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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 dual stage front air bag modules. The SRS system may only deploy one front air bag, depending on the severity of a collision and whether the front passenger seat is occupied. 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.

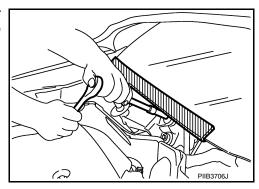
PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

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

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



Precaution for Work

- 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.

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PRECAUTIONS

< PRECAUTION >

- Then rub with a soft, 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, 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

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PREPARATION

PREPARATION

Special Service Tool

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

Tool number (Kent-Moore No.) Tool name		Description
— (J-39570) Chassis ear	SBT839	Locating the noise
— (J-50397) INFINITI Squeak and Rattle Kit	ALJIA1232ZZ	Repairing the cause of noise
— (J-46534) Trim Tool Set		Removing trim components

Commercial Service Tool

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

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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
C101		Removal: Remove by bending up with flat-bladed screwdrivers or clip remover.
C103	TTTT	Removal: Remove with a clip remover.
C203 [()		Removal: Push center pin to catching position. (Do not remove center pin by hitting it.) Push Push Installation:
C205		Removal: Flat-bladed screwdriver Clip Finisher
C206		Removal:

SIIA0315E

Symbol No.	Shapes	Removal & Installation
CE103		Removal:
CF110	Clip A	Removal: Finisher Clip A Flat-bladed screwdrivers Clip B
CF118	Clip A Clip B (Grommet)	Removal: Flat-bladed Finisher screwdrivers Body panel 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:
CS102	(X)	
CS113		Removal: 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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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 screwdrivers Body panel Clip A Clip B (Grommet)

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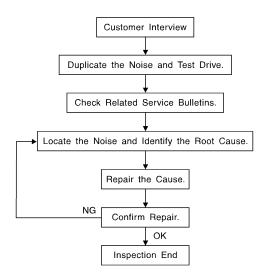
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SYMPTOM DIAGNOSIS

SQUEAK AND RATTLE TROUBLE DIAGNOSES

Work Flow INFOID:0000000009133564



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 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 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

< 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 temporarily.
 - 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-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. An INFINITI Squeak and Rattle Kit (J-50397) is available through your authorized INFINITI 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 materials contained in the INFINITI 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

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

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< SYMPTOM DIAGNOSIS >

INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

- Cluster lid A and the instrument panel
- 2. Acrylic lens and combination meter housing
- Instrument panel to front pillar finisher
- Instrument panel to windshield
- 5. Instrument panel pins
- 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
- 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 INFINITI 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:

- Trunk lid bumpers out of adjustment
- Trunk lid striker out of adjustment
- 3. The trunk lid torsion bars knocking together
- 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 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:

< SYMPTOM DIAGNOSIS >

- 1. Loose harness or harness connectors.
- 2. Front console map/reading lamp lens loose.
- 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
- 3. The rear seatback lock and bracket

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

UNDERHOOD

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

Causes of transmitted underhood noise include:

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

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

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< SYMPTOM DIAGNOSIS >

Diagnostic Worksheet

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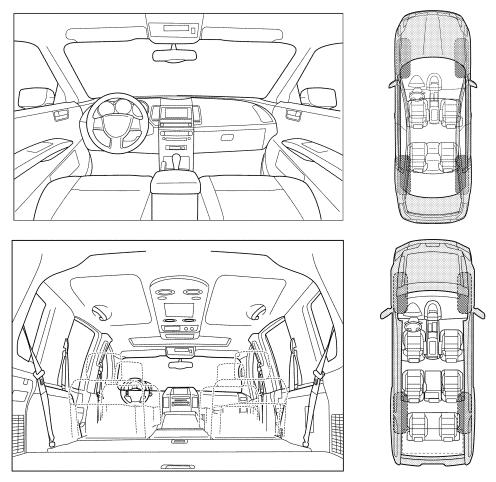
Dear Customer:

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.

-1-

< SYMPTOM DIAGNOSIS >

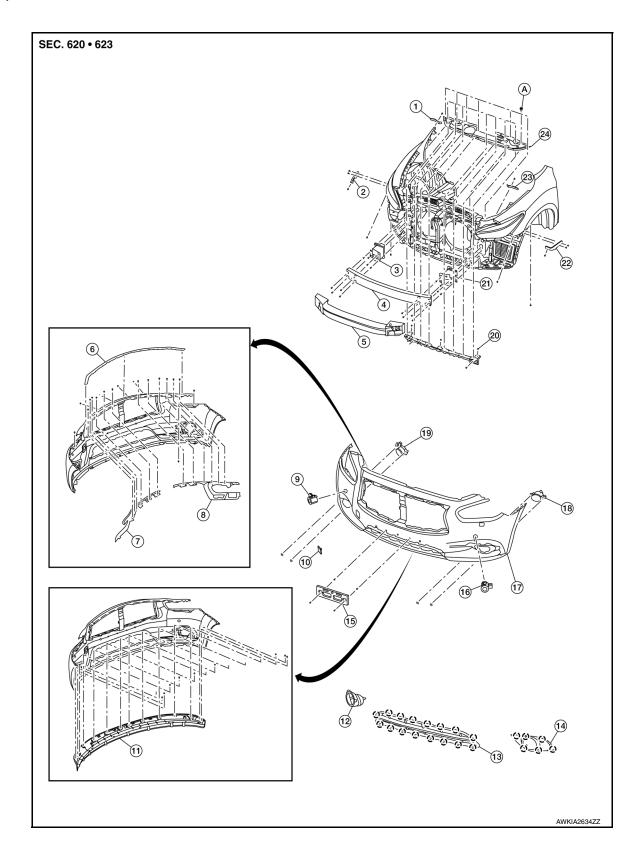
		- -
I. WHEN DOES IT OCCUR? (please chec	k the boxes that apply)	_
☐ Anytime	☐ After sitting out in the rain	
☐ 1st time in the morning	☐ When it is raining or wet	
Only when it is cold outside	Dry or dusty conditions	
Only when it is hot outside	Other:	
II. WHEN DRIVING:	IV. WHAT TYPE OF NOISE	
☐ Through 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☐ On turns: left, right or either (circle)	☐ Thump (heavy muffled knock noise)☐ Buzz (like a bumble bee)	
☐ With passengers or cargo	Buzz (like a bullible bee)	
Other:		
After driving miles or minute	es	
		-
TO BE COMPLETED BY DEALERSHIP PE	RSONNEL	
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est Drive Notes:		
est Drive Notes:		-
est Drive Notes:		- - -
est Drive Notes:	YES NO Initials of person performing	- - -
		- - -
/ehicle test driven with customer		- - -
/ehicle test driven with customer - Noise verified on test drive - Noise source located and repaired		- - -
Vehicle test driven with customer - Noise verified on test drive - Noise source located and repaired		-
Vehicle test driven with customer - Noise verified on test drive - Noise source located and repaired - Follow up test drive performed to confirm		-

