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EXTERIOR

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PRECAUTION

PRECAUTIONS

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

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The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER”, used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. 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, it is recommended that all maintenance and repair be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper repair, 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

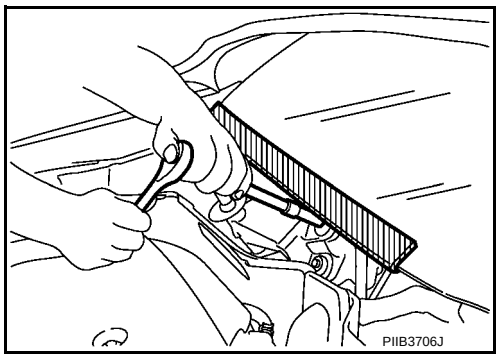
WARNING:

- **When working near the Air Bag Diagnosis Sensor Unit or other Air Bag 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 or batteries, and wait at least three minutes before performing any service.**

Precaution for Procedure without Cowl Top Cover

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



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 a new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After installation is complete, be sure to check that each part works properly.
- Follow the steps below to clean components:

- Water soluble dirt:

- Dip a soft cloth into lukewarm water, wring the water out of the cloth and wipe the dirty area.
- Then rub with a soft, dry cloth.

- Oily dirt:

< PRECAUTION >

- Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%) and wipe the dirty area.
- Then dip a cloth into fresh water, wring the water out of the cloth and wipe the detergent off.
- Then rub with a soft, dry cloth.

- Do not use organic solvent such as thinner, benzene, alcohol or gasoline.
- For genuine leather seats, use a genuine leather seat cleaner.

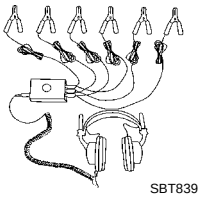
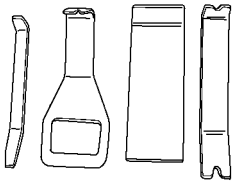
PREPARATION

PREPARATION

Special Service Tool

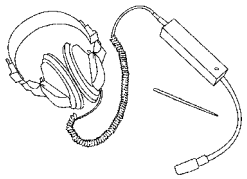
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The actual shape of the tools may differ from those illustrated here.

Tool number (TechMate No.) Tool name	Description
— (J-39570) Chassis Ear  SBT839	Locating the noise
— (J-50397) NISSAN Squeak and Rattle Kit  ALJIA1232ZZ	Repairing the cause of noise
— (J-46534) Trim Tool Set  AWJIA0483ZZ	Removing trim components

Commercial Service Tool

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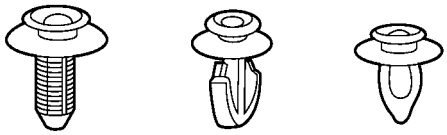
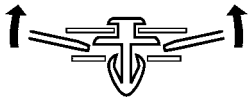
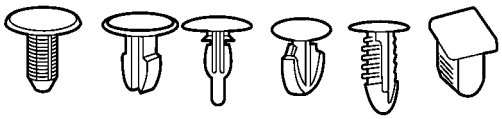
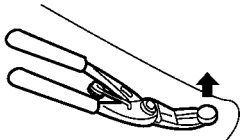
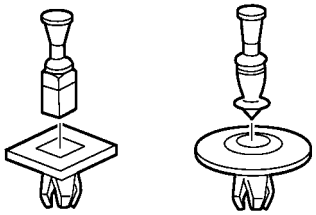
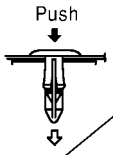
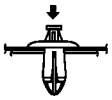
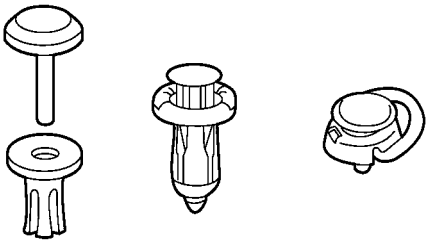
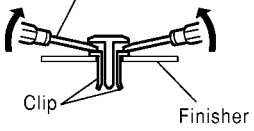
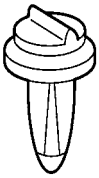
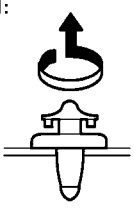
(TechMate No.) Tool name	Description
(J-39565) Engine Ear  SIIA0995E	Locating the noise

