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# SECTION **GW**

## GLASS & WINDOW SYSTEM

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# PRECAUTIONS

< PRECAUTION >

## PRECAUTION

### PRECAUTIONS

#### Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

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

#### **WARNING:**

Always observe the following items for preventing accidental activation.

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that 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 "SRS AIR BAG".
- Never use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

#### PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

#### **WARNING:**

Always observe the following items for preventing accidental activation.

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

#### Service Procedure Precautions for Models with a Pop-up Roll Bar

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#### **WARNING:**

Always observe the following items for preventing accidental activation.

- Risk of passenger injury or death may increase if the pop-up roll bar does not deploy during a roll over collision. In order to reduce the chance of an incident where the pop-up roll bar is inoperative, all maintenance must be performed by a NISSAN or INFINITI dealer.
- Before removing and installing the pop-up roll bar component parts and harness, always turn the ignition switch OFF, disconnect the battery negative terminal, and wait for 3 minutes or more. (The purpose of this operation is to discharge electricity that is accumulated in the auxiliary power supply circuit in the air bag diagnosis sensor unit.)
- When repairing, removing, and installing a pop-up roll bar, always refer to SRS AIR BAG and SRS AIR BAG CONTROL warnings in the Service Manual.

#### Precaution for Battery Service

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

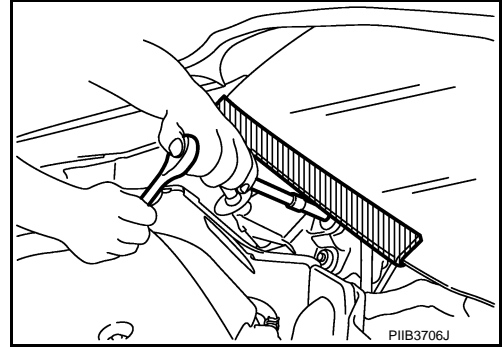
# PRECAUTIONS

< PRECAUTION >

## Precaution for Procedure without Cowl Top Cover

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



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# PREPARATION

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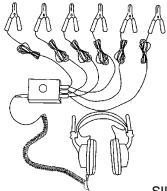
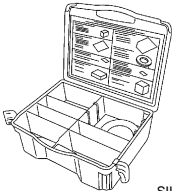
## PREPARATION

### PREPARATION

#### Special Service Tools

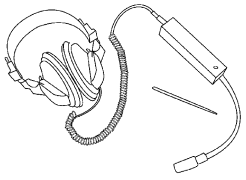
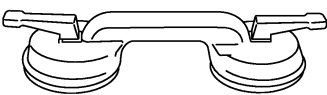
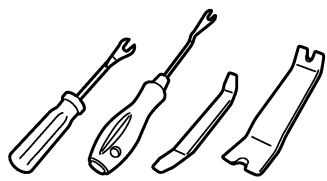
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The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.

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

#### Commercial Service Tools

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Tool name	Description
<p>Engine ear</p>  <p style="text-align: center;">SIIA0995E</p>	<p>Locates the noise</p>
<p>Suction lifter</p>  <p style="text-align: center;">PIIB1805J</p>	<p>Holds the windshield glass, side window glass, back door window glass and door glass</p>
<p>Remover tools</p>  <p style="text-align: center;">JMKIA3050ZZ</p>	<p>Removes the clips, pawls and metal clips</p>

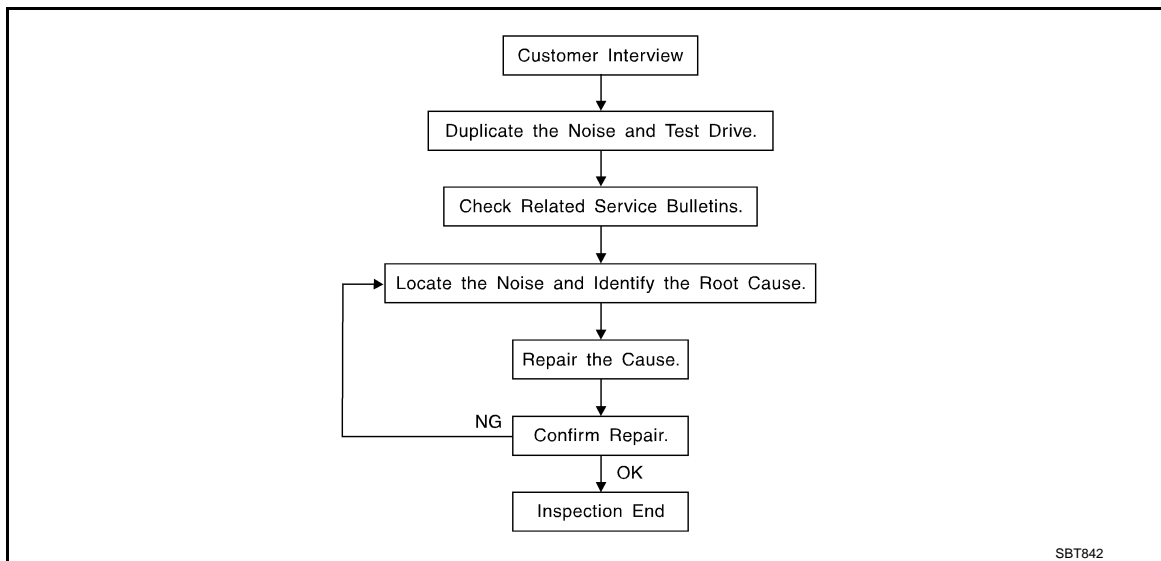
# SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

## SYMPTOM DIAGNOSIS

### SQUEAK AND RATTLE TROUBLE DIAGNOSES

#### Work Flow



#### 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 comments. Refer to [GW-9, "Diagnostic Worksheet"](#). This information is necessary to duplicate the conditions that exist when the noise occurs.

- The customer may not be able to provide a detailed description or the location of the noise. Attempt to obtain all the facts and conditions that exist when the noise occurs (or does not occur).
- If there is more than one noise in the vehicle, perform a diagnosis and repair the noise that the customer is concerned about. This can be accomplished by performing a test drive with the customer.
- After identifying the type of noise, isolate the noise in terms of its characteristics. The noise characteristics are provided so that the customer, service adviser, and technician use the same language when describing 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 = high-pitched noise / softer surfaces = low-pitched 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 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 sounds / 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 / dull sounds often brought on by activity.
- Buzz – (Like a bumblebee)  
Buzz characteristics include high frequency rattle / firm contact.
- Often the degree of acceptable noise level varies depending upon the person. A noise that a technician may judge as acceptable may be very irritating to a customer.
- Weather conditions, especially humidity and temperature, may have a great effect on noise level.

#### DUPLICATE THE NOISE AND TEST DRIVE

# SQUEAK AND RATTLE TROUBLE DIAGNOSES

## < SYMPTOM DIAGNOSIS >

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 the repair is reconfirmed.

If the noise can be duplicated easily during the test drive, do the following with the vehicle stopped to help identify the source of the noise.

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

## CHECK RELATED SERVICE BULLETINS

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

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

## LOCATE THE NOISE AND IDENTIFY THE ROOT CAUSE

1. Narrow down the noise to a general area. To help pinpoint the source of the noise, use a listening tool (Chassis ear: J-39570, engine ear, and mechanics stethoscope).
2. Narrow down the noise to a more specific area and identify the cause of the noise by:
  - Removing the component(s) in the area(s) that is / are suspected to be the cause of the noise. Do not use too much force when removing clips and fasteners, otherwise clips and fasteners can be broken or lost during the repair, creating a new noise.
  - Tapping or pushing/pulling the component(s) that is / are suspected to be the cause of the noise. Do not tap or push/pull the component(s) with excessive force, otherwise the noise is eliminated only temporarily.
  - Feeling for a vibration by hand by touching the component(s) that is / are suspected to be the cause of the noise.
  - Placing a piece of paper between components that are suspected to be the cause of the noise.
  - Looking for loose components and contact marks.  
Refer to [GW-7, "Inspection Procedure"](#).

## 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 components, if possible.
  - Insulate components with a suitable insulator such as urethane pads, foam blocks, felt cloth tape, or urethane tape. A NISSAN Squeak and Rattle Kit (J-43980) is available through the authorized NISSAN Parts Department.

### **CAUTION:**

**Never use excessive force as many components are constructed of plastic and may be damaged.**

### **NOTE:**

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

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

URETHANE PADS [1.5 mm (0.059 in) thick]

Insulates connectors, harness, etc.

- 76268-9E005: 100 × 135 mm (3.937 × 5.315 in)
- 76884-71L01: 60 × 85 mm (2.362 × 3.346 in)
- 76884-71L02: 15 × 25 mm (0.591 × 0.984 in)

INSULATOR (Foam blocks)

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

- 73982-9E000: 45 mm (1.772 in) thick, 50 × 50 mm (1.969 × 1.969 in)
- 73982-50Y00: 10 mm (0.394 in) thick, 50 × 50 mm (1.969 × 1.969 in)

INSULATOR (Light foam block)

80845-71L00: 30 mm (1.18 in) thick, 30 × 50 mm (1.181 × 1.969 in)

FELT CLOTHTAPE

# SQUEAK AND RATTLE TROUBLE DIAGNOSES

## < SYMPTOM DIAGNOSIS >

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

- 68370-4B000: 15 × 25 mm (0.591 × 0.984 in) pad
- 68239-13E00: 5 mm (0.197 in) wide tape roll

The following materials, not found in the kit, can also be used to repair squeaks and rattles.

### UHMW (TEFLON) TAPE

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

### SILICONE GREASE

Used in place of UHMW tape that is visible or does not fit. Only lasts a few months.

### SILICONE SPRAY

Used when grease cannot be applied.

### DUCT TAPE

Used to eliminate movement.

## CONFIRM THE REPAIR

After repair is complete, test drive the vehicle to confirm that the cause of 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.

## Inspection Procedure

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

## INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

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

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

### **CAUTION:**

**Never use silicone spray to isolate a squeak or rattle. If the area is saturated with silicone, the recheck of repair becomes impossible.**

## CENTER CONSOLE

Components to check 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

Check the following items:

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

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

## TRUNK

Trunk noises are often caused by a loose jack or loose items put into the trunk by the customer.

In addition check for the following items:

# SQUEAK AND RATTLE TROUBLE DIAGNOSES

## < SYMPTOM DIAGNOSIS >

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1. Trunk lid dumpers out of adjustment
2. Trunk lid striker out of adjustment
3. 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 items:

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

Causes of seat noise include:

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

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

## UNDERHOOD

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

Causes of transmitted underhood noise include:

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

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



# SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

## Diagnostic Worksheet

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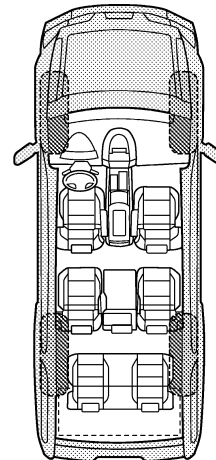
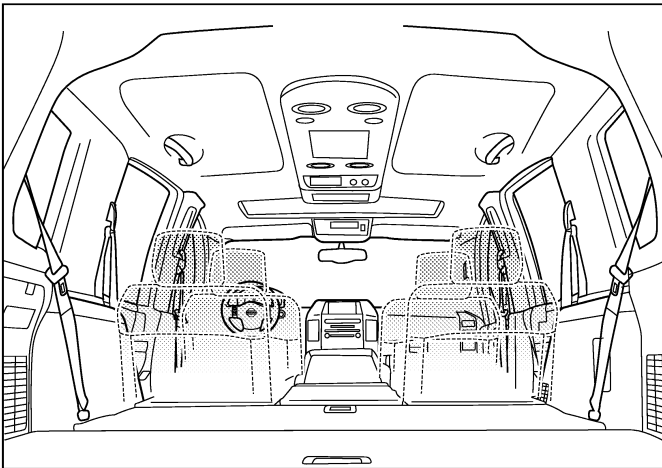
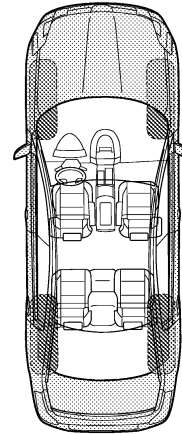
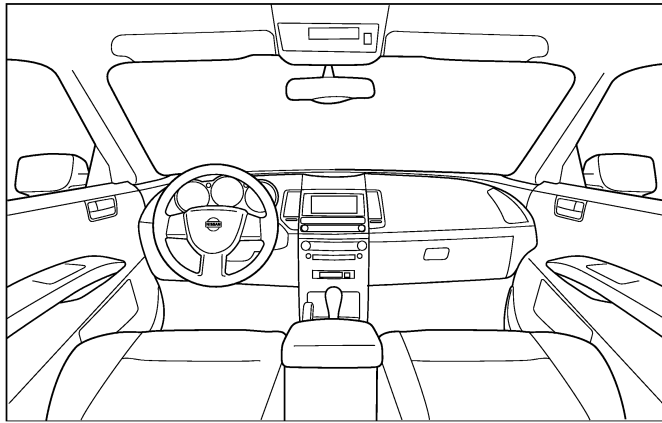
### SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

Dear Nissan Customer:

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

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

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



Continue to page 2 of the worksheet and briefly describe the location of the noise or rattle. In addition, please indicate the conditions which are present when the noise occurs.

