-diagnosis for auto drive positioner	● Diagnoses malfunctions in each motor and sensor in the electrical load parts of the driver power seat system (sliding, reclining, and lifter [front/rear]), of the steering wheel system (tilt, telescoping), and of door mirror.

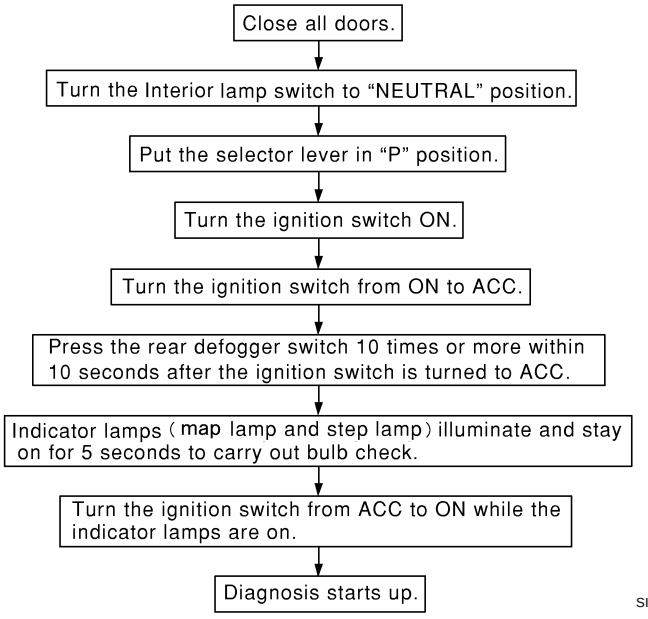
COMMUNICATION DIAGNOSIS

Check the communication between BCM and each local control unit (LCU).

Operation Procedure



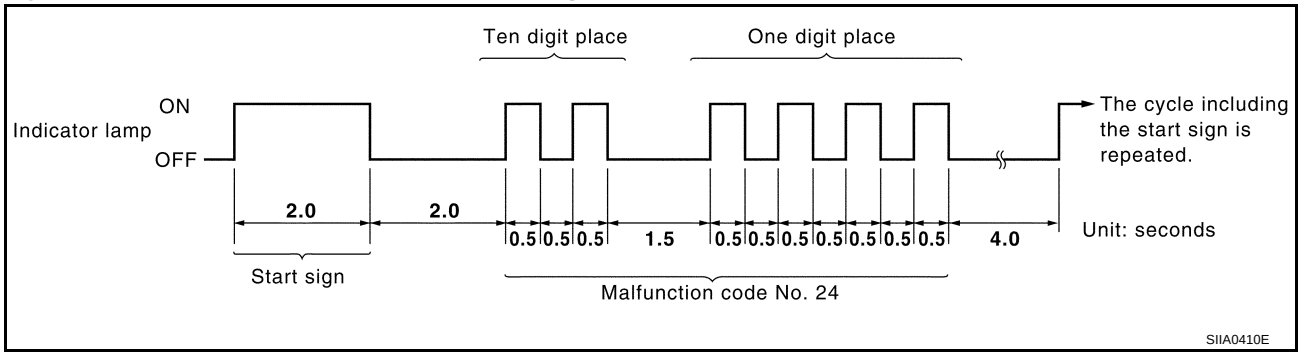




Diagnosis Result Display

- The indicator lamps (the map lamp and step lamp) turn ON (illuminate) for 2 seconds and OFF (go off) for 2 seconds to indicate that the diagnosis has started, then indicate the diagnosis trouble code.
- To indicate the self–diagnosis trouble code, the indicator lamps illuminate or flash.
- At first, the lamps indicate the second place by ON / OFF with 0.5 second-interval, then OFF for 1.5 seconds. Next, they indicate the first place by ON / OFF with 0.5 second interval.
- If there are multiple malfunctioning parts, the lamps indicate them in sequence from the smallest diagnosis trouble code.
- The diagnosis results repeat until the diagnosis is cancelled.
- If a malfunction is indicated, carry out the communication diagnosis again to check that the same diagnosis trouble code is indicated.

Diagnosis Trouble Code Indication Example



Trouble Diagnosis Chart

Malfunctioning item	Display unit	CONSULT–II IVMS communication diagnosis content	Self-diagnosis trouble code No.	Malfunctioning system and reference
COMM DATA	One LCU is displayed.	POWER WINDOW C/U–DR "COMM DATA"	24	Replace the displayed LCU.
		DOOR MIRROR C/U–RH "COMM DATA"	27	
		DOOR MIRROR C/U–LH "COMM DATA"	37	
		POWER SEAT C/U–DR "COMM DATA"	47	
	Multiple LCUs are displayed	BCM "COMM FAIL1" ,"COMM FAIL2"	Displays in order of 24→27→37→47→ and cycles from 24.	Communication system A: Refer to GW-102 .
NO RESPONSE	One LCU is displayed.	POWER WINDOW C/U–DR "NO RESPONSE"	25	Communication system B: Refer to GW-102 .
		DOOR MIRROR C/U–RH "NO RESPONSE"	28	
		DOOR MIRROR C/U–LH "NO RESPONSE"	38	
		POWER SEAT C/U–DR "NO RESPONSE"	48	
	Multiple LCUs are displayed	BCM/HARNESS	Displays in order of 25→28→38→48→ and cycles from 25.	Communication system C: Refer to GW-102 .
SLEEP malfunction	One LCU is displayed.	POWER WINDOW C/U–DR "SLEEP"	No self-diagnosis function	Replace the displayed LCU.
		DOOR MIRROR C/U–RH "SLEEP"		
		DOOR MIRROR C/U–LH "SLEEP"		
		POWER SEAT C/U–DR "SLEEP"		
	Multiple LCUs are displayed	All the above control units are displayed.	No self-diagnosis function	Communication system A: Refer to GW-102 .

NOTE:

- For a specific local control unit (LCU), either "PAST COMM DATA" or "PAST NO RESPONSE" may be displayed instead of the above results. This is caused by the data record, so erase the records.
  (The display only shows the incident records, they are not malfunctions caused during the diagnosis. One possible cause is that an irreproducible incident occurred.)
- Follow the steps below to erase the memory.
  Carry out either disconnect BCM battery power supply or erase memory with CONSULT-II.
- With the battery connected, if the local control unit (LCU) connector is disconnected and left for approximately 1 minute, the BCM stores "NO RESPONSE" record.

Cancel of Communication Diagnosis

If one of the following conditions is satisfied, the communication diagnosis is cancelled.

- When the ignition switch is turned OFF.
- The vehicle speed becomes 7 km/h (4 MPH) or higher.
- Ten minutes have passed since the diagnosis result indication start without no diagnosis cancel operation.

COMMUNICATION SYSTEM A

1. BCM INSPECTION

Replace BCM with a known-good one, and carry out the communication diagnosis. Refer to GW-100, "COMMUNICATION DIAGNOSIS" .

OK or NG?

OK >> Replace BCM
NG >> GO TO 2.

