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#### **PRECAUTIONS**

[COUPE] < PRECAUTION >

## **PRECAUTION**

## **PRECAUTIONS**

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRF-TFNSIONER"

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 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 3 minutes before performing any service.

Precautions Necessary for Steering Wheel Rotation after Battery Disconnect

INFOID:0000000006931315

#### NOTE:

- Before removing and installing any control units, first turn the push-button ignition switch to the LOCK position, then disconnect both battery cables.
- · After finishing work, confirm that all control unit connectors are connected properly, then re-connect both battery cables.
- Always use CONSULT to perform self-diagnosis as a part of each function inspection after finishing work. If a DTC is detected, perform trouble diagnosis according to self-diagnosis results.

This vehicle is equipped with a push-button ignition switch and a steering lock unit.

If the battery is disconnected or discharged, the steering wheel will lock and cannot be turned.

If turning the steering wheel is required with the battery disconnected or discharged, follow the procedure below before starting the repair operation.

#### OPERATION PROCEDURE

Connect both battery cables.

#### NOTE:

Supply power using jumper cables if battery is discharged.

- 2. Carry the Intelligent Key or insert it to the key slot and turn the push-button ignition switch to ACC position. (At this time, the steering lock will be released.)
- 3. Disconnect both battery cables. The steering lock will remain released with both battery cables disconnected and the steering wheel can be turned.
- Perform the necessary repair operation.

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#### **PRECAUTIONS**

< PRECAUTION > [COUPE]

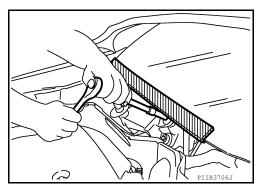
5. When the repair work is completed, re-connect both battery cables. With the brake pedal released, turn the push-button ignition switch from ACC position to ON position, then to LOCK position. (The steering wheel will lock when the push-button ignition switch is turned to LOCK position.)

Perform self-diagnosis check of all control units using CONSULT.

## Precaution for Procedure without Cowl Top Cover

INFOID:0000000006391068

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



#### Precaution for Work

INFOID:0000000006931318

- 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 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, and wring the water out of the cloth to wipe the dirty area.
  - Then rub with a soft and dry cloth.
- Oily dirt: 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, and wring the water out of the cloth to wipe the detergent off. Then rub with a soft and 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**

[COUPE] < PREPARATION >

## **PREPARATION**

## **PREPARATION**

Special Service Tool

INFOID:0000000006391070 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	
 (J-39570) Chassis ear	SBT839	Locating the noise	
 (J-43980) NISSAN Squeak and Rattle kit	SBT840	Repairing the cause of noise	
— (J-46534) Trim Tool Set		Removing trim components	

## **Commercial Service Tool**

INFOID:0000000006391071

(Kent-Moore No.) Tool name		Description
(J-39565) Engine ear	SIIA0995E	Locating the noise

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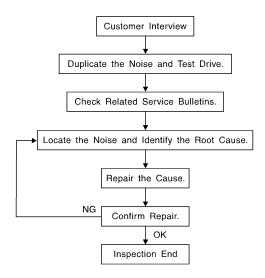
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[COUPE]

## SYMPTOM DIAGNOSIS

## SQUEAK AND RATTLE TROUBLE DIAGNOSES

Work Flow INFOID:000000006931326



SBT842

#### **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 <a href="EXT-34">EXT-34</a>, "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
  - 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

### < 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 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.
- 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
  - feeling for a vibration with your hand by touching the component(s) that you suspect is (are) causing the
  - placing a piece of paper between components that you suspect are causing the noise.
  - looking for loose components and contact marks. Refer to EXT-32, "Generic Squeak and Rattle Troubleshooting".

#### REPAIR THE CAUSE

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

#### **CAUTION:**

Do not use excessive force as many components are constructed of plastic and may be damaged. Always check with the Parts Department for the latest parts information.

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

URETHANE PADS [1.5 mm (0.059 in) thick]

Insulates connectors, harness, etc.

76268-9E005: 100×135 mm (3.94×5.31 in)/76884-71L01: 60×85 mm (2.36×3.35 in)/76884-71L02: 15×25 mm (0.59×0.98 in)

**INSULATOR (Foam blocks)** 

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

73982-9E000: 45 mm (1.77 in) thick, 50×50 mm (1.97×1.97 in)/73982-50Y00: 10 mm (0.39 in) thick, 50×50 mm (1.97×1.97 in)

**INSULATOR** (Light foam block)

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

**FELT CLOTH TAPE** 

Revision: June 2012

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

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

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< SYMPTOM DIAGNOSIS > [COUPE]

#### **UHMW (TEFLON) TAPE**

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

#### SILICONE GREASE

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

Note: Will only last a few months.

SILICONE SPRAY

Use when grease cannot be applied.

**DUCT TAPE** 

Use to eliminate movement.

#### CONFIRM THE REPAIR

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

## Generic Squeak and Rattle Troubleshooting

INFOID:0000000006931327

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

#### INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

- The cluster lid A and instrument panel
- 2. Acrylic lens and combination meter housing
- 3. Instrument panel to front pillar garnish
- Instrument panel to windshield
- 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:

- 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-43980) 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
- Trunk lid striker out of adjustment
- The trunk lid torsion bars knocking together

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## < SYMPTOM DIAGNOSIS > [COUPE]

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
- Sun visor shaft shaking in the holder
- 3. Front or rear windshield touching headliner and squeaking

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

#### 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:

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

#### **SEATS**

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

Cause of seat noise include:

- Headrest rods and holder
- 2. A squeak between the seat pad cushion and frame
- 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 installed to the engine wall
- 2. Components that pass through the engine wall
- Engine wall mounts and connectors
- Loose radiator installation pins
- 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.

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## **Diagnostic Worksheet**

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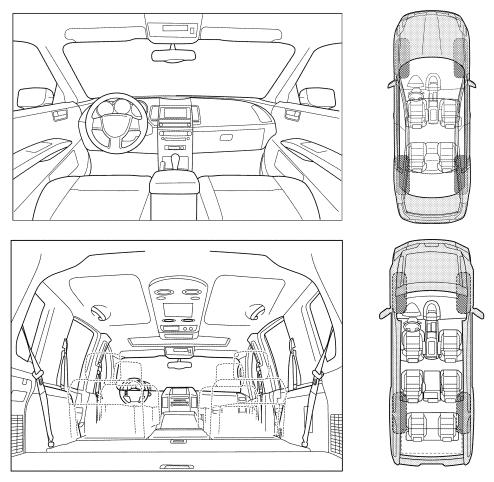
#### Dear Customer:

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.