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REMOVAL AND INSTALLATION

FRONT BUMPER

Exploded View



FRONT BUMPER

< REMOVAL AND INSTALLATION >

1.	Front bumper fascia upper bracket (RH)	2.	Front bumper side bracket (RH)	3.	Front bumper reinforcement support (RH)
4.	Front bumper reinforcement	5.	Front energy absorber	6.	Front bumper fascia hood seal
7.	Front bumper fascia inner stiff- ener (RH)	8.	Front bumper fascia inner stiff- ener (LH)	9.	Front sonar sensor outer (RH)
10.	Tow cover	11.	Front spoiler	12.	Front fog lamp finisher (RH)
13.	Front bumper grille	14.	Front fog lamp finisher (LH)	15.	Front license plate bracket
16.	Front sonar sensor outer (LH)	17.	Front bumper fascia	18.	Front fog lamp (LH)
19.	Front fog lamp (RH)	20.	Front bumper fascia upper retainer bracket	21.	Front bumper reinforcement support (LH)
22.	Front bumper side bracket (LH)	23.	Front bumper fascia upper bracket (LH)	24.	Core support cover
A.	Clip	(⁻)	Pawl		

Removal and Installation

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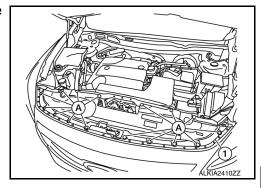
REMOVAL

CAUTION:

Bumper fascia is made of resin. Use care when handling to prevent damage. Avoid contact with oily substances.

Open hood.

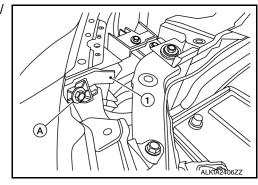
2. Remove the core support cover clips (A), then remove the core support cover (1).



3. Partially remove the front fender protectors (LH/RH). Refer to <u>EXT-28</u>, "FENDER PROTECTOR Removal and Installation".

4. Remove the front under cover. Refer to EXT-30, "Removal and Installation".

5. Remove the front bumper fascia to upper fender screw (A) (LH/RH), then remove front fascia upper bracket (1) (LH/RH).



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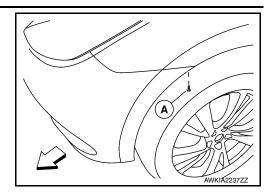
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FRONT BUMPER

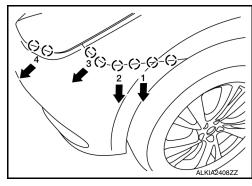
< REMOVAL AND INSTALLATION >

Remove the front bumper fascia to fender screw (A) (LH/RH). <: Front



- 7. Disconnect all harness connectors.
- 8. Release the front bumper fascia from the side brackets (LH/RH).

(): Pawl



Remove the front bumper fascia.

CAUTION:

When removing front bumper fascia, two people are required to avoid damaging.

- 10. Remove the following parts (if necessary) after removing front bumper fascia.
 - Front fascia lower grille.
 - Front bumper grille.

 - Front sonar sensor outer (LH/RH). Refer to <u>AV-907</u>, "<u>Removal and Installation</u>".
 Front fog lamp assemblies (LH/RH). Refer to <u>EXL-163</u>, "<u>Removal and Installation</u>".
 - Front fog lamp finishers (LH/RH).
 - · Front license plate bracket.
 - · Front spoiler.
- 11. Remove the front bumper fascia upper retainer bracket.

INSTALLATION

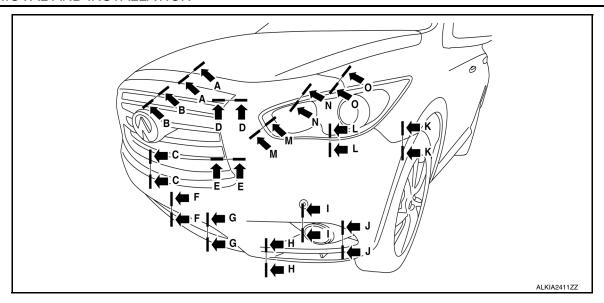
Installation is in the reverse order of removal.

NOTE:

- The following table shows the specified values for checking normal installation status.
- Fitting adjustment cannot be performed.

FRONT BUMPER

< REMOVAL AND INSTALLATION >



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Section	Measurement	Minimum	Target Value	Maximum
A-A	Clearance	2.1 (0.08)	4.1 (0.16)	6.1 (0.24)
A-A	Surface height	-0.50 (-0.02)	1.0 (0.04)	2.5 (0.10)
B-B	Clearance	0.2 (0.01)	1.5 (0.06)	2.8 (0.11)
В-В	Surface height	-0.8 (-0.03)	0.3 (0.01)	1.4 (0.06)
C-C	Clearance	0.2 (0.01)	1.5 (0.06)	2.8 (0.11)
C-C	Surface height	0.7 (0.03)	2.0 (0.08)	3.3 (0.13)
D-D	Clearance	0.2 (0.01)	1.5 (0.06)	2.8 (0.11)
D-D	Surface height	2.4 (0.09)	3.5 (0.14)	4.6 (0.18)
E-E	Clearance	0.2 (0.01)	1.5 (0.06)	2.8 (0.11)
F-F	Clearance	0.0 (0.00)	1.0 (0.04)	2.0 (0.08)
G-G	Clearance	0.0 (0.00)	1.0 (0.04)	2.0 (0.08)
H-H	Clearance	0.0 (0.00)	0.0 (0.00)	0.7 (0.03)
I-I	Clearance	0.0 (0.00)	1.0 (0.04)	2.0 (0.08)
J-J	Clearance	0.0 (0.00)	1.0 (0.04)	2.0 (0.08)
K-K	Clearance	0.0 (0.00)	0.0 (0.00)	0.8 (0.03)
K-K	Surface height	-0.3 (-0.01)	0.7 (0.03)	1.7 (0.07)
L-L	Clearance	0.2 (0.01)	1.5 (0.06)	3.2 (0.13)
M-M	Clearance	0.2 (0.01)	1.5 (0.06)	3.2 (0.13)
N-N	Clearance	0.2 (0.01)	1.5 (0.06)	3.2 (0.13)
0-0	Clearance	0.0 (0.00)	0.0 (0.00)	0.7 (0.03)
0-0	Surface height	-1.0 (-0.04)	0.0 (0.00)	1.0 (0.04)