2. LCU INSPECTION

1. Replace with the previously installed BCM.
2. Replace the LCU with a known-good one, and carry out the communication diagnosis. Refer to GW-100, "COMMUNICATION DIAGNOSIS" .

OK or NG?

OK >> Replace LCU
NG >> Perform the following.

- Repair or replace communication harness between LCU and BCM.
- Replace with the previously installed LCU.

COMMUNICATION SYSTEM B

1. HARNESS CONNECTOR INSPECTION

Check the terminals (at the control unit and harness) on the malfunctioning LCU for disconnection, bend, poor connection and other malfunctions.

OK or NG?

OK >> GO TO 2.
NG >> Repair the terminals and connectors.

2. LCU INSPECTION

Replace the malfunctioning LCU with a known-good one, and carry out the communication diagnosis. Refer to GW-100, "COMMUNICATION DIAGNOSIS" .

OK or NG?

OK >> Replace LCU
NG >> Perform the following.

- Repair or replace communication harness between LCU and BCM.
- Replace with the previously installed LCU.

COMMUNICATION SYSTEM C

1. HARNESS CONNECTOR INSPECTION

Check the terminals (at the control unit and harness) on BCM and LCU for disconnection, bend, poor connection, and other malfunctions.

OK or NG?

OK >> GO TO 2.
NG >> Repair the terminals and connectors.

2. BCM INSPECTION

Replace the malfunctioning BCM with a known-good one, and carry out the communication diagnosis. Refer to GW-100, "COMMUNICATION DIAGNOSIS" .

OK or NG?

OK >> Replace BCM

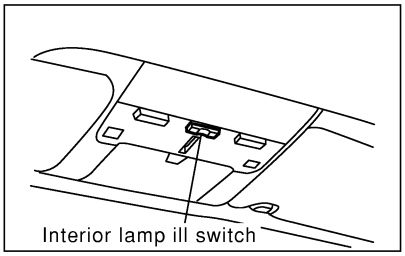
NG >> Perform the following.

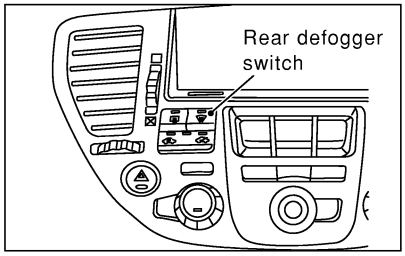
- Repair or replace communication harness between LCU and BCM control.
- Replace with the previously installed BCM.

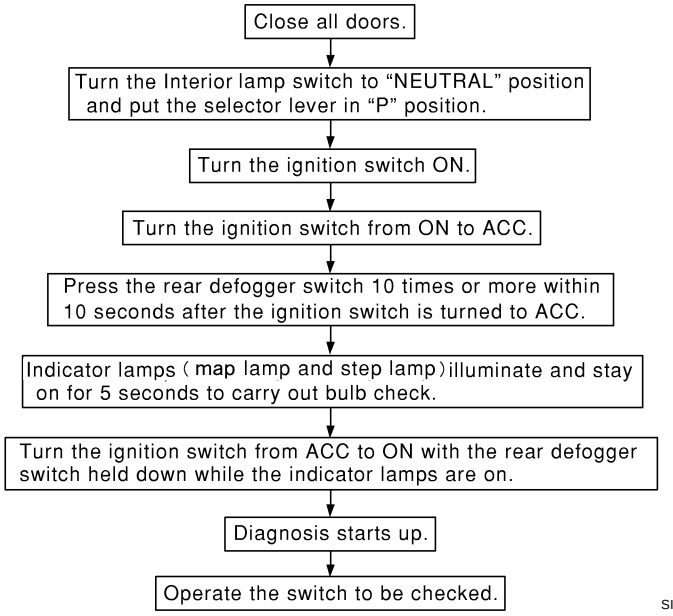
SWITCH MONITOR

Carry out the diagnosis for the switch system input to each control unit.

Operation Procedure

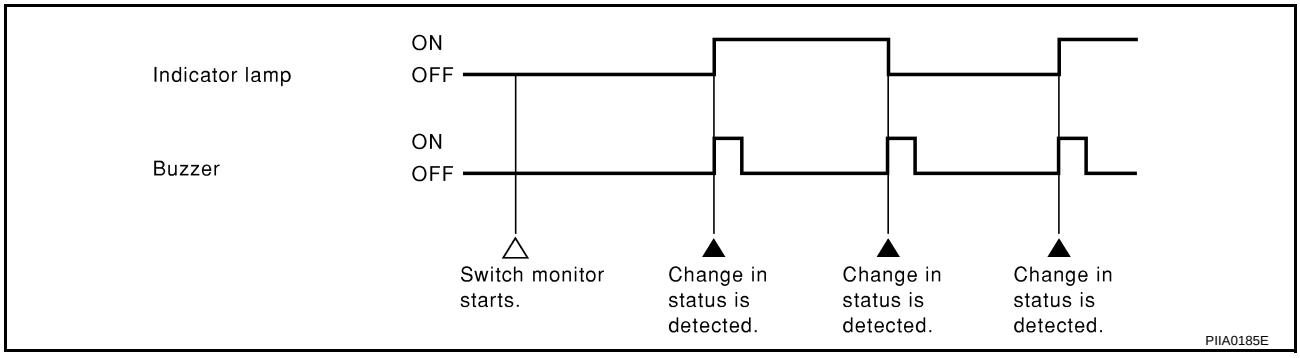






Diagnosis Result Display

- Detects the status change (switch ON/OFF operation) of the switch to be checked, and turns on/off the indicator lamps (the map lamp and step lamp). Also sounds the buzzer (the key remainder and light remainder) for 0.5 seconds.
- If a malfunction is detected, no indicator lamp and buzzer react.



Diagnosis Item

- The status of the switch (except the ignition switch, interior lamp switch, and map lamp switch) input to each control unit can be monitored.

Control unit	Item
BCM	Detent switch
	Steering wheel position switch (telescoping switch and tilt switch)
	Seat memory switch (memory switch 1, memory switch 2, and setting switch).
	Driver door switch
	Door mirror remote control switch

