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# SECTION **EXT** EXTERIOR

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# PRECAUTIONS

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## PRECAUTION

### PRECAUTIONS

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

INFOID:000000011262286

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. Information necessary to service the system safely is included in the SR 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 SR section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

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

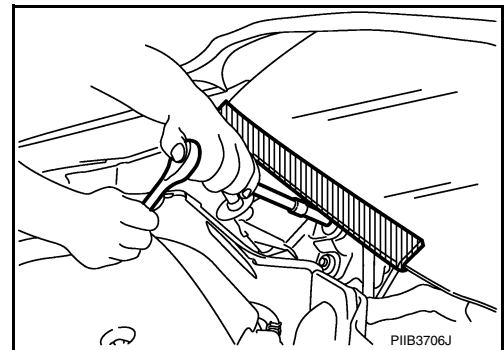
#### **WARNING:**

- When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT 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 three minutes before performing any service.

#### Precaution for Procedure without Cowl Top Cover

INFOID:000000011935872

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



#### Precaution for Work

INFOID:000000011935873

- When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.
- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and prevent them from being dropped.
- Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with a new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After installation is complete, be sure to check that each part works properly.
- Follow the steps below to clean components:
  - Water soluble dirt:
    - Dip a soft cloth into lukewarm water, wring the water out of the cloth and wipe the dirty area.
    - Then rub with a soft, dry cloth.
  - Oily dirt:

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## PRECAUTIONS

### < PRECAUTION >

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- Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%) and wipe the dirty area.
- Then dip a cloth into fresh water, wring the water out of the cloth and wipe the detergent off.
- Then rub with a soft, dry cloth.
- Do not use organic solvent such as thinner, benzene, alcohol or gasoline.
- For genuine leather seats, use a genuine leather seat cleaner.

# PREPARATION

< PREPARATION >

## PREPARATION

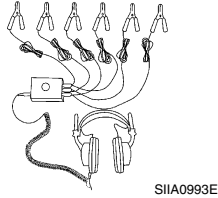
### PREPARATION

#### Special Service Tools

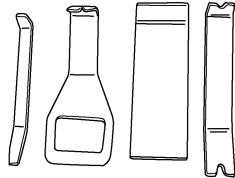
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The actual shape of the tools may differ from those illustrated here.

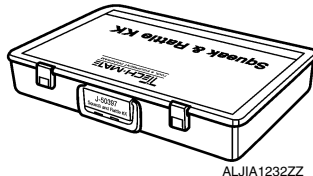
Tool number (TechMate No.) Tool name	Description
— (J-39570) Chassis Ear	Locating the noise
— (J-46534) Trim Tool Set	Removing trim components
— (J-50397) NISSAN Squeak and Rattle Kit	Repairing the cause of noise



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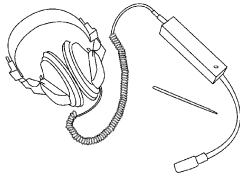
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#### Commercial Service Tool

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(TechMate No.) Tool name	Description
(J-39565) Engine Ear	Locating the noise



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# CLIP LIST


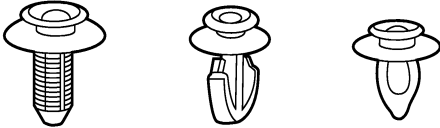


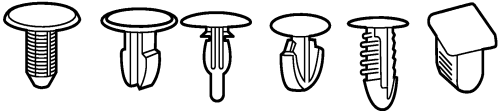
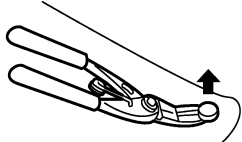

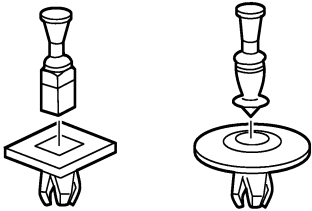
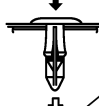
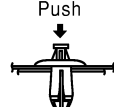

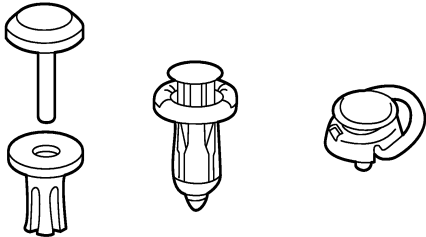
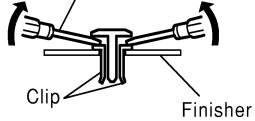

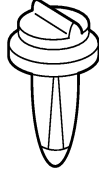
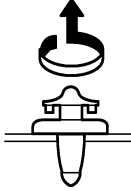
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## CLIP LIST

### Descriptions for Clips

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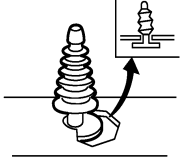
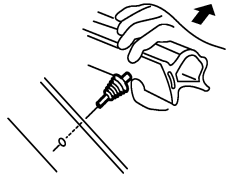

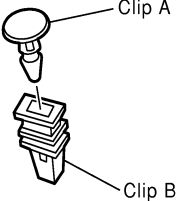
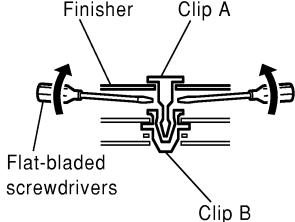

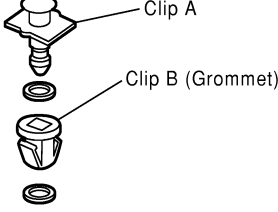
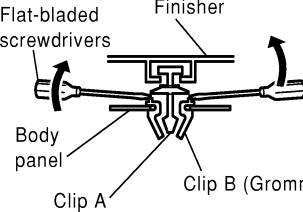


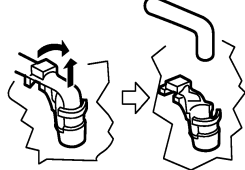

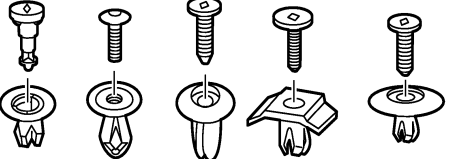

Replace any clips which are damaged during removal or installation.

Symbol No.	Shapes	Removal & Installation
<p>C101</p> 		<p><b>Removal:</b> Remove by bending up with flat-bladed screwdrivers or clip remover.</p> 
<p>C103</p> 		 <p><b>Removal:</b> Remove with a clip remover.</p>
<p>C203</p> 		<p><b>Removal:</b> Push center pin to catching position. (Do not remove center pin by hitting it.)</p> <p>Push</p>  <p><b>Installation:</b></p> 
<p>C205</p> 		<p><b>Removal:</b></p> 
<p>C206</p> 		<p><b>Removal:</b></p> 

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# CLIP LIST

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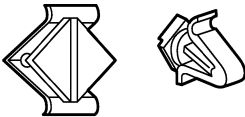

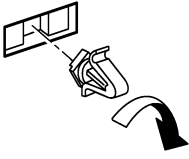

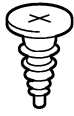



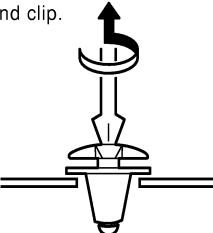


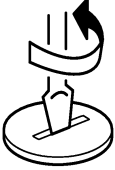
Symbol No.	Shapes	Removal & Installation
<p>CE103</p> 		<p><b>Removal:</b></p> 
<p>CF110</p> 		<p><b>Removal:</b></p> 
<p>CF118</p> 		<p><b>Removal:</b></p> 
<p>CR103</p> 		<p><b>Removal:</b> Holder portion of clip must be spread out to remove rod.</p> 
<p>CS101</p> 		<p><b>Removal:</b></p> <ol style="list-style-type: none"> <li>1. Screw out with a Phillips screwdriver.</li> <li>2. Remove female portion with flat-bladed screwdriver.</li> </ol> 

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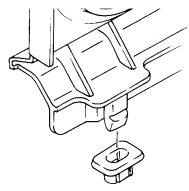
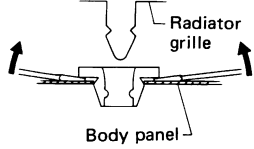

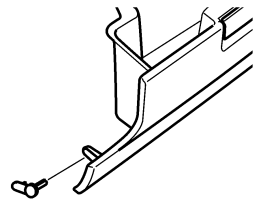
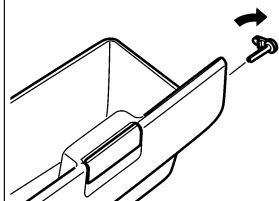

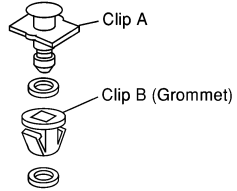
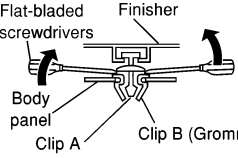
Symbol No.	Shapes	Removal & Installation	
CG101 		<b>Removal:</b>  Rotate 45° to remove	<b>Installation:</b> 
CS102 			
CS113 		<b>Removal:</b> Disconnect upper connection of clip with a flat-bladed screwdriver, then remove clip while inserting a flat-bladed screwdriver between body panel and clip. 	
C111 			

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# CLIP LIST

< PREPARATION >

Symbol No.	Shapes	Removal & Installation
<p>CG104</p> 		<p><b>Removal:</b> Remove by bending up with flat-bladed screwdrivers.</p> 
<p>CE114</p> 		
<p>CF118</p> 		<p><b>Removal:</b> Flat-bladed screwdrivers Finisher</p> 

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EXT

# SQUEAK AND RATTLE TROUBLE DIAGNOSES

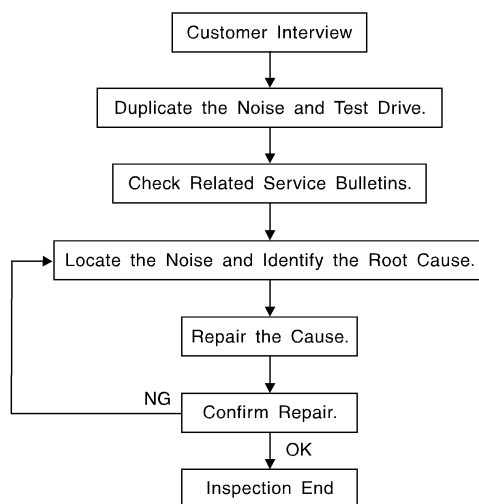
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## PERIODIC MAINTENANCE

### SQUEAK AND RATTLE TROUBLE DIAGNOSES

#### Work Flow

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#### CUSTOMER INTERVIEW

Interview the customer if possible, to determine the conditions that exist when the noise occurs. Use the Diagnostic Worksheet during the interview to document the facts and conditions when the noise occurs and any customer's comments; refer to [EXT-14, "Diagnostic Worksheet"](#). This information is necessary to duplicate the conditions that exist when the noise occurs.

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

#### DUPLICATE THE NOISE AND TEST DRIVE

# SQUEAK AND RATTLE TROUBLE DIAGNOSES

## < PERIODIC MAINTENANCE >

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 CVT and A/T models).
  - 6) Raise the vehicle on a hoist and hit a tire with a rubber hammer.
- Drive the vehicle and attempt to duplicate the conditions the customer states exist when the noise occurs.
  - If it is difficult to duplicate the noise, drive the vehicle slowly on an undulating or rough road to stress the vehicle body.

## CHECK RELATED SERVICE BULLETINS

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

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

## LOCATE THE NOISE AND IDENTIFY THE ROOT CAUSE

1. Narrow down the noise to a general area. To help pinpoint the source of the noise, use a listening tool (Chassis Ear: J-39570, Engine Ear: J-39565 and mechanic's 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 fasteners 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 [EXT-11. "Generic Squeak and Rattle Troubleshooting"](#).

## REPAIR THE CAUSE

- If the cause is a loose component, tighten the component securely.
- If the cause is insufficient clearance between components:
  - separate components by repositioning or loosening and retightening the component, if possible.
  - insulate components with a suitable insulator such as urethane pads, foam blocks, felt cloth tape or urethane tape. A NISSAN Squeak and Rattle Kit (J-50397) is available through your authorized NISSAN Parts Department.

### CAUTION:

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

### NOTE:

- Always check with the Parts Department for the latest parts information.
- The materials contained in the NISSAN Squeak and Rattle Kit (J-50397) are listed on the inside cover of the kit; and can each be ordered separately as needed.
- The following materials not found in the kit can also be used to repair squeaks and rattles.
  - SILICONE GREASE: Use instead of UHMW tape that will be visible or does not fit. The silicone grease 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

INFOID:0000000011935878

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

# SQUEAK AND RATTLE TROUBLE DIAGNOSES

## < PERIODIC MAINTENANCE >

---

### INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

1. Cluster lid A and the instrument panel
2. Acrylic lens and combination meter housing
3. Instrument panel to front pillar finisher
4. Instrument panel to windshield
5. Instrument panel 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. Shift selector assembly cover to finisher
2. A/C control unit and cluster lid C
3. Wiring harnesses behind audio and A/C control unit

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

### DOORS

Pay attention to the:

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

Tapping or moving the components or pressing on them while driving to duplicate the conditions can isolate many of these incidents. You can usually insulate the areas with felt cloth tape or insulator foam blocks from the NISSAN Squeak and Rattle Kit (J-50397) 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 bumpers 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. Sun visor 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.

### OVERHEAD CONSOLE (FRONT AND REAR)

Overhead console noises are often caused by the console panel clips not being engaged correctly. Most of these incidents are repaired by pushing up on the console at the clip locations until the clips engage.