CLIP LIST

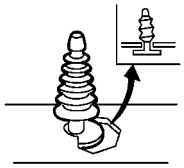
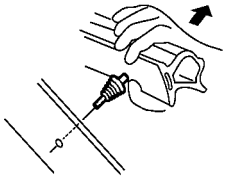
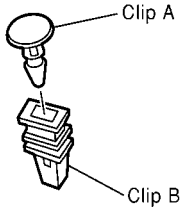
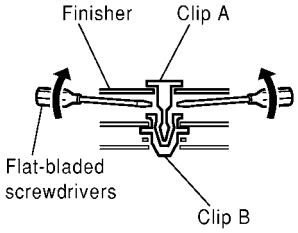
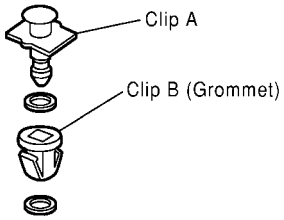
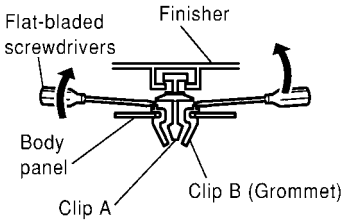
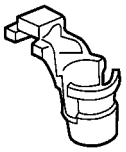
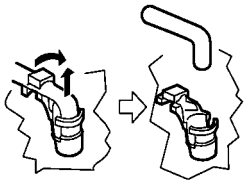
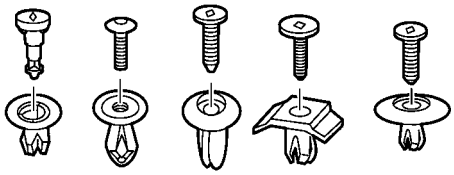
Descriptions for Clips

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Replace any clips which are damaged during removal or installation.

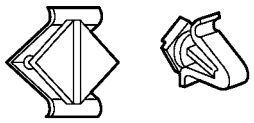
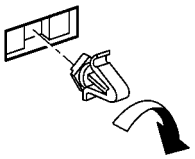
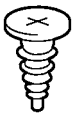
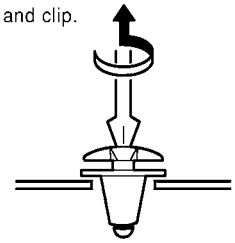
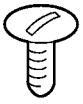
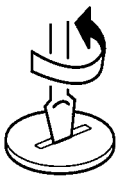
Symbol No.	Shapes	Removal & Installation
C101		**Removal:** Remove by bending up with flat-bladed screwdrivers or clip remover. 
C103		 **Removal:** Remove with a clip remover.
C203		**Removal:** Push center pin to catching position. (Do not remove center pin by hitting it.)  Push  Push **Installation:**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

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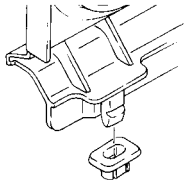
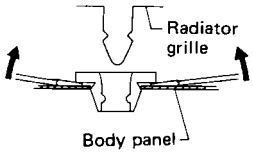
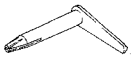
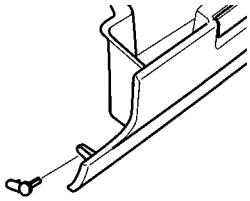
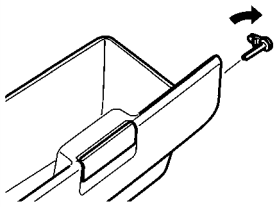
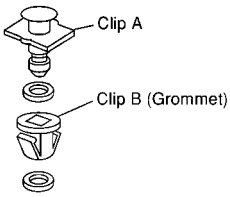
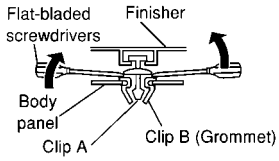
Symbol No.	Shapes	Removal & Installation
CE103 		**Removal:** 
CF110 		**Removal:** 
CF118 		**Removal:** 
CR103		**Removal:** Holder portion of clip must be spread out to remove rod. 
CS101 		**Removal:** 1. Screw out with a Phillips screwdriver. 2. Remove female portion with flat-bladed screwdriver. 