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# SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

## SQUEAK & RATTLE DIAGNOSTIC WORKSHEET - page 2

Briefly describe the location where the noise occurs:

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

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

### III. WHEN DRIVING:

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

### IV. WHAT TYPE OF NOISE

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

## TO BE COMPLETED BY DEALERSHIP PERSONNEL

### Test Drive Notes:

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

VIN: \_\_\_\_\_ Customer Name: \_\_\_\_\_  
W.O.# \_\_\_\_\_ Date: \_\_\_\_\_

This form must be attached to Work Order

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# WINDSHIELD GLASS

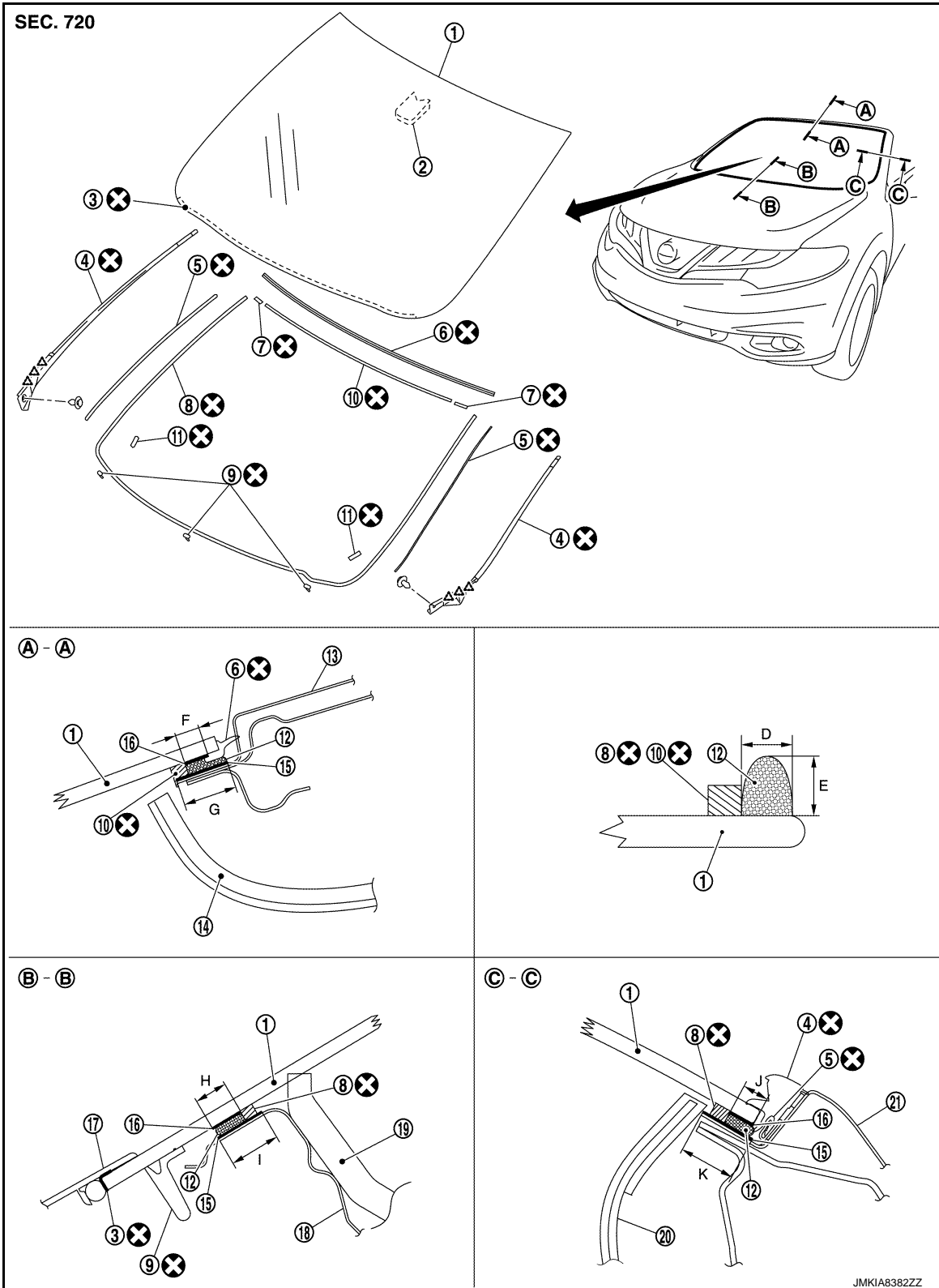
< REMOVAL AND INSTALLATION >

## REMOVAL AND INSTALLATION

### WINDSHIELD GLASS

Exploded View

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# WINDSHIELD GLASS

## < REMOVAL AND INSTALLATION >

- |                              |                             |                             |
|------------------------------|-----------------------------|-----------------------------|
| 1. Windshield glass          | 2. Inside mirror base       | 3. Adhesive tape            |
| 4. Windshield molding (side) | 5. Fastener (side)          | 6. Windshield molding upper |
| 7. Upper spacer              | 8. Dam sealant rubber lower | 9. Lower spacer             |
| 10. Dam sealant rubber upper | 11. Insulator               | 12. Adhesive                |
| 13. Headlining finisher      | 14. Headlining assembly     | 15. Body panel primer       |
| 16. Glass primer             | 17. Cowl top cover          | 18. Cowl top center         |
| 19. Insulator dash lower     | 20. Front pillar garnish    | 21. Body side outer         |
- D : 7 (0.276)      E : 12 (0.472)      F : 11 (0.433)  
G : 17 (0.669)      H : 11 (0.433)      I : 19 (0.748)  
J : 11 (0.433)      K : 17 (0.669)

 : Pawl

 Always replace after every disassembly

Unit: mm (in)

## Removal and Installation

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### REMOVAL

1. Remove front pillar garnish (LH and RH). Refer to [INT-18. "FRONT PILLAR GARNISH : Removal and Installation"](#).
2. Remove headlining. Refer to [INT-26. "Removal and Installation"](#).
3. Remove front wiper arm (LH and RH). Refer to [WW-39. "Removal and Installation"](#).
4. Remove front fender cover. Refer to [EXT-26. "FENDER PROTECTOR : Removal and Installation"](#).
5. Remove cowl top cover. Refer to [EXT-20. "Removal and Installation"](#).
6. Remove the roof side molding (LH and RH). Refer to [EXT-41. "Removal and Installation"](#).
7. Guiding a cutter knife along windshield glass, cut the windshield molding.

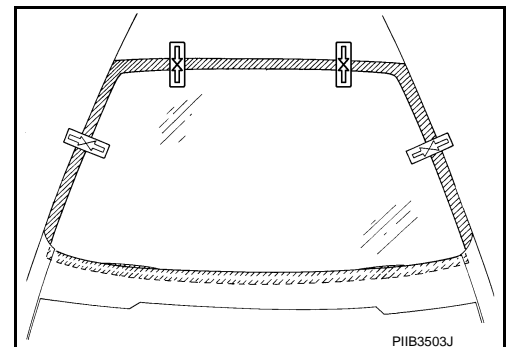
#### CAUTION:

**Apply protective tape around windshield to prevent painted surface from being damaged.**

8. Using a pair of pliers, pull molding remaining at the body flange out of bonded area of windshield glass.
9. Paint matching marks on the body and glass if the windshield is reused.

#### NOTE:

- Positioning during installation can be easily performed.
- When installing a new windshield glass mount the glass on the body and put the matching marks after clearing the body side.



10. Cut the adhesive.  
Depending on the tool in use, follow the procedures below:

#### CAUTION:

**Never use a windshield cutter if the windshield is reused. (It may scratch the glass surface)**

- a. With piano wire (when reusing windshield glass).

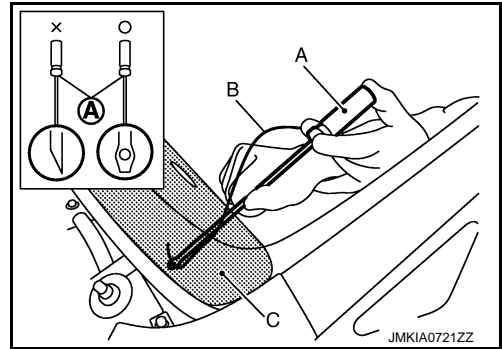
# WINDSHIELD GLASS

## < REMOVAL AND INSTALLATION >

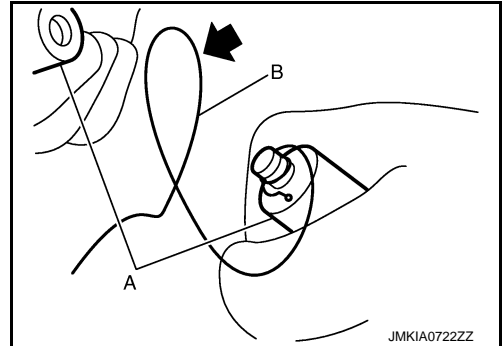
- i. Pass the piano wire (B) from the passenger room to the bonded area of windshield glass using a wire pierce (A).

**CAUTION:**

- Never press the piano wire excessively against the edge of the glass.
- Always use a Standish cover (C) to keep the piano wire clear of plastic parts such as the instrument panel.
- For the corner area, never insert the piano wire into the mating surfaces of windshield glass.
- Never damage the harness around the windshield glass.



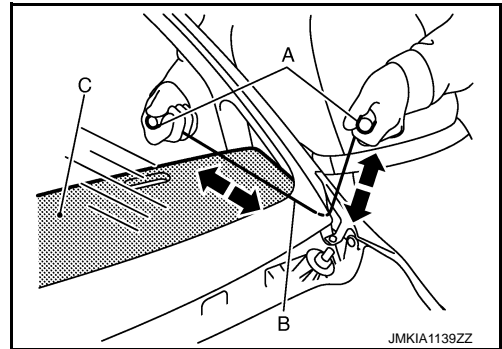
- ii. Tie both ends of the piano wire (B) to the wire grip (A), etc.



- iii. With 2 persons, one holding the piano wire (B) inside the vehicle along with the windshield glass and the other holding it outside the vehicle along with the gap between the body and windshield glass, pull it to cut off the adhesive.

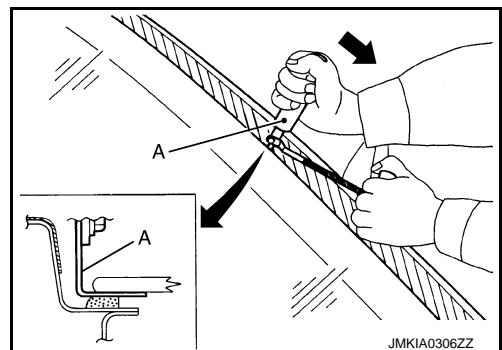
**CAUTION:**

- Always use a Standish cover (C) to keep the piano wire clear of plastic parts such as the instrument panel.**

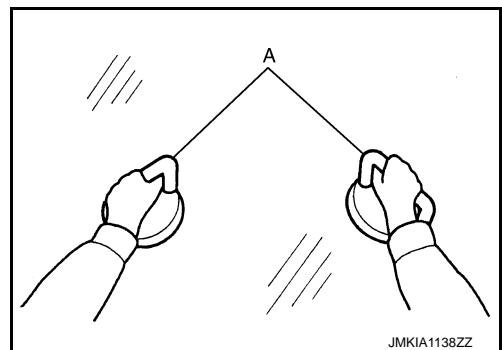


- b. With a windshield cutter (A) (when replacing windshield glass)

- i. Apply soapy water around the bonded area on the body for smooth movement of the windshield cutter.  
 ii. Insert the windshield cutter into the bonded area. Cut the adhesive by pulling the knife, keeping the tip parallel to the edge of the windshield glass.



11. Use rubber suction cups or suction lifter (A), etc. to remove windshield glass from the vehicle.



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# WINDSHIELD GLASS

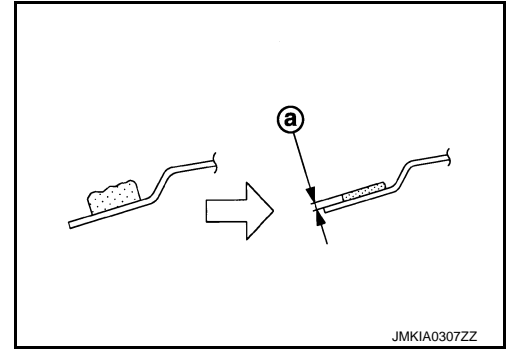
## < REMOVAL AND INSTALLATION >

### INSTALLATION

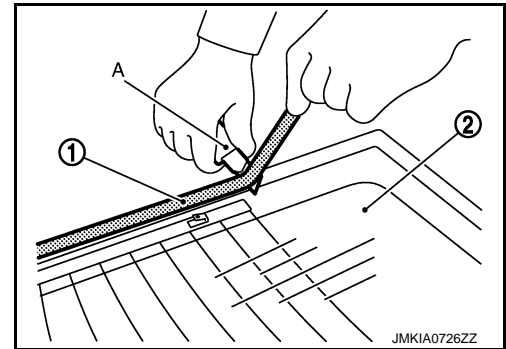
1. Using a scraper, remove remaining adhesive (sealant) on the body side down to approximately a depth that is 2 mm (0.079 in) thick (a) so that entire contour becomes smooth.