In addition look for:

# SQUEAK AND RATTLE TROUBLE DIAGNOSES

## < PERIODIC MAINTENANCE >

---

1. Loose harness or harness connectors.
2. Front console map/reading lamp lens loose.
3. Loose screws at console attachment points.

A

## 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.

B

Cause of seat noise include:

C

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

D

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.

E

## 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.

F

Causes of transmitted underhood noise include:

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

G

H

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.

I

J

EXT

L

M

N

O

P

# SQUEAK AND RATTLE TROUBLE DIAGNOSES

< PERIODIC MAINTENANCE >

## Diagnostic Worksheet

INFOID:000000011935879

Dear Customer:

We are concerned about your satisfaction with your vehicle. Repairing a squeak or rattle sometimes can be very difficult. To help us fix your vehicle 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.

### SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

#### 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.

# SQUEAK AND RATTLE TROUBLE DIAGNOSES

< PERIODIC MAINTENANCE >

## SQUEAK & RATTLE DIAGNOSTIC WORKSHEET - page 2

Briefly describe the location where the noise occurs:

---

---

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

- |   |  |
|---|--|
| <input type="checkbox"/> Anytime                      | <input type="checkbox"/> After sitting out in the rain |
| <input type="checkbox"/> 1st time in the morning      | <input type="checkbox"/> When it is raining or wet     |
| <input type="checkbox"/> Only when it is cold outside | <input type="checkbox"/> Dry or dusty conditions       |
| <input type="checkbox"/> Only when it is hot outside  | <input type="checkbox"/> Other:                        |

### III. WHEN DRIVING:

- Through driveways
- Over rough roads
- Over speed bumps
- Only about \_\_\_\_ mph
- On acceleration
- Coming to a stop
- On turns: left, right or either (circle)
- With passengers or cargo
- Other: \_\_\_\_\_
- After driving \_\_\_\_ miles or \_\_\_\_ minutes

### IV. WHAT TYPE OF NOISE

- Squeak (like tennis shoes on a clean floor)
- Creak (like walking on an old wooden floor)
- Rattle (like shaking a baby rattle)
- Knock (like a knock at the door)
- Tick (like a clock second hand)
- Thump (heavy muffled knock noise)
- Buzz (like a bumble bee)

### TO BE COMPLETED BY DEALERSHIP PERSONNEL

Test Drive Notes:

---

---

---

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

VIN: \_\_\_\_\_ Customer Name \_\_\_\_\_

W.O.# \_\_\_\_\_ Date: \_\_\_\_\_

This form must be attached to Work Order

LAI/A0071E

A  
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P

# FRONT BUMPER

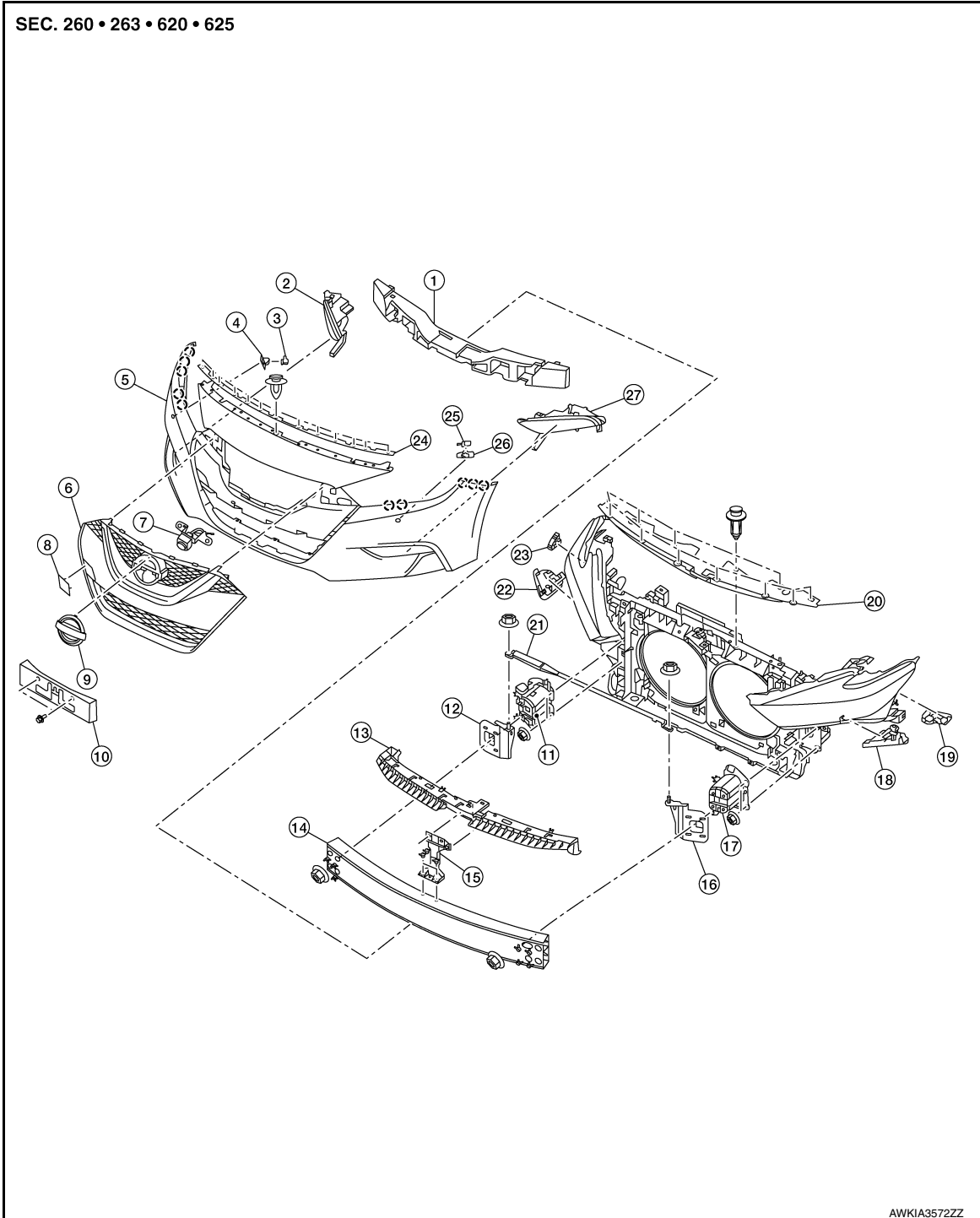
< REMOVAL AND INSTALLATION >

## REMOVAL AND INSTALLATION

### FRONT BUMPER

Exploded View

INFOID:000000011935880



- |  |   |                               |
|--|---|-------------------------------|
| 1. Front energy absorber               | 2. Front fog lamp (RH)                      | 3. Sonar sensor (if equipped) |
| 4. Sonar sensor finisher (if equipped) | 5. Front bumper fascia                      | 6. Front grille               |
| 7. Camera (if equipped)                | 8. Tow cover                                | 9. Emblem                     |
| 10. License plate bracket              | 11. Front bumper reinforcement bracket (RH) | 12. Apron side bracket (RH)   |



# FRONT BUMPER

## < REMOVAL AND INSTALLATION >

- |   |   |                                     |
|---|---|-------------------------------------|
| 13. Bumper retainer (upper)               | 14. Front bumper reinforcement              | 15. Bumper stay retainer            |
| 16. Apron side bracket (LH)               | 17. Front bumper reinforcement bracket (LH) | 18. Front bumper side retainer (LH) |
| 19. Front bumper fascia side bracket (LH) | 20. Core support cover                      | 21. Body damper (if equipped)       |
| 22. Front bumper side retainer (RH)       | 23. Front bumper fascia side bracket (RH)   | 24. Hood seal                       |
| 25. Sonar sensor (if equipped)            | 26. Sonar sensor finisher (if equipped)     | 27. Front fog lamp (LH)             |
- Pawl

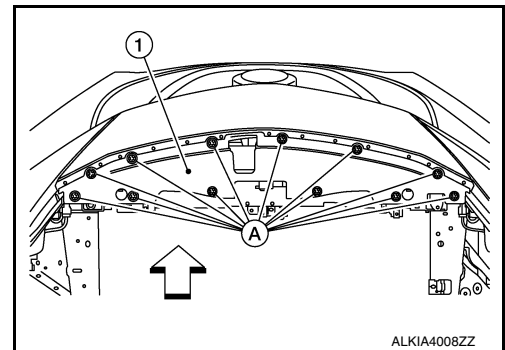
## Removal and Installation

INFOID:000000011935881

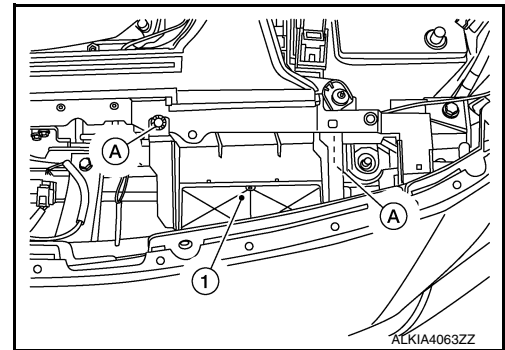
### REMOVAL

1. Remove clips (A), then remove the core support cover (1).

⇐ : Front

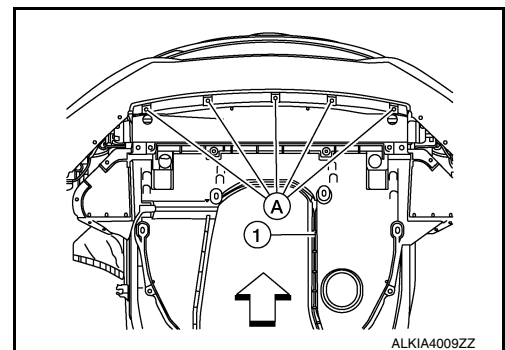


2. Remove clips (A) and remove intake air duct splashguard (1).



3. Remove bolts (A) from engine undercover (1).

⇐ : Front



4. Remove the front fender protector side covers (RH/LH). Refer to [EXT-28, "Removal and Installation"](#).
5. Partially remove front fender protector. Refer to [EXT-28, "Removal and Installation"](#).

# FRONT BUMPER

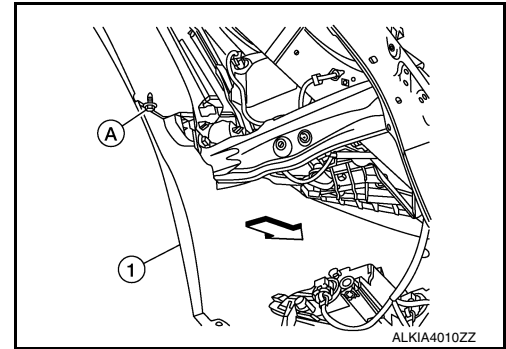
## < REMOVAL AND INSTALLATION >

6. Remove front fascia bolt (A) from front fascia (1).

⇐ : Front

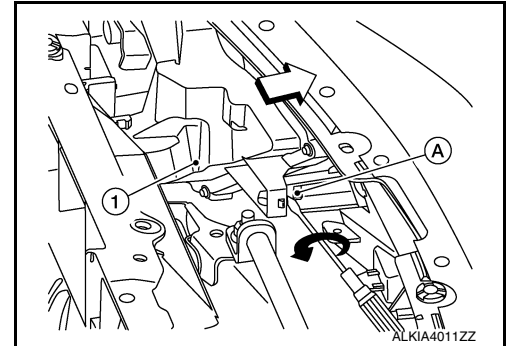
**NOTE:**

LH shown, RH similar



7. To release turn fasteners, insert a suitable tool into slot between turn fastener (A) and headlamp (1) and rotate as shown.

⇐ : Front



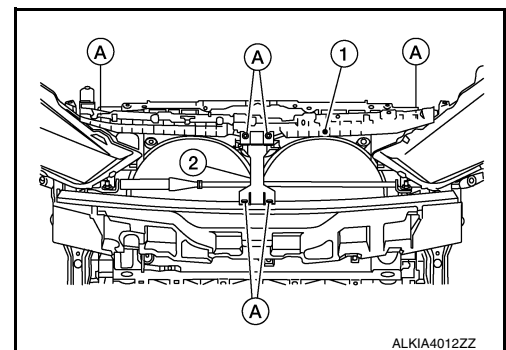
8. Disconnect the harness connectors from the following:
- Sonar sensors (if equipped). Refer to [SN-40, "Removal and Installation - Front Sonar Sensors"](#).
  - Fog lamps (RH/LH). Refer to [EXL-110, "Removal and Installation"](#) (LED HEADLAMP) or [EXL-228, "Removal and Installation"](#) (HALOGEN HEADLAMP).

9. Remove the front bumper fascia.

**CAUTION:**

**When removing front bumper fascia, two operators are needed to prevent damage.**

10. Remove the following from the front bumper fascia after removing (if necessary):
- Sonar sensors (if equipped). Refer to [SN-40, "Removal and Installation - Front Sonar Sensors"](#).
  - Fog lamps (RH/LH). Refer to [EXL-110, "Removal and Installation"](#) (LED HEADLAMP) or [EXL-228, "Removal and Installation"](#) (HALOGEN HEADLAMP).
  - Front grille. Refer to [EXT-22, "Removal and Installation"](#).
11. Remove front energy absorber (if necessary).
12. Remove horns (high/low) (if necessary). Refer to [HRN-7, "Removal and Installation"](#).
13. Remove the bolts (A) and then remove bumper upper retainer (1) and bumper stay retainer (2) (if necessary).