< SYMPTOM DIAGNOSIS > [COUPE]

	se occurs:	
		<b>–</b>
I. WHEN DOES IT OCCUR? (please che	eck the boxes that apply)	
☐ Anytime	☐ After sitting out in the rain	
☐ 1st time in the morning	☐ When it is raining or wet	
Only when it is cold outside	☐ Dry or dusty conditions	
Only when it is hot outside	Other:	
II. WHEN DRIVING:	IV. WHAT TYPE OF NOISE	
Through driveways	☐ Squeak (like tennis shoes on a clean floor)	
Over rough roads	Creak (like walking on an old wooden floor)	
Over speed bumps	Rattle (like shaking a baby rattle)	
Only about mph	☐ Knock (like a knock at the door)	
On acceleration	☐ Tick (like a clock second hand)	
Coming to a stop	☐ Thump (heavy muffled knock noise)☐ Buzz (like a bumble bee)	
☐ On turns: left, right or either (circle)☐ With passengers or cargo	Duzz (like a bumble bee)	
Other:		
After driving miles or minu	utes	
		_
O BE COMPLETED BY DEALERSHIP P	PERSONNEL	
		_
		_ _ _
	YES NO Initials of person performing	_ _ _
est Drive Notes:		 
Yehicle test driven with customer		
Vehicle test driven with customer - Noise verified on test drive - Noise source located and repaired		
Test Drive Notes:  Tehicle test driven with customer  Noise verified on test drive  Noise source located and repaired	performing	
Vehicle test driven with customer - Noise verified on test drive - Noise source located and repaired - Follow up test drive performed to confirm	performing	_

Revision: June 2012 EXT-11 2011 Altima GCC

## **CLIP AND FASTENER**

## Descriptions for Clips and Fasteners

INFOID:0000000006931329

## Replace any clips and fasteners which are damaged during removal or installation.

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

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## **CLIP AND FASTENER**

Symbol No.	Shapes	Removal & Installation
CE103		Removal:
CF110	Clip A	Removal:  Finisher Clip A  Flat-bladed screwdrivers  Clip B
CF118 <b>♦</b>	Clip A Clip B (Grommet)	Removal:  Flat-bladed screwdrivers  Body panel  Clip A Clip B (Grommet)
CR103		Removal: Holder portion of clip must be spread out to remove rod.
CS101		Removal:  1. Screw out with a Phillips screwdriver.  2. Remove female portion with flat-bladed screwdriver.

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Symbol No.	Shapes	Removal & Installation	
CG101		Removal: Installation:  Rotate 45° to remove  Removal:	1
CS102	(X)		
CS113		Removal: Disconnect upper connection of with a flat-bladed screwdriver, then remove clip while inserting flat-bladed screwdriver between body panel and clip.	a
C111			

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Symbol No.	Shapes	Removal & Installation
CG104		Removal: Remove by bending up with flat-bladed screwdrivers.  Radiator grille  Body panel
CE114		
CF118	Clip A  Clip B (Grommet)	Removal: Flat-bladed Finisher screwdrivers Body panel Clip A Clip B (Grommet)

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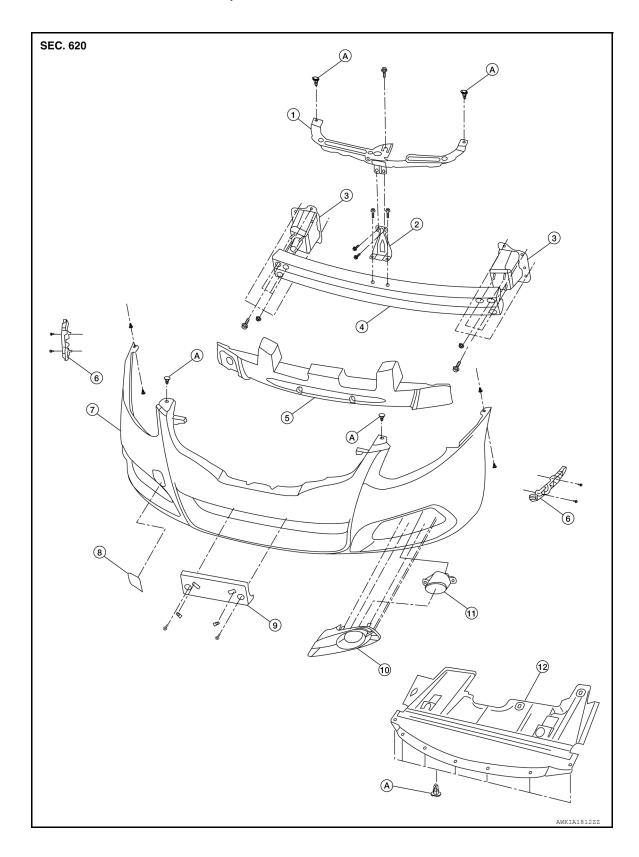
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# REMOVAL AND INSTALLATION

## FRONT BUMPER

Removal and Installation - Coupe

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- 1. Front bumper upper reinforcement
- 4. Front bumper reinforcement
- 7. Front bumper fascia
- 10. Fog lamp finisher
- A. Clip

- 2. Front bumper reinforcement bracket 3.
- 5. Front energy absorbing foam
- 8. Tow hook cover
- 11. Fog lamp

- 3. Front bumper supports RH/LH
- 6. Front bumper side bracket RH/LH
- 9. License plate bracket
- 12. Engine under cover

## ne under cover B

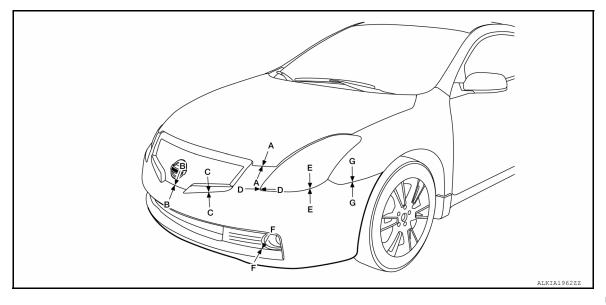
#### REMOVAL

- Partially remove the front fender protectors (RH/LH). Refer to <u>EXT-22, "Removal and Installation"</u>.
- 2. Remove the clips, then remove the engine under cover.
- 3. Remove the fog lamps. Refer to EXL-210, "Removal and Installation".
- 4. Remove the front bumper fascia clips and screws, then remove the front bumper fascia.
- 5. Remove the front grille. Refer to EXT-20, "Removal and Installation".
- 6. Remove the front energy absorbing foam.
- 7. Remove the retainers, then the front bumper upper reinforcement and front bumper reinforcement bracket.
- 8. Remove the retainers, then the front bumper reinforcement.
- 9. Remove the retainers, then the front bumper supports (RH/LH).

#### INSTALLATION

Installation is in the reverse order of removal.

Adjust fog lamp aiming. Refer to <u>EXL-206</u>, "Aiming Adjustment".