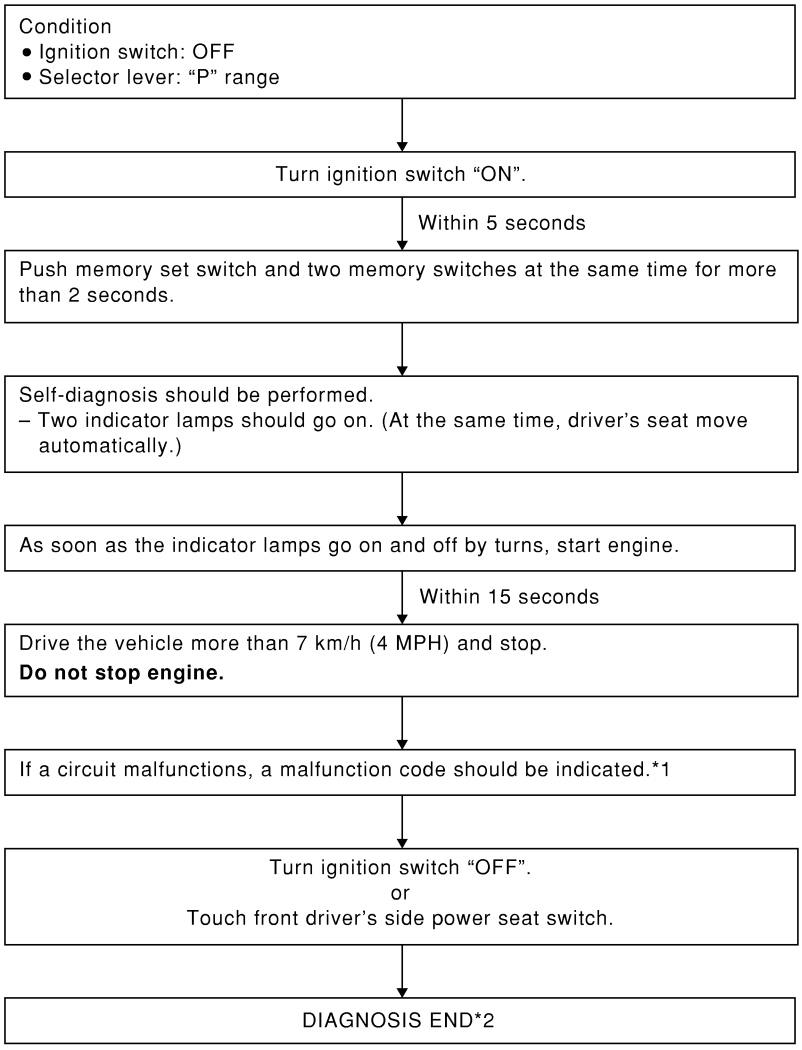
Cancel of Switch Monitor

If one of the following conditions are satisfied, the switch monitor is cancelled.

- When the ignition switch is turned OFF.
- The vehicle speed becomes 7 km/h (4 MPH) or higher.

ON BOARD DIAGNOSIS FOR AUTOMATIC DRIVE POSITIONER

- Check the operations of the auto drive positioner system.



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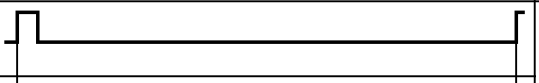
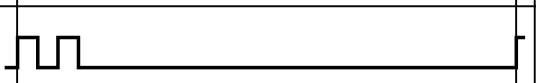
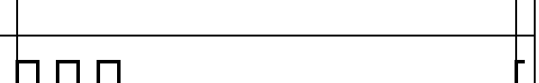
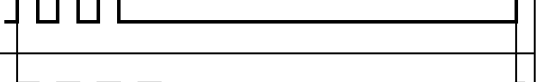
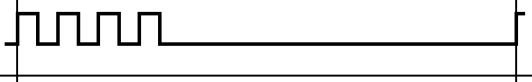
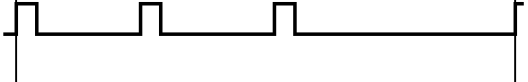
*1:If no malfunction is indicated, On board Diagnosis will end after the vehicle speed sensor diagnosis is performed.
*2:Diagnosis ends after self–diagnostic results have indicated for 10 minutes if left unattended.

Diagnosis Result Display

- The malfunctioning items are indicated by how many times LEDs on the seat memory switches 1 and 2 flash simultaneously.

Code No.	Detected items	Indication of seat memory switches 1 and 2	Explanation
1	Seat sliding		While the seat motors are moving for 2.5 seconds, if the number of seat sliding/reclining/lifting sensor pulses changes 2 times or less, the seat device is determined to be malfunctioning.
2	Seat reclining		
3	Seat lifting front		
4	Seat lifting rear		
5	Steering telescopic		While the steering motors are moving, if the steering sensor output changes 0.2 volts or less, the steering device is determined to be malfunctioning.
6	Steering tilt		
7	Door mirrors (upper and lower)		When output voltage of either LH or RH door mirror sensor continues at less than 0.2V or more than 4.5V for 0.5 seconds or more, the door mirror is determined to be malfunctioning.
8	Door mirrors (LH and RH)		When output voltage of either LH or RH door mirror sensor continues at less than 0.2V or more than 4.5V for 0.5 seconds or more, the door mirror is determined to be malfunctioning.
9	Vehicle speed sensor circuit		If the vehicle speed sensor output of less than 7 km/h (4 MPH) is detected, the vehicle speed sensor is determined to be malfunctioning.
–	No malfunction in the above items		—

PIIA0190E

- If the vehicle speed is less than 7 km/h (4 MPH) for 15 seconds after the diagnosis for the seat and steering wheel systems were completed, the vehicle speed signal is judged malfunctioning.
- If LH door mirror is malfunctioning, only indicator lamp on the memory switch 1 flashes, and if RH door mirror is malfunctioning, only indicator lamp on the memory switch 2 flashes.
- When all the diagnosis are finished normally, the indicator lamps on the memory switches 1 and 2 go off after the vehicle speed signal diagnosis.
- If there are multiple malfunctioning parts, the lamps indicate them in sequence from the smallest diagnosis trouble code.
- The diagnosis results repeat until the diagnosis mode is cancelled.

Symptom Chart

AIS001XM

Symptom	Diangoses / Service procedure	Refer to page
Reverse interlock door mirror system does not operate at all.	1. Door mirror remote control switch (changeover switch) circuit inspection.	GW-107
	2. Back-up input signal circuit inspection in R position.	GW-109
	3. Replace BCM.	—
● During the reverse interlock door mirror system operation, either LH or RH door mirror face does not reproduce the stored angle. ● After the reverse interlock door mirror system operation, the door mirror face returns to wrong position (not to the original position).	1. Mirror sensors circuit inspection.	GW-113
	2. Carry out the communication inspection again.	—
The mirror face position with the reverse gear engaged cannot be memorized.	1. Seat memory switch circuit inspection.	SE-76
	2. Door mirror remote control switch (changeover switch) system inspection.	GW-107
	3. Door mirror remote control switch (mirror switch) system inspection.	GW-110
	4. Back-up input signal control inspection R position inspection.	GW-109
	5. Mirror motors circuit inspection.	GW-111
	6. Mirror sensors circuit inspection.	GW-113
	7. Replace BCM.	—

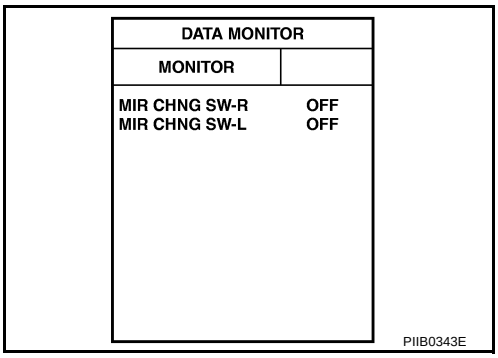
Door Mirror Remote Control Switch (Changeover switch) Circuit Inspection

AIS001XN

1. FUNCTION INSPECTION

With CONSULT–II

Check the operation on “**MIR CHNG SW-R** ” or “**MIR CHNG SW-L** ” in the DATA MONITOR. Refer to GW-97, "DATA MONITOR" .