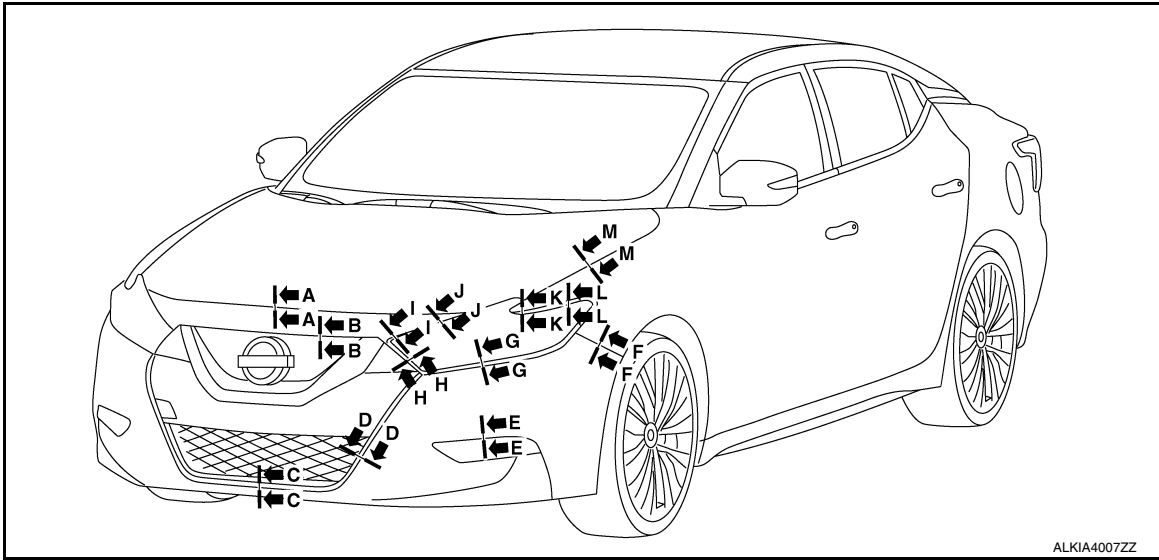


## INSTALLATION

# FRONT BUMPER

## < REMOVAL AND INSTALLATION >

Installation is in the reverse order of removal.



ALKIA4007ZZ

mm (in)

Section	Measurement	Minimum	Target Value	Maximum
A-A	Clearance	2 (0.08)	4.1 (0.16)	6.2 (0.24)
A-A	Surface Height	-0.6 (-0.02)	1.0 (0.04)	2.6 (0.10)
B-B	Clearance	0.2 (0.01)	1.5 (0.06)	2.8 (0.11)
C-C	Clearance	0.2 (0.01)	1.5 (0.06)	2.8 (0.11)
C-C	Surface Height	-0.3 (-0.01)	1.0 (0.04)	2.0 (0.08)
D-D	Clearance	0.2 (0.01)	1.5 (0.06)	2.8 (0.11)
D-D	Surface Height	-0.3 (-0.01)	1.0 (0.04)	2.0 (0.08)
E-E	Clearance	0.5 (0.02)	1.5 (0.06)	2.5 (0.10)
F-F	Clearance	0.0 (0.00)	0.3 (0.01)	1.1 (0.04)
F-F	Surface Height	-0.3 (-0.01)	0.7 (0.03)	1.7 (0.07)
G-G	Clearance	0.2 (0.01)	1.5 (0.06)	3.2 (0.13)
H-H	Clearance	0.0 (0.000)	1.5 (0.06)	3.0 (0.12)
I-I	Clearance	0.2 (0.01)	1.5 (0.06)	3.2 (0.13)
J-J	Clearance	0.2 (0.01)	1.5 (0.06)	3.2 (0.13)
K-K	Clearance	0.1 (0.00)	1.5 (0.06)	2.9 (0.11)
L-L	Clearance	0.1 (0.00)	1.5 (0.06)	2.9 (0.11)
M-M	Clearance	2.5 (0.10)	3.5 (0.14)	4.5 (0.18)
M-M	Surface Height	0.0 (0.00)	1.0 (0.04)	2.0 (0.08)

A  
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EXT

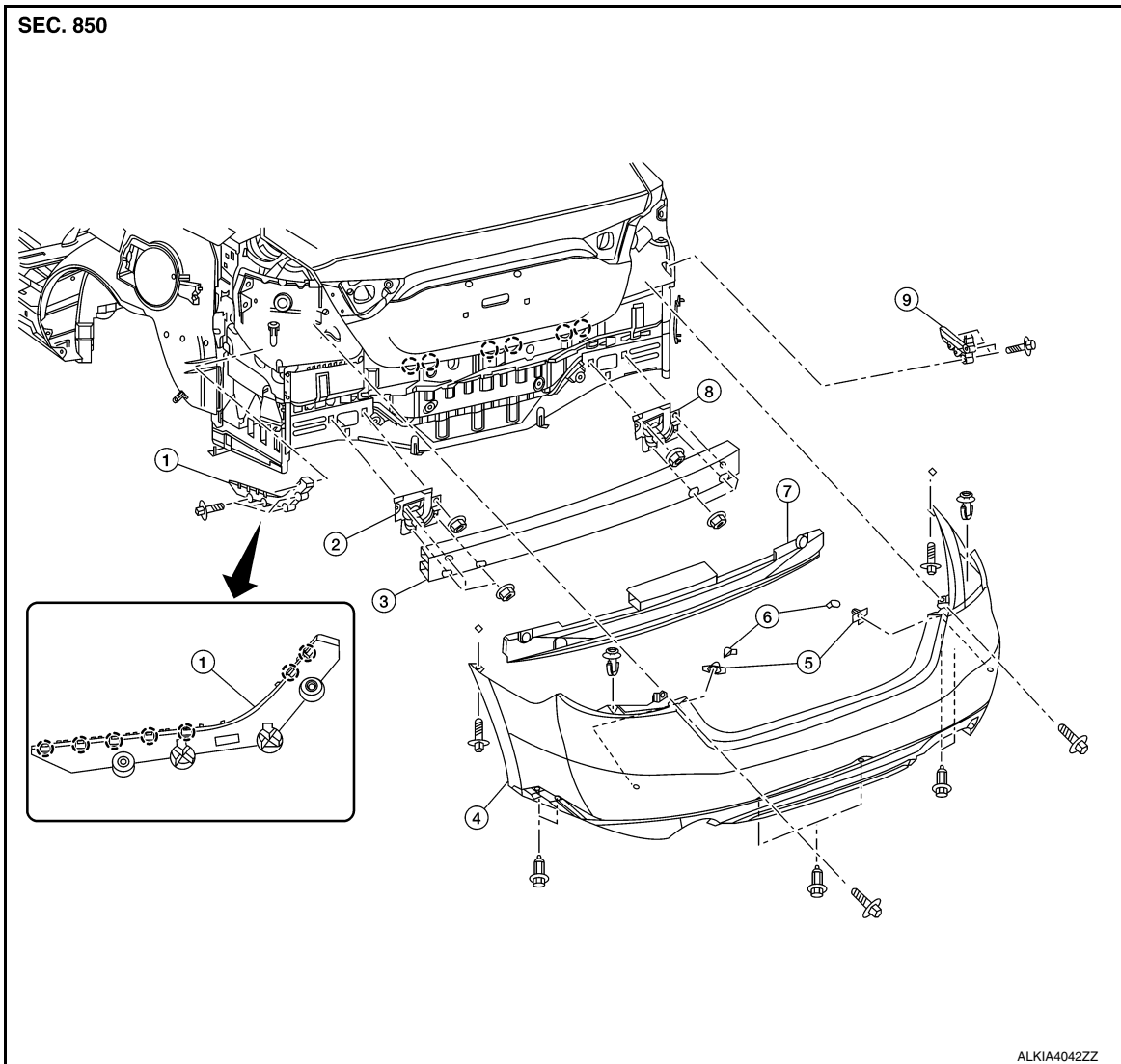
# REAR BUMPER

< REMOVAL AND INSTALLATION >

## REAR BUMPER

Exploded View

INFOID:000000011935882



- |   |   |   |
|---|---|---|
| 1. Rear bumper fascia side bracket (LH) | 2. Rear bumper reinforcement bracket (LH) | 3. Rear bumper reinforcement            |
| 4. Rear bumper fascia                   | 5. Sonar sensor finisher (if equipped)    | 6. Sonar sensor (if equipped)           |
| 7. Rear energy absorber                 | 8. Rear bumper reinforcement bracket (RH) | 9. Rear bumper fascia side bracket (RH) |

 Pawl

## Removal and Installation

INFOID:000000011935883

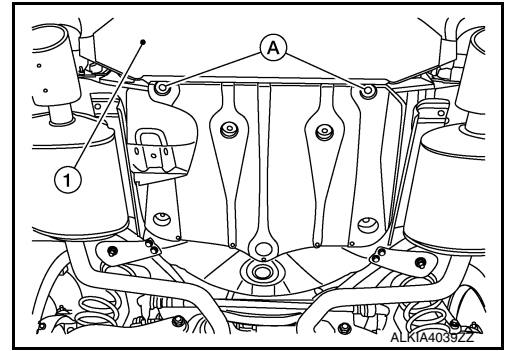
### REMOVAL

1. Remove the rear combination lamps (RH/LH). Refer to [EXL-117, "Removal and Installation"](#) (LED HEADLAMP) or [EXL-235, "Removal and Installation"](#) (HALOGEN HEADLAMP).
2. Remove rear trunk finisher. Refer to [INT-54, "TRUNK REAR FINISHER : Removal and Installation"](#).
3. Partially remove trunk lid weather strip.
4. Remove bolts and clips from rear bumper fascia.


# REAR BUMPER

## < REMOVAL AND INSTALLATION >

- Partially remove rear undercover clips (A) from rear bumper fascia (1).

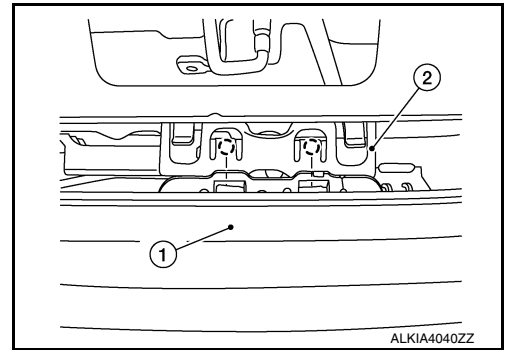


- Disconnect rear sonar sensor harness connector (if equipped).
- Release pawls and remove rear bumper fascia from rear bumper side brackets (RH/LH).
- Using a suitable tool, release pawls to separate the rear bumper fascia (1) from the rear panel (2) and then remove rear bumper fascia.

 : Pawl

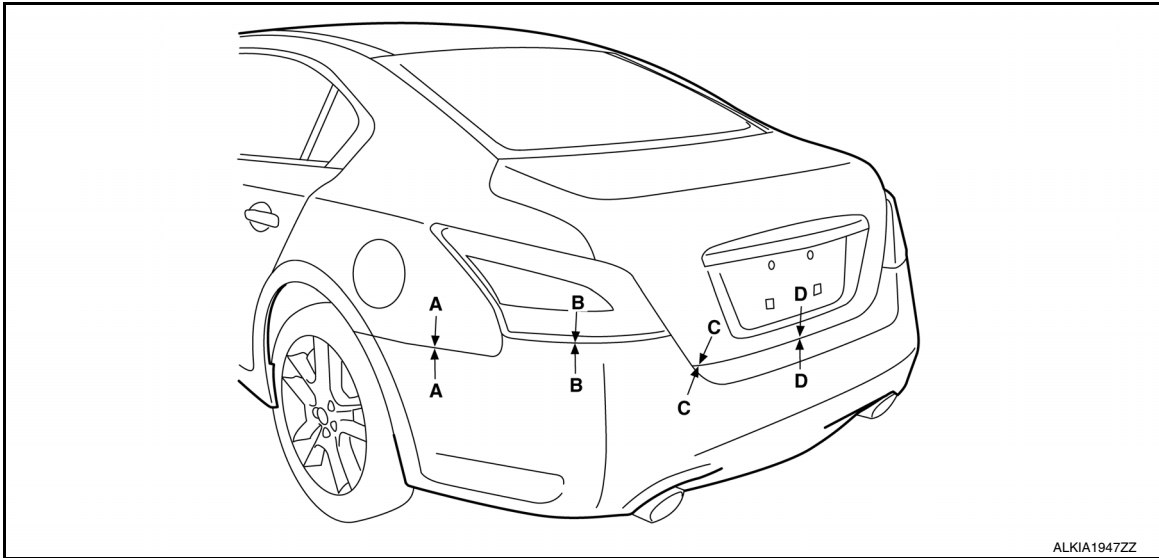
### WARNING:

- Do not damage rear bumper fascia when releasing pawls.
- Two operators are required when removing fascia to prevent damage to fascia.