**CAUTION:**

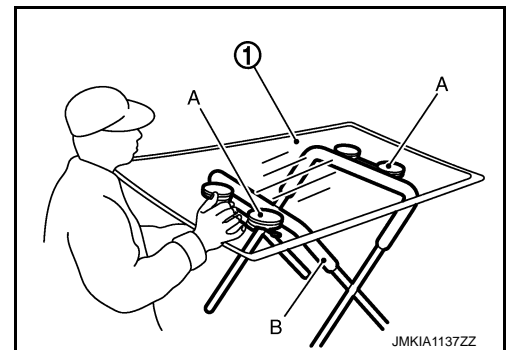
If the bonded area on the body is scratched, repair it with a two-liquid type urethane paint. Never use lacquer type paint.



2. When reusing the windshield glass (2), use the cutter (A) to remove the remaining adhesive (1) (sealant) and smooth out the surface.



3. Mount the windshield glass onto the vehicle and paint matching marks on the body and glass when installing new glass. Then remove the glass again.
4. Use the rubber suction cups or suction lifter (A) to set the glass (1) on the glass stand (B).



5. Install a new adhesive tape into the windshield glass.
6. Install the news spacers.
7. Install dam sealant rubber.
8. Clean the bonded area on the glass and body with white gasoline or degreasing agent.
9. Install new glass insulator.
10. Install new clips (lower and upper).
11. Apply primer for the glass along the entire circumference of the glass. Use the sealing kit for glass application and the special holder for cartridge or similar tools.

**CAUTION:**

There are 2 types of primer. Never confuse the application methods.

- Primer for painted surfaces
- Primer for glass

**NOTE:**

The essential function of primers is to strengthen adhesion between the glass and the painted surface.

12. Apply primer for the painted surface to the body side bonding surface.

**CAUTION:**

- If the body side bonding surface is repaired with a two-liquid type urethane paint, always apply the primer after drying the paint.

# WINDSHIELD GLASS

## < REMOVAL AND INSTALLATION >

- If primer for painted surfaces adheres to a painted surface other than the bonding area, or if it overflows, quickly remove it with white gasoline or degreasing agent.
- Always use a Standish cover (stainless plate) to prevent primer for painted surfaces from adhering to the instrument panel.

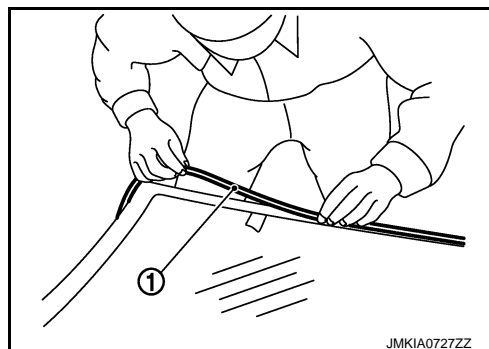
13. Affix the dam sealant rubber and apply adhesive along the edge of the glass within the time period indicated in the service manual after applying primer.
- When reusing the glass, affix new dam sealant rubber at the same place where old dam rubber is affixed.
  - When installing new glass, apply the dam sealant rubber from the edge of the glass so as to hide the black print.

### CAUTION:

- Apply the dam sealant rubber (1) from the outline mark of black print as shown in Exploded View.
- Start to apply the dam sealant rubber at the outline mark of black print. Apply it so as to only place it without pulling. Stop applying at another outline mark of black print.

### NOTE:

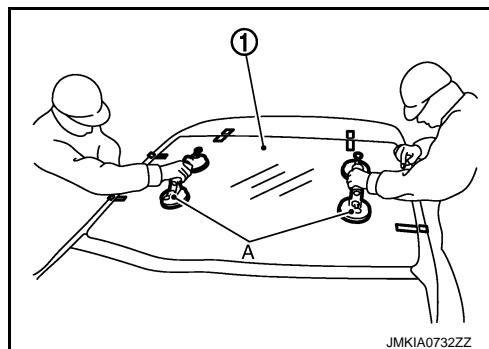
Open adhesive by cutting off the nozzle tip and set it in a sealant gun.



14. Use rubber suction cups or suction lifter (A) that are installed in advance, align the matching marks between the spacer and roof panel hole and between the body and glass (1) to install them on the vehicle.

### CAUTION:

2 or more workers are required when installing the glass.



15. Press the entire surface of the glass lightly to fit it completely.
16. Install the new fastener.
17. Correct any adhesive overflow or shortage using a spatula to make the surface smooth.
18. Remove the protective tape.
19. Install new windshield glass molding.

### NOTE:

Lightly affix the center of molding. Affix the whole length while checking the length on the left and right.

### CAUTION:

- Always install the windshield molding before the adhesive hardens.
- After installing glass, keep the front door glass open until the adhesive is completely cured. Never drive the vehicle.

20. Install the removed parts.

### CAUTION:

- Adjust the front wiper arms stop position. Refer to [WW-40, "Adjustment"](#).
- Check the mating area with surrounding parts. Adjust if necessary.

## Inspection

INFOID:000000008462457

## REPAIRING WATER LEAKAGE FOR WINDSHIELD

Leakage can be repaired without removing the glass.

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

Apply primer (if necessary) and then urethane adhesive to the leakage point to stop the leakage.

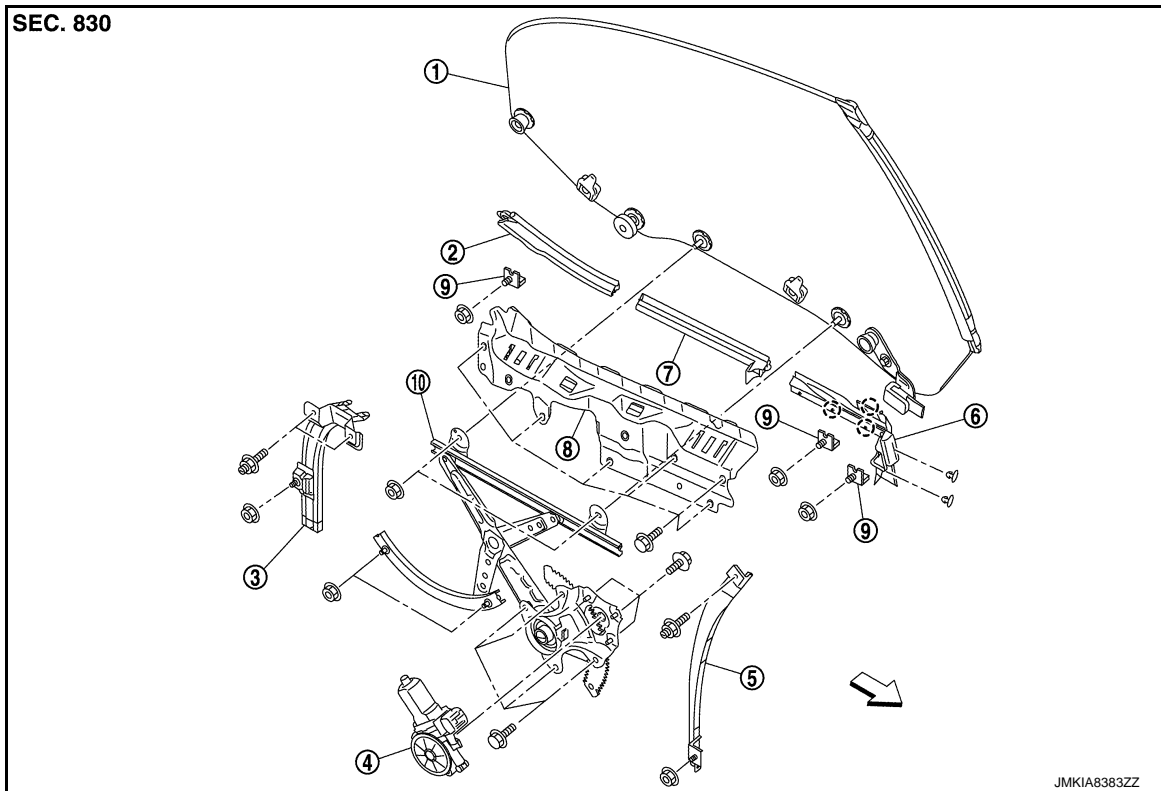
# QUARTER WINDOW GLASS

< REMOVAL AND INSTALLATION >

## QUARTER WINDOW GLASS

Exploded View

INFOID:000000008462458



- |  |                                       |   |
|--|---------------------------------------|---|
| 1. Quarter window glass                | 2. Quarter window weather-strip rear  | 3. Quarter window rear guide rail       |
| 4. Quarter window regulator motor      | 5. Quarter window front guide channel | 6. Quarter window weather-strip front   |
| 7. Quarter window weather-strip center | 8. Door inner stabilizer assembly     | 9. Quarter window glass stopper (LH/RH) |
| 10. Quarter window regulator assembly  |                                       |   |

## Removal and Installation

INFOID:000000008462459

### REMOVAL

1. Fully open soft top assembly.
2. Fully open quarter window glass.
3. Remove rear seat cushion. Refer to [SE-50. "SEAT CUSHION : Removal and Installation"](#).
4. Remove rear seatback. Refer to [SE-49. "SEATBACK : Removal and Installation"](#).
5. Remove quarter window weather-strip front, center and rear.
6. Remove rear side finisher. Refer to [INT-22. "REAR SIDE FINISHER : Removal and Installation"](#).
7. Remove rear seatback side support assembly. Refer to [SE-48. "Exploded View"](#).
8. Remove rear side outside molding. Refer to [EXT-35. "Removal and Installation"](#).
9. Remove quarter window glass stopper (LH and RH). Refer to [GW-16. "Exploded View"](#).

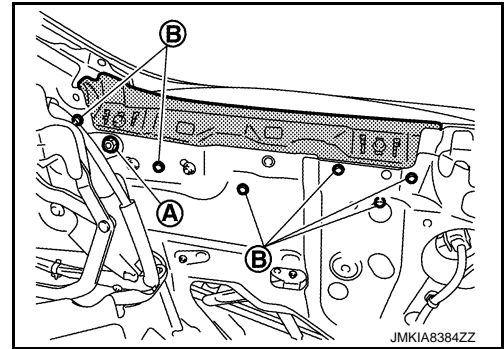


## QUARTER WINDOW GLASS

### < REMOVAL AND INSTALLATION >

10. Remove door inner stabilizer assembly.

- a. Remove folding roof bracket mounting bolt (A).
- b. Remove door inner stabilizer assembly mounting bolts (B).

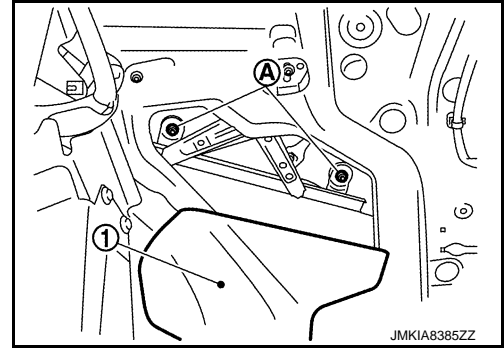


11. Remove quarter window glass mounting nuts (A).

- a. Operate quarter window glass motor switch to raise or lower the quarter window glass until the glass mounting nuts (A) can be seen.
- b. Remove the upper side of sealing screen (1) with a cutter tool.

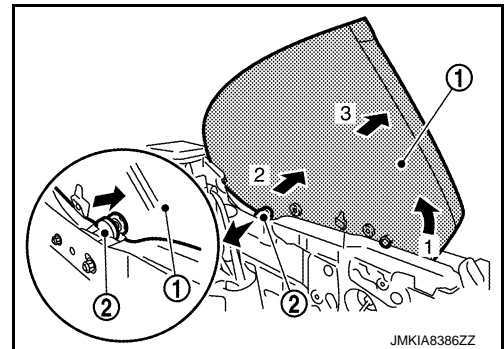
**NOTE:**

Cut the butyl-tape so that some parts of the butyl-tape do not remain on the sealing screen, if the sealing screen is reused.



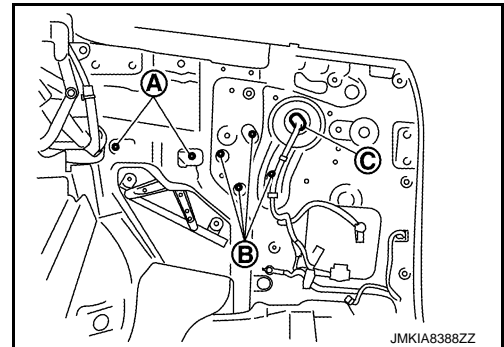
12. Remove the quarter window glass (1).