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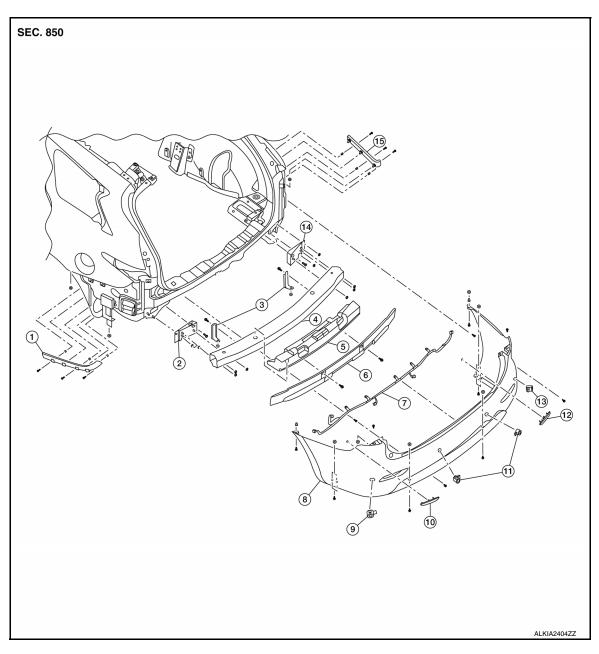
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REAR BUMPER

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- Rear bumper side bracket (LH)
- Rear bumper reinforcement
- 7. Rear sonar sensor harness
- 10. Rear bumper fascia reflector (LH)
- 13. Rear sonar sensor outer (RH)
- 2. Rear bumper reinforcement support (LH)
- Rear bumper energy absorber 1 5.
- Rear bumper fascia
- 14. Rear bumper reinforcement support (RH)
- Rear bumper fascia lower bracket (LH/RH)
- Rear bumper energy absorber 2
- Rear sonar sensor outer (LH)
- 11. Rear sonar sensors inner (LH/RH) 12. Rear bumper fascia reflector (RH)
 - 15. Rear bumper side bracket (RH)

Removal and Installation

INFOID:0000000009133570

REMOVAL

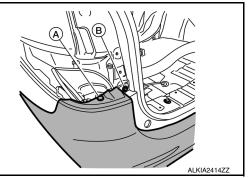
CAUTION:

Bumper fascia is made of resin. Use care when handling to prevent damage. Avoid contact with oily substances.

REAR BUMPER

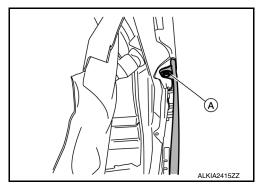
< REMOVAL AND INSTALLATION >

- Open back door.
- 2. Remove the rear combination lamps (LH/RH). Refer to EXL-169, "Removal and Installation".
- 3. Remove the rear bumper fascia clips (A) and screws (B) (LH/RH).

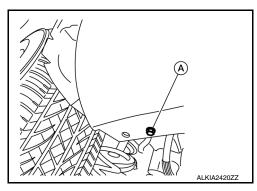


4. Partially remove the rear wheel house protectors. Refer to <u>EXT-29</u>, "REAR WHEEL HOUSE PROTECTOR: Removal and Installation".

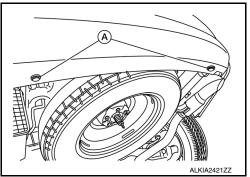
5. Remove the bumper fascia side upper screws (A) (LH/RH).



6. Remove rear bumper fascia lower side bolts (A) (LH/RH).



7. Remove the rear bumper fascia lower rear clips (A).



8. Disconnect the harness connector from rear sonar sensors.

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Revision: August 2013 EXT-21 2014 QX60

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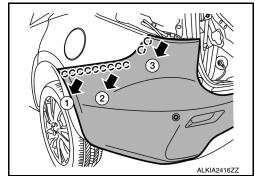
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REAR BUMPER

< REMOVAL AND INSTALLATION >

9. Pull rear bumper fascia downward as shown by the arrows to release from rear bumper side brackets (LH/RH).

(): Pawl



10. Remove the rear bumper fascia.

CAUTION:

When removing rear bumper fascia, two people are required to avoid damaging.

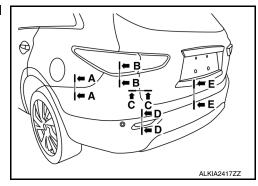
- 11. Remove the following parts (if necessary) after removing rear bumper fascia.
 - Rear bumper side brackets (LH/RH)
 - Rear bumper fascia reflectors (LH/RH)
 - · Rear sonar sensors
 - Remove rear bumper energy absorbers 1 and 2.

INSTALLATION

Installation is in the reverse order of removal.