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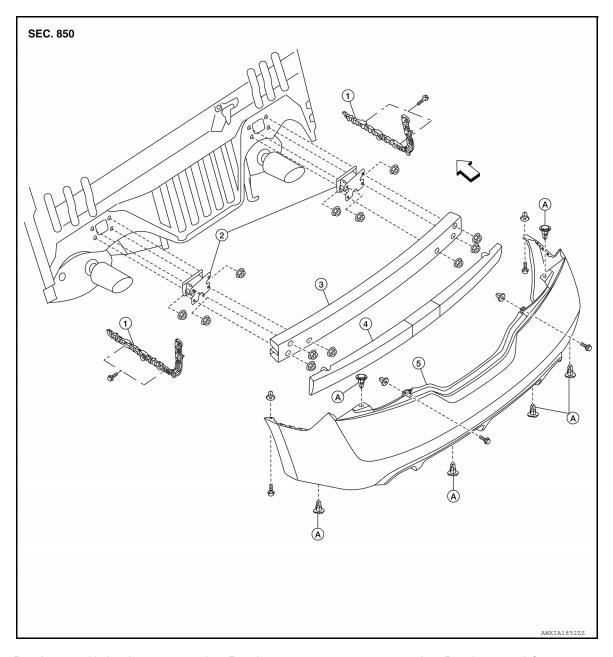
Section	Measurement	Minimum	Target Value	Maximum
A-A	Surface height	1.2 (0.047)	3.5 (0.138)	5.8 (0.228)
A-A	Clearance	3.1 (0.122)	5.1 (0.201)	7.1 (0.280)
В-В	Surface height	-1.5 (-0.059)	0.0 (0.000)	1.5 (0.059)
D-D	Clearance	0.5 (0.020)	1.5 (0.059)	2.5 (0.098)
C-C	Surface height	-1.5 (-0.059)	0.0 (0.000)	1.5 (0.059)
0-0	Clearance	0.2 (0.008)	1.5 (0.059)	2.8 (0.110)
D-D	Clearance	2.0 (0.079)	4.0 (0.157)	6.0 (0.236)
E-E	Clearance	0.3 (0.012)	1.5 (0.059)	2.7 (0.106)
F-F	Clearance	2.0 (0.079)	3.0 (0.118)	4.0 (0.157)
G-G	Surface height	-1.7 (-0.067)	-0.7 (-0.028)	0.3 (0.012)
G-G	Clearance	0.0 (0.000)	0.0 (0.000)	0.8 (0.031)

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## **REAR BUMPER**

## Removal and Installation

INFOID:0000000006391077



- 1. Rear bumper side brackets
- 4. Rear energy absorbing foam
- ⟨
  → Vehicle front

- 2. Rear bumper supports
- 5. Rear bumper fascia
- 3. Rear bumper reinforcement
- A. C205 push pin

### **REMOVAL**

- 1. Remove the rear combination lamps (RH/LH). Refer to EXL-214, "Removal and Installation".
- 2. Partially remove the rear fender protectors (RH/LH).
- 3. Remove the rear bumper fascia clips and screws, then remove the rear bumper fascia.
- 4. Remove the rear energy absorbing foam.
- 5. Remove the nuts, then the rear bumper reinforcement.
- 6. Remove the nuts, then the rear bumper supports.

#### INSTALLATION

[COUPE]

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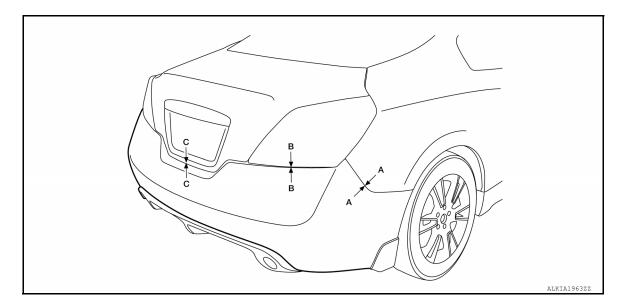
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Installation is in the reverse order of removal.



mm (in)

Section	Measurement	Minimum	Target Value	Maximum
A-A	Clearance	0.0 (0.000)	0.0 (0.000)	1.0 (0.039)
A-A	Surface height	-0.25 (-0.010)	0.75 (0.030)	1.75 (0.069)
В-В	Clearance	0.0 (0.000)	1.5 (0.059)	3.0 (0.118)
C-C	Clearance	4.2 (0.165)	6.5 (0.256)	8.8 (0.346)

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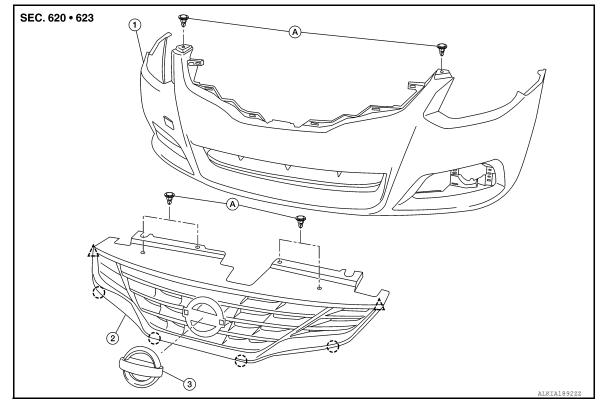
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## **FRONT GRILLE**

## Removal and Installation

INFOID:0000000006391078



- 1. Front bumper fascia
- A. Clip C101

- Front grille
- ∠^\ Clips

- Emblem
- ( Pawl

#### Removal

- 1. Partially remove the front fender protectors (RH/LH). Refer to EXT-22, "Removal and Installation".
- 2. Remove the clips, then the engine under cover.
- 3. Disconnect the fog lamps.
- 4. Remove the front bumper fascia. Refer to EXT-16, "Removal and Installation Coupe".
- 5. Release the grille clips and pawls from the front bumper fascia and remove the front grille.
- 6. Remove the emblem to transfer to the new grille, if necessary.

#### Installation

Installation is in the reverse order of removal.

[COUPE]

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## **COWL TOP**

## Removal and Installation

SEC. 660

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3
ALKIA000422

- 1. Cowl top seal
- 4. Cowl top

- 2. Cowl top side trim covers
- A. Clips

3. Cowl top foam blocks

#### **REMOVAL**

- Remove the wiper arms (RH/LH). Refer to <u>WW-84, "FRONT WIPER ARMS: Removal and Installation"</u>.
- 2. Remove the cowl top side trim covers.
- 3. Remove the cowl top foam blocks.
- 4. Remove the cowl top seal clips, then remove the cowl top seal.
- 5. Remove the cowl top clips, disconnect the washer nozzle hoses, then remove the cowl top.
- 6. Remove the washer nozzles to transfer to the new cowl top, if necessary.

#### **INSTALLATION**

Installation is in the reverse order of removal.

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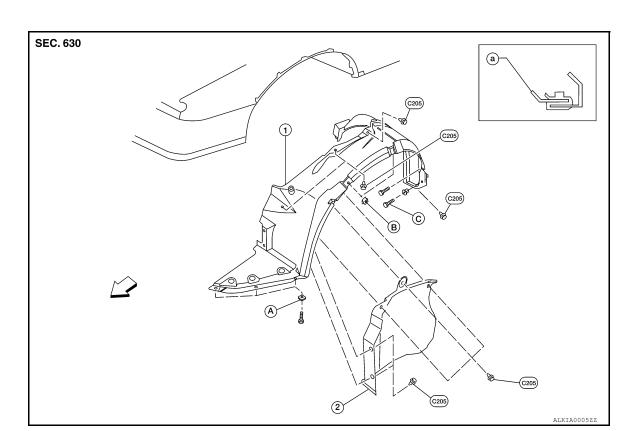
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## FENDER PROTECTOR

### Removal and Installation



1. Fender protector

Sheet metal

B. Clips

- 2. Fender protector side cover
- C. Center mudguard screw
- A. J-clips
- ⟨
  ⇒ Vehicle front

#### NOTE:

a.