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CLIP LIST

Symbol No.	Shapes	Removal & Installation
CG101 		**Removal:**  Rotate 45° to remove  **Removal:** **Installation:** 
CS102 		
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 		

SIIA0317E

Symbol No.	Shapes	Removal & Installation
CG104 		**Removal:** **Remove by bending up with flat-bladed screwdrivers.**
CE114 		
CF118 		**Removal:**

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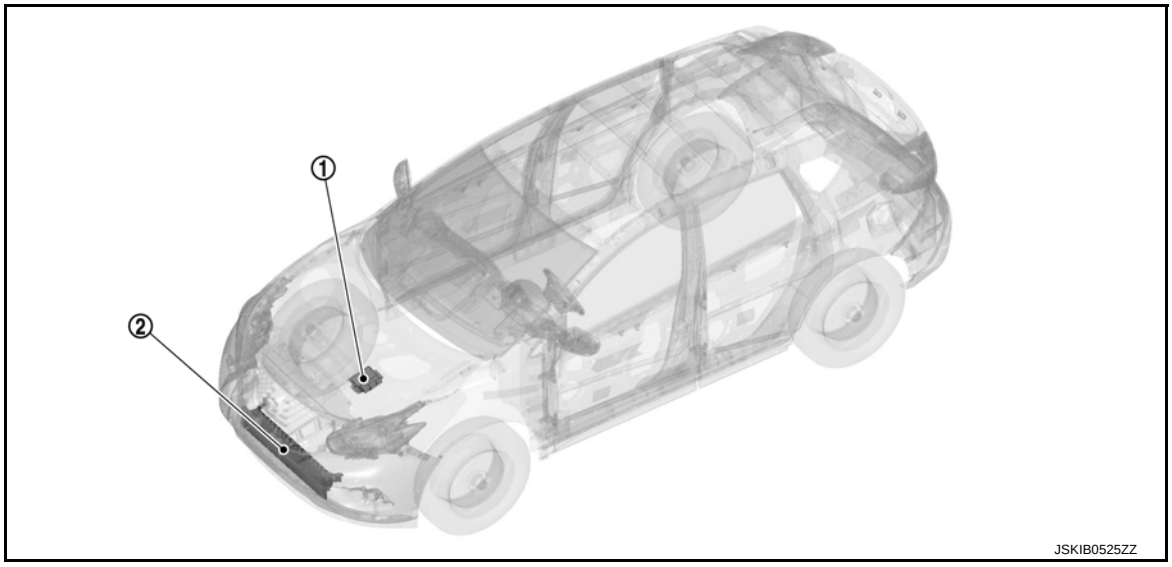
SYSTEM DESCRIPTION

COMPONENT PARTS

ACTIVE GRILLE SHUTTER SYSTEM

ACTIVE GRILLE SHUTTER SYSTEM : Component Parts Location

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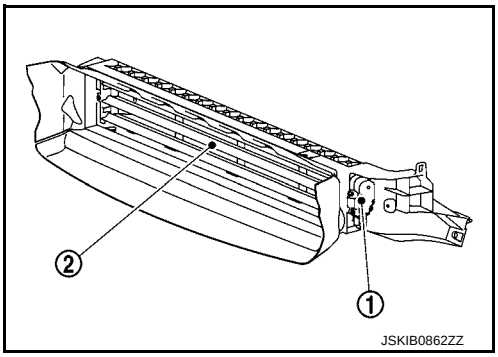
No.	Component	Function
①	ECM	EC-23, "ECM"
②	Active grille shutter	EXT-10, "ACTIVE GRILLE SHUTTER SYSTEM : Active grille shutter"

For the engine related component parts, refer to EC-17, "Component Parts Location".