NOTE:

- The following table shows the specified values for checking normal installation status.
- · Fitting adjustment cannot be performed.



mm (in)

Section	Measurement	Minimum	Target Value	Maximum
A-A	Clearance	0.0 (0.00)	0.0 (0.00)	1.0 (0.04)
A-A	Surface height	0.0 (0.00)	1.0 (0.04)	2.0 (0.08)
B-B	Clearance	0.0 (0.00)	1.5 (0.06)	3.0 (0.12)
C-C	Clearance	3.0 (0.12)	5.0 (0.20)	7.0 (0.28)
C-C	Surface height	-2.0 (-0.08)	0.0 (0.00)	2.0 (0.08)
D-D	Clearance	0.0 (0.00)	1.0 (0.04)	2.0 (0.08)
E-E	Clearance	5.0 (0.12)	7.0 (0.28)	9.0 (0.35)

FRONT GRILLE

Exploded View

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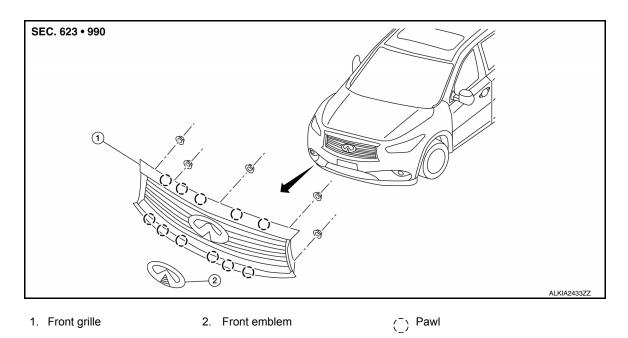
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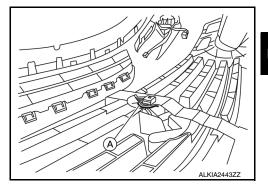


Removal and Installation

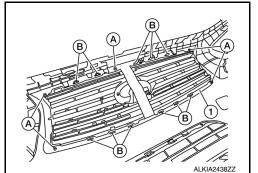
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REMOVAL

- 1. Open hood.
- Remove the front bumper fascia. Refer to <u>EXT-17</u>, "Removal and Installation".
- 3. Release front camera harness connector clip (A) (if equipped).



4. Remove the front grille nuts (A), release front grille pawls (B), then remove front grille (1) from the front bumper fascia.



- 5. Remove the following parts (if necessary) after removing front grille.
 - Front camera (if equipped). Refer to AV-601, "Removal and Installation".
 - · Front emblem.

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FRONT GRILLE

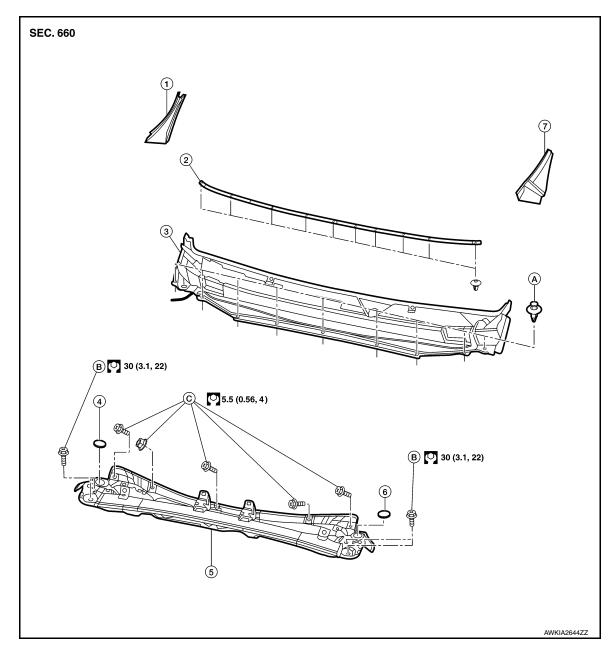
< REMOVAL AND INSTALLATION >

INSTALLATION

Installation is in the reverse order of removal.

COWL TOP

Exploded View



- 1. Cowl top side trim cover (RH)
- 4. Rubber plug (LH)
- 7. Cowl top side trim cover (LH)
- C. Refer to installation
- 2. Cowl top seal
- 5. Cowl top extension
- A. Clip

- 3. Cowl top cover
- 6. Rubber plug (RH)
- B. Refer to installation

Removal and Installation

COWL TOP COVER

Removal

- Remove front wiper arms (LH/RH). Refer to <u>WW-70. "Removal and Installation"</u>.
- 2. Release the cowl top seal clips, then remove the cowl top seal.

Revision: August 2013 EXT-25 2014 QX60

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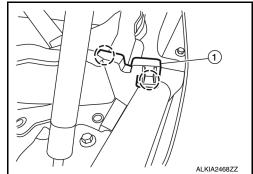
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< REMOVAL AND INSTALLATION >

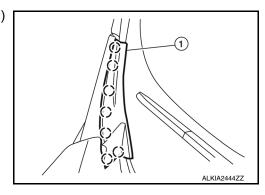
3. Release the clips and pawls using a suitable tool and remove hood ledge finisher (1).

(<u>)</u>: Pawl

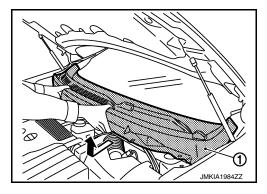


4. Release the pawls, then remove cowl top side trim covers (1) (LH/RH).

(): Pawl



- 5. Disconnect front washer tube connector.
- 6. Remove cowl top cover clips.
- 7. Pull forward to release cowl top cover (1) and remove.



- 8. Remove the following parts (if necessary) after removing cowl top cover.
 - Front washer nozzle (LH/RH)
 - · Front washer tube

Installation

Installation is in the reverse order of removal.

COWL TOP EXTENSION

REMOVAL

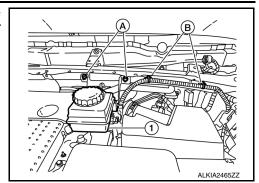
 Remove the front wiper drive assembly. Refer to <u>WW-73, "Removal and Installation"</u>. CAUTION:

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

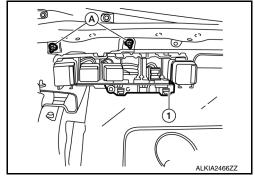
COWL TOP

< REMOVAL AND INSTALLATION >

 Remove the brake reservoir bracket nuts (A), release the brake level sensor harness clips (B) and position the brake reservoir (1) aside.