## INSTALLATION

Installation is in the reverse order of removal.



mm (in)

Section	Measurement	Minimum	Target Value	Maximum
A-A	Clearance	0.0 (0.00)	0.0 (0.00)	0.8 (0.03)
A-A	Surface height	-1.8 (-0.07)	-0.8 (-0.03)	0.2 (0.01)
B-B	Clearance	0.5 (0.02)	2.0 (0.08)	3.5 (0.14)
B-B	Surface height	-1.5 (-0.06)	0.0 (0.00)	1.5 (0.06)
C-C	Clearance	3.0 (0.12)	5.0 (0.20)	7.0 (0.28)
D-D	Clearance	5.0 (0.20)	7.0 (0.28)	9.0 (0.35)

A  
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EXT

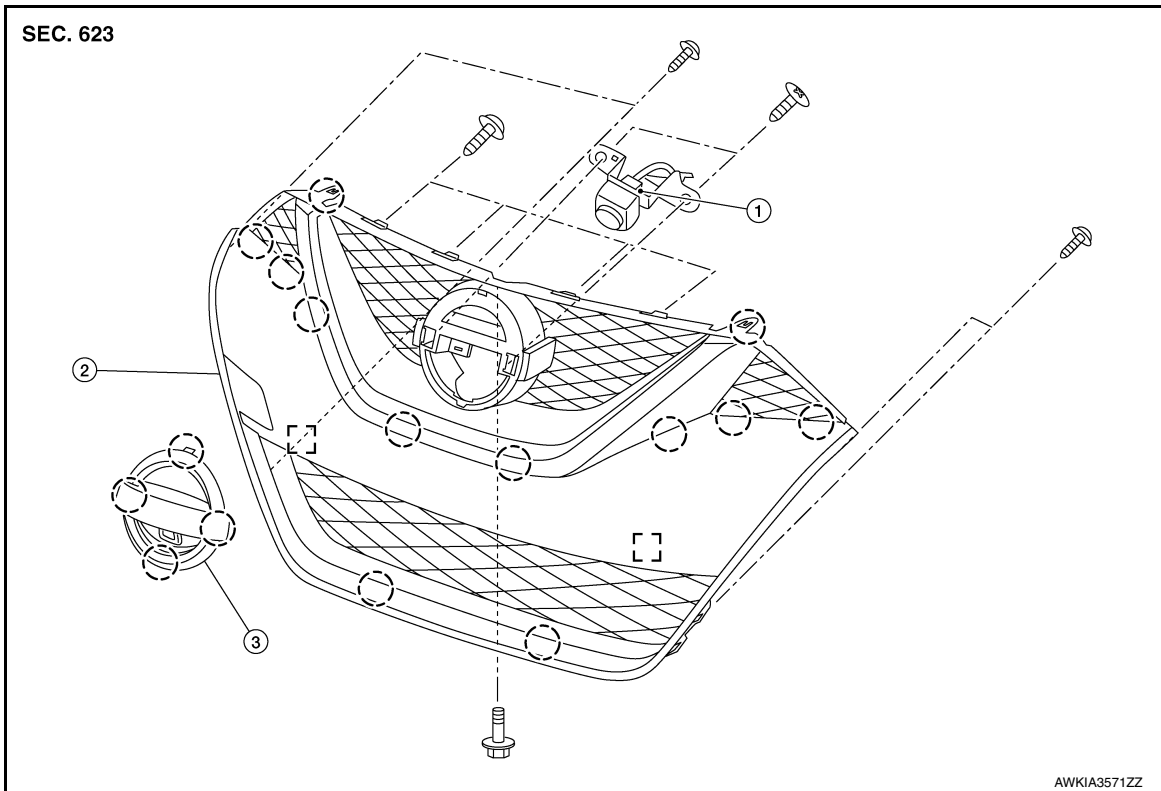
# FRONT GRILLE

< REMOVAL AND INSTALLATION >

## FRONT GRILLE

Exploded View

INFOID:000000012242614



1. Camera (if equipped)

2. Front grille

3. Emblem

○ Pawl

□ Metal clip

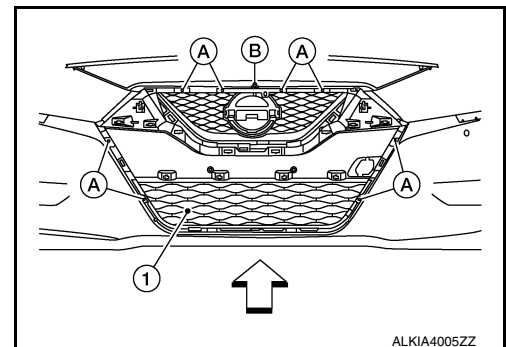
## Removal and Installation

INFOID:000000011935884

### REMOVAL

1. Remove front bumper fascia. Refer to [EXT-17, "Removal and Installation"](#).
2. Remove screws (A) and bolt (B) from front grille (1).

← : Front



3. Release the pawls and metal clips, then remove front grille.

### NOTE:

Remove the following parts (if necessary) after removing the front grille:

- Camera (if equipped)
- Emblem

# FRONT GRILLE

< REMOVAL AND INSTALLATION >

---

## INSTALLATION

Installation is in the reverse order of removal.

**CAUTION:**

Perform camera image calibration (with around view monitor). Refer to [AV-239, "Description"](#).

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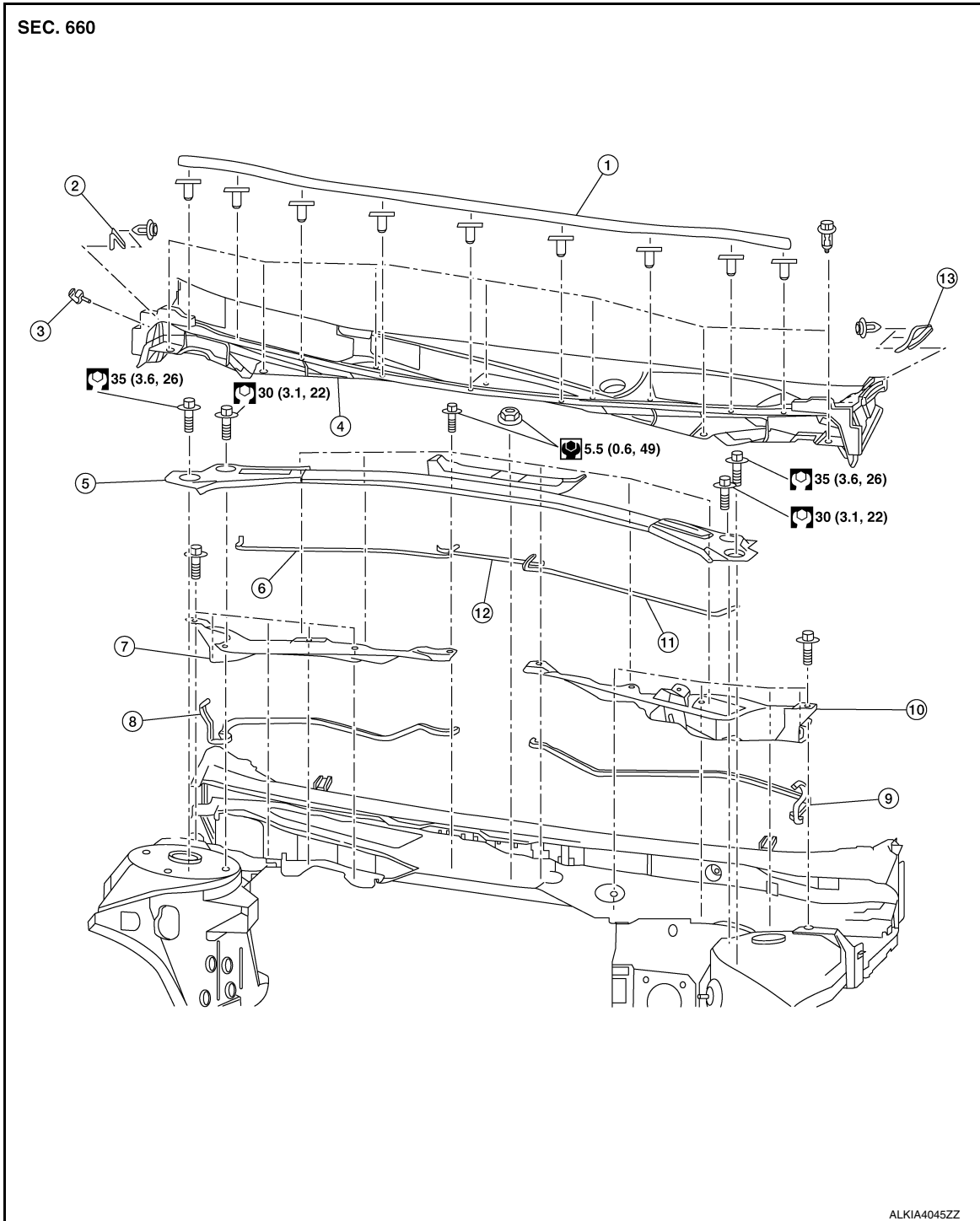
# COWL TOP

< REMOVAL AND INSTALLATION >

## COWL TOP

Exploded View

INFOID:000000011935885



- |                                   |                                   |                                   |
|-----------------------------------|-----------------------------------|-----------------------------------|
| 1. Cowl top cover seal            | 2. Cowl top side trim cover (RH)  | 3. Harness clip                   |
| 4. Cowl top cover                 | 5. Cowl top extension             | 6. Cowl top seal                  |
| 7. Cowl top brace (RH)            | 8. Cowl top brace lower seal (RH) | 9. Cowl top brace lower seal (LH) |
| 10. Cowl top brace (LH)           | 11. Cowl top seal                 | 12. Cowl top seal                 |
| 13. Cowl top side trim cover (LH) |                                   |                                   |



# COWL TOP

## < REMOVAL AND INSTALLATION >

### Removal and Installation


INFOID:000000011935886

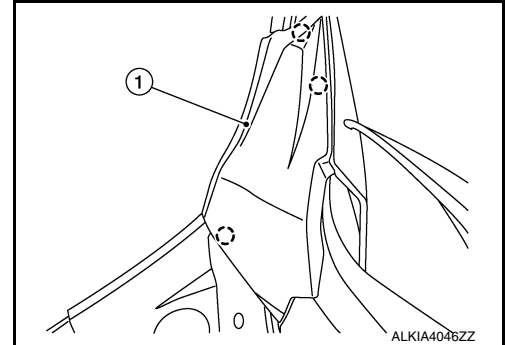
#### REMOVAL

1. Remove both wiper arms (RH/LH). Refer to [WW-45. "WIPER ARM : Removal and Installation"](#).
2. Release the cowl top cover seal clips, then remove cowl top cover seal.
3. Release the pawls, then remove the front fender covers (1) (RH/LH).

**NOTE:**

LH shown, RH similar

 : Pawl



4. Disconnect the washer nozzle supply hose.
5. Release the cowl top cover clips, then remove cowl top cover.
6. Disconnect the harness connector from the wiper motor. Refer to [WW-49. "WIPER MOTOR : Removal and Installation"](#).
7. Remove wiper motor harness clip and cowl top extension bolts, then remove the cowl top extension.
8. Remove the front wiper drive assembly. Refer to [WW-48. "WIPER DRIVE ASSEMBLY : Removal and Installation"](#).
9. Remove the cowl top brace (RH/LH) bolts, then remove cowl top brace (RH/LH) (if necessary).

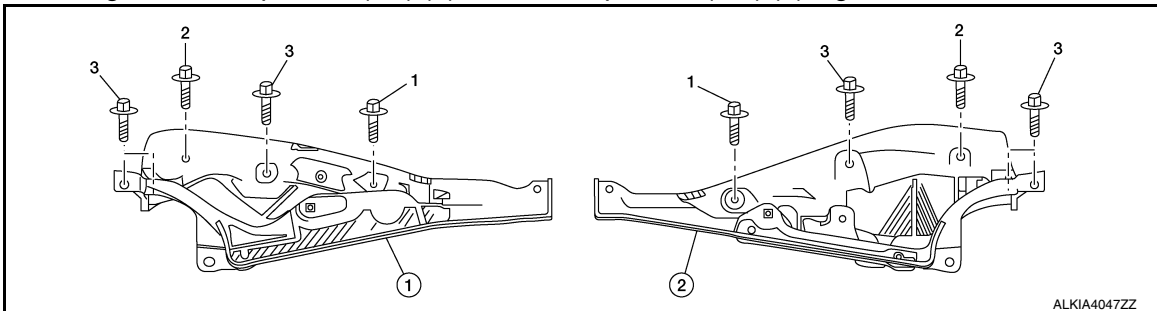
#### INSTALLATION

Installation is in the reverse order of removal.

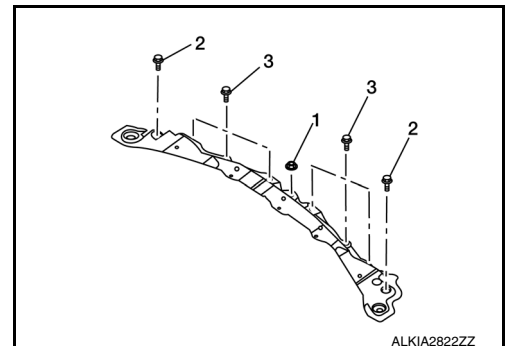
**CAUTION:**

**After installing, perform adjustment of wiper arm. Refer to [WW-46. "WIPER ARM : Adjustment"](#).**

- When installing the cowl top brace (LH) (2) and cowl top brace (RH) (1), tighten the bolts in the order shown.



- When installing the lower cowl top extension brace, tighten the bolts in the order shown.