Without CONSULT–II

Carry out the switch monitor in the self-diagnostic function. Refer to GW-104, "SWITCH MONITOR" .

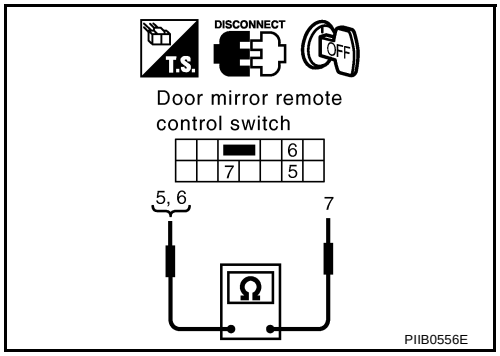
OK or NG?

OK >> Door mirror remote control switch (changeover switch) circuit is OK.
NG >> GO TO 2.

2. DOOR MIRROR REMOTE CONTROL SWITCH (CHANGEOVER SWITCH) INSPECTION

1. Turn ignition switch OFF.
2. Disconnect door mirror remote control switch connector.
3. Check continuity between door mirror remote control switch terminal 5 (RH), 6 (LH) and 7.

Changeover switch RIGHT position
5 – 7 :Continuity should exist.
Changeover switch LEFT position
6 – 7 :Continuity should exist.



OK or NG?
OK >> GO TO 3.
NG >> Replace malfunction door mirror remote control switch.

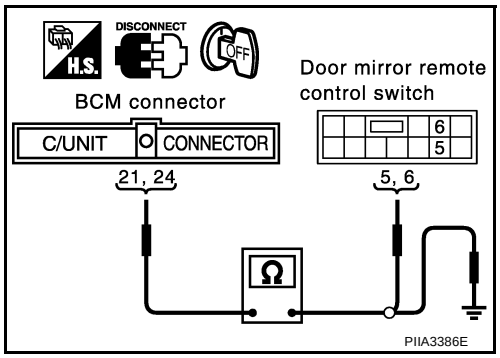
3. HARNESS CONTINUITY INSPECTION

1. Disconnect the BCM connector.
2. Check continuity between BCM connector M4 terminals 21, 24 and door mirror remote control switch connector M19 terminals 5, 6.

21 (SB) – 5 (SB) :Continuity should exist.
24 (BR/Y) – 6 (BR/Y) :Continuity should exist.

3. Check continuity between BCM connector M4 terminals 21, 24 and ground.

21 (SB) – Ground :Continuity should not exist.
24 (BR/Y) – Ground :Continuity should not exist.

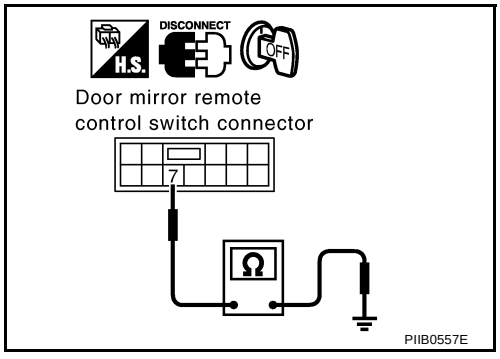


OK or NG?
OK >> GO TO 4
NG >> Repair or replace harness.

4. GROUND CIRCUIT INSPECTION OF DOOR MIRROR REMOTE CONTROL SWITCH

Check continuity between the door mirror remote control switch connector M19 terminal 7 and ground.

7 (B) – Ground :Continuity should exist.



OK or NG?
OK >> Check connector for damage or loose connection.
NG >> Repair or replace harness.

Back- up Input Signal Circuit Inspection In R Position

AIS001XO

1. CHECK THE SYMPTOM

Check that other systems using the reverse signal are under normal operation.

Whether back–up lamp lights is checked.

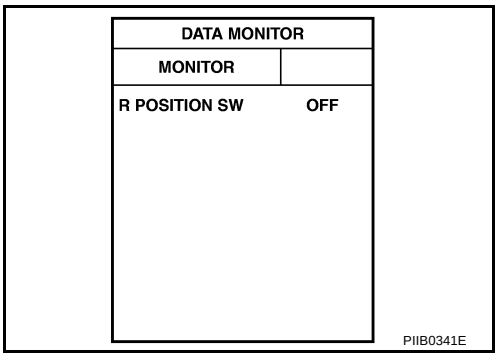
OK or NG?

OK >> GO TO 2.
NG >> Refer to AT-251, "Vehicle Does Not Creep Backward In “R” Position" .

2. FUNCTION INSPECTION

With CONSULT–II

Check the operation on “**R POSITION SW** ” in the DATA MONITOR. Refer to GW-97, "DATA MONITOR" .



Without CONSULT–II

Carry out switch monitor in self-diagnostic function. Refer to GW-104, "SWITCH MONITOR" .

GO or NG?

OK >> System is OK.
NG >> GO TO 3.

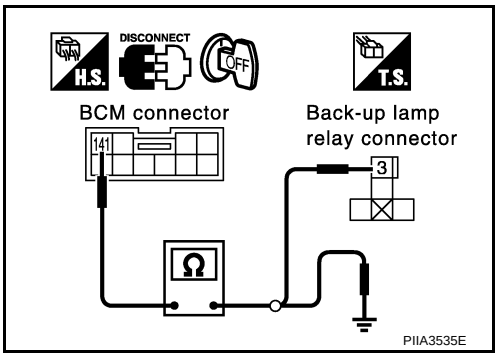
3. HARNESS CONTINUITY INSPECTION

1. Turn ignition switch OFF.
2. Disconnect the BCM and back-up lamp relay connector.
3. Check continuity between BCM connector B4 terminal 141 and back–up lamp relay connector E2-2 terminal 3.

   141 (R/B) – 3 (R/B) :Continuity should exist.

4. Check continuity between BCM connector B4 terminal 141 and ground.

   141 (R/B) – Ground :Continuity should not exist.



OK or NG?

OK >> Replace BCM.
NG >> Repair or replace harness.

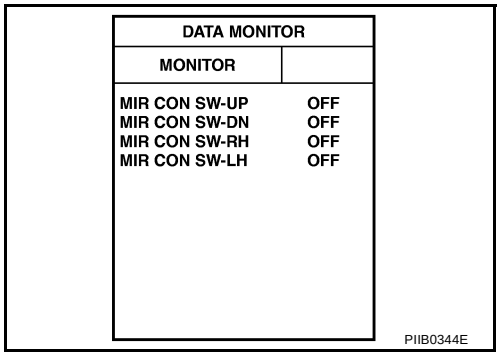
Door Mirror Remote Control Switch (Mirror Switch) Circuit Inspection

AIS001XR

1. DOOR MIRROR REMOTE CONTROL SWITCH(MIRROR SWITCH) SIGNAL INSPECTION

With CONSULT–II

Check the operation on "**MIR CON SW-UP/DN** " and "**MIR CON SW-RH/LH** " in the DATA MONITOR. Refer to GW-97, "DATA MONITOR" .