1. Hold securely quarter window glass and remove it from quarter window regulator.
2. Pull up while rotating quarter window glass as shown in the figure to remove it from quarter window rear guide rail (2).



13. Remove quarter window regulator assembly.

- a. Remove quarter window regulator mounting nuts (A).
- b. Remove quarter window regulator motor mounting nuts (B).
- c. Disconnect harness connector (C).
- d. Remove quarter window regulator assembly from door panel.

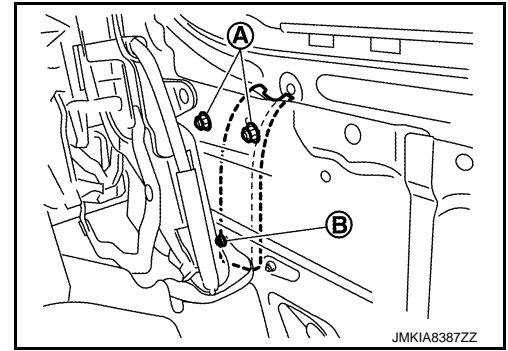


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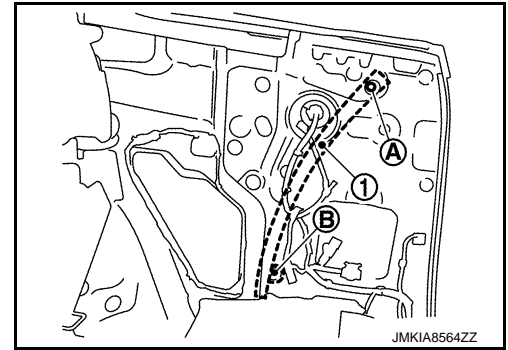
# QUARTER WINDOW GLASS

## < REMOVAL AND INSTALLATION >

14. Remove quarter window guide rail mounting nuts (A) and nuts (B), and then remove quarter window guide rail.



15. Remove quarter window front guide channel (1) mounting nut (A) and (B), then remove quarter window front guide channel.



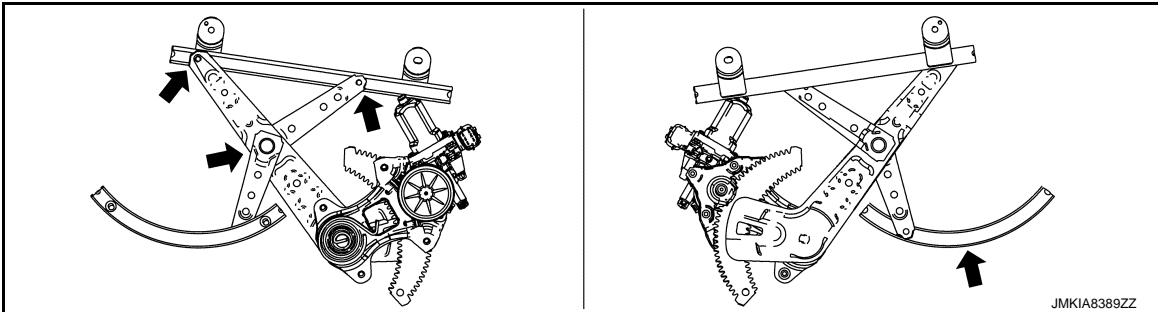
## INSTALLATION

Install in the reverse order of removal.

## INSPECTION AFTER REMOVAL

Quarter window glass regulator

Check that the quarter window glass regulator assembly for the following. If a failure is detected, replace or grease it.



- Wire wear
- Quarter window glass regulator assembly deformation
- Grease body condition on each sliding part

The arrows in the figure grease show the application points of the multi-purpose grease.

Quarter window rear guide rail and front guide channel

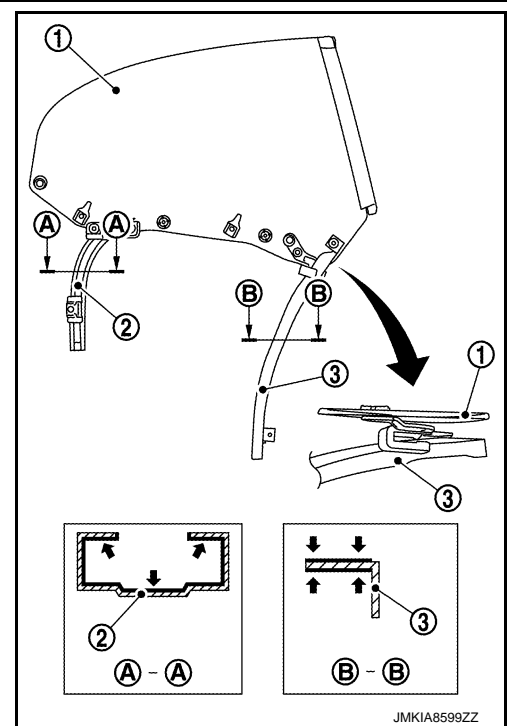
# QUARTER WINDOW GLASS

## < REMOVAL AND INSTALLATION >

Check that the quarter window (1) rear guide rail (2) and guide channel (3) for the following. If a failure is detected, replace or grease it.

- Quarter window rear guide rail or guide channel deformation
- Grease body condition on each sliding part

The arrows in the figure show the application points of the multi-purpose grease.



## Disassembly and Assembly

INFOID:000000008462460

### DISASSEMBLY

1. Remove quarter window regulator assembly. Refer to [GW-16, "Removal and Installation"](#).
2. Remove the quarter window regulator motor from quarter window glass regulator assembly.

### ASSEMBLY

Assemble in the reverse order of disassembly.

**Glass mounting nut**

**Tightening torque : 7.0 N·m (0.71 kg·m, 62 in·lb)**

## Inspection and Adjustment

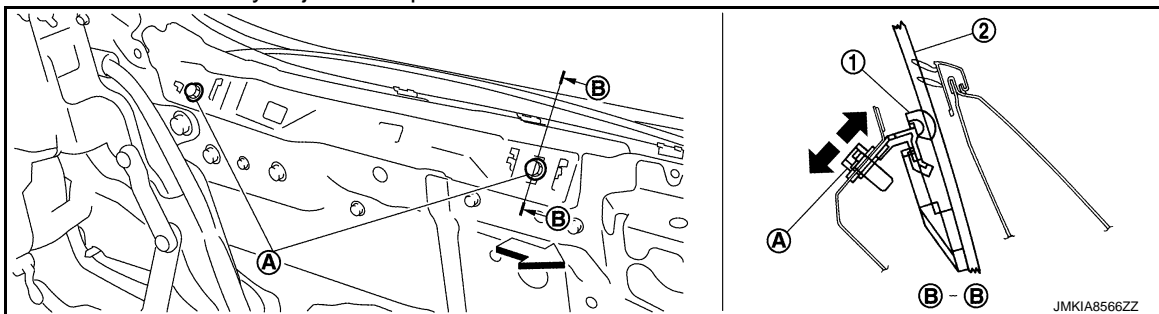
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### FITTING ADJUSTMENT

#### **CAUTION:**

**Adjust door inner stabilizer assembly after every quarter window glass removal before adjusting the glass.**

Door inner stabilizer assembly adjustment procedure.



1. Loosen door inner stabilizer assembly adjusting nut (A).
2. Set quarter window glass (2) to the position just before fully-closed (the status that glass stopper does not contact with inner stabilizer (1)).
3. Contact outside surface of quarter window glass to outside molding while lightly pressing door inner stabilizer assembly adjusting bolts (A) as shown by the arrows in the figure to inside surface of quarter window glass (2).

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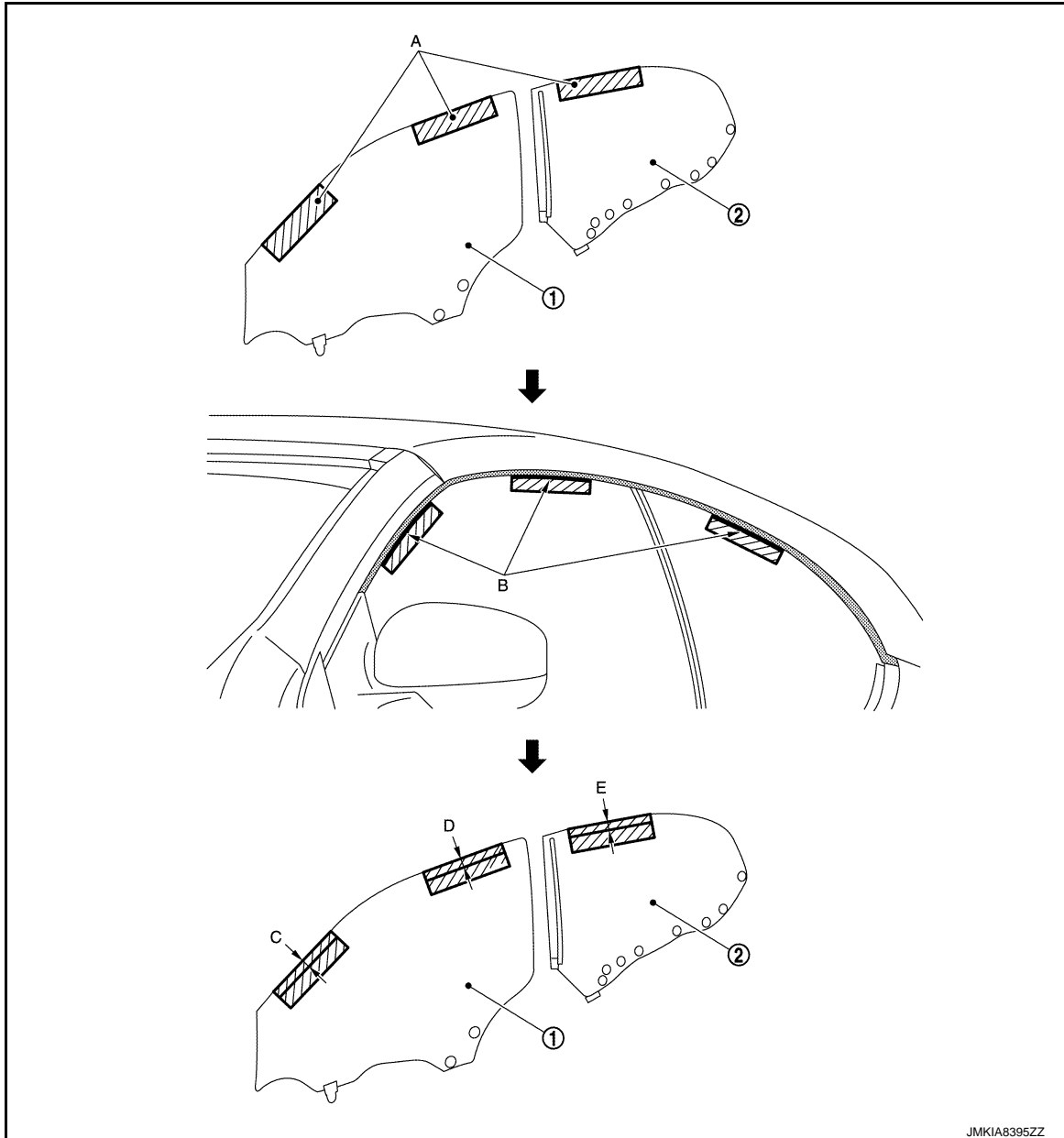
GW

# QUARTER WINDOW GLASS

## < REMOVAL AND INSTALLATION >

4. Tighten bolt on upper end of inner stabilizer to the specified torque and check that door inner stabilizer is parallel to glass surface.

Preparation for adjustment



1. Door glass assembly

2. Quarter window glass

C : 4.0 (0.157)

D : 9.8 (0.386)

E : 9.8 (0.386)

Unit: mm (in)

1. Apply protective tape (A) as shown on the figure above in door glass and quarter window glass.
2. Fully close the door window glass and the quarter window glass, and mark each edge of the weather-strip on the glass as shown by the points (B).
3. Measure the clearances (C), (D), and (E) and check that there are in the range provided in the figure above. If not then proceed to the adjustment of quarter window glass by following the steps below.