A  
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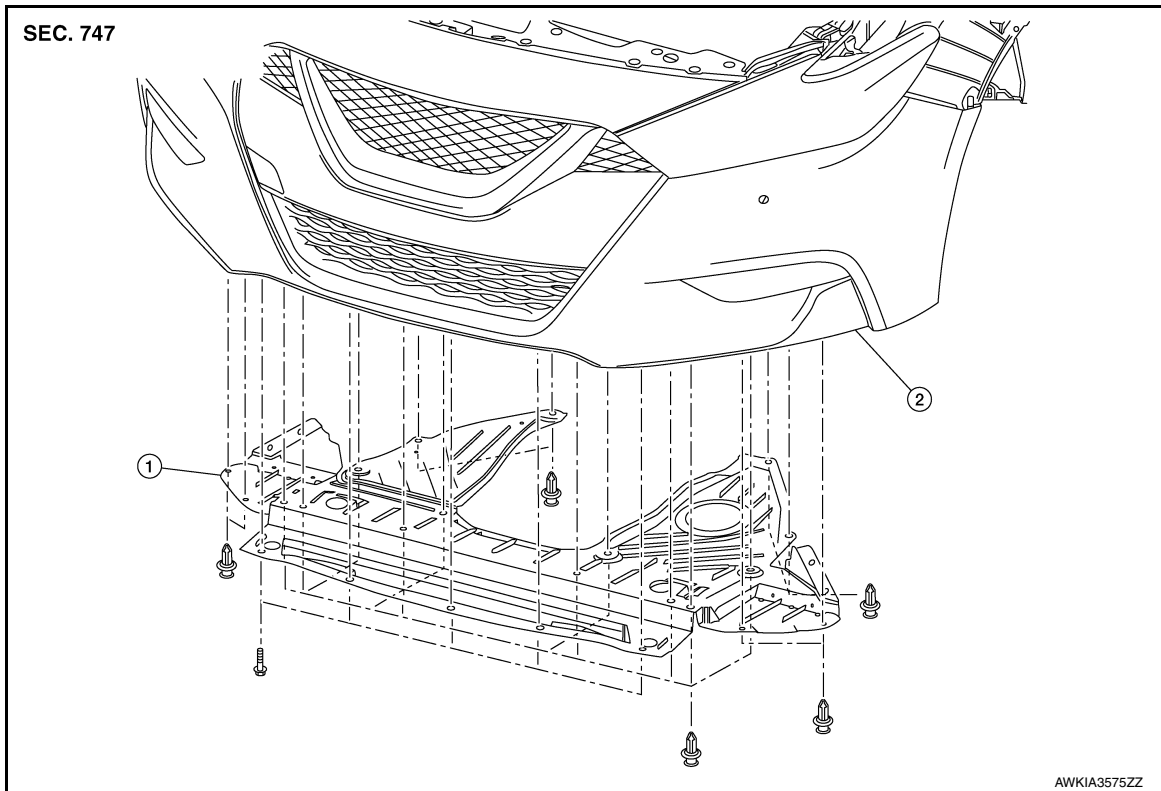
# FRONT UNDER COVER

< REMOVAL AND INSTALLATION >

## FRONT UNDER COVER

### Exploded View

INFOID:000000012244199



1. Front undercover

2. Front bumper fascia

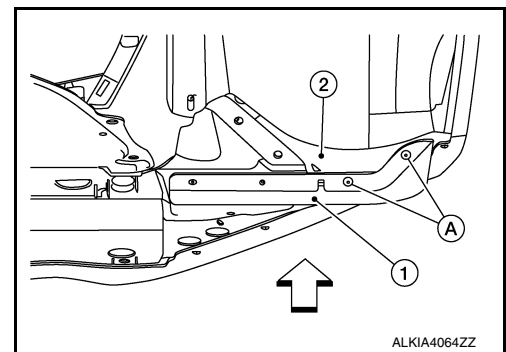
### Removal and Installation

INFOID:000000012244200

#### REMOVAL

1. Remove front undercover bolts.
2. Drill out the rivets (A) that secure the air deflector (1) to the fender protector (2).

← : Front



3. Remove clips and then remove front undercover.

#### INSTALLATION

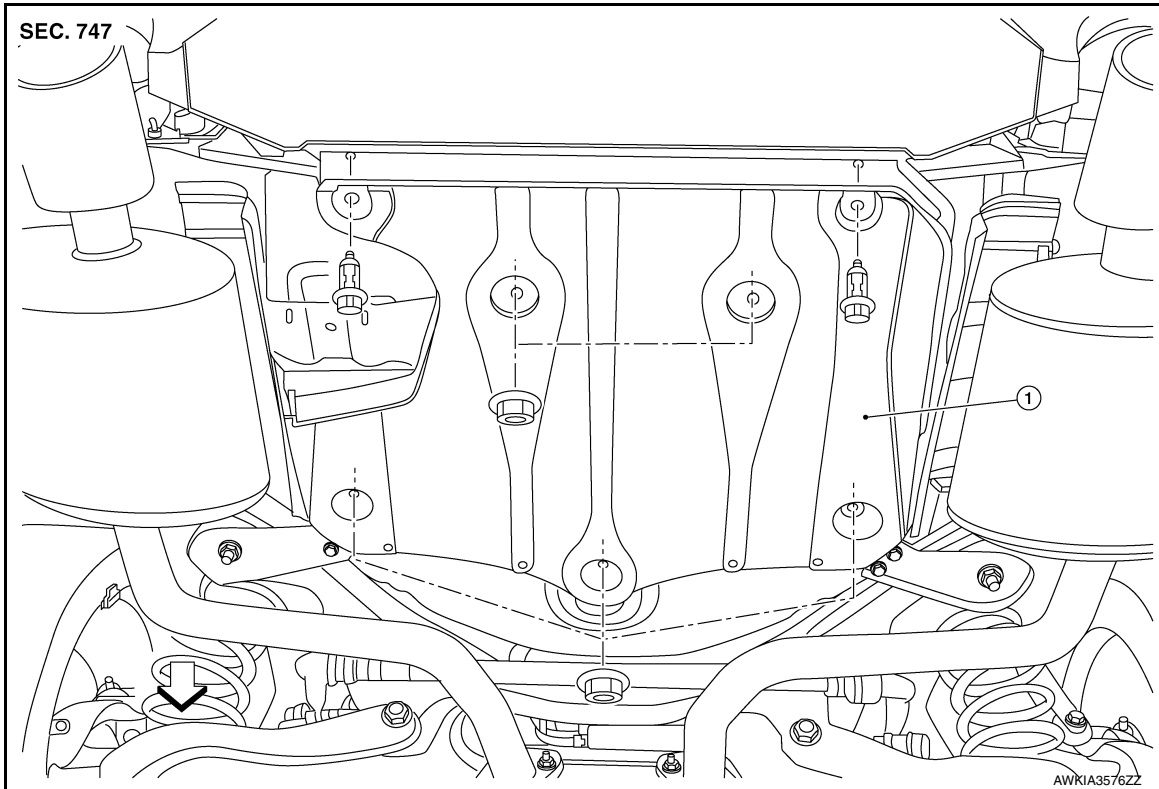
Installation is in the reverse order of removal.

# REAR UNDER COVER

< REMOVAL AND INSTALLATION >

## REAR UNDER COVER

### Exploded View



1. Rear under cover

⇐ Front

### Removal and Installation

INFOID:000000012260896

#### REMOVAL

1. Remove clips from rear under cover.
2. Remove nuts from rear under cover and remove rear under cover.

#### INSTALLATION

Installation is in the reverse order of removal.

A  
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EXT

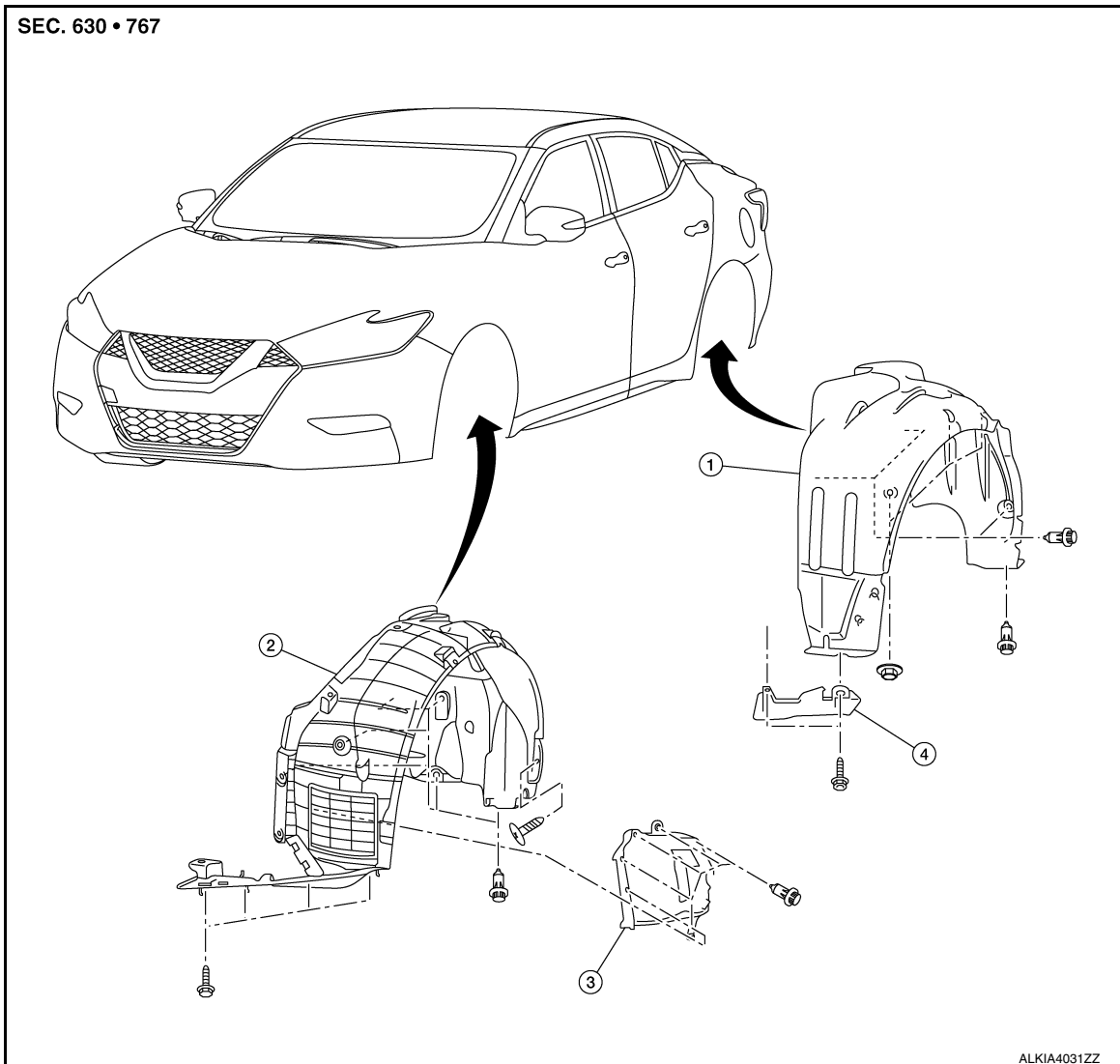
# FENDER PROTECTOR

< REMOVAL AND INSTALLATION >

## FENDER PROTECTOR

Exploded View

INFOID:000000011935887



- 1. Rear fender protector
- 2. Front fender protector
- 3. Front fender protector side cover
- 4. Rear wind deflector

## Removal and Installation

INFOID:000000011935888

### FRONT FENDER PROTECTOR

Removal

**NOTE:**

Position front tires as necessary to remove the front fender protectors.

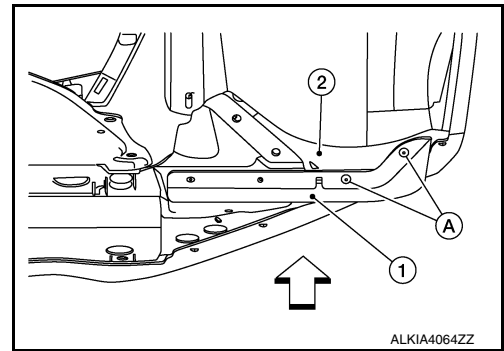
1. Remove the front screw from center mudguard.
2. Remove the front fender protector side cover clips, then remove front fender protector side cover.

# FENDER PROTECTOR

## < REMOVAL AND INSTALLATION >

3. Drill out the rivets (A) that secure the air deflector (1) to the fender protector (2).

← : Front



4. Remove the front fender protector screws and clips, then remove front fender protector.

### Installation

Installation is in the reverse order of removal.

### NOTE:

Position front tires as necessary to install the front fender protectors.

## REAR FENDER PROTECTOR

### Removal

1. Remove the rear tire/wheel assembly. Refer to [WT-64. "Adjustment"](#).
2. Remove the rear fender protector nuts and clips.
3. Remove the rear fender protector.
4. Remove the wind deflector screws, then remove the wind deflector.

### Installation

Installation is in the reverse order of removal.