Without CONSULT–II

Carry out the switch monitor in the self-diagnostic function. Refer to GW-104, "SWITCH MONITOR"

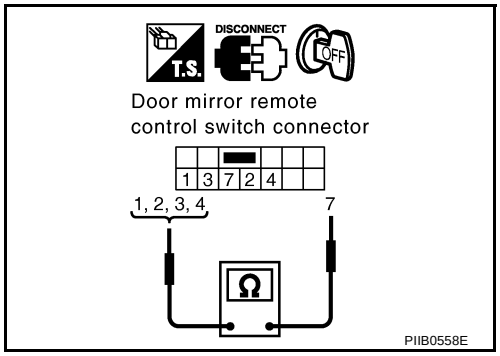
OK or NG?

OK >> Door mirror remote control switch (mirror switch) circuit is OK.
NG >> GO TO 2.

2. DOOR MIRROR REMOTE CONTROL SWITCH (MIRROR SWITCH) INSPECTION

1. Turn ignition switch OFF.
2. Disconnect door mirror remote control switch connector.
3. Check continuity between door remote control switch (mirror switch) terminals 1, 2, 3, 4 and 7.

Terminals		Condition	Continuity
3	7	UP operation	Should exist
4		DOWN operation	Should exist
2		LEFT operation	Should exist
1		RIGHT operation	Should exist



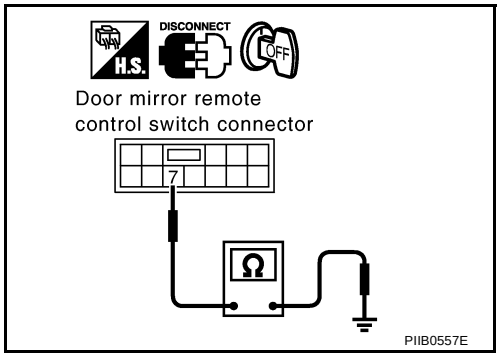
OK or NG?

OK >> GO TO 3.
NG >> Replace the door mirror remote control switch.

3. GROUND CIRCUIT INSPECTION OF DOOR MIRROR REMOTE CONTROL SWITCH

Check continuity between the door mirror remote control switch connector M19 terminal 7 and ground.

7 – Ground :Continuity should exist.



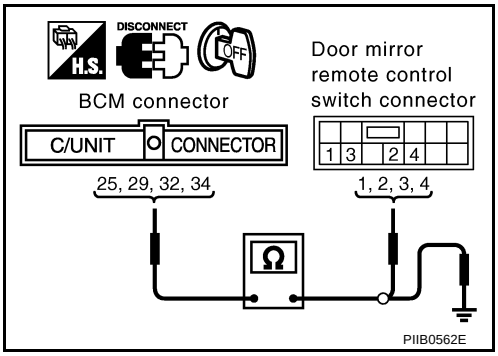
OK or NG?

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

4. HARNESS CONTINUITY INSPECTION

1. Disconnect BCM harness connector.
2. Check continuity between BCM connector M4 terminals 25, 29, 32, 34 and door mirror remote control switch connector M19 terminals 1, 2, 3, 4.

25 (G/R) – 2 (G/R) :Continuity should exist.
29 (LG/R) – 1 (LG/R) :Continuity should exist.
32 (L/W) – 3 (L/W) :Continuity should exist.
34 (P/L) – 4 (P/L) :Continuity should exist.



3. Check continuity between BCM connector M4 terminals 25, 29, 32, 34 and ground.

25 (G/R) – Ground :Continuity should not exist.
29 (LG/R) – Ground :Continuity should not exist.
32 (L/W) – Ground :Continuity should not exist.
34 (P/L) – Ground :Continuity should not exist.

OK or NG?

OK >> Check connector for damage or loose connection.
NG >> Repair or replace harness between BCM and door mirror remote control switch.

Mirror Motors Circuit Inspection

AIS001XS

1. DOOR MIRROR FUNCTION INSPECTION

Check the following items.
Operation malfunction caused by a foreign object caught in door mirror face edge.

OK or NG?

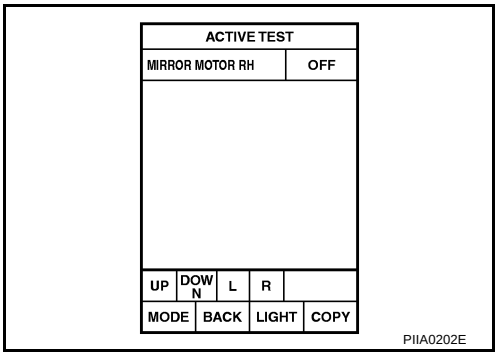
OK >> GO TO 2.
NG >> Repair the malfunctioning parts, and check the symptom again.

2. MIRROR MOTOR INSPECTION

With CONSULT–II

Check the operation with “**MIRROR MOTOR RH** ” or “**MIRROR MOTOR LH** ” in the ACTIVE TEST. Refer to GW-99, "ACTIVE TEST" .

NOTE:
If CONSULT-II is not available, skip this procedure and go to the next step.



OK or NG?

OK >> System is OK.
NG >> GO TO 3.

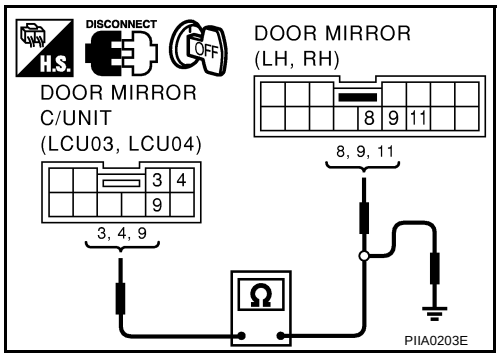
3. HARNESS CONTINUITY INSPECTION

1. Turn ignition switch OFF.
2. Disconnect door mirror control unit D5 (driver side), D35 (passenger side) and door mirror connector D2 (driver side), D32 (passenger side) connectors.
3. Check continuity between door mirror control unit connector D5 (driver side), D35 (passenger side) terminals 3, 4, 9 and door mirror connector D2 (driver side), D32 (passenger side) terminals 8, 9, 11.

3 (GY/R)(R)* – 8 (GY/R)(R)* :Continuity should exist.
4 (BR) – 9 (BR) :Continuity should exist.
9 (PU/W)(OR)*–11 (PU/W)(OR)* :Continuity should exist.

4. Check continuity between door mirror control unit connector D5 (driver side), D35 (passenger side) terminals 3, 4, 9 and ground.

3 (GY/R)(R)* – Ground :Continuity should not exist.
4 (BR) – Ground :Continuity should not exist.
9 (PU/W)(OR)* – Ground :Continuity should not exist.



*:Wire color for passenger side door mirror and passenger side door mirror control unit.