ACTIVE GRILLE SHUTTER SYSTEM : Active grille shutter

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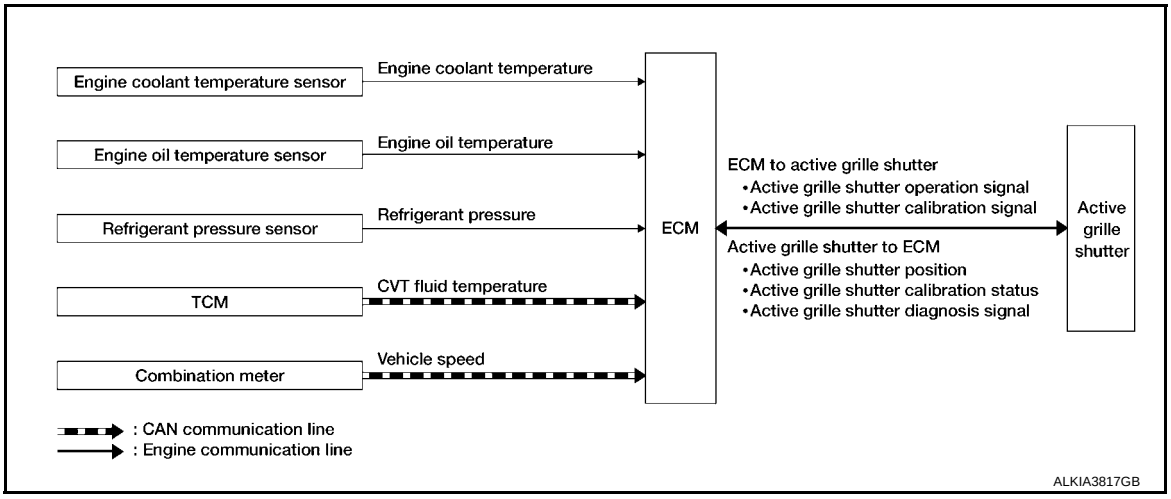
Active grille shutter is located at front bumper lower opening, and according to the signal from ECM it operates actuator ① to perform open/close movement of flap ② to control the amount of air flow taken into engine compartment.



SYSTEM
ACTIVE GRILLE SHUTTER SYSTEM
ACTIVE GRILLE SHUTTER SYSTEM : System Description

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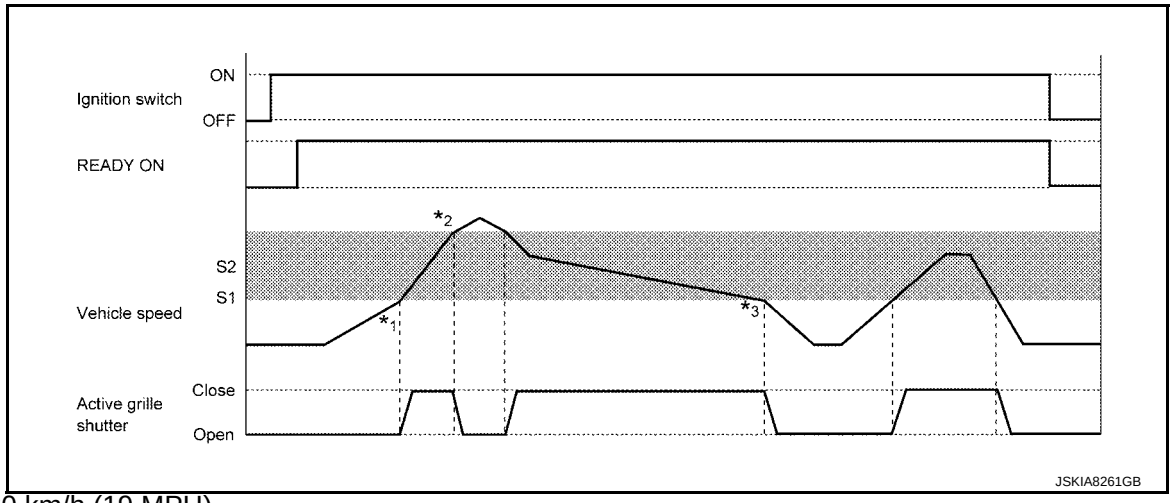
SYSTEM DIAGRAM



SYSTEM DESCRIPTION

While driving, the active grille shutter system closes shutter to reduce air flow to engine compartment for the purpose of reducing aerodynamic drag, and as a result, improves the vehicle's fuel efficiency.
ECM controls active grille shutter system by detecting vehicle status through respective modules and sensors.
Active grille shutter actuator is equipped with self-diagnosis function. When a malfunction is detected, a signal is transmitted to the ECM and the ECM records the active grille shutter malfunction.