A  
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EXT

# MUDGUARD

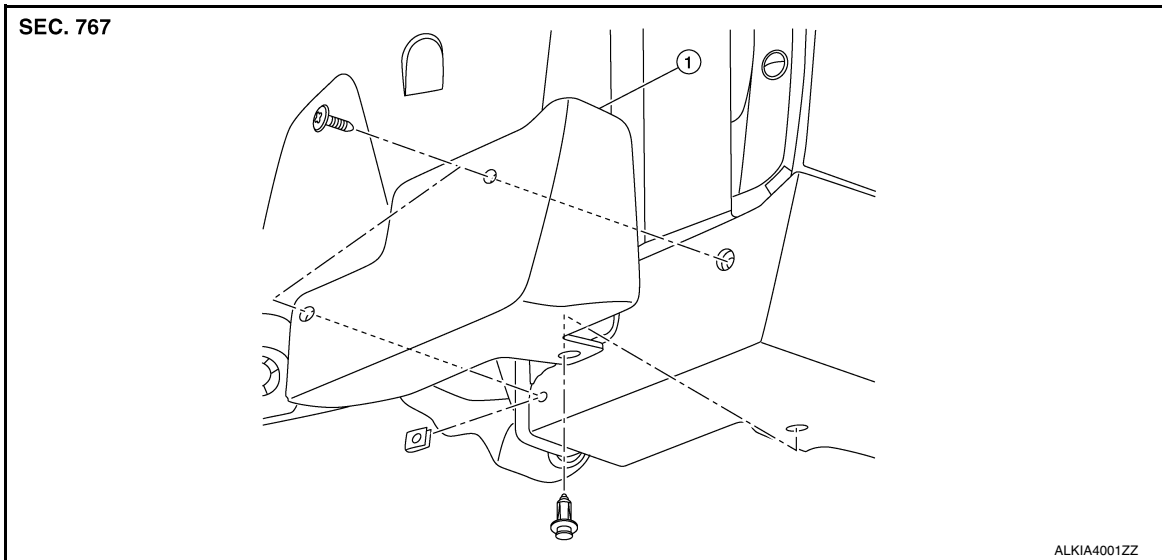
< REMOVAL AND INSTALLATION >

## MUDGUARD

### FRONT MUDGUARD

#### FRONT MUDGUARD : Exploded View

INFOID:000000012242509



1. Front mudguard

↔ Front

#### FRONT MUDGUARD : Removal and Installation

INFOID:000000012242510

##### REMOVAL

Remove screws and clip and remove front mudguard.

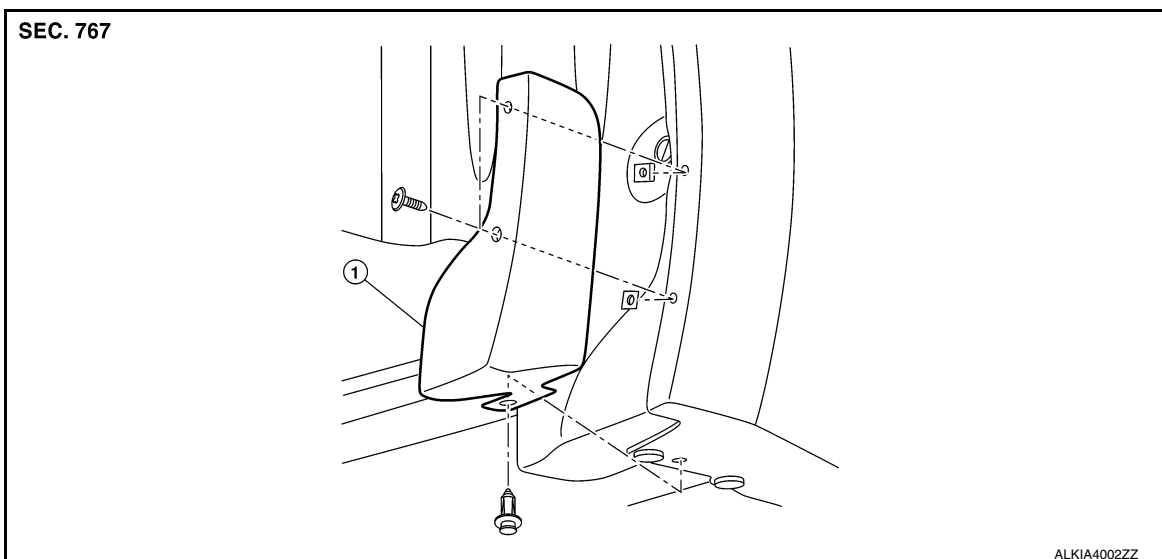
##### INSTALLATION

Installation is in the reverse order of removal.

### REAR MUDGUARD

#### REAR MUDGUARD : Exploded View

INFOID:000000012242505



# MUDGUARD

## < REMOVAL AND INSTALLATION >

1. Rear mudguard

⇐ Front

### REAR MUDGUARD : Removal and Installation

INFOID:0000000112242506

#### REMOVAL

Remove screws and clip and remove rear mudguard.

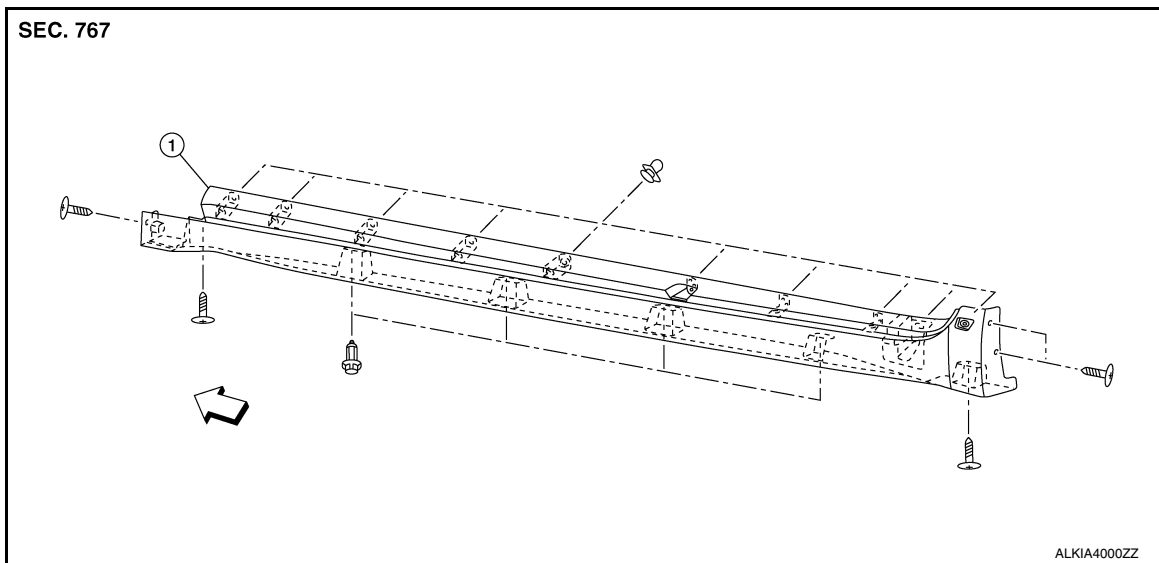
#### INSTALLATION

Installation is in the reverse order of removal.

### CENTER MUD GUARD

### CENTER MUD GUARD : Exploded View

INFOID:000000011935899



1. Center mudguard

⇐ Front

### CENTER MUD GUARD : Removal and Installation

INFOID:000000011935890

#### REMOVAL

1. Remove front mudguard. Refer to [EXT-30. "FRONT MUDGUARD : Removal and Installation"](#).
2. Remove the screws and clips located on the underbody.
3. Remove rear wind deflector bolt. Refer to [EXT-28. "Exploded View"](#).
4. Remove the center mudguard front and rear screws.
5. Release the clips located behind the center mudguard using a suitable tool, beginning with the front and working rearward.
6. Remove the center mudguard from body side.

#### INSTALLATION

Installation is in the reverse order of removal.

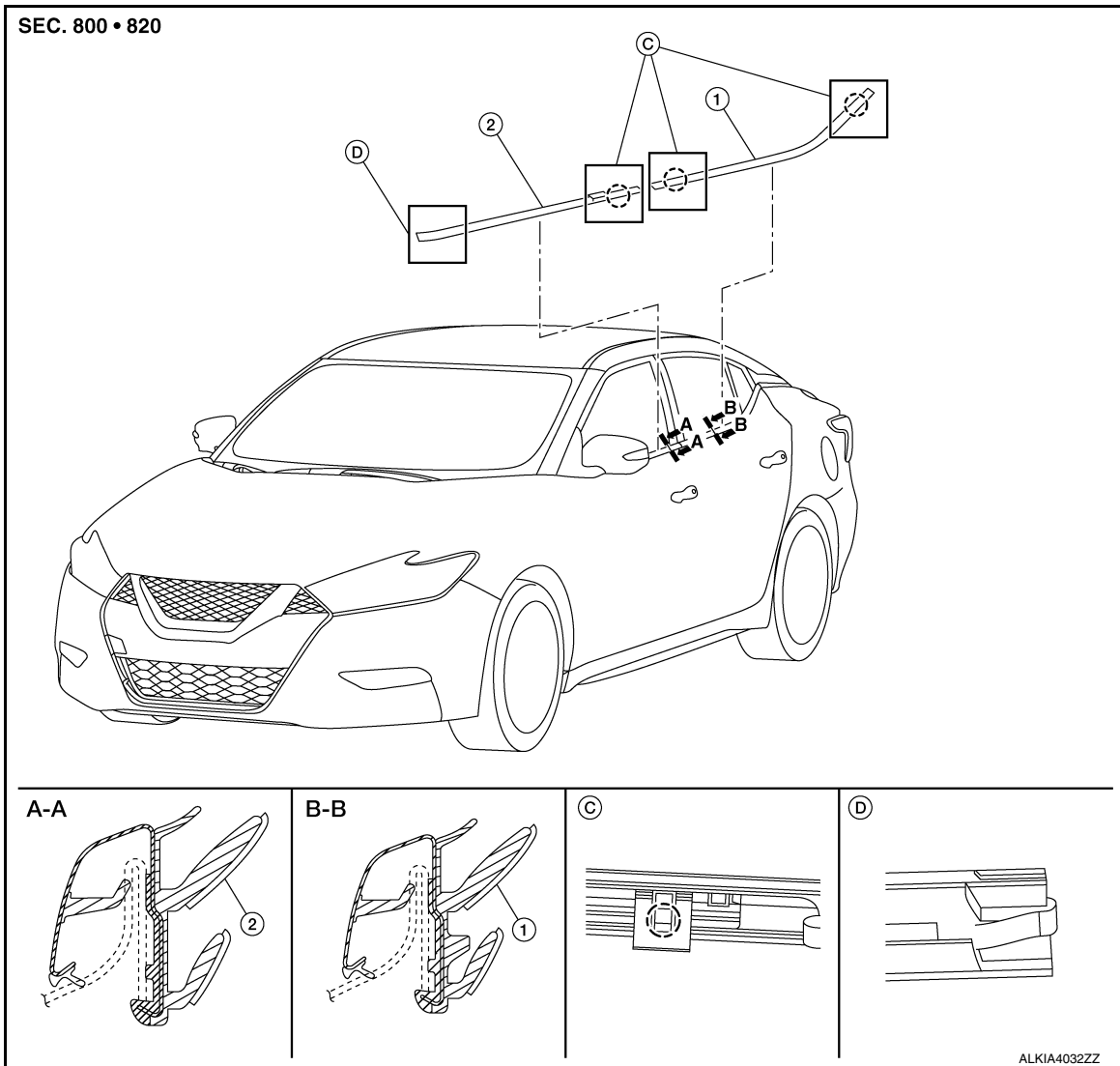
# DOOR OUTSIDE MOLDING

< REMOVAL AND INSTALLATION >

## DOOR OUTSIDE MOLDING


Exploded View

INFOID:000000011935891



1. Rear door outside molding

2. Front door outside molding

 Pawl

## Removal and Installation

INFOID:000000011935892

### FRONT DOOR OUTSIDE MOLDING

Removal


1. Open the front door window fully.
2. Remove the side view mirror. Refer to [MIR-21, "Removal and Installation"](#).



# DOOR OUTSIDE MOLDING

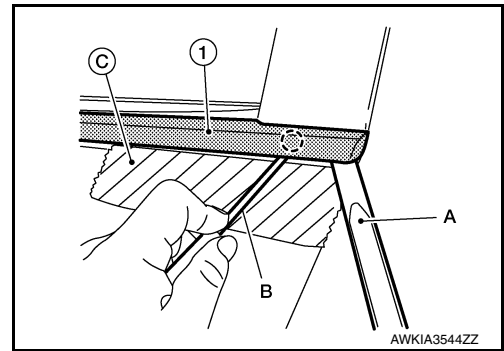
## < REMOVAL AND INSTALLATION >

- Using a suitable tool (A), lift front door outside molding (1) enough to carefully insert a suitable tool (B) beneath it and release pawl.

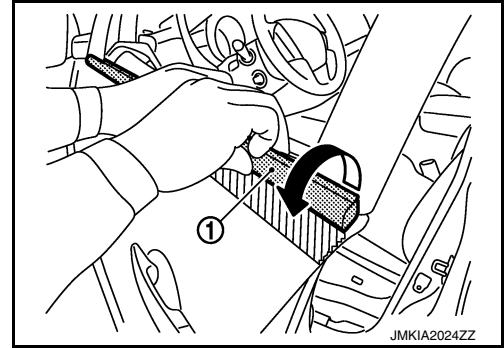
 : Pawl

### CAUTION:

Apply protection tape (C) around entire work area.



- Lift and twist front door outside molding (1) upward then out from door panel flange.



- Remove front door outside molding.


### Installation

Installation is in the reverse order of removal.

## REAR DOOR OUTSIDE MOLDING

### Removal

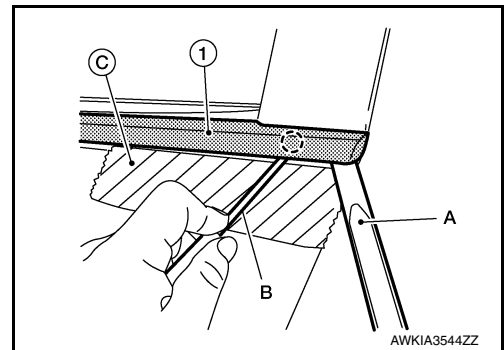
- Open the rear door window fully.
- Using a suitable tool (A), lift rear door outside molding (1) enough to carefully insert a suitable tool (B) beneath it and release pawls at front and rear.