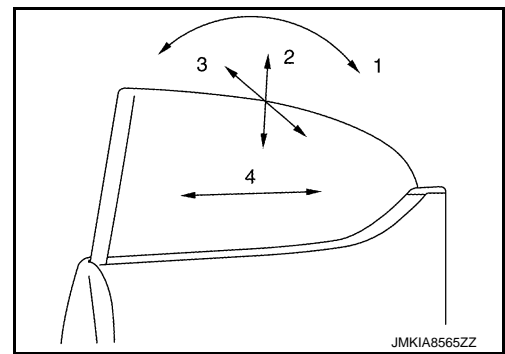
Inclination Adjustment

# QUARTER WINDOW GLASS

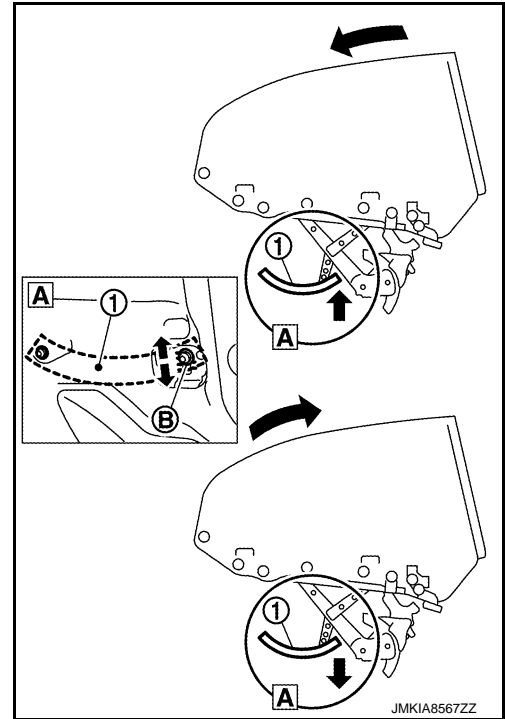
## < REMOVAL AND INSTALLATION >

As shown in the figure, quarter glass adjustment can be made in four different directions.

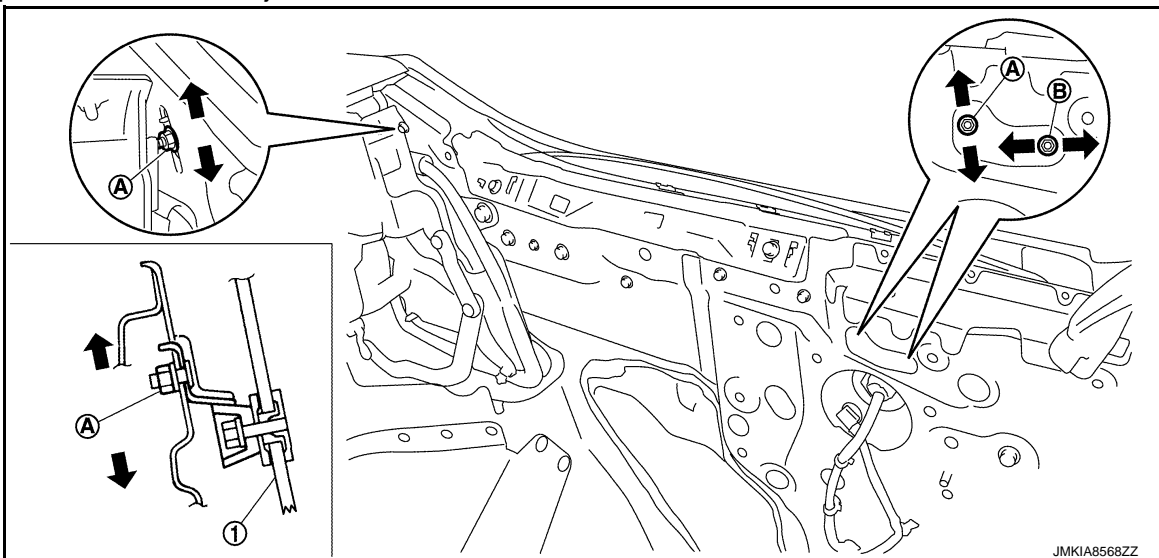
- (1): Clockwise rotation / Counterclockwise rotation direction
- (2): Upper / lower direction
- (3): Outer / inner direction
- (4): Front / rear direction



1. Clockwise rotation / Counterclockwise rotation adjustment.
  - a. Loose quarter window door regulator sub channel (1) adjusting nut (B).
  - b. Slide the sub channel upper to rotate quarter window glass to the left (anti-clockwise)
  - c. Slide the sub channel lower to rotate quarter window glass to the right (clockwise)



2. Upper/lower direction adjustment.

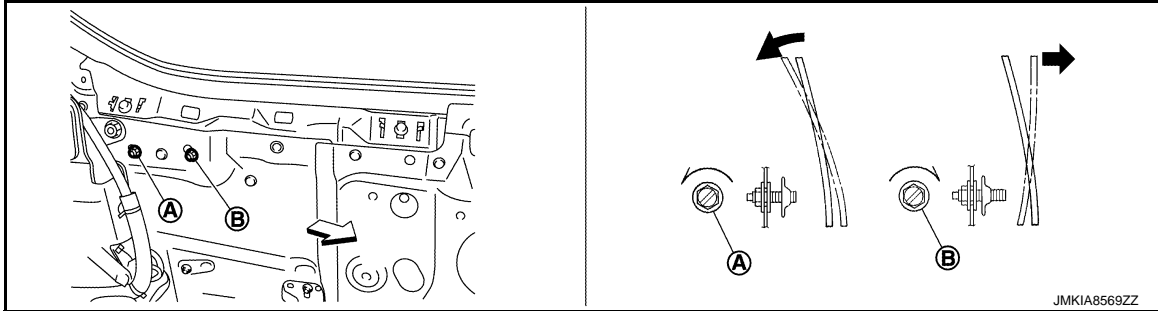


- a. Operate quarter window glass motor switch to lower the quarter window glass (1) if it was fully closed.
- b. Loose adjusting nuts (A) or (B) to adjust the nuts as shown by the figure to upper or lower the glass.
- c. When the right position is find, tighten adjusting nuts to the specified torque.

# QUARTER WINDOW GLASS

## < REMOVAL AND INSTALLATION >

### 3. Outer / inner direction adjustment (Upper glass).



↶ : Vehicle front

- Adjust quarter window glass and retainer to the specified dimension using adjusting bolts (A) and (B) of quarter window rear guide rail and quarter window front guide channel.
- Upper end of glass opens toward outside for the adjusting bolt clockwise rotation.
- Upper end of glass opens toward inside for the adjusting bolt counterclockwise rotation.
- Adjust using either rear bolt out of the two adjusting bolts (A) and (B). After tilt is adjusted, slightly contact remaining adjusting bolt to inner panel, and then tighten flange nut to the specified torque.

**NOTE:**

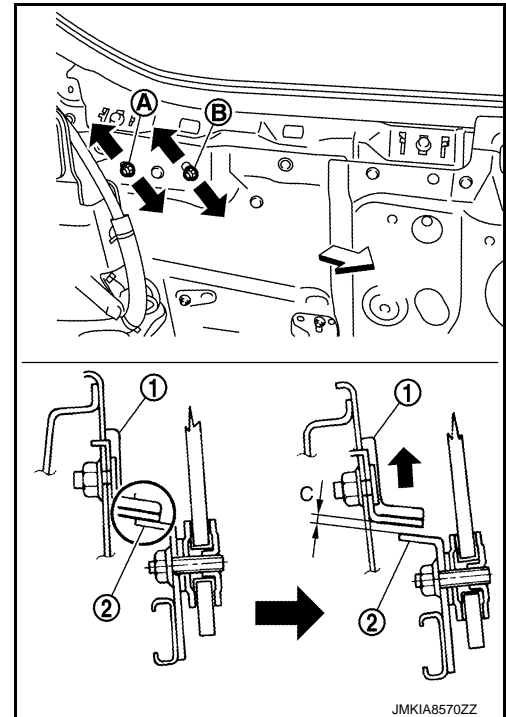
Adjust so that protrusions of the 2 adjusting bolts are the same.

### 4. Front / rear direction adjustment.

- Adjust the quarter window glass with quarter window guide rail adjusting bolt (A) and (B).

- When adjusting the quarter window glass toward front, lower the glass at about 5 to 10 mm (0.197 to 0.394in) of space between panel side stopper (1) and glass side stopper (2).

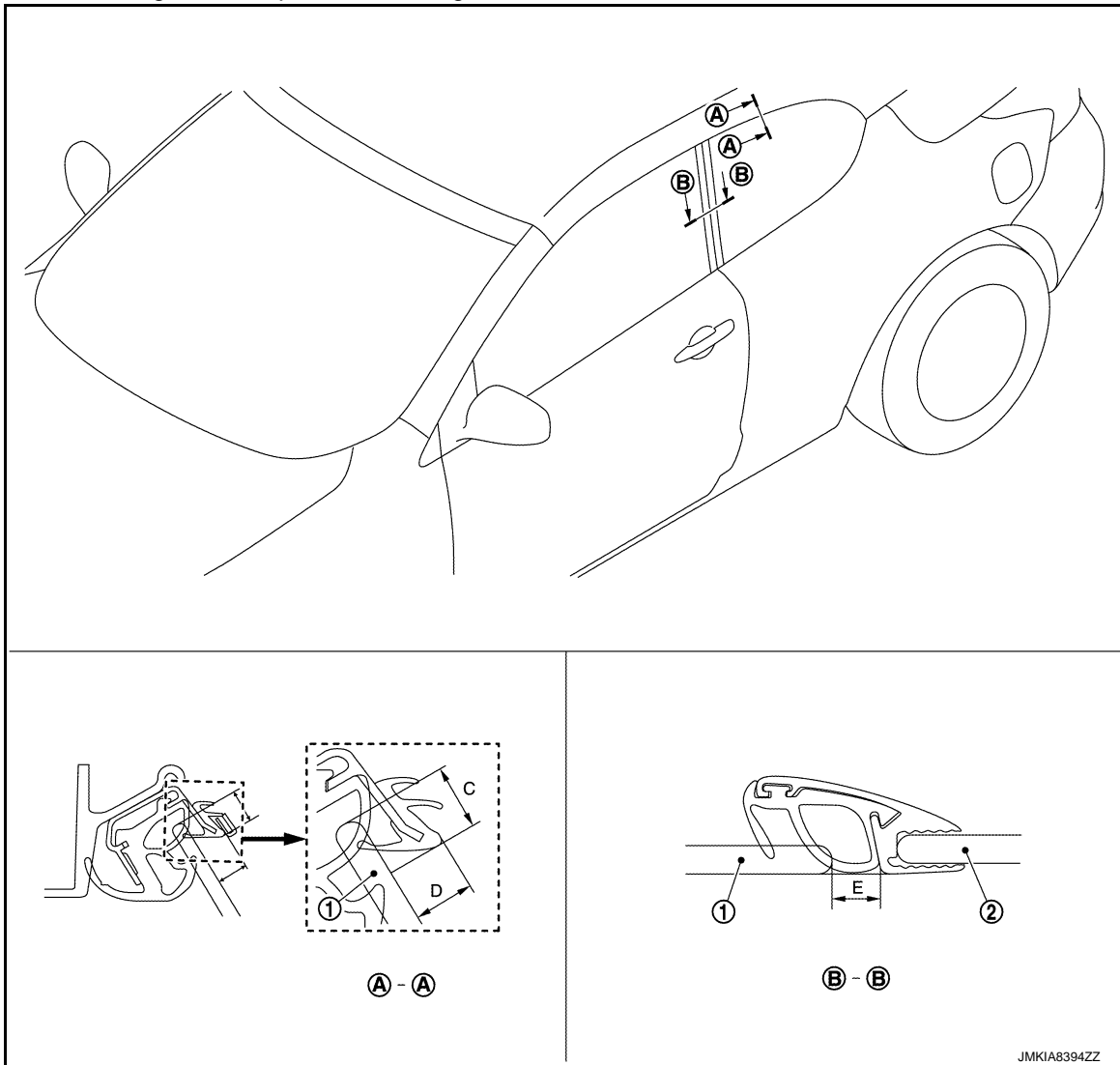
↶ : Vehicle front



# QUARTER WINDOW GLASS

## < REMOVAL AND INSTALLATION >

Fitting between door glass and quarter window glass



1. Door glass assembly

2. Quarter window glass

C : 9.8 (0.386)

D : 10.6 (0.417)

E : 8.5 (0.335)

Unit: mm (in)

1. Fully close door glass and quarter window glass.
2. Check that both upper edges of door glass and quarter window glass are the same level.
3. Check that the clearance between door glass and quarter window glass is in the range of E.
4. Check that the clearances between the weather-strip and quarter window glass is in the range of C and D.

### Fitting inspection

- Check that the overlap length with the body side weather-strip is maintained on the glass.
- Check that clearance between door glass and quarter window glass sash is parallel when door glass is closed.
- Adjust sub channel and set quarter window glass to the normal position, when clearance between front door glass and quarter sash is not parallel. At this time, adjustment for stopper of panel side is necessary again.
- When adjusting fitting of glass, open glass once, fully close it, and then check the fitting while glass is fully closed.
- Check opening and closing trace of quarter window glass.
- Check that closing trace of quarter window glass is constant just before glass is fully closed while soft top is open.
- Open and close quarter window glass and check that operation is normal, for each condition where soft top is open or closed, or door glass is open or closed.

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## QUARTER WINDOW GLASS

### < REMOVAL AND INSTALLATION >

---

- Particularly, check that door glass does not contact to quarter sash when quarter window glass is operated to the fully closed position while soft top is open status and front door glass is closed.