**REMOVAL** 

Position the front tires as necessary to access the front fender protector screws.

- 1. Remove the fender protector side covers (RH/LH).
- 2. Remove the screw from center mudguard.
- 3. Remove the fender protector screws and clips.
- 4. Remove the fender protector.

#### **INSTALLATION**

Installation is in the reverse order of removal.

[COUPE]

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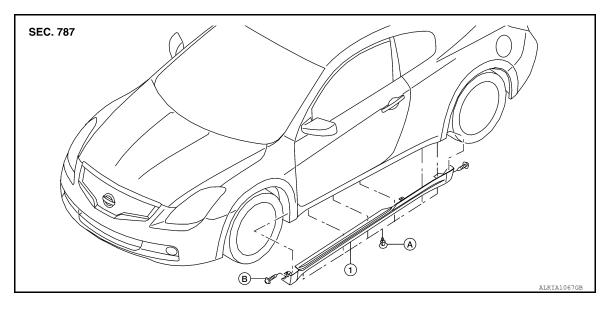
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## **MUDGUARD**

## Removal and Installation



1. Center mudguard

A. C205 push pin

B. Splash guard screw

#### **REMOVAL**

#### NOTE:

Position the front tires as necessary to access the mudguard screws.

- 1. Remove the rear tire. Refer to WT-65, "Adjustment".
- 2. Remove the C205 push-pins located on the under body.
- 3. Remove splash guard screws.
- 4. Remove the center mudguard screws, then remove the center mudguard.

#### **INSTALLATION**

Installation is in the reverse order of removal.

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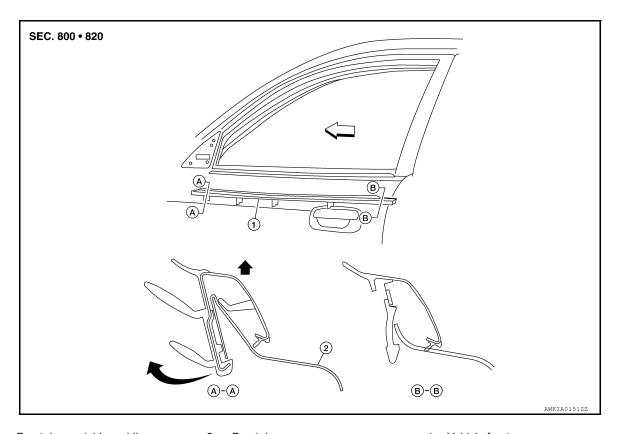
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## DOOR OUTSIDE MOLDING

## Removal and Installation





- 1. Front door outside molding
- 2. Front door

Vehicle front

## **Door Outside Molding**

#### Removal

- 1. Remove the door mirror assembly. Refer to MIR-22, "Removal and Installation".
- Lift and twist front door outside molding from rear end, disconnect clips from flange and pull the front door outside molding out backward.

#### Installation

Installation is in the reverse order of removal.

[COUPE]

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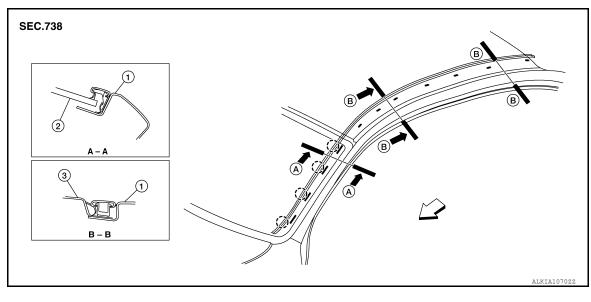
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## **ROOF SIDE MOLDING**

## Removal and Installation



Body side outer panel

⟨□ Vehicle front

Windshield

^\ Pawl

3. Roof

#### **REMOVAL**

- 1. Lift and twist the roof side molding up from the rear edge.
- 2. Disconnect the roof side molding from the pawls, and remove the roof side molding.

### **INSTALLATION**

Installation is in the reverse order of removal.

• Engage the roof molding into the clips starting at the rear.

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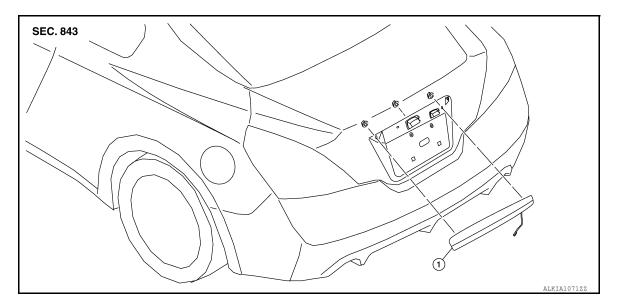
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## LICENSE LAMP FINISHER

## Removal and Installation





1. License lamp finisher

#### **REMOVAL**

- 1. Remove the trunk lid finisher (if equipped). Refer to <a href="INT-54">INT-54</a>, "Removal and Installation".
- 2. Remove the license lamp finisher nuts.
- Remove license lamp finisher by pulling toward the rear, then disconnect the trunk request switch connector.

### **INSTALLATION**

Installation is in the reverse order of removal.

#### **PRECAUTIONS**

< PRECAUTION > [SEDAN]

## **PRECAUTION**

## **PRECAUTIONS**

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

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.

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 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 3 minutes before performing any service.

Precautions Necessary for Steering Wheel Rotation after Battery Disconnect

INFOID:0000000006931316

#### NOTE:

- Before removing and installing any control units, first turn the push-button ignition switch to the LOCK position, then disconnect both battery cables.
- After finishing work, confirm that all control unit connectors are connected properly, then re-connect both battery cables.
- Always use CONSULT to perform self-diagnosis as a part of each function inspection after finishing work. If a DTC is detected, perform trouble diagnosis according to self-diagnosis results.

This vehicle is equipped with a push-button ignition switch and a steering lock unit.

If the battery is disconnected or discharged, the steering wheel will lock and cannot be turned.

If turning the steering wheel is required with the battery disconnected or discharged, follow the procedure below before starting the repair operation.

#### **OPERATION PROCEDURE**

Connect both battery cables.

#### NOTE:

Supply power using jumper cables if battery is discharged.

- 2. Carry the Intelligent Key or insert it to the key slot and turn the push-button ignition switch to ACC position. (At this time, the steering lock will be released.)
- Disconnect both battery cables. The steering lock will remain released with both battery cables disconnected and the steering wheel can be turned.
- 4. Perform the necessary repair operation.

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#### **PRECAUTIONS**

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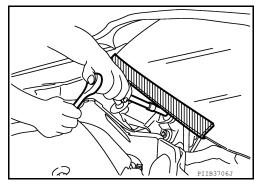
5. When the repair work is completed, re-connect both battery cables. With the brake pedal released, turn the push-button ignition switch from ACC position to ON position, then to LOCK position. (The steering wheel will lock when the push-button ignition switch is turned to LOCK position.)