3. Remove the fuse and relay box nuts (A) and position the fuse and relay box (1) aside.



4. Remove the cowl top extension bolts and the cowl top extension.

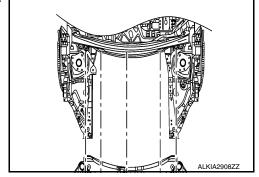
INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

- When installing cowl top cover, check that clips are securely fitted in panel holes on body, and then press them in.
- After installing, perform adjustment of wiper arms. Refer to <u>WW-70, "Removal and Installation"</u>.
 NOTE:

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



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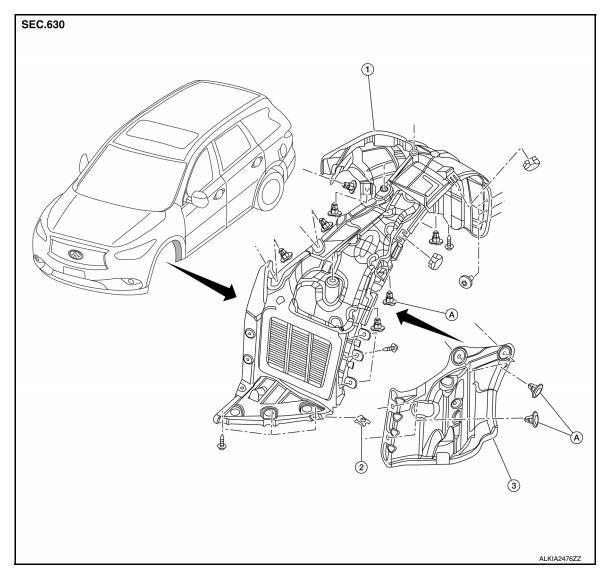
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FENDER PROTECTOR **FENDER PROTECTOR**

FENDER PROTECTOR: Exploded View





- 1. Front fender protector
- 2. J-nut

3. Front fender protector side cover

A. Clip

FENDER PROTECTOR: Removal and Installation

INFOID:0000000009133576

REMOVAL

- 1. Remove the front under cover. Refer to EXT-30, "Removal and Installation".
- 2. Position the front wheels as necessary to remove screws and clips.
- 3. Remove the front fender protector side cover clips, then remove the front protector side cover.
- Release the front fender protector clips, remove the front fender protector screws, then remove the front fender protector.

INSTALLATION

Installation is in the reverse order of removal.

REAR WHEEL HOUSE PROTECTOR

EXT-28 Revision: August 2013 2014 QX60

REAR WHEEL HOUSE PROTECTOR: Exploded View

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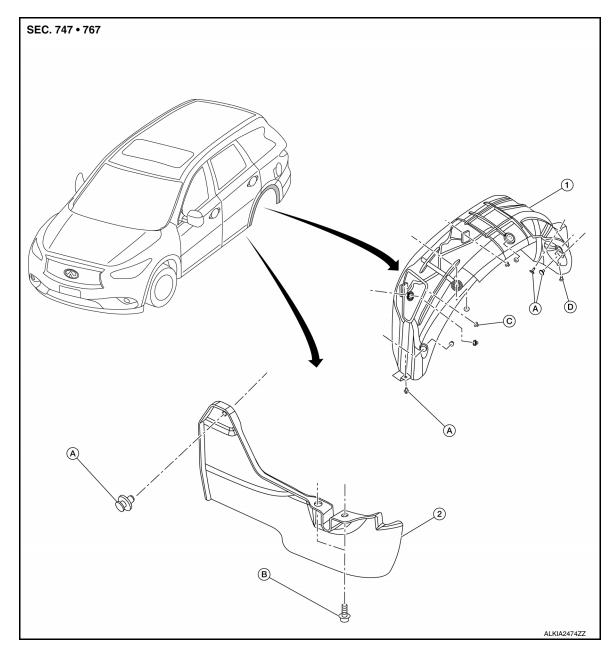
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- 1. Rear wheel house protector
- 2. Rear wind deflector
- A. Clip

- B. Rear wind deflector bolt
- C. Plastic nut

D. Rear bumper fascia screw

REAR WHEEL HOUSE PROTECTOR: Removal and Installation

INFOID:0000000009133578

REMOVAL

- 1. Remove the rear wheel house protector clips.
- 2. Remove rear wheel house protector plastic nuts, remove the rear bumper fascia screw, then remove the rear wheel house protector.
- 3. Remove rear wind deflector bolts and clip, then remove rear wheel wind deflector.

INSTALLATION

Installation is in the reverse order of removal.

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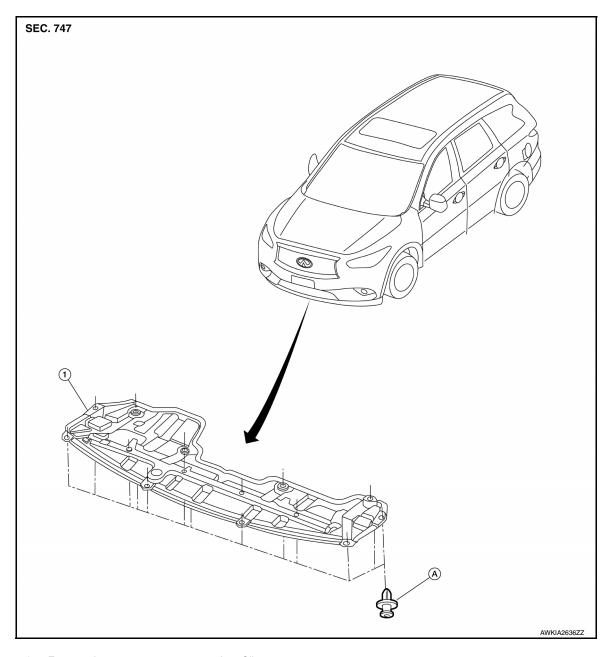
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FRONT UNDER COVER

Exploded View



1. Front under cover

A. Clip

Removal and Installation

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REMOVAL

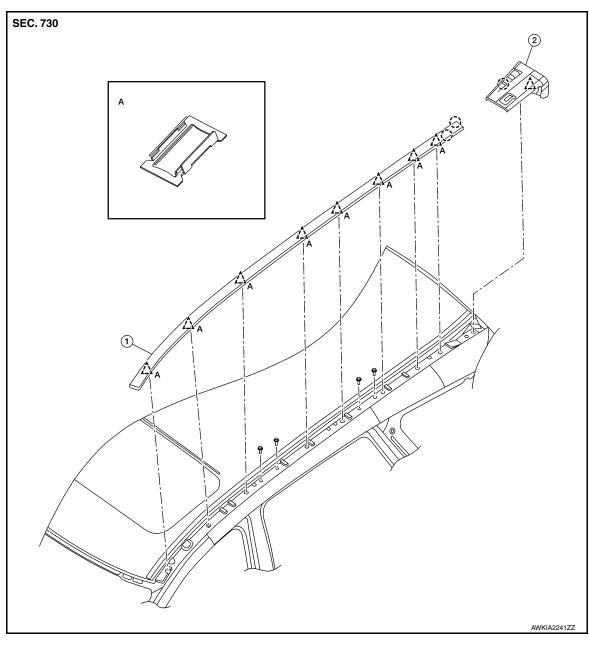
Remove the front under cover clips, and then remove front under cover.