Basic Movements



- S1: 30 km/h (19 MPH)
- S2: Approx. 30 - 140 km/h (19 - 88 MPH)
- *1: Shutter initial position learning
- *2: Judgment of high vehicle speed
- *3: Judgment of low vehicle speed

Description of Movements

Active grille shutter is fully open when the vehicle stops or the ignition switch is turned OFF.
ECM operates the shutter to close position in order to perform shutter's initial position learning whenever the ignition switch is turned OFF → ON and the READY status. At the end of initial position learning ECM operates shutter to open position.
While driving, after the initial position learning ends, ECM operates the active grille shutter to close position when the operational conditions of active grille shutter are met.

While driving at high speed, ECM operates the shutter to open position when the vehicle reaches the specified speed in order to prevent the shutter from shutting up due to wind resistance.
When the vehicle speed is reduced below the specified speed ECM operates active grille shutter to open position.

NOTE:

- When any one of the conditions for opening the active grille shutter is satisfied, ECM performs active grille shutter initial position learning even when the vehicle speed is less than 30 km/h.
- ECM may perform active grille shutter initial position learning according to other diagnosis conditions.

Active Grille Shutter Operational Conditions

ECM operates active grille shutter to close position when all of the following conditions are met.

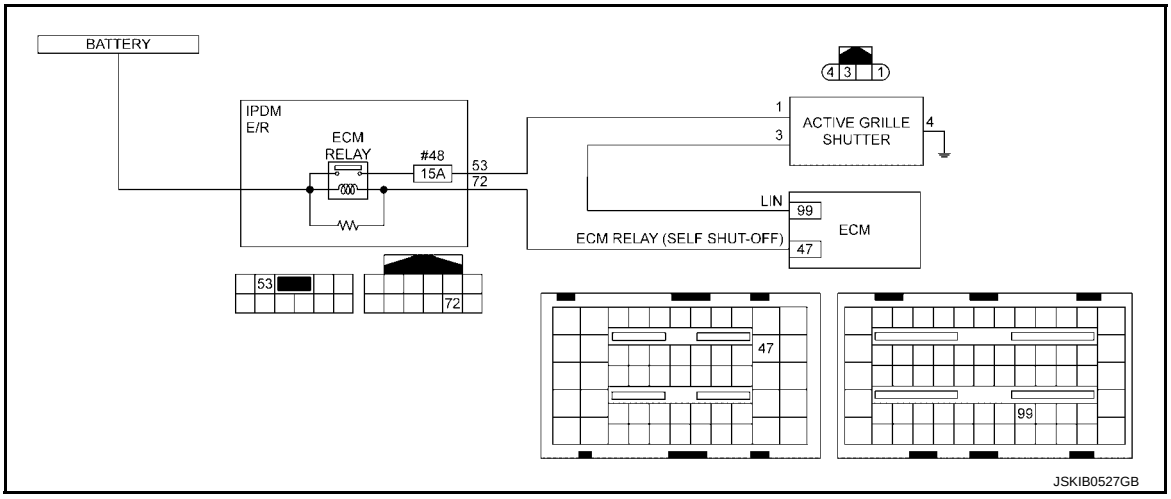
Item	Status
Active grille shutter initial position learning	Complete
Vehicle speed	Approx. 30 – 140 km/h (19 – 88 MPH)
Engine coolant temperature	Approx. less than 95°C (203°F)
Engine oil temperature	Approx. less than 140°C (284°F)
CVT fluid temperature	Approx. less than 135°C (275°F)
Cooling fan	OFF
Refrigerant pressure	0.98 MPa (9.8 bar, 10 kg/cm^2, 142.1 psi) or less
Malfunction of engine coolant temperature sensor system	Not detected
Malfunction of engine oil temperature sensor system	Not detected
Malfunction of vehicle speed sensor system	Not detected
Malfunction of CAN communication system	Not detected

ECM operates active grille shutter to open position when one of the following conditions is met.

Item	Status
Vehicle speed	• 22 km/h (14 MPH) or less • 140 km/h (88 MPH) or more
Engine coolant temperature	Approx. 95°C (203°F) or more
Engine oil temperature	Approx. 140°C (284°F) or more
CVT fluid temperature	Approx. 135°C (275°F) or more
Cooling fan	ON
Refrigerant pressure	1.18 MPa (11.