 : Pawl

### CAUTION:

Apply protection tape (C) around entire work area.

- Lift and twist rear door outside molding (1) up then outward from door panel flange.
- Remove rear door outside molding.



### Installation

Installation is in the reverse order of removal.

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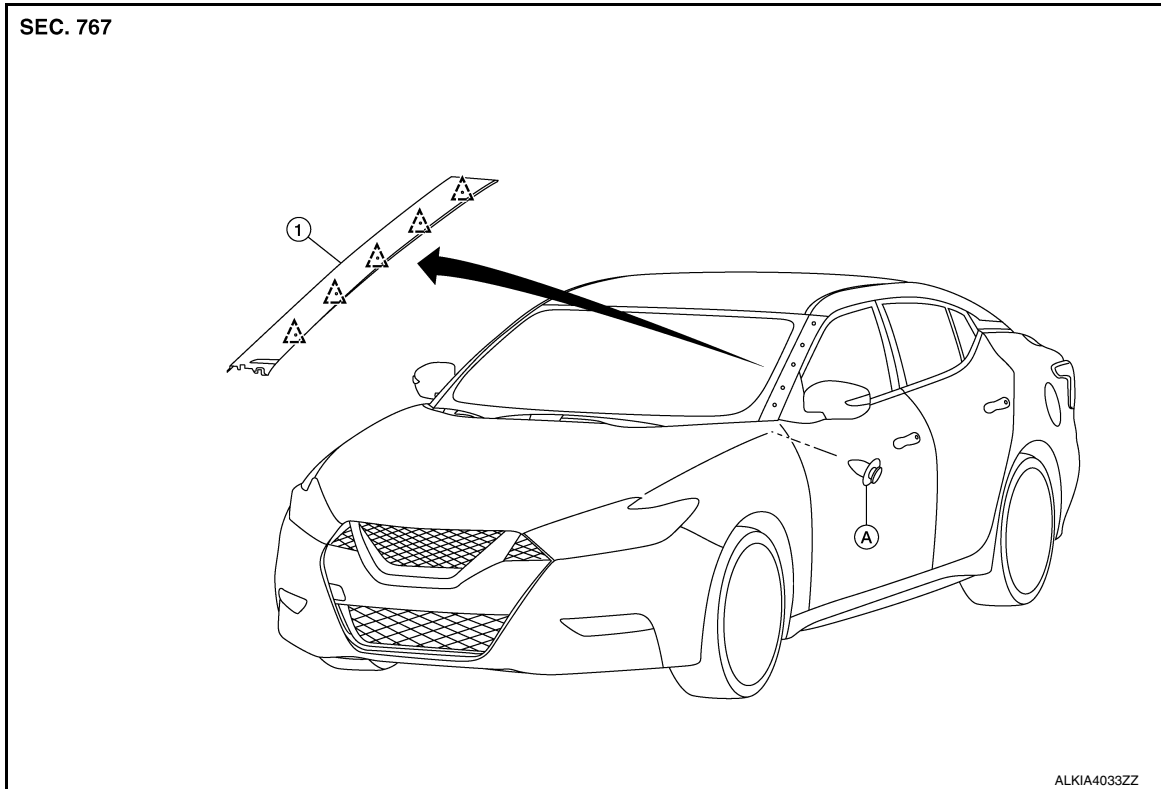
# FRONT PILLAR MOLDING

< REMOVAL AND INSTALLATION >

## FRONT PILLAR MOLDING


### Exploded View

INFOID:000000012246446



1. Front pillar molding

A. Locating pin

 Clip

### Removal and Installation

INFOID:000000012246447

#### REMOVAL

Release clips and then remove front pillar molding.

#### INSTALLATION

Installation is in the reverse order of removal.

#### **NOTE:**

When installing front pillar molding, make sure molding is aligned with locating pin.

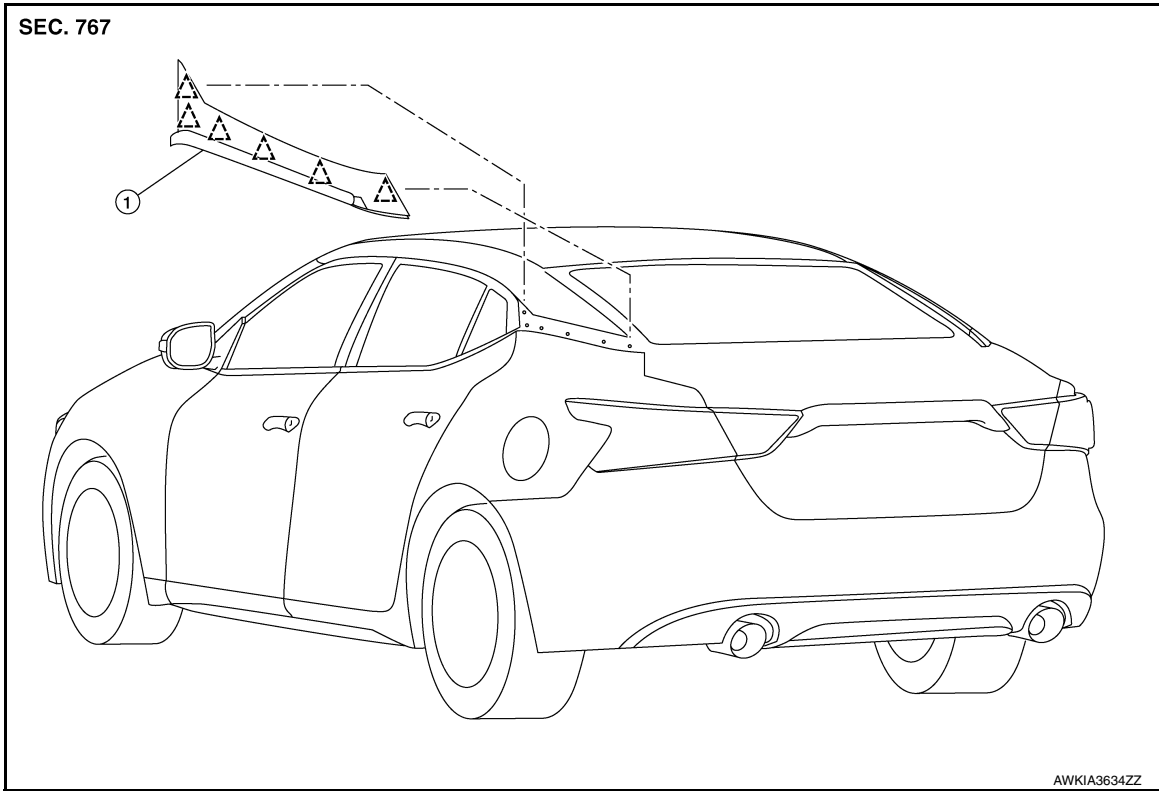
# REAR PILLAR MOLDING

< REMOVAL AND INSTALLATION >


## REAR PILLAR MOLDING

### Exploded View

INFOID:000000012246448



1. Rear pillar molding

 Clip

### Removal and Installation

INFOID:000000012246449

#### REMOVAL

Release clips and then remove rear pillar molding.

#### INSTALLATION

Installation is in the reverse order of removal.

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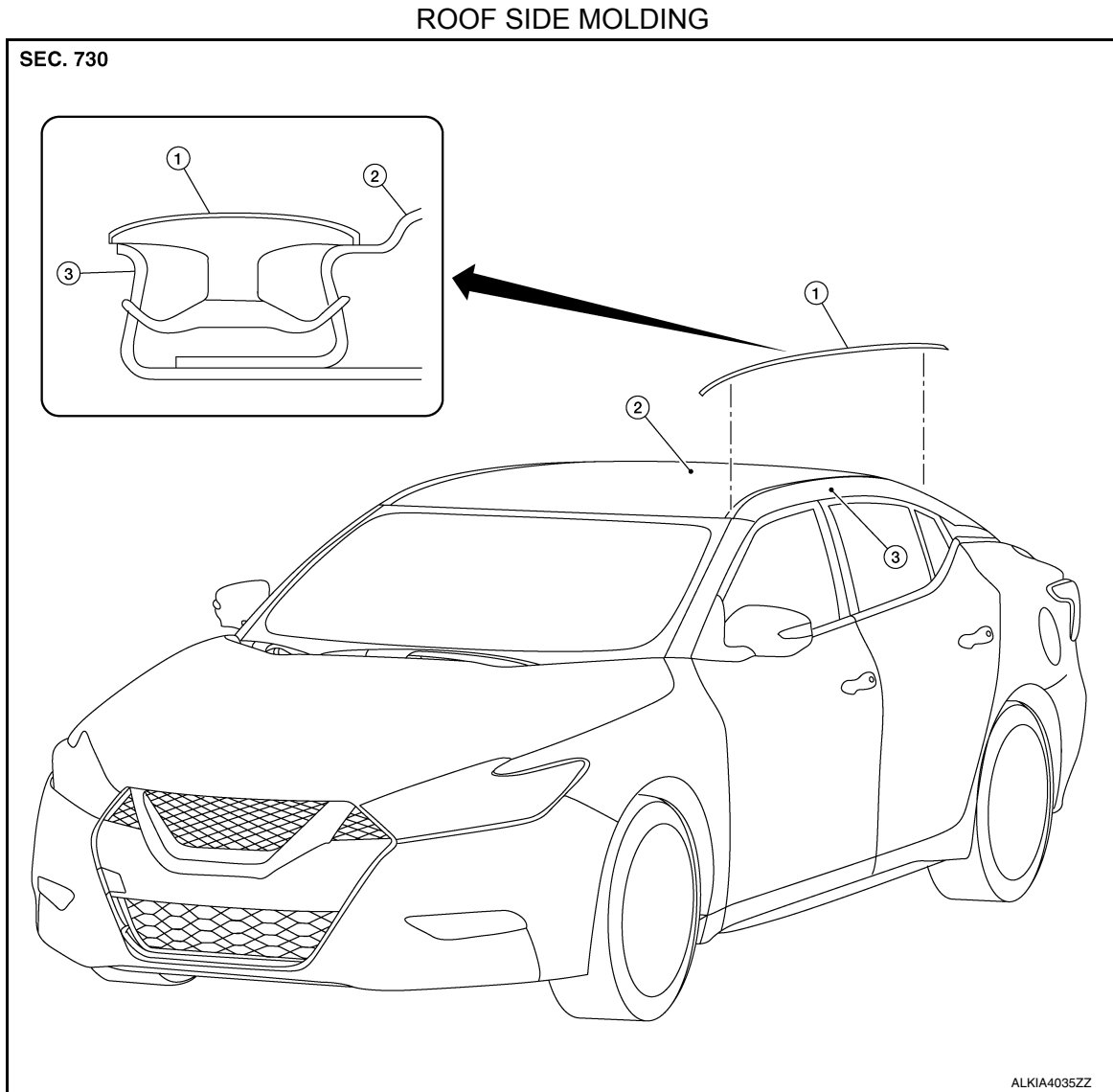
# ROOF SIDE MOLDING

< REMOVAL AND INSTALLATION >

## ROOF SIDE MOLDING

Exploded View

INFOID:000000011935893



1. Roof side molding

2. Roof panel

3. Body side panel

## Removal and Installation

INFOID:000000011935894

### ROOF SIDE MOLDING

#### REMOVAL

1. Starting at the rear, lift and pull the roof side molding upward.
2. Release the roof side molding from the channel and remove from the roof.

#### INSTALLATION

Installation is in the reverse order of removal.

#### **NOTE:**

Begin installation of roof side molding at the front and move rearward.

# ROOF SIDE MOLDING

< REMOVAL AND INSTALLATION >

## Clip Replacement

INFOID:0000000011935895

### REMOVAL

1. Remove roof side molding.
2. Heat adhesive tape interface using a suitable tool (heat gun), then peel roof side molding clips (body side) using long-nose pliers.

**CAUTION:**

**Be careful not to damage the body.**

### INSTALLATION

1. Clean tape removed surface with a shop cloth soaked in white gasoline or IPA.
2. Use two-part epoxy adhesive.

**Adhesive : 3M-weld DP-100 or equivalent**

3. Apply adhesive evenly to clip tape surface.

**Thickness : Approximately 0.5 mm (0.020 in)**

4. Position applied parts to the proper location, and then sufficiently press-fit until the adhesive protrudes to tape side.

**Press-fit limit : 19.6 N× 2 seconds**

5. Tape clips after press fit, and temporarily hold it for specified time based on the following.

**5 to 10°C (41 to 50°F) : 1 hour or more**

**11 to 23°C (52 to 73°F) : 30 minutes or more**

**24°C or more (75°F or more) : 15 minutes or more**

6. Install roof side molding rear edge first, working toward front after temporarily holding.

**CAUTION:**

- Securely insert molding rear end cap onto roof rear end cutout (installation standard).
- When installing roof side molding, check that molding fastener is securely inserted and then press in.
- Do not wash the vehicle within 24 hours after repair.