Perform self-diagnosis check of all control units using CONSULT.

## 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.



#### Precaution for Work

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- 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 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, and wring the water out of the cloth to wipe the dirty area.
  - Then rub with a soft and dry cloth.
- Oily dirt: 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, and wring the water out of the cloth to wipe the detergent off. Then rub with a soft and 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**

[SEDAN] < PREPARATION >

## **PREPARATION**

## **PREPARATION**

**Special Service Tool** 

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	
— (J-39570) Chassis ear	SBT839	Locating the noise	
 (J-43980) NISSAN Squeak and Rattle kit	SBT840	Repairing the cause of noise	
— (J-46534) Trim Tool Set	AWJIA04832Z	Removing trim components	

## Commercial Service Tool

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(Kent-Moore No.) Tool name		Description
(J-39565) Engine ear	SIIAO995E	Locating the noise

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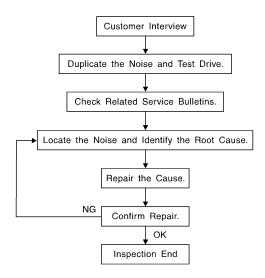
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[SEDAN]

## SYMPTOM DIAGNOSIS

## SQUEAK AND RATTLE TROUBLE DIAGNOSES

Work Flow INFOID:000000006931332



SBT842

#### **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 <a href="EXT-34">EXT-34</a>, "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
  - 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

#### [SEDAN] < 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 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.
- 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
  - feeling for a vibration with your hand by touching the component(s) that you suspect is (are) causing the
  - placing a piece of paper between components that you suspect are causing the noise.
  - looking for loose components and contact marks. Refer to EXT-32, "Generic Squeak and Rattle Troubleshooting".

#### REPAIR THE CAUSE

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

#### **CAUTION:**

Do not use excessive force as many components are constructed of plastic and may be damaged. Always check with the Parts Department for the latest parts information.

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

URETHANE PADS [1.5 mm (0.059 in) thick]

Insulates connectors, harness, etc.

76268-9E005: 100×135 mm (3.94×5.31 in)/76884-71L01: 60×85 mm (2.36×3.35 in)/76884-71L02: 15×25 mm (0.59×0.98 in)

**INSULATOR (Foam blocks)** 

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

73982-9E000: 45 mm (1.77 in) thick, 50×50 mm (1.97×1.97 in)/73982-50Y00: 10 mm (0.39 in) thick, 50×50 mm (1.97×1.97 in)

**INSULATOR** (Light foam block)

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

FELT CLOTH TAPE

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

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

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< SYMPTOM DIAGNOSIS > [SEDAN]

#### **UHMW (TEFLON) TAPE**

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

#### SILICONE GREASE

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

Note: Will only last a few months.

SILICONE SPRAY

Use when grease cannot be applied.

**DUCT TAPE** 

Use to eliminate movement.

#### CONFIRM THE REPAIR

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

## Generic Squeak and Rattle Troubleshooting

INFOID:0000000006931333

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

#### INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

- The cluster lid A and instrument panel
- 2. Acrylic lens and combination meter housing
- Instrument panel to front pillar garnish
- Instrument panel to windshield
- 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
- Door striker out of alignment causing a popping noise on starts and stops

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

#### **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
- Trunk lid striker out of adjustment
- The trunk lid torsion bars knocking together

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## < SYMPTOM DIAGNOSIS > [SEDAN]

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:

- 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 headliner and squeaking

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

#### 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:

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

#### **SEATS**

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

Cause of seat noise include:

- Headrest rods and holder
- A squeak between the seat pad cushion and frame
- 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 installed to the engine wall
- 2. Components that pass through the engine wall
- Engine wall mounts and connectors
- 4. Loose radiator installation pins
- 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.

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## Diagnostic Worksheet

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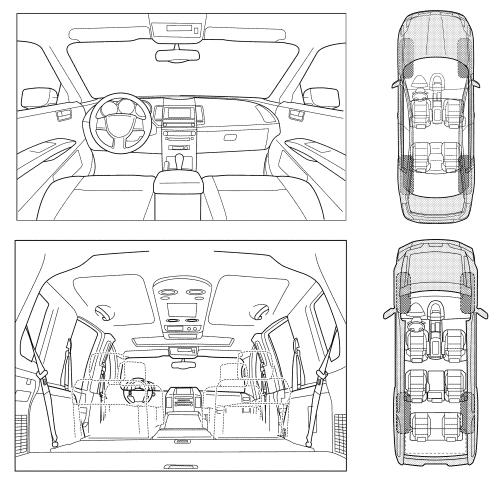
#### Dear Customer:

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.

< SYMPTOM DIAGNOSIS >

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	se occurs:	
I. WHEN DOES IT OCCUR? (please che	ock the boxes that apply)	
☐ Anytime	☐ After sitting out in the rain	
☐ 1st time in the morning	☐ When it is raining or wet	
Only when it is cold outside	☐ Dry or dusty conditions	
Only when it is hot outside	Other:	
II. WHEN DRIVING:	IV. WHAT TYPE OF NOISE	
Through driveways	☐ Squeak (like tennis shoes on a clean floor)	
Over rough roads	Creak (like walking on an old wooden floor)	
Over speed bumps	Rattle (like shaking a baby rattle)	
Only about mph	☐ Knock (like a knock at the door)	
On acceleration	☐ Tick (like a clock second hand)	
Coming to a stop	☐ Thump (heavy muffled knock noise)☐ Buzz (like a bumble bee)	
☐ On turns: left, right or either (circle)☐ With passengers or cargo	Buzz (like a bumble bee)	
Other:		
☐ After driving miles or minu	utes	
O BE COMPLETED BY DEALERSHIP P	ERSONNEL	
est Drive Notes:		
	YES NO Initials of person performing	
est Drive Notes:		
Test Drive Notes:		
Test Drive Notes:  Tehicle test driven with customer  Noise verified on test drive  Noise source located and repaired	performing	
Test Drive Notes:  Vehicle test driven with customer  Noise verified on test drive  Noise source located and repaired  Follow up test drive performed to confirm	performing	

Revision: June 2012 EXT-35 2011 Altima GCC

## **CLIP AND FASTENER**

## Descriptions for Clips and Fasteners

INFOID:0000000006931335

## Replace any clips and fasteners which are damaged during removal or installation.

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

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# **CLIP AND FASTENER**

Symbol No.	Shapes	Removal & Installation
CE103		Removal:
CF110	Clip A	Removal:  Finisher Clip A  Flat-bladed screwdrivers  Clip B
CF118 <b>☆</b>	Clip A Clip B (Grommet)	Removal:  Flat-bladed screwdrivers  Body panel  Clip A Clip B (Grommet)
CR103		Removal: Holder portion of clip must be spread out to remove rod.
CS101		Removal:  1. Screw out with a Phillips screwdriver.  2. Remove female portion with flat-bladed screwdriver.