#### Water Leakage Test

Visually check for water leakage after adjustment. Refer to [RF-71. "Water Leakage Test"](#).



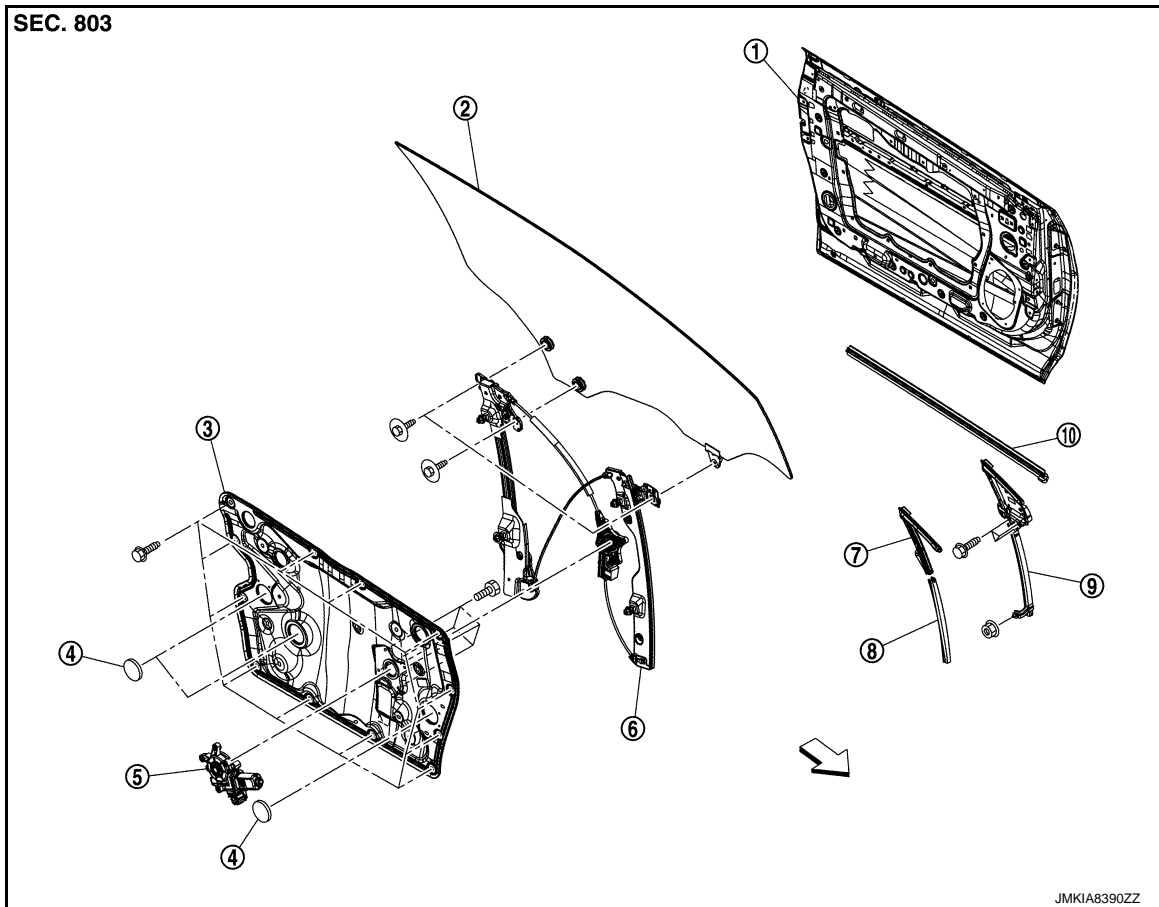
# DOOR GLASS

< REMOVAL AND INSTALLATION >

## DOOR GLASS

Exploded View

INFOID:000000008462462



- |  |  |                               |
|--|--|-------------------------------|
| 1. Door panel assembly                   | 2. Door glass                            | 3. Module base                |
| 4. Hole cover seal                       | 5. Power window motor                    | 6. Door regulator             |
| 7. Door corner piece weather-strip upper | 8. Door corner piece weather-strip lower | 9. Door corner piece assembly |
| 10. Door inside seal                     |  |                               |
- ↶ : Vehicle front

## Removal and Installation

INFOID:000000008462463

### REMOVAL

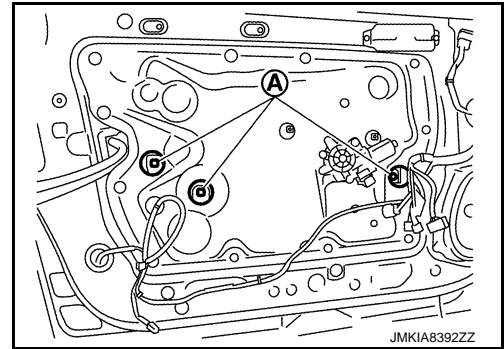
1. Remove door finisher. Refer to [INT-13, "Removal and Installation"](#).
2. Remove door finisher inside seal.
3. Remove door module assembly hole cover seal.

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# DOOR GLASS

## < REMOVAL AND INSTALLATION >

4. Operate the power window main switch to raise or lower the door window until the glass mounting bolts can be seen.
5. Remove door glass mounting bolts (A).



6. Remove the door glass.  
**CAUTION:**  
**When removing or installing, 2 workers are required because of the weight of the glass and for safety reasons.**
  - a. Hold securely the door glass.
  - b. Rotate slightly the door glass
  - c. Pull up the door glass out to remove.
7. Remove the corner piece assembly.
  - a. Remove door mirror assembly. Refer to [MIR-19. "DOOR MIRROR ASSEMBLY : Removal and Installation"](#).
  - b. Remove corner piece assembly mounting bolts and nut.
  - c. Pull up while rotating corner piece assembly to remove out of the door panel.

## INSTALLATION

Install in the reverse order of removal.

## Inspection and Adjustment

INFOID:000000008462464

## SYSTEM INITIALIZATION

- Description: Refer to [PWC-26. "Description"](#).
- Work procedure: Refer to [PWC-26. "Work Procedure"](#).

## CHECK ANTI-PINCH FUNCTION

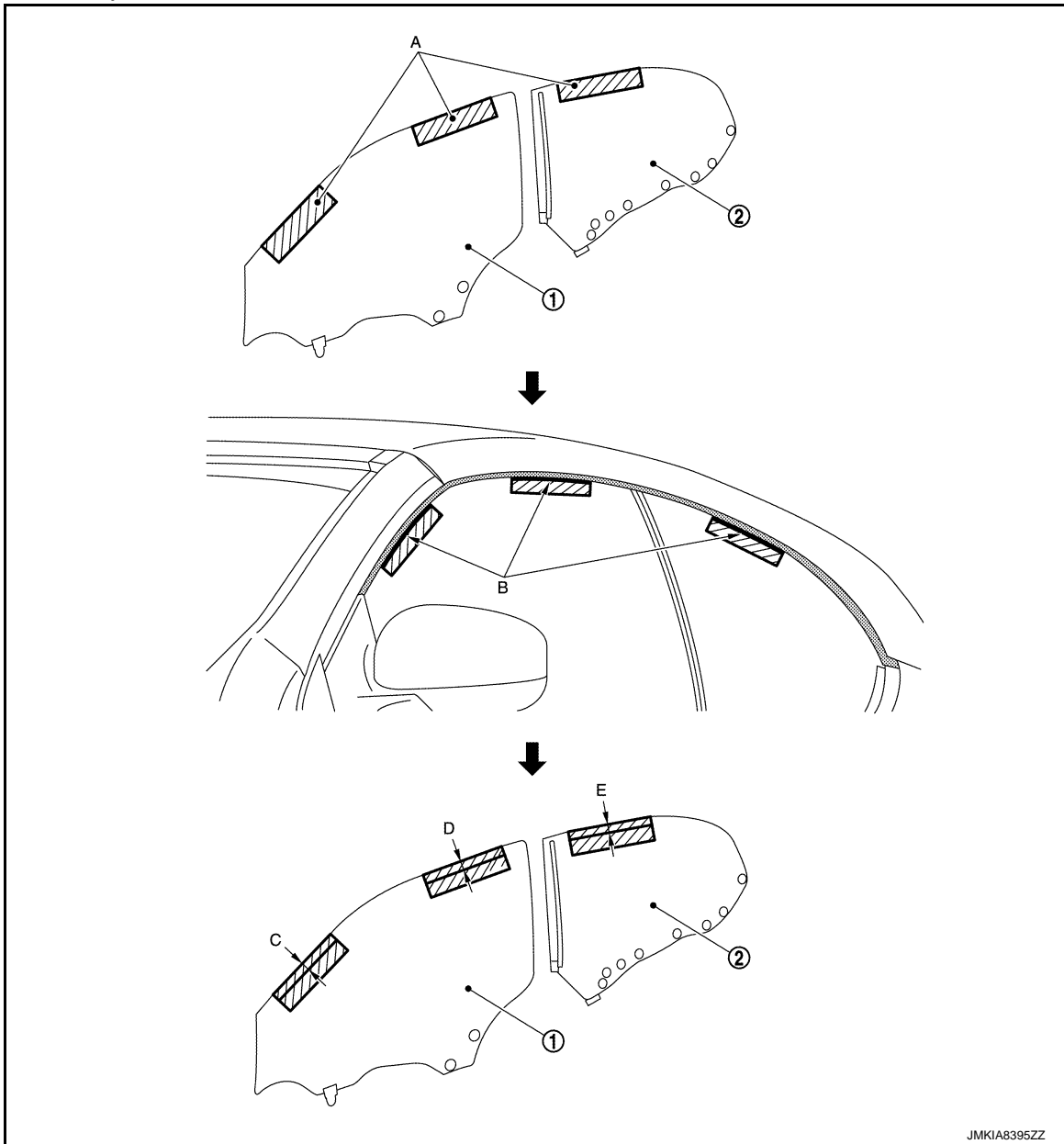
- Description: Refer to [PWC-27. "Description"](#).
- Work procedure: Refer to [PWC-27. "Work Procedure"](#).

## FITTING INSPECTION

# DOOR GLASS

## < REMOVAL AND INSTALLATION >

### Preparation for adjustment



1. Door glass assembly

2. Quarter window glass

C: 4.0 (0.157)

D: 9.8 (0.386)

E: 9.8 (0.386)

Unit: mm (in)

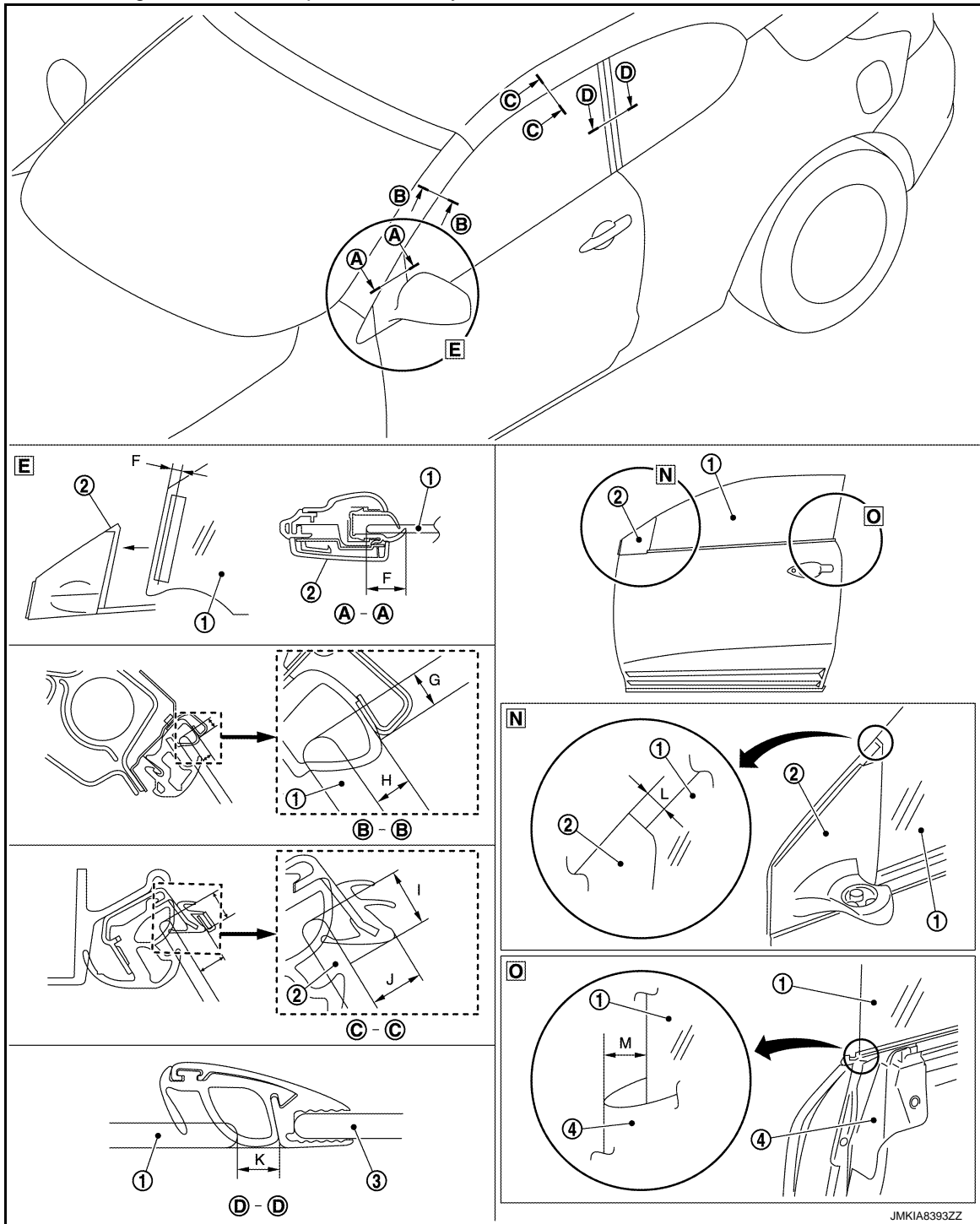
1. Apply protective tape (A) as shown on the figure above on door glass and quarter window glass.
2. Fully close door window glass and quarter window glass, and mark each edge of weather-strip on the glass as shown by the marks (B).
3. Measure the clearances (C), (D), and (E) and check that these clearances are in the range provided in the figure above. If not, then proceed to the adjustment of quarter window glass by following the steps below.