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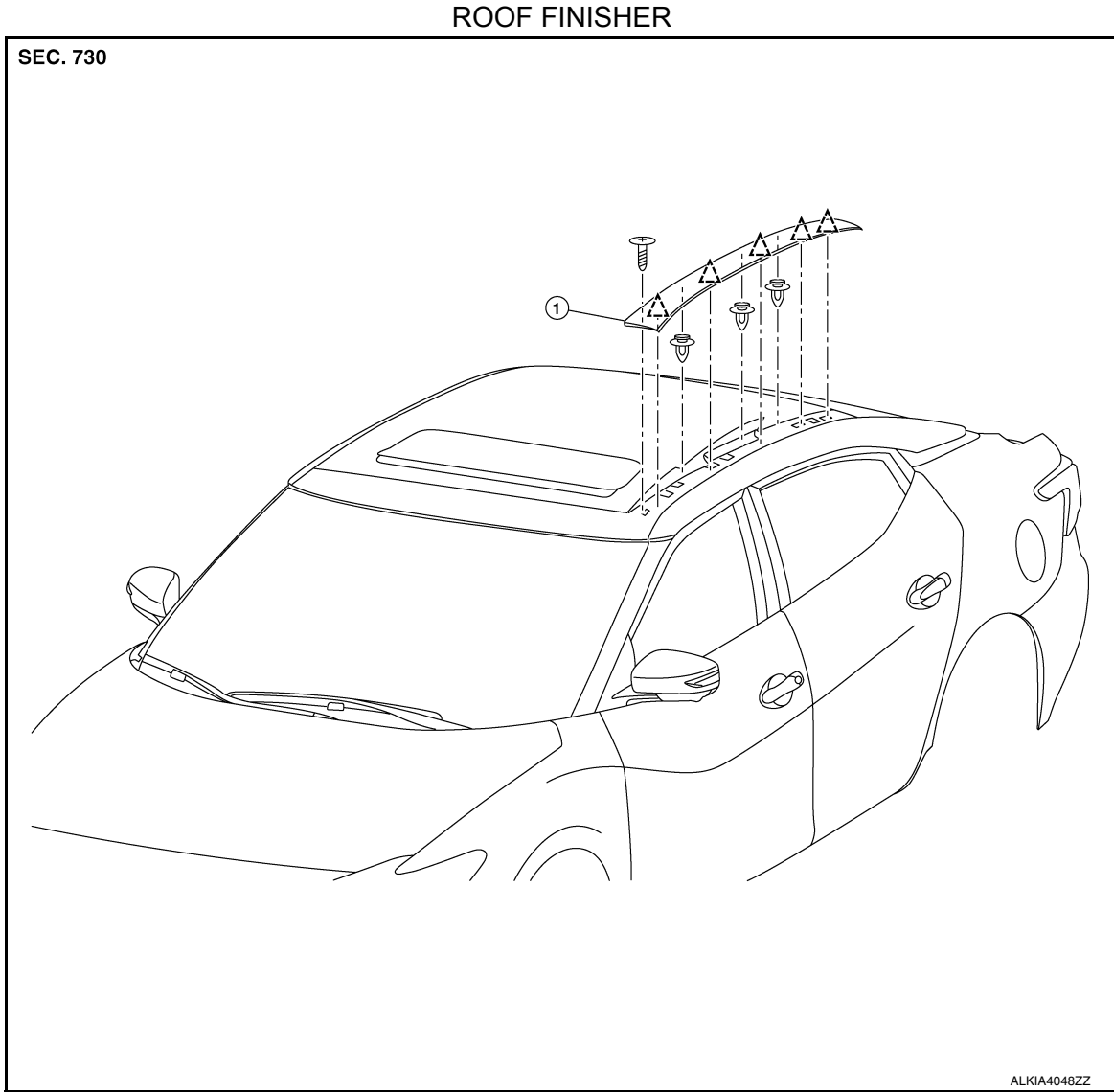
# ROOF FINISHER

< REMOVAL AND INSTALLATION >

## ROOF FINISHER

Exploded View

INFOID:000000012463969



1. Roof finisher

△ Clip

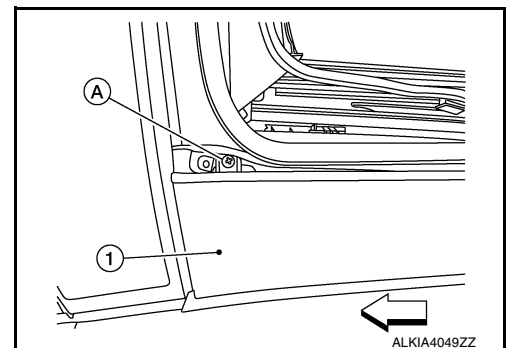
### Removal and Installation

INFOID:000000012463968

#### REMOVAL

1. Open sunroof and remove screw (A) from roof finisher (1).

⇐ : Front



# ROOF FINISHER

## < REMOVAL AND INSTALLATION >

---

2. Release roof finisher clips from roof panel and remove roof finisher.

## INSTALLATION

Installation is in the reverse order of removal.

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**EXT**

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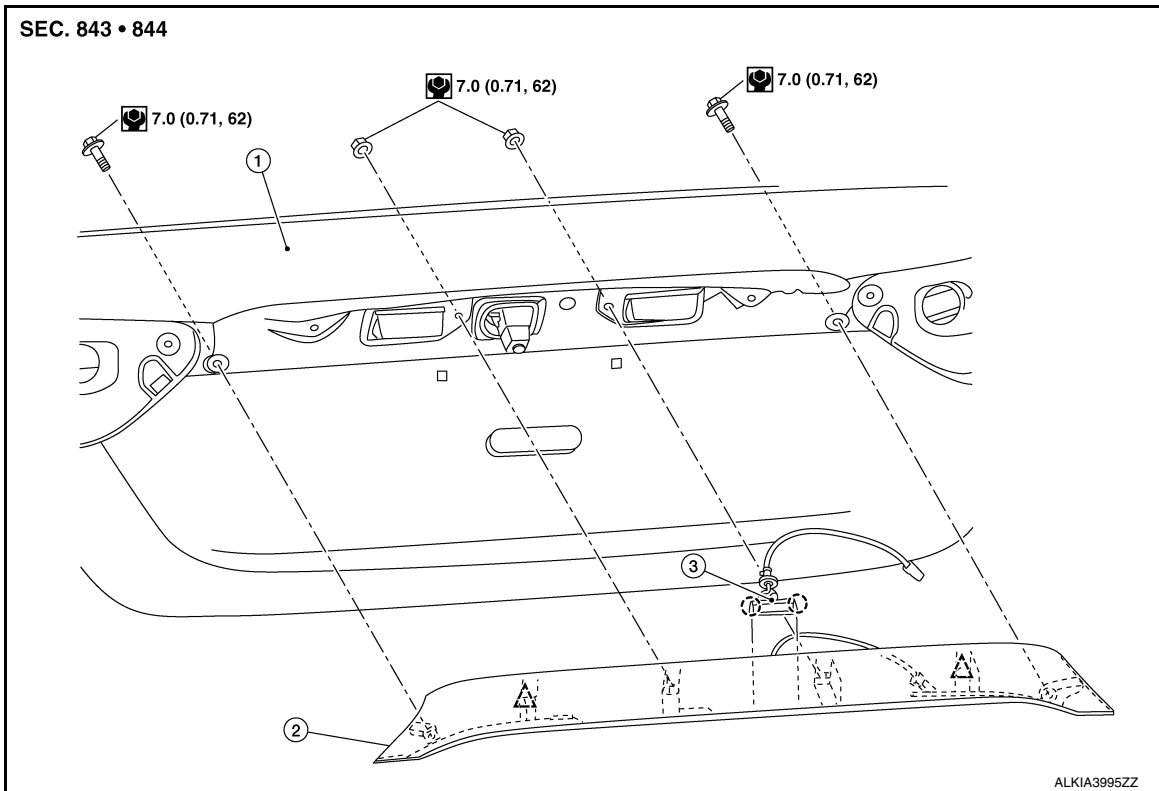
# LICENSE LAMP FINISHER

< REMOVAL AND INSTALLATION >

## LICENSE LAMP FINISHER

Exploded View

INFOID:000000011935896



1. Trunk lid

2. License lamp finisher

3. Trunk request switch connector

△ Clip

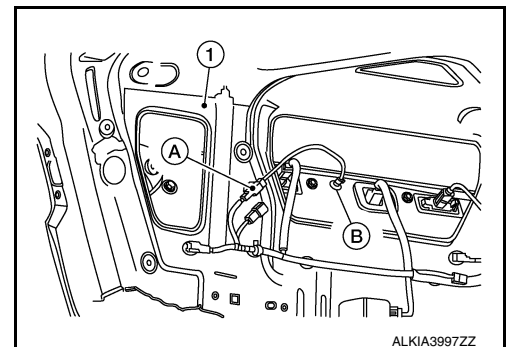
○ Pawl

## Removal and Installation

INFOID:000000011935897

### REMOVAL

1. Remove the trunk lid finisher. Refer to [INT-51, "TRUNK LID FINISHER : Removal and Installation"](#).
2. Disconnect the trunk request switch harness connector (A) and disengage grommet (B) from trunk lid (1).

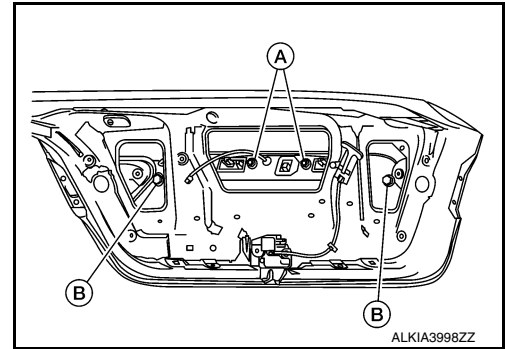




# LICENSE LAMP FINISHER

## < REMOVAL AND INSTALLATION >

3. Remove the license lamp finisher nuts (A) and bolts (B).



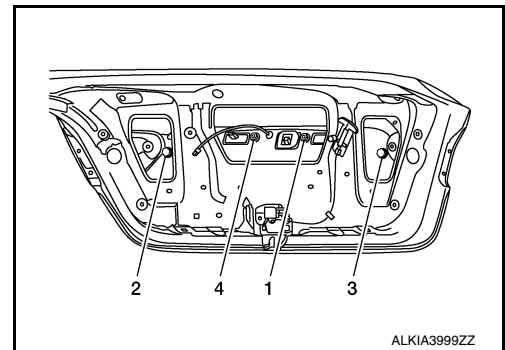
4. Disengage clips and then remove license lamp finisher.

### INSTALLATION

Installation is in the reverse order of removal.

#### **NOTE:**

When tightening the license lamp finisher, tighten the nuts and bolts in the order shown.



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EXT

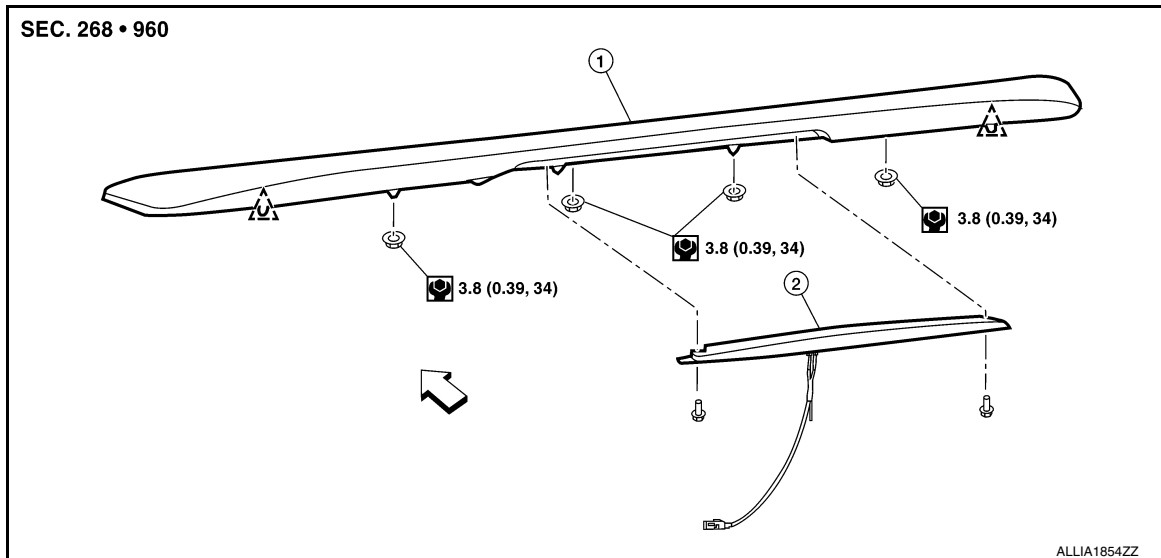
# REAR SPOILER

< REMOVAL AND INSTALLATION >

## REAR SPOILER

Exploded View

INFOID:000000011935898



1. Rear air spoiler

2. High-mounted stop lamp

△ Clip

← Front

## Removal and Installation

INFOID:000000011935899

### Removal

1. Remove trunk lid finisher. Refer to [INT-51. "TRUNK LID FINISHER : Removal and Installation"](#).
2. Disconnect the harness connector from the high-mounted stop lamp.
3. Remove the rear spoiler nuts.
4. Using a suitable tool, release clips and then remove rear spoiler.

#### NOTE:

After removing rear spoiler, release harness grommet from trunk lid and remove rear spoiler.

### Installation

Installation is in the reverse order of removal.

#### NOTE:

- Before installing rear spoiler, clean the surface where it will be mounted with isopropyl alcohol or equivalent to degrease the surface.
- Before installing, be sure there are no gaps or waves in the adhesive-backed foam tape where the surfaces meet.
- During installation, be sure harness grommet of high-mounted stop lamp is fully seated into trunk lid opening prior to final rear spoiler assembly placement.