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Symbol No.	Shapes	Remov	al & Installation
CG101		Removal:  Rotate 45° to remove  Removal:	Installation:
CS102	(X)		
CS113		with a flat-blade	while inserting a wdriver between
C111			

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Symbol No.	Shapes	Removal & Installation
CG104		Removal: Remove by bending up with flat-bladed screwdrivers.  Radiator grille  Body panel
CE114		
CF118	Clip A Clip B (Grommet)	Removal: Flat-bladed Finisher screwdrivers Body panel Clip A Clip B (Grommet

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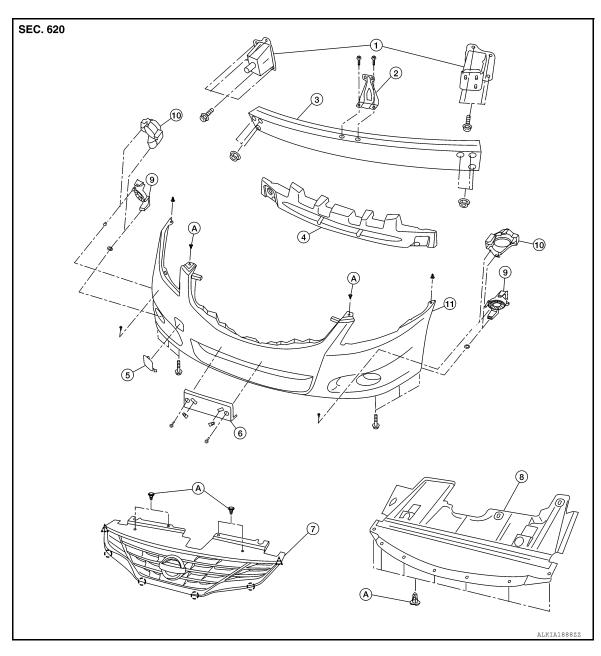
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# REMOVAL AND INSTALLATION

# FRONT BUMPER

# Removal and Installation



- 1. Front bumper supports
- 4. Energy absorbing foam
- Front grille
- 10. Fog lamp (if equipped)
- ( Pawls

- 2. Front bumper reinforcement bracket 3.
- 5. Tow cover
- 8. Engine under cover
- 11. Front bumper fascia
- Front bumper reinforcement
- 6. License plate bracket
- 9. Fog lamp finisher (if equipped)
- ,^ Clips C101

# **REMOVAL**

- Partially remove the front fender protectors (RH/LH). Refer to <u>EXT-46, "Removal and Installation"</u>.
- 2. Remove the clips, then the engine under cover.
- Remove the front grille. Refer to <u>EXT-44</u>, "Removal and Installation".

# **FRONT BUMPER**

### < REMOVAL AND INSTALLATION >

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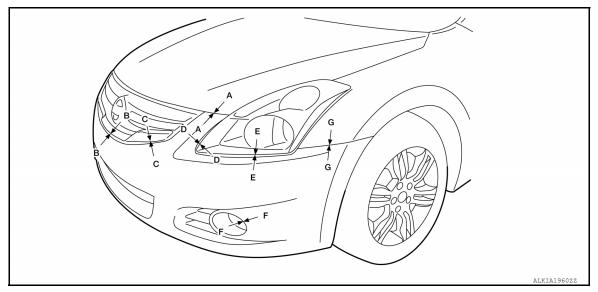
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- 4. Disconnect the harness connectors from the fog lamps (if equipped).
- 5. Remove the fog lamp (if equipped). Refer to EXL-210, "Removal and Installation".
- 6. Remove the front bumper fascia clips and screws, then remove the front bumper fascia.
- 7. Remove the front energy absorbing foam.
- 8. Remove the retainers, then the front bumper upper reinforcement and front bumper reinforcement bracket.
- 9. Remove the nuts, then the front bumper reinforcement.
- 10. Remove the retainers, then the front bumper supports (RH/LH).

### **INSTALLATION**

Installation is in the reverse order of removal.

• Adjust fog lamp aiming, if equipped. Refer to EXL-206. "Aiming Adjustment".



mm (in)

Section	Measurement	Minimum	Target Value	Maximum
A-A	Surface height	1.0 (0.039)	3.1 (0.122)	5.2 (0.205)
	Clearance	3.1 (0.122)	5.1 (0.201)	7.1 (0.280)
В-В	Surface height	-1.5 (-0.059)	0.0 (0.000)	1.5 (0.059)
	Clearance	0.5 (0.020)	1.5 (0.059)	2.5 (0.098)
C-C	Surface height	-1.5 (-0.059)	0.0 (0.000)	1.5 (0.059)
	Clearance	0.2 (0.008)	1.5 (0.059)	2.8 (0.110)
D-D	Clearance	1.5 (0.059)	3.5 (0.138)	5.5 (0.217)
E-E	Clearance	0.3 (0.012)	1.5 (0.059)	2.7 (0.106)
F-F	Clearance	2.0 (0.079)	3.0 (0.118)	4.0 (0.157)
G-G	Surface height	-0.3 (-0.012)	0.7 (0.028)	1.7 (0.067)
	Clearance	0.0 (0.000)	0.0 (0.000)	0.8 (0.031)

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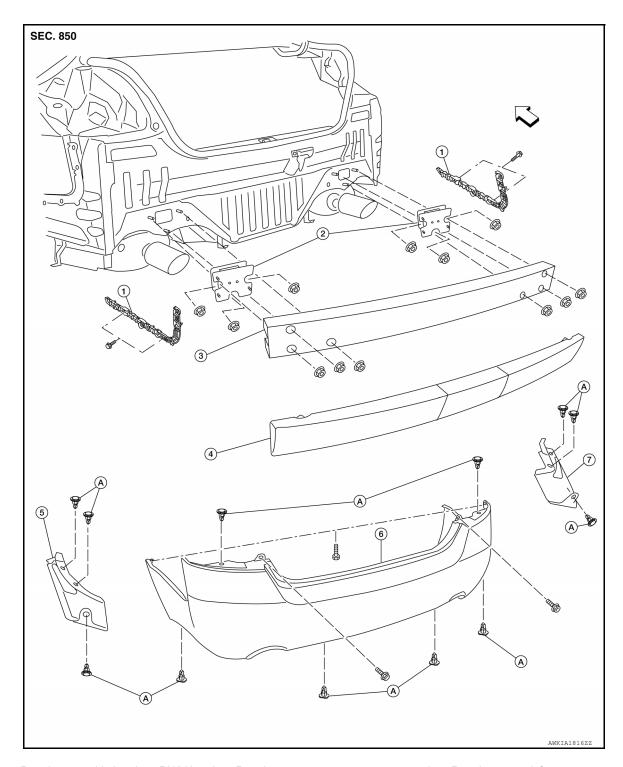
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# **REAR BUMPER**

# Removal and Installation

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- 1. Rear bumper side brackets RH/LH 2.
- 4. Energy absorbing foam
- 7. Splash shield RH
- 2. Rear bumper supports
- 5. Splash shield LH
- A. Clips

- 3. Rear bumper reinforcement
- 6. Rear bumper fascia

# **REMOVAL**

- 1. Remove the rear combination lamps (RH/LH). Refer to EXL-214. "Removal and Installation".
- 2. Remove both the rear wheels and tires (RH/LH). Refer to WT-65, "Adjustment".