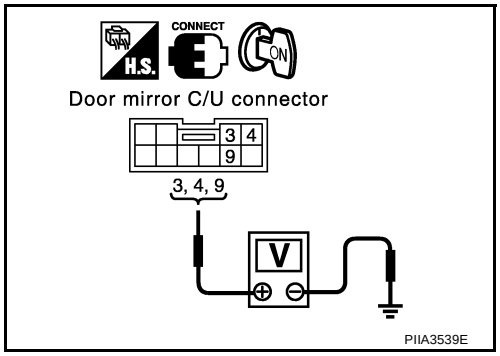
OK or NG?

OK >> GO TO 4.
NG >> Repair or replace harness between door mirror control unit and door mirror.

4. MIRROR MOTOR SIGNAL INSPECTION

1. Connect door mirror control unit D5 (driver side), D35 (passenger side) and door mirror connector D2 (driver side), D32 (passenger side) connectors.
2. Turn ignition switch ON.
3. Check voltage between door mirror control unit connector D5 (driver side), D35 (passenger side) terminals 3, 4, 9 and ground.

Con–nector	Terminals (Wire color) (+)	Terminals (Wire color) (–)	Condition	Voltage(V) (Approx.)
D5 D35	3 (GY/R) (R)*	Ground	When motor is actiated (UP)	Battery voltage
			When motor is not activated	0
	4 (BR)		When motor is actiaged (LEFT)	Battery voltage
			When motor is not activated	0
	9 (PU/W) (OR)*		When motor is activated (RIGHT) or (DOWN)	Battery voltage
			When motor is not activated	0



*:Wire color for passenger side door mirror control unit

OK or NG ?

OK >> Replace the door mirror motor (driver side) or (passenger side).
NG >> Replace the door mirror control unit (driver side) or (passenger side).

Mirror Sensors Circuit Inspection

AIS002MX

1. DOOR MIRROR FUNCTION INSPECTION

Check the following items.

- Operation malfunction caused by a foreign object caught in door mirror face edge.
- Operation malfunction in memory control

NOTE:
If a door mirror face position is set to an implausible angle, the set position may not be reproduced.

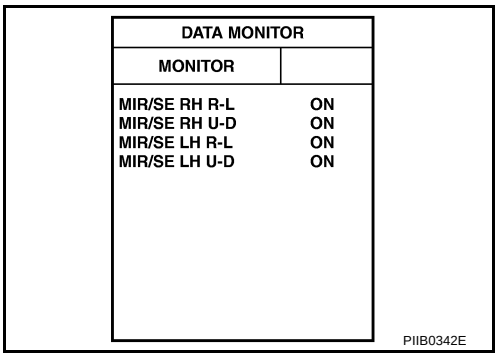
OK or NG?

OK >> GO TO 2.
NG >> Repair the malfunctioning parts, and check the symptom again.

2. MIRROR SENSOR INSPECTION

With CONSULT–II

Check that “ON” is displayed on “**MIR/SE RH R-L** ”, “**MIR/SE RH U-D** ” or “**MIR/SE LH R-L** ”, “**MIR/SE LH U-D** ” in the DATA MONITOR. Refer to GW-97, "DATA MONITOR" .



Without CONSULT–II

GO TO 3.

Question

OK >> System is OK.
NG >> GO TO 3.

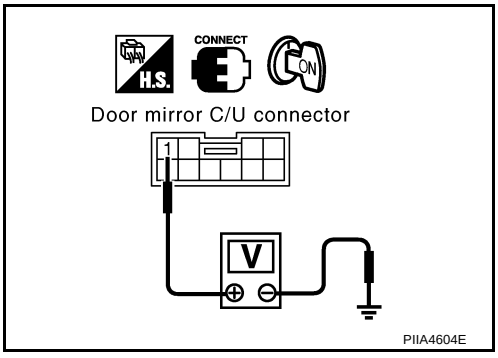
3. MIRROR SENSOR POWER SUPPLY INSPECTION

1. Turn ignition switch ON.
2. Check voltage between door mirror control unit connector D5 (driver side), D35 (passenger side) terminal 1 and ground.

1 (W/L) – Ground :Approx. 5V

OK or NG

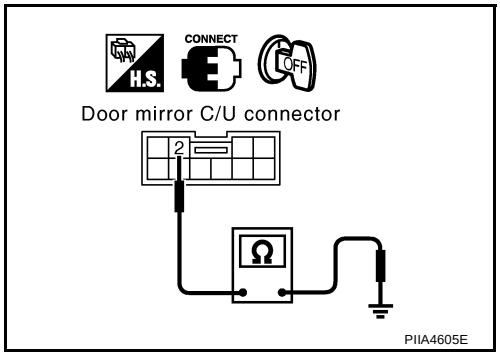
OK >> GO TO 4
NG >> Replace door mirror control unit.



4. MIRROR SENSOR GROUND CIRCUIT INSPECTION

1. Turn ignition switch OFF.
2. Check continuity between door mirror control unit connector D5 (driver side), D35 (passenger side) terminal 2 and ground.

2 (Y) – Ground **:Continuity should exist.**



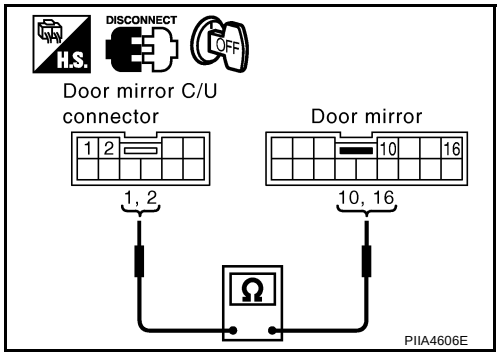
OK or NG

OK >> GO TO 5
NG >> Replace door mirror control unit.

5. HARNESS CONTINUITY INSPECTION 1

1. Disconnect door mirror control unit connector D5 (driver side), D35 (passenger side) and door mirror connector D2 (driver side), D32 (passenger side).
2. Check continuity between door mirror control unit connector D5 (driver side), D35 (passenger side) terminal 1, 2 and door mirror connector D2 (driver side), D32 (passenger side) terminal 10, 16.

1 (W/L) – 16 (W/L) **:Continuity should exist.**
2 (Y) – 10 (Y) **:Continuity should exist.**



OK or NG

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

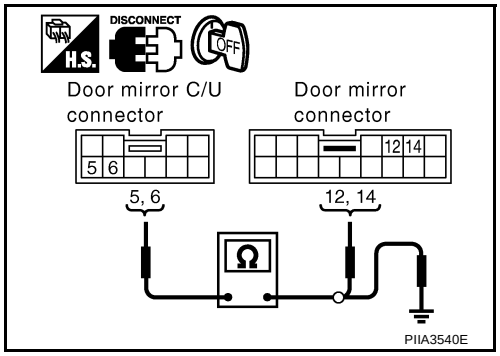
6. HARNESS CONTINUITY INSPECTION 2

1. Disconnect door mirror control unit connector D5 (driver side), D35 (passenger side) and door mirror connector D2 (driver side), D32 (passenger side).
2. Check continuity between door mirror control unit connector D5 (driver side), D35 (passenger side) terminals 5, 6 and door mirror connector D2 (driver side), D32 (passenger side) terminals 12, 14.