INSTALLATION

Installation is in the reverse order of removal.

ROOF SIDE MOLDING

Exploded View



- 1. Roof side molding
- 2. Roof side molding end finisher
- ^` Clip

(Pawl

Removal and Installation

REMOVAL

Revision: August 2013 EXT-31 2014 QX60

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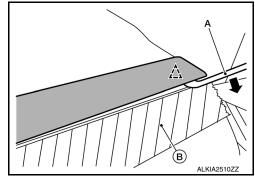
ROOF SIDE MOLDING

< REMOVAL AND INSTALLATION >

1. Release the roof side molding clips, using a suitable tool (A), and then remove the roof side molding.

CAUTION:

Apply protective tape (B) around the roof side molding. \triangle : Clip



INSTALLATION

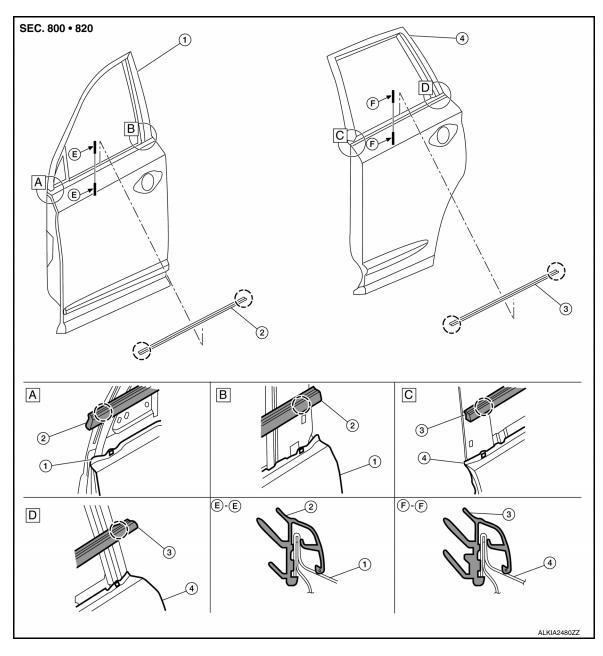
Installation is in the reverse order of removal.

CAUTION:

When installing, make sure all clips are on roof side molding. Make sure all old clips have been removed from posts on roof panel.

DOOR OUTSIDE MOLDING

Exploded View



- 1. Front door panel
- 4. Rear door panel

- 2. Front door outside molding
- (Pawl

3. Rear door outside molding

Removal and Installation

FRONT DOOR OUTSIDE MOLDING

Removal

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Revision: August 2013 EXT-33 2014 QX60

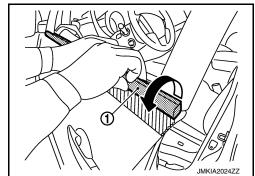
DOOR OUTSIDE MOLDING

< REMOVAL AND INSTALLATION >

1. Rotate and lift as shown to remove the front door outside molding (1).

CAUTION:

- Apply protective tape on front door panel.
- Do not use excessive force when removing or damage may occur.



Installation

Installation is in the reverse order of removal.

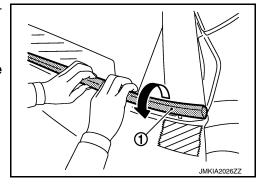
REAR DOOR OUTSIDE MOLDING

Removal

1. Rotate and lift as shown to remove the rear door outside molding (1).

CAUTION:

- Apply protective tape on rear door panel.
- Do not use excessive force when removing or damage may occur.



Installation

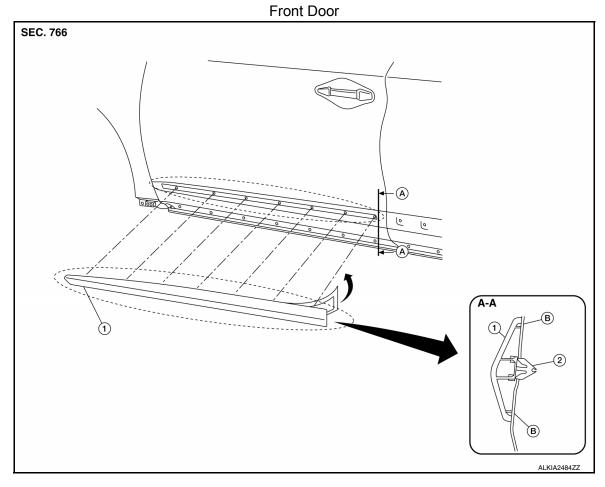
Installation is in the reverse order of removal.

SIDE GUARD MOLDING

< REMOVAL AND INSTALLATION >

SIDE GUARD MOLDING

Exploded View



1. Front door side guard molding 2. Clip

3. Double-faced adhesive tape

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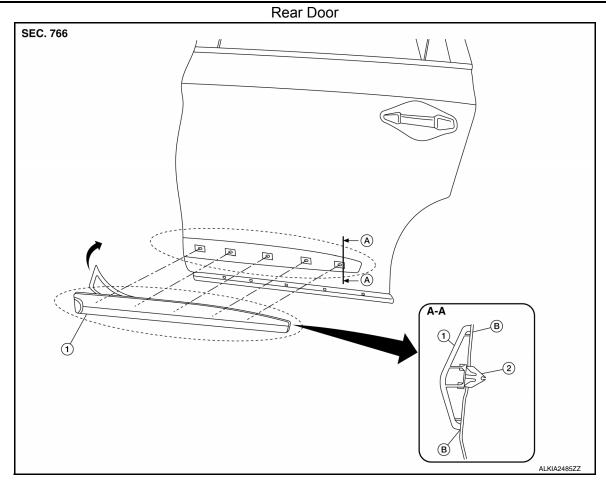
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1. Rear door side guard molding

2. Clip

B. Double-faced adhesive tape

Removal and Installation

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Removal

CAUTION:

Do not 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° 40°C (86° 104°F) with a heat gun.
- 2. Raise end of molding to release clips, then cut away tape to remove molding. Remove all traces of tape.