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# DOOR GLASS

## < REMOVAL AND INSTALLATION >

Fitting between door glass and corner piece assembly



JMKIA8393ZZ

- |                        |                 |                         |
|------------------------|-----------------|-------------------------|
| 1. Door glass          | 2. Mirror base  | 3. Quarter window glass |
| 4. Door weather -strip |                 |                         |
| F : 25.5 (1.0004)      | G : 4 (0.157)   | H : 6.6 (0.260)         |
| I : 9.8 (0.386)        | J : 9.1 (0.358) | K : 8.5 (0.335)         |
| L : 2 (0.079)          | M : 2 (0.079)   |                         |

Unit: mm (in)

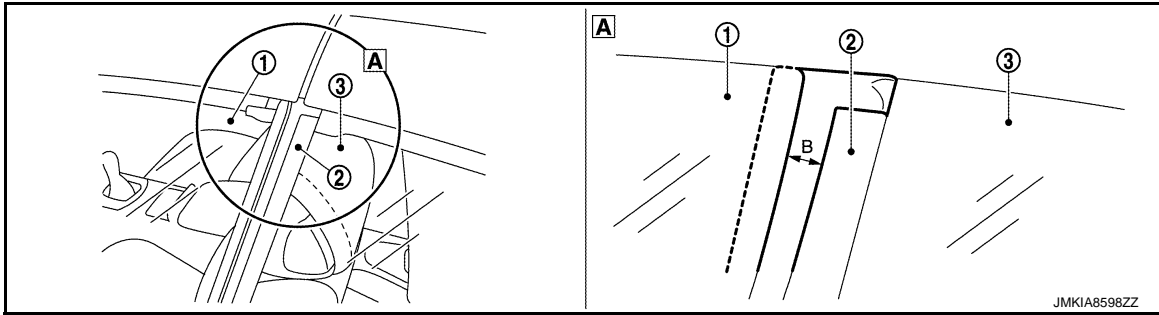
1. Remove the door glass. Refer to [GW-25. "Removal and Installation"](#).
2. Apply protective tape (B) on door glass at a distance of 25.5 mm (0.1004in), starting from front edge as shown in the figure above.

# DOOR GLASS

## < REMOVAL AND INSTALLATION >

- Reinstall door glass while fitting the corner piece assembly to the protective tape as shown in the figure above.

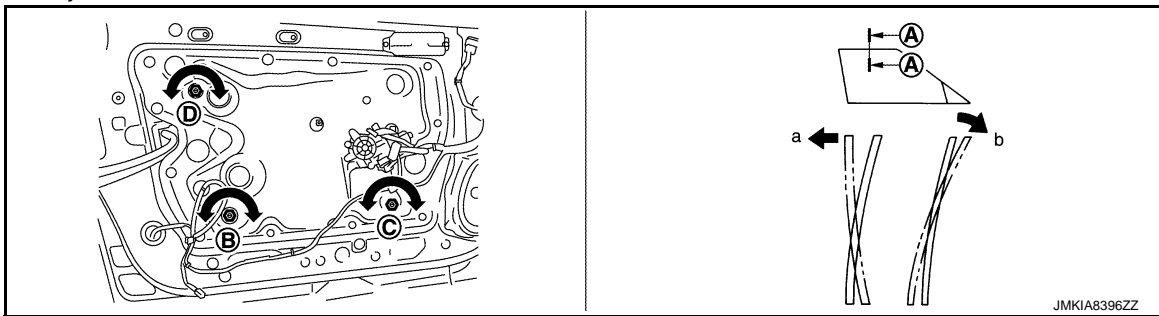
Fitting between door glass and quarter window glass



- Door glass assembly
  - Quarter window glass sash
  - Quarter window glass
- B : 8.5 (0.335)  
Unit: mm (in)

- Fully close door glass and quarter window glass.
- Check that both upper edges of door glass and quarter window glass are at the same level.
- Check that the distance between door glass and quarter window glass sash is 8.5 mm (0.335 in).

Inclination Adjustment



- Check that door glass is fitted securely into the sash groove.
- Lower the glass slightly [approximately 10 to 20 mm (0.394 to 0.787 in)] and check that the clearance to the body side weather-strip is parallel. Loosen the regulator mounting bolts, guide rail mounting bolts, and glass and guide rail mounting bolts to correct the glass position if the clearance between door glass and body side weather-strip is not parallel.
- Raise door glass fully and adjust door glass top end and body side weather-strip with adjusting bolt (B), (C), or (D) as shown in the figure above.
- Always start at adjusting with bolt (B). If the desired angle is not achieved, then proceed to adjusting bolt (C) and (D) respectively.
- Turn the adjusting bolt clockwise to move the door glass upper end outward.
- Turn the adjusting bolt counterclockwise to move the door glass upper end inward.
- Adjustment process with adjusting bolt (C) is the inverse of adjusting bolt (B) and (D).
- When adjusting with adjusting bolt (D), turn the adjusting bolt clockwise to move the door glass upper end inward, then counterclockwise to move the door glass upper end outward.

A  
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GW  
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P

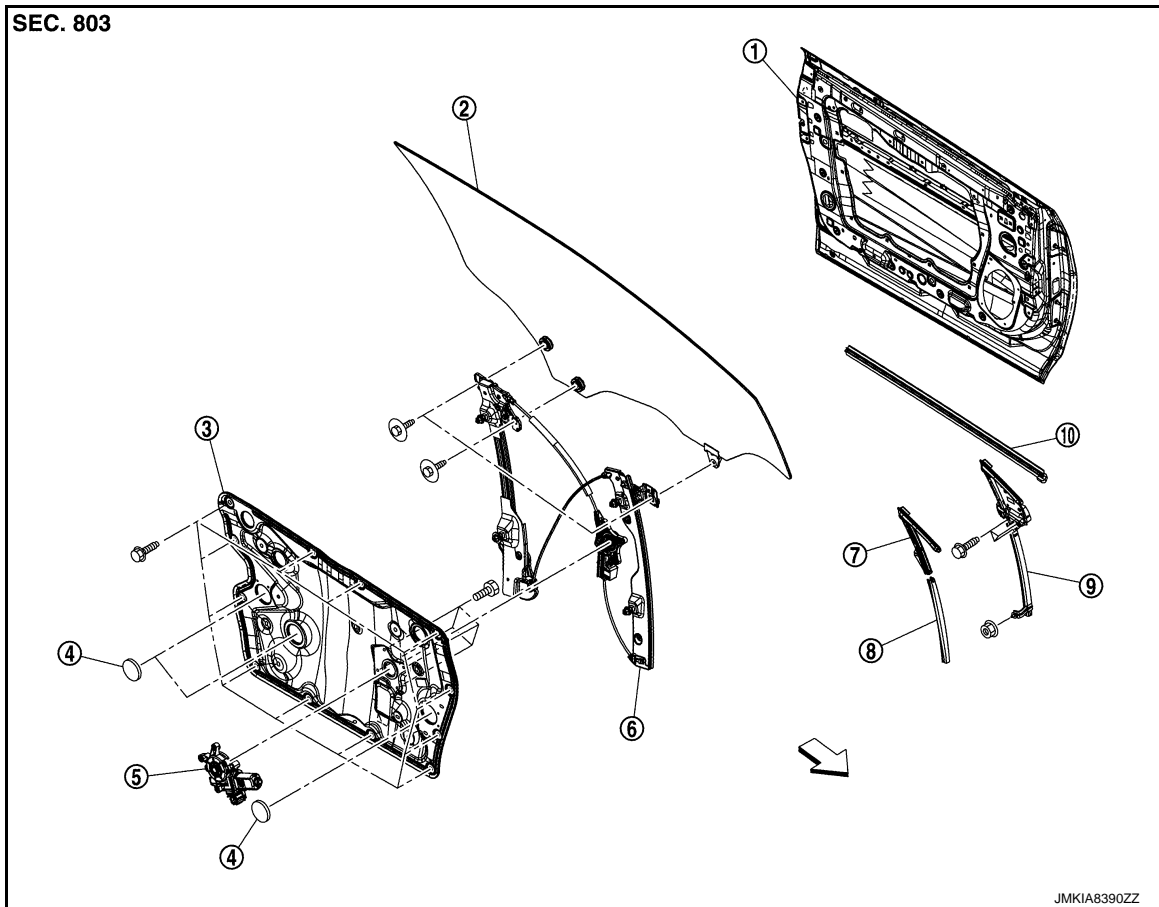
# DOOR REGULATOR

< REMOVAL AND INSTALLATION >

## DOOR REGULATOR

Exploded View

INFOID:000000008462465



- |  |  |                               |
|--|--|-------------------------------|
| 1. Door panel assembly                   | 2. Door glass                            | 3. Module base                |
| 4. Hole cover seal                       | 5. Power window motor                    | 6. Door regulator             |
| 7. Door corner piece weather-strip upper | 8. Door corner piece weather-strip lower | 9. Door corner piece assembly |
| 10. Door inside seal                     |  |                               |
- ⇐ : Vehicle front

## Removal and Installation

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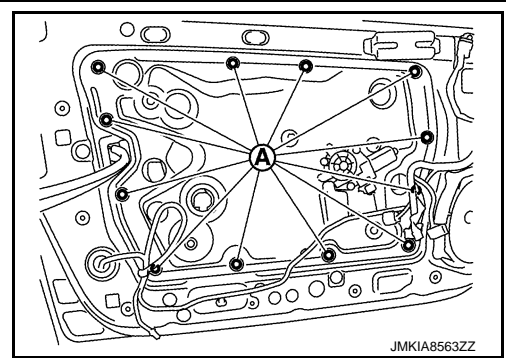
### REMOVAL

1. Remove the door glass. Refer to [GW-25, "Removal and Installation"](#).
2. Disconnect the power window motor harness connector.
3. Disconnect the harness fixing clips from the door module assembly.

# DOOR REGULATOR

## < REMOVAL AND INSTALLATION >

4. Remove door module assembly mounting bolts (A) and then remove the door module assembly from door panel.



## INSTALLATION

Install in the reverse order of removal.

## Disassembly and Assembly

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## DISASSEMBLY

1. Remove the power window motor from the module assembly.
2. Remove door regulator assembly from module assembly.

## ASSEMBLY

Assemble in the reverse order of disassembly.

**Glass mounting nut**

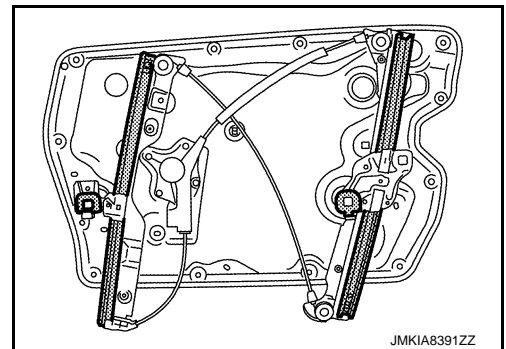
**Tightening torque : 5.1N.m (0.52kg-m, 45 in-lb)**

## Inspection After Removal

INFOID:000000008462468

Check the regulator assembly for the following items. Replace or grease it if a malfunction is detected.

- Wire wear
- Regulator deformation



## Inspection and Adjustment

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## SYSTEM INITIALIZATION

- Description: Refer to [PWC-26. "Description"](#).
- Work procedure: Refer to [PWC-26. "Work Procedure"](#).

## CHECK ANTI-PINCH FUNCTION

- Description: Refer to [PWC-27. "Description"](#).
- Work procedure: Refer to [PWC-27. "Work Procedure"](#).