5 (L/Y) – 14 (L/Y) **:Continuity should exist.**
6 (G) – 12 (G) **:Continuity should exist.**

3. Check continuity between door mirror control unit connector D5 (driver side), D35 (passenger side) terminals 5, 6 and ground.

5 (L/Y) – Ground **:Continuity should not exist.**
6 (G) – Ground **:Continuity should not exist.**



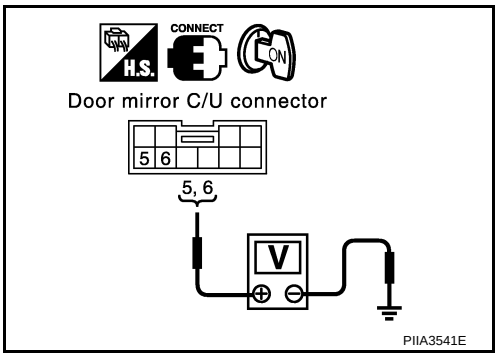
OK or NG?

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

7. MIRROR SENSOR SIGNAL INSPECTION

1. Connect door mirror control unit D5 (driver side), D35 (passenger side) and door mirror D2 (driver side), D32 (passenger side) connectors.
2. Turn ignition switch ON.
3. Check voltage between door mirror control unit connector D5 (driver side), D35 (passenger side) terminals 5, 6and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx,)
	(+)	(–)		
D5 D35	5(L/Y)	Ground	When motor is activated (UP/ DOWN)	Changes between 4 (close to peak) – 0.5 (close to valley)
	6(G)		When motor is activated (LEFT/ RIGHT)	Changes between 4 (close to right edge) – 0.5 (close to left edge)



OK or NG?

OK >> Replace the door mirror control unit.
NG >> Replace the door mirror.

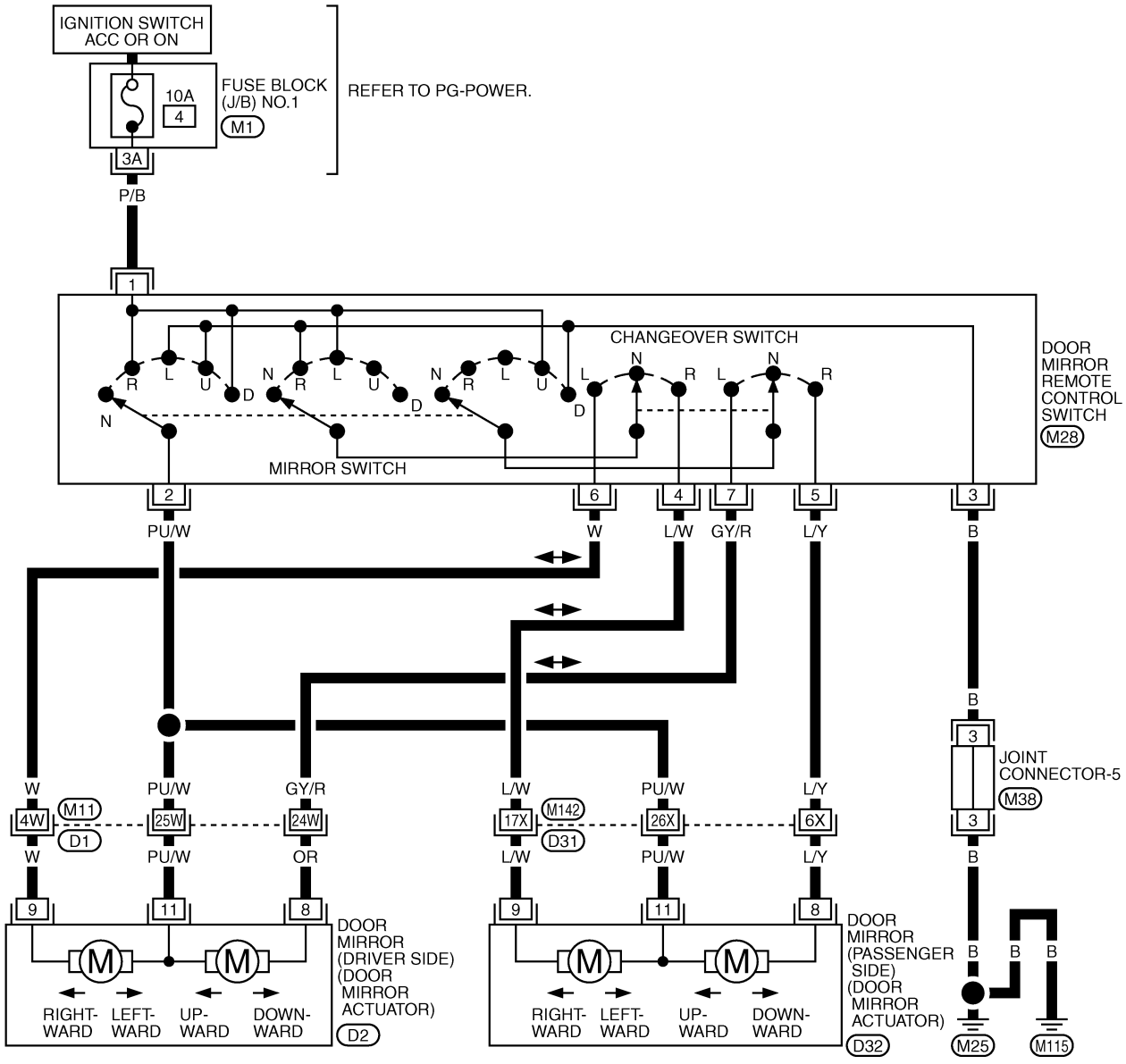
DOOR MIRROR

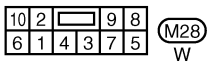
PFP:96301

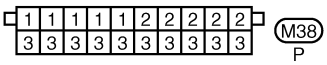
Wiring Diagram-MIRROR-

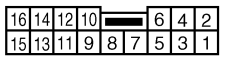
AIS001HM

GW-MIRROR-05









REFER TO THE FOLLOWING.