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 affixed with double-faced adhesive tape.
- To re-use existing molding, clean all traces of double-faced adhesive tape from the molding and apply new double-faced adhesive tape to the molding.
- 1. Clean the panel surface with isopropyl alcohol or equivalent to degrease the surface.
- 2. Heat the panel and molding tape surface to 30° 40°C (86° 104°F).
- 3. Apply the side guard molding.
 - Remove the backing sheet from the tape surface.
 - Align the locating pin into the hole in the outer door.
 - Continue aligning the pins into their corresponding holes in the outer door during installation.
 - . Press ends by hand and use a roller to apply 5 kg-f (11 ft-lbs) to press molding to door surface.
 - Apply even pressure along molding to insure proper wet out.

CAUTION:

To secure contact, do not wash vehicle for 24 hours after installation.

ROOF RACK

Removal and Installation

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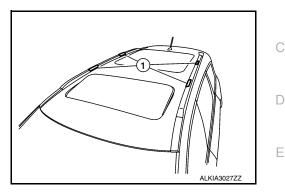
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REMOVAL

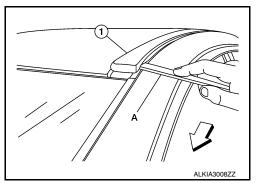
1. Remove the bolt finishers (1) using a suitable tool.



2. Release the roof rack side rail (1) beginning at the front using a suitable tool (A).

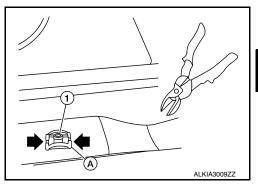
NOTE:

Plastic clip located at the rear of the roof rack side rail must be released using a suitable tool.

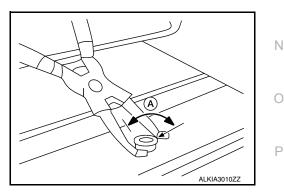


INSPECTION

 Remove metal clips (A) from roof posts (1) by cutting on each side (←).



2. Rotate each roof post 90 degrees (A) using a suitable tool.



INSTALLATION

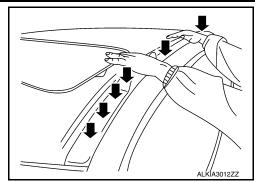
Installation is in the reverse order of removal.

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ROOF RACK

< REMOVAL AND INSTALLATION >

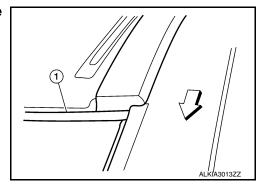
Tap firmly on the roof rack side rail to lock each of the remaining seven clips into place on the remaining seven posts.



CAUTION:

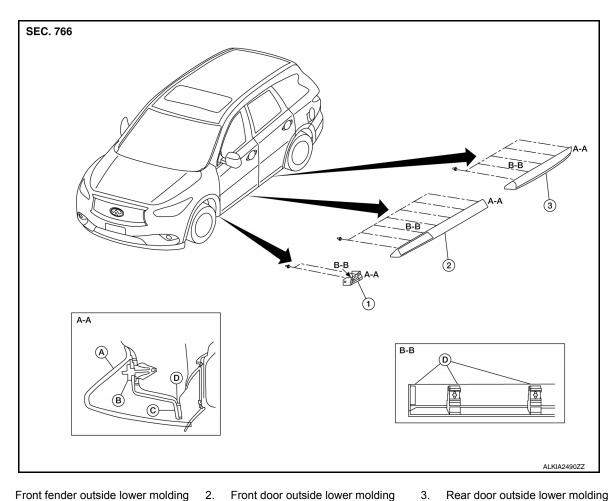
Make sure front edge of roof rack side rail is aligned behind the windshield seal (1) as shown.

<: Front



DOOR OUTSIDE LOWER MOLDING

Exploded View INFOID:0000000009133587



- Front fender outside lower molding
- B.

Clip

- C. Outer sheet metal

Adhesive

Removal and Installation

Outside lower molding

FRONT FENDER OUTSIDE LOWER MOLDING

Removal

- 1. Remove the front fender protector screw.
- 2. Release the clips from the front fender outside lower molding (1) using a suitable tool (A).

CAUTION:

- . Apply protective tape (B) to the front fender to protect the painted surface from damage.
- · Release the clips slowly and carefully.
- Do not pull the front fender outside lower molding.

∴: Clip

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Remove the front fender outside lower molding.

Installation

EXT-39 Revision: August 2013 2014 QX60 **EXT**

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DOOR OUTSIDE LOWER MOLDING

< REMOVAL AND INSTALLATION >

Installation is in the reverse order of removal.

CAUTION:

- When installing, visually check the outside lower molding and the clips and replace with new parts if they have been damaged.
- When installing outside lower molding, make sure that the clips are attached to the molding. Make sure old clips have all been removed from fender.

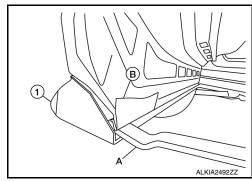
FRONT DOOR OUTSIDE LOWER MOLDING

Removal

1. Release the clips from the front door outside lower molding (1) by starting at the rear and moving forward, using a suitable tool (A).

CAUTION:

- Apply protective tape (B) to the door to protect the painted surface from damage.
- Release the clips slowly and carefully.
- · Do not pull the front door outside lower molding.



Remove the front door outside lower molding.

Installation

Installation is in the reverse order of removal.

CAUTION:

- When installing, visually check the outside lower molding and the clips and replace with new parts if they have been damaged.
- When installing outside lower molding, make sure that the clips are attached to the molding. Make sure old clips have all been removed from door.

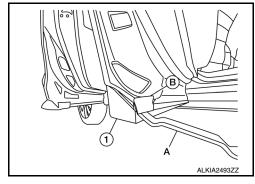
REAR DOOR OUTSIDE LOWER MOLDING

Removal

 Release the clips from the rear door outside lower molding (1) by starting at the rear and moving forward, using a suitable tool (A).

CAUTION:

- Apply protective tape (B) to the door to protect the painted surface from damage.
- Release the clips slowly and carefully.
- · Do not pull the rear door outside lower molding.