# **REAR BUMPER**

### < REMOVAL AND INSTALLATION >

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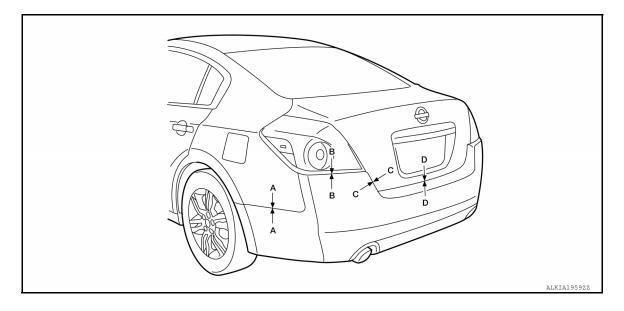
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- 3. Remove the splash shields (RH/LH).
- 4. Disconnect the sonar sensors from the sonar sensor retainers (if equipped).
- 5. Remove the rear bumper fascia clips and screws, then remove the rear bumper fascia.
- 6. Remove the rear energy absorbing foam.
- 7. Remove the nuts, then the rear bumper reinforcement.
- 8. Remove the nuts, then the rear bumper supports (RH/LH).
- 9. Remove the sonar sensors and harness, if necessary from the rear bumper fascia (if equipped).
  - Disconnect the sonar sensors from the harness.
  - Remove the sonar sensor retainers from the rear bumper fascia.

#### INSTALLATION

Installation is in the reverse order of removal.



mm (in)

Section	Measurement	Minimum	Target Value	Maximum
A-A	Clearance	0.0 (0.000)	0.0 (0.000)	0.8 (0.031)
A-A	Surface height	-0.25 (-0.010)	0.75 (0.028)	1.75 (0.069)
В-В	Clearance	0.5 (0.020)	2.0 (0.079)	3.5 (0.138)
	Surface height	-1.5 (-0.059)	0.0 (0.000)	1.5 (0.059)
C-C	Clearance	2.0 (0.079)	4.0 (0.157)	6.0 (0.236)
D-D	Clearance	3.9 (0.154)	5.9 (0.232)	7.9 (0.311)

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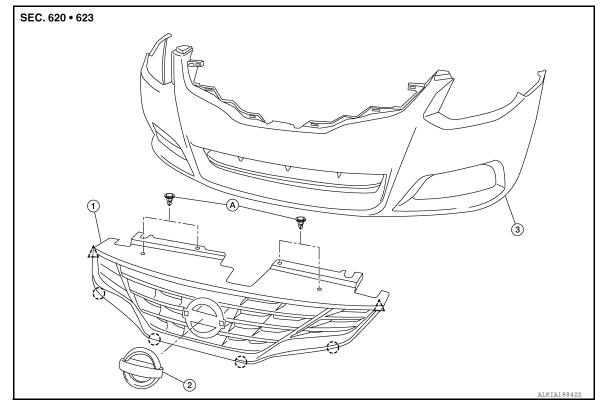
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# **FRONT GRILLE**

# Removal and Installation

INFOID:0000000006391097



- 1. Front grille
- A. Clip C205

- 2. Emblem
- ∠^\ Clips

- Bumper fascia
- ( Pawls

# FRONT GRILLE

### Removal

- 1. Remove the front grille clips.
- 2. Release the grille pawls and clips from the front bumper fascia, then remove the front grille.
- 3. Remove the emblem to transfer to the new grille, if necessary.

### Installation

Installation is in the reverse order of removal.

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# **COWL TOP**

# Removal and Installation

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- 1. Cowl top seal
- 4. Cowl top

- 2. Cowl top side trim covers
- A Clips

- 3. Cowl top foam blocks
  - vi top toam blocks

### **REMOVAL**

- Remove the wiper arms (RH/LH). Refer to <u>WW-84, "FRONT WIPER ARMS: Removal and Installation"</u>.
- 2. Remove the cowl top side trim covers.
- 3. Remove the cowl top foam blocks.
- 4. Remove the cowl top seal clips, then remove the cowl top seal.
- 5. Remove the cowl top clips, disconnect the washer nozzle hoses, then remove the cowl top.
- 6. Remove the washer nozzles to transfer to the new cowl top, if necessary.

### **INSTALLATION**

Installation is in the reverse order of removal.

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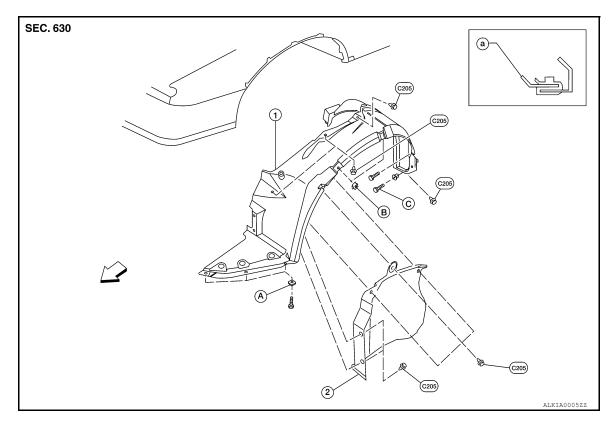
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# FENDER PROTECTOR

# Removal and Installation



- 1. Fender protector
- B. Clips

- 2. Fender protector side cover
- C. Center mudguard screw
- A. J-clips
- a. Sheet metal

# REMOVAL

### NOTE:

Position the front tires as necessary to access the front fender protector screws.

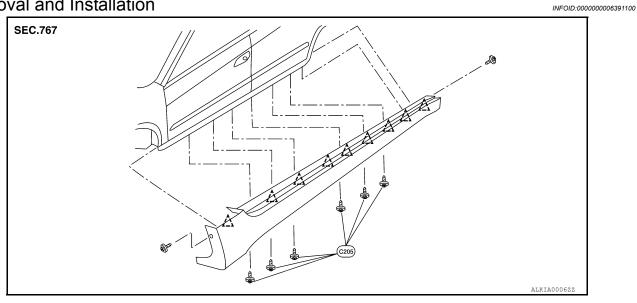
- 1. Remove the fender protector side covers (RH/LH).
- 2. Remove the screw from center mudguard.
- 3. Remove the fender protector screws and clips.
- 4. Remove the fender protector.

### **INSTALLATION**

Installation is in the reverse order of removal.

# **MUDGUARD**

# Removal and Installation



**REMOVAL** 

- Remove the C205 push-pins located on the under body.
- Remove the center mudguard screws, then remove the center mudguard.

# **INSTALLATION**

△ Clips

Installation is in the reverse order of removal.