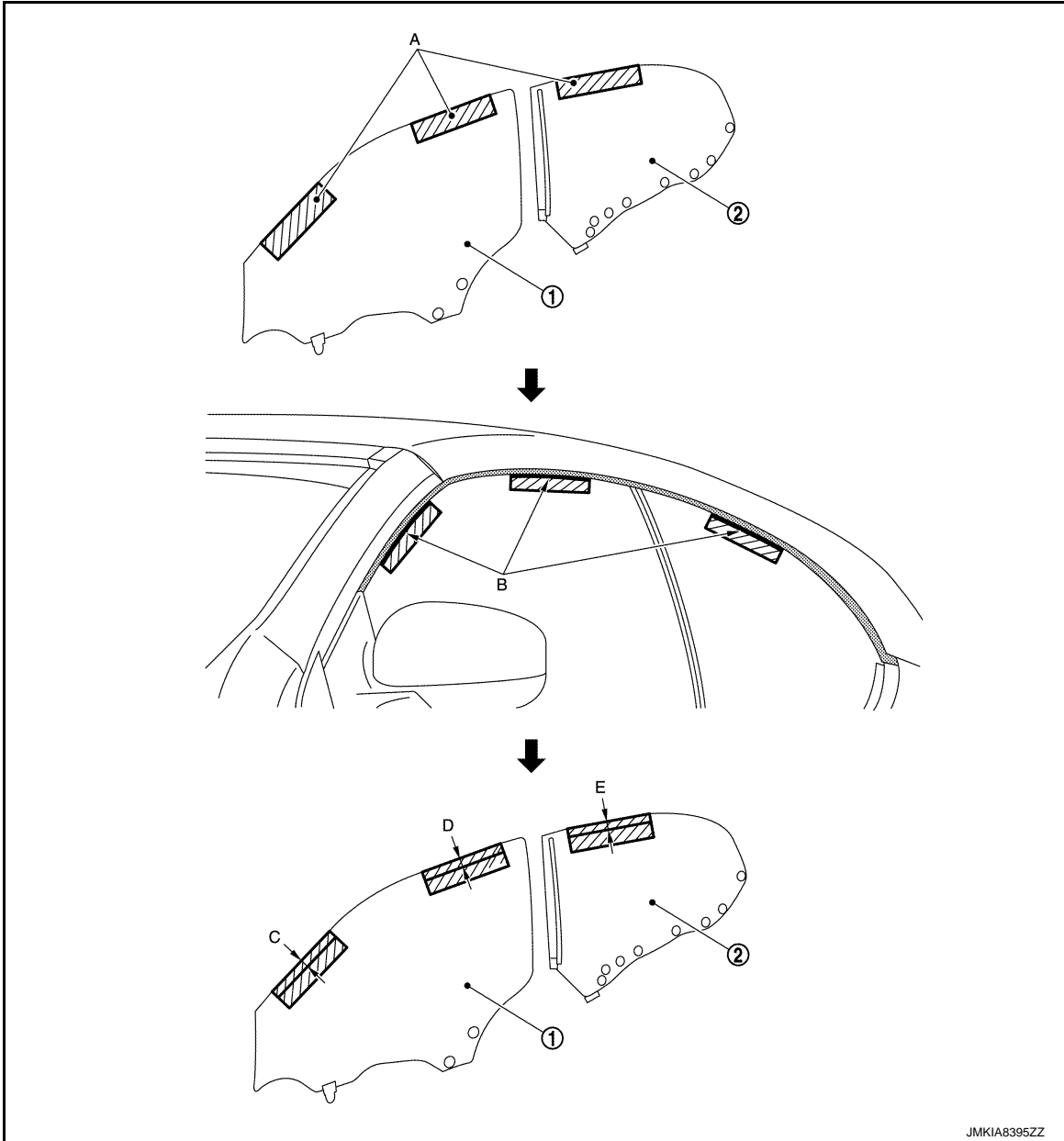
## FITTING INSPECTION

A  
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# DOOR REGULATOR

## < REMOVAL AND INSTALLATION >

### Preparation for adjustment



1. Door glass assembly

2. Quarter window glass

C: 4.0 (0.157)

D: 9.8 (0.386)

E: 9.8 (0.386)

Unit: mm (in)

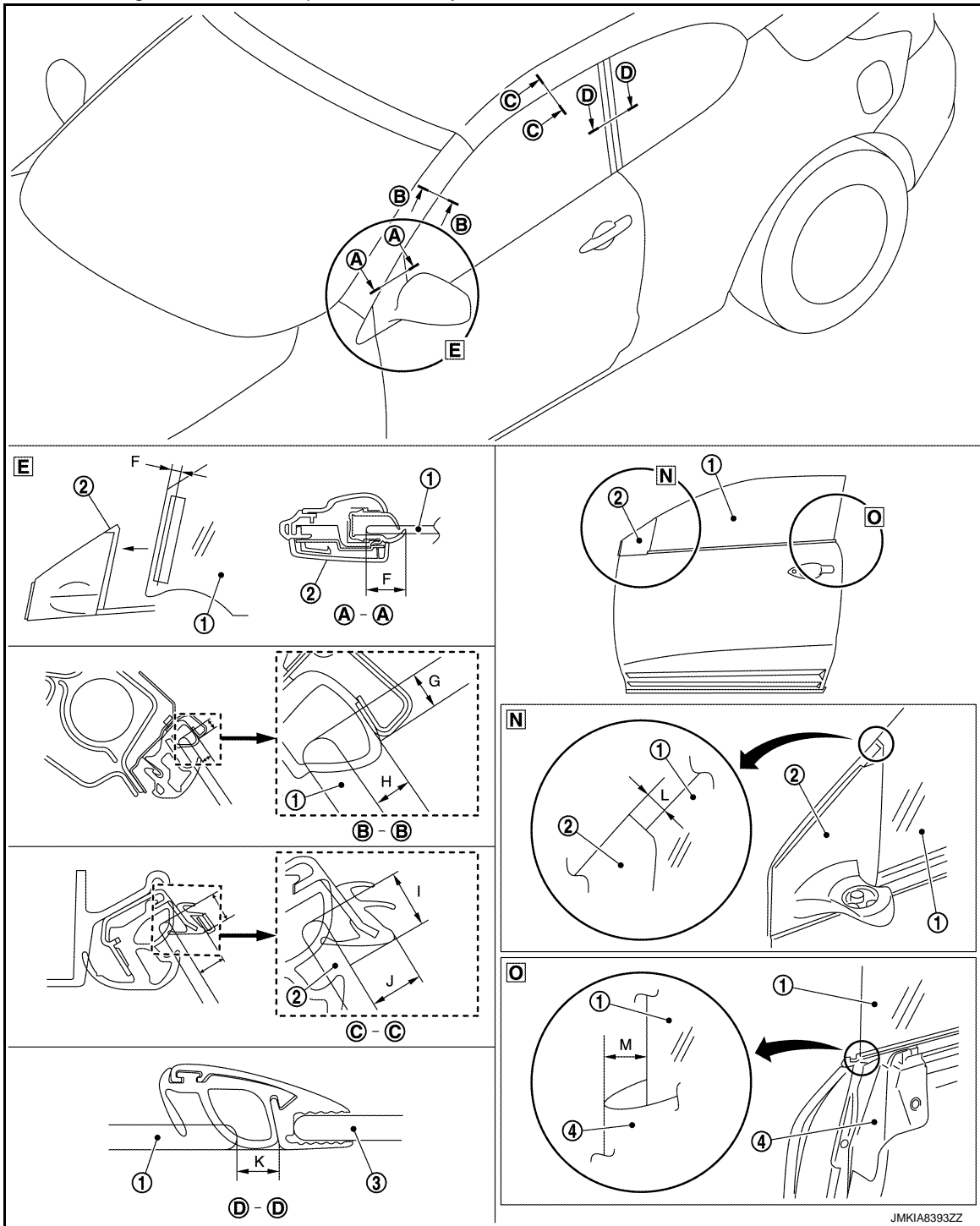
1. Apply protective tape (A) as shown on the figure above on door glass and quarter window glass.
2. Fully close door window glass and quarter window glass, and mark each edge of weather-strip on the glass as shown by the marks (B).
3. Measure the clearances (C), (D), and (E) and check that these clearances are in the range provided in the figure above. If not, then proceed to the adjustment of quarter window glass by following the steps below.



# DOOR REGULATOR

## < REMOVAL AND INSTALLATION >

Fitting between door glass and corner piece assembly



- |                        |                 |                         |
|------------------------|-----------------|-------------------------|
| 1. Door glass          | 2. Mirror base  | 3. Quarter window glass |
| 4. Door weather -strip |                 |                         |
| F : 25.5 (1.0004)      | G : 4 (0.157)   | H : 6.6 (0.260)         |
| I : 9.8 (0.386)        | J : 9.1 (0.358) | K : 8.5 (0.335)         |
| L : 2 (0.079)          | M : 2 (0.079)   |                         |

Unit: mm (in)

1. Remove the door glass. Refer to [GW-25. "Removal and Installation"](#).
2. Apply protective tape (B) on door glass at a distance of 25.5 mm (0.1004in), starting from front edge as shown in the figure above.

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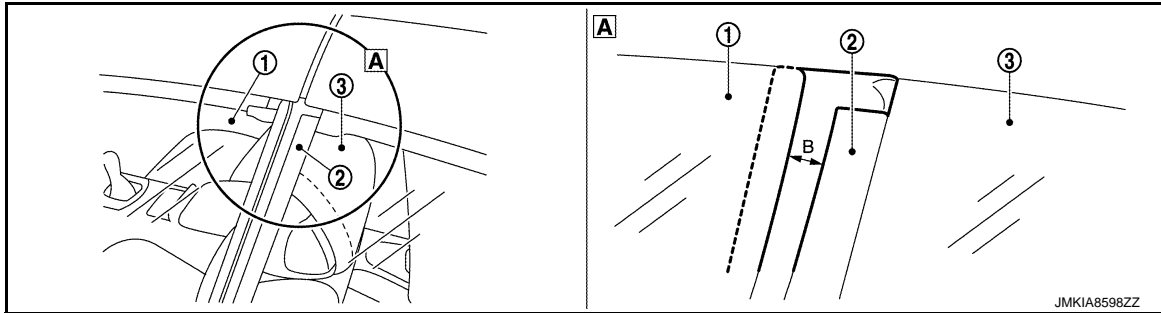
GW

# DOOR REGULATOR

## < REMOVAL AND INSTALLATION >

- Reinstall door glass while fitting the corner piece assembly to the protective tape as shown in the figure above.

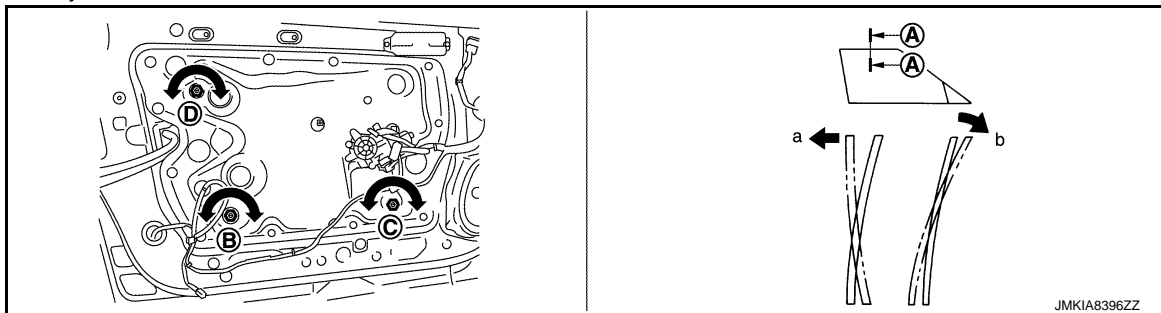
Fitting between door glass and quarter window glass



- Door glass assembly
  - Quarter window glass sash
  - Quarter window glass
- B : 8.5 (0.335)
- Unit: mm (in)

- Fully close door glass and quarter window glass.
- Check that both upper edges of door glass and quarter window glass are at the same level.
- Check that the distance between door glass and quarter window glass sash is 8.5 mm (0.335 in).

Inclination Adjustment



- Check that door glass is fitted securely into the sash groove.
- Lower the glass slightly [approximately 10 to 20 mm (0.394 to 0.787 in)] and check that the clearance to the body side weather-strip is parallel. Loosen the regulator mounting bolts, guide rail mounting bolts, and glass and guide rail mounting bolts to correct the glass position if the clearance between door glass and body side weather-strip is not parallel.
- Raise door glass fully and adjust door glass top end and body side weather-strip with adjusting bolt (B), (C), or (D) as shown in the figure above.
- Always start at adjusting with bolt (B). If the desired angle is not achieved, then proceed to adjusting bolt (C) and (D) respectively.
- Turn the adjusting bolt clockwise to move the door glass upper end outward.
- Turn the adjusting bolt counterclockwise to move the door glass upper end inward.
- Adjustment process with adjusting bolt (C) is the inverse of adjusting bolt (B) and (D).
- When adjusting with adjusting bolt (D), turn the adjusting bolt clockwise to move the door glass upper end inward, then counterclockwise to move the door glass upper end outward.