2. Remove the rear door outside lower molding.

Installation

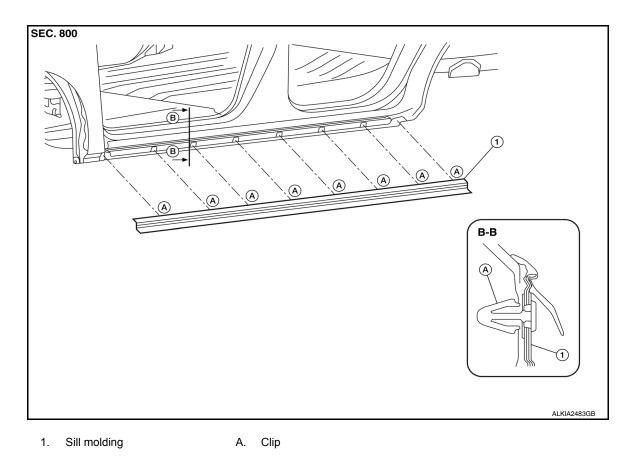
Installation is in the reverse order of removal.

CAUTION:

- When installing, visually check the outside lower molding and the clips and replace with new parts if they have been damaged.
- When installing outside lower molding, make sure that the clips are attached to the molding. Make sure old clips have all been removed from door.

SILL MOLDING

Exploded View



Removal and Installation

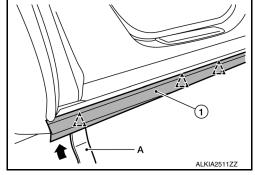
REMOVAL

1. Release sill molding clips with a suitable tool (A), and then remove the sill molding (1).

CAUTION:

Disengage the clips slowly and carefully.

∠_`: Clip



INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

- When installing, visually check the sill molding and the clips and replace them with new parts if they
 have been damaged.
- When installing the sill molding, check that clips are securely fitted in panel holes on body, and then
 press them in.

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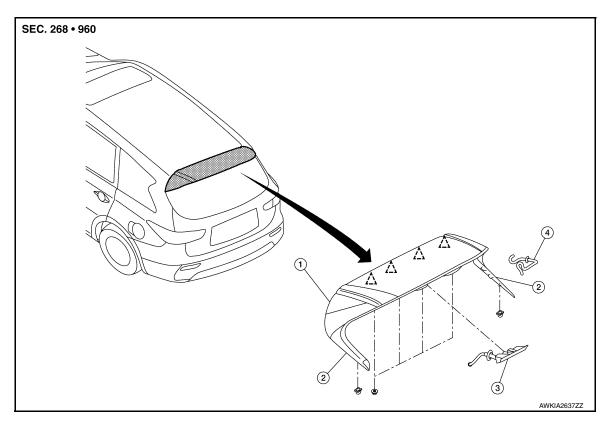
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REAR SPOILER

Exploded View



- 1. Rear spoiler
- 2. Rear spoiler side trim cover (LH/RH)
- 4. Rear washer nozzle ^ (

3. High-mounted stop lamp

^\ Clip

Removal and Installation

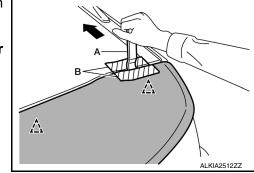
REMOVAL

- 1. Remove the back door side finishers (LH/RH). Refer to EXT-44, "Removal and Installation".
- 2. Remove the rear spoiler nuts.
- 3. Disconnect the harness connector from high-mounted stop lamp.
- 4. Release the rear washer nozzle tube.
- 5. Release the rear spoiler clips with a suitable tool (A), and then remove the rear spoiler.

CAUTION:

Apply protective tape (B) to the roof panel and rear spoiler to protect the painted surface from damage.

<u></u>___: Clip



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- 6. Remove following parts (if necessary) after removing rear spoiler.
 - High-mounted stop lamp
 - Rear spoiler side trim covers (LH/RH)
 - Rear washer nozzle

REAR SPOILER

< REMOVAL AND INSTALLATION >

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

- When installing, visually check the rear spoiler and the clips and replace them with new parts if they are damaged.
- When installing rear spoiler, make sure that the clips and bolts are securely placed in back door panel holes, and then press them in.
- Do not wash the vehicle within 24 hours after installing to allow adhesive time to cure.

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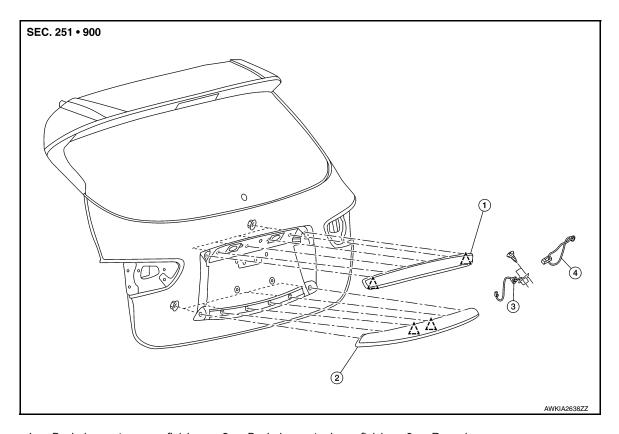
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BACK DOOR OUTER FINISHER

Exploded View INFOID:0000000009133593



- 1. Back door outer upper finisher
- 2. Back door outer lower finisher 3. Rear view camera

Removal and Installation

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Back Door Outer Upper Finisher

Removal

- Remove the back door lower finisher. Refer to INT-35, "BACK DOOR LOWER FINISHER: Removal and Installation".
- 2. Disconnect the harness connectors from rear view camera and back door request switch.
- 3. Remove the back door outer upper finisher nuts.
- 4. Release the clips, and then remove the back door outer upper finisher.
- Remove the following parts (if necessary) after removing back door outer upper finisher.
 - · Rear view camera
 - · Back door opener switch
 - License lamp

Installation

Installation is in the reverse order of removal.

Back Door Outer Lower Finisher

Removal

- 1. Remove the back door lower finisher. Refer to INT-35, "BACK DOOR LOWER FINISHER: Removal and Installation".
- 2. Remove the back door outer lower finisher nuts.
- Release clips, and then remove the back door outer lower finisher.

BACK DOOR OUTER FINISHER

< REMOVAL AND INSTALLATION >

Installation

Installation is in the reverse order of removal.

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