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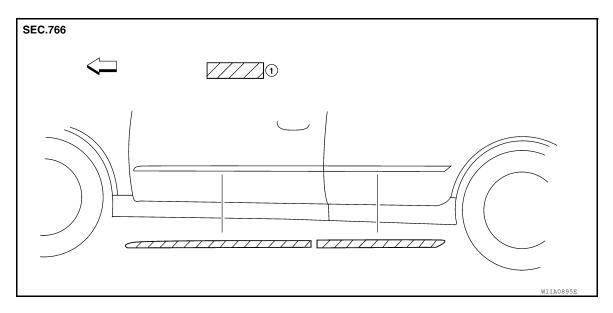
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# SIDE GUARD MOLDING

# Removal and Installation



1. Double-faced adhesive tape

< > ∨ehicle front

#### Removal

#### **CAUTION:**

Never apply tack-paper adhesive remover to body panel surface finished with lacquer-based paints.

- Original side guard molding is affixed to body panel with double-faced adhesive tape.
- 1. Heat molding to between 30° and 40°C (86° to 104°F) with a heat gun.
- 2. Using a suitable tool, gently lift an end of the molding and cut away tape to remove molding.
- 3. Remove all remaining traces of tape and adhesive.

#### Installation

- On vehicles coated with Hard Clear Coat, use double-faced 3M® adhesive tape Product No. 4210 or equivalent, after priming with 3M primer Product No. N200 or C-100 or equivalent.
- The repair parts are also attached with double-faced adhesive tape.
- To re-use existing molding, clean all traces of double sided tape from the molding and apply new doublefaced tape to the molding.
- Clean the panel surface with isopropyl alcohol or equivalent to degrease the surface.
- 2. Using a heat gun, heat the panel and molding tape surface to 30° to 40°C (86° to 104°F).
- Remove the backing sheet from the tape surface.
- 4. Press ends by hand and use a roller to apply 49N (5 kg-f 11 lb-f) to press molding to door surface.

### **CAUTION:**

For maximum adhesion, allow vehicle to set without washing for 24 hours after installation.

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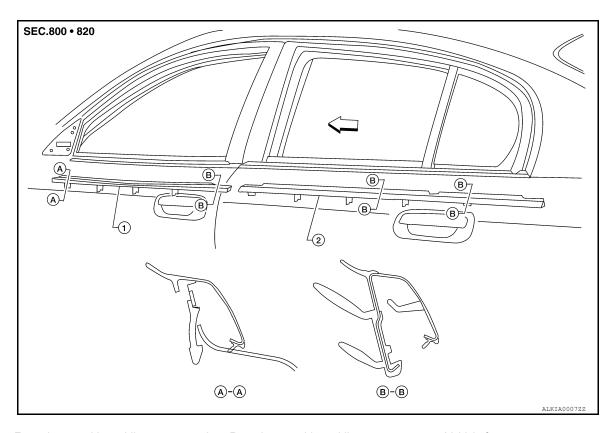
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# DOOR OUTSIDE MOLDING

# Removal and Installation



1. Front door outside molding

2. Rear door outside molding

### FRONT DOOR OUTSIDE MOLDING

### Removal

1. Remove the door mirror assembly. Refer to MIR-22, "Removal and Installation".

Lift and twist from rear side, disconnect clips from flange and pull the front door outside molding out toward rear of the vehicle.

### Installation

Installation is in the reverse order of removal.

### REAR DOOR OUTSIDE MOLDING

# Removal

• Lift and twist from rear side, then disconnect clips from flange and pull the rear door molding out.

#### Installation

Installation is in the reverse order of removal.

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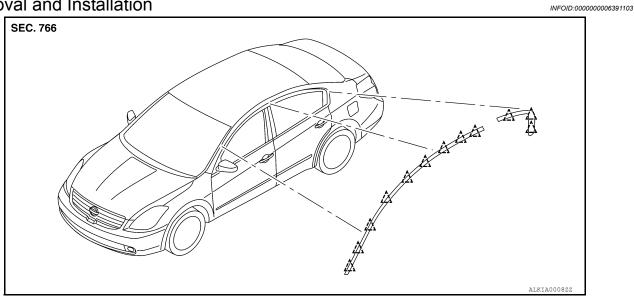
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# **DRIP MOLDING**

# Removal and Installation



△ Clips

### **REMOVAL**

- Using a suitable tool, release the drip molding clips starting at the front, working rearward.
- Remove the drip moldings.

# **INSTALLATION**

Installation is in the reverse order of removal.

• Insert drip moldings onto vehicle starting at the rear, working forward.

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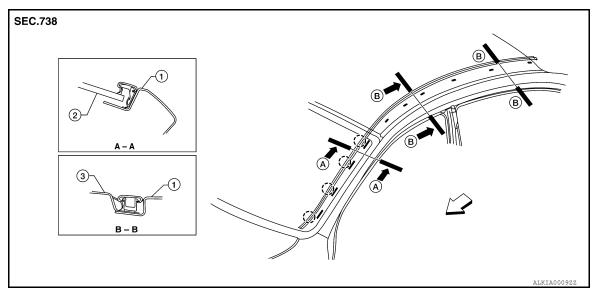
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# **ROOF SIDE MOLDING**

# Removal and Installation



Body side outer panel

Vehicle front

Windshield

` Pawls

3. Roof

### **REMOVAL**

- 1. Lift and twist the roof side molding up from the rear edge.
- 2. Disconnect the roof side molding from the pawls, and remove the roof side molding.

### **INSTALLATION**

Installation is in the reverse order of removal.

• Engage the roof molding into the pawls starting at the rear.

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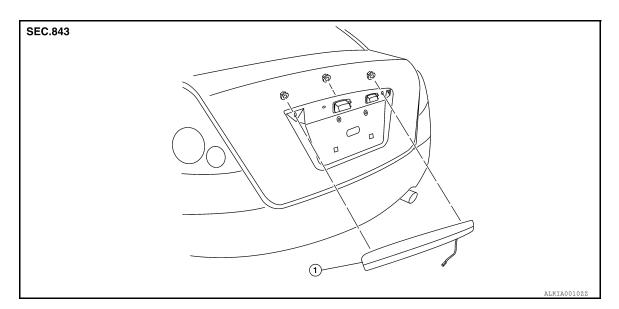
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# LICENSE LAMP FINISHER

# Removal and Installation



1. License lamp finisher

### **REMOVAL**

- 1. Remove the trunk lid finisher (if equipped). Refer to <a href="INT-31">INT-31</a>, "Removal and Installation".
- 2. Remove the license lamp finisher nuts.
- Remove license lamp finisher by pulling toward the rear, then disconnect the trunk request switch connector.

# **INSTALLATION**

Installation is in the reverse order of removal.

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# **REAR SPOILER**

### Removal and Installation

SEC. 960

- Rear spoiler assembly
- 2. High mounted stop lamp harness
- Gasket

A. Nuts

### Removal

- Remove trunk lid finisher (if equipped). Refer to <u>INT-31, "Removal and Installation".</u>
- Disconnect high mounted stop lamp connector.
- Using suitable tool, carefully release the clips and pry foam tape free from trunk lid surface.
  CAUTION:

Use care not to damage painted surfaces during removal of, or releasing adhesive backed foam tapes.

4. Release the high mounted stop lamp harness grommet from trunk lid, then 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 foam tape where the surfaces meet.
- During installation, be sure grommet of high mounted stop lamp harness is fully seated into trunk lid opening prior to final rear air spoiler placement.

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