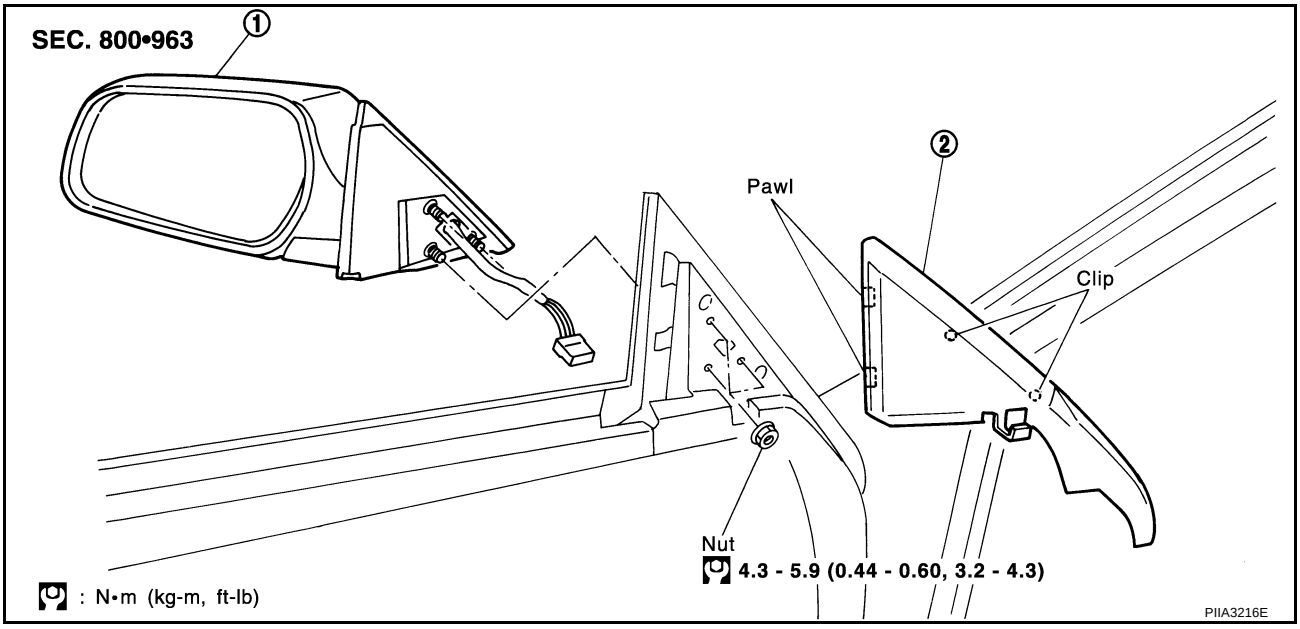
D1 , D31 -SUPER MULTIPLE JUNCTION (SMJ)

M1 -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

TIWA0227E

Removal and Installation

AIS001HN



1. Door mirror assembly
2. Inner cover

REMOVAL

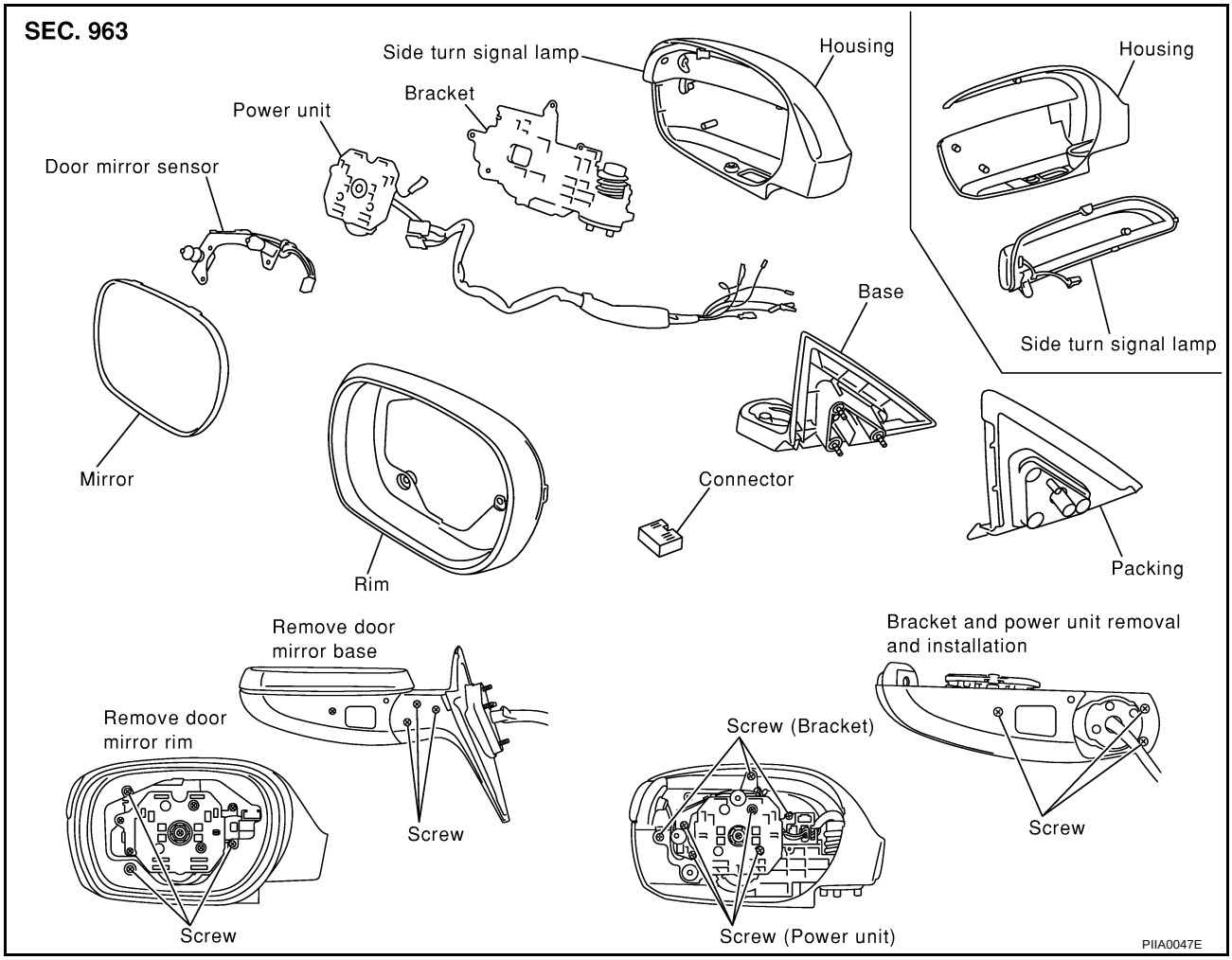
1. Remove front door finisher and Inner cover. Refer to EI-31, "DOOR FINISHER" .
2. Disconnect door mirror harness connector.
3. Loosen the door mirror mounting nuts, and remove door mirror assembly.

INSTALLATION

Install in the reverse order of removal.

Disassembly and Assembly

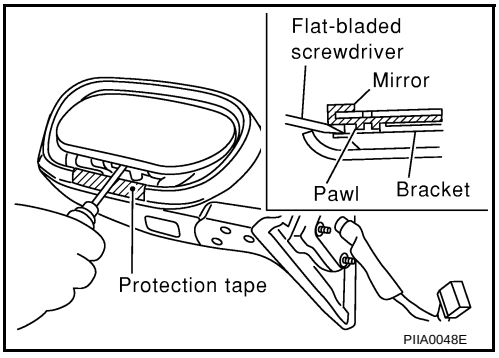
AIS001HO



DISASSEMBLY

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

   NOTE:
   When pushing up the pawls, do not attempt to use 1 recess only, be sure to push up with both recesses.
   Insert screwdriver into recesses, and push up while rotating (twist) to make work easier.



4. Lightly lift up lower side of mirror surface from mirror surface, and detach pawls (2) of upper side as if pulling it out. Remove mirror surface from mirror body.

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

ASSEMBLY

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

   NOTE:
   After installation, visually check that the lower pawls (2) are securely engaged from the bottom of the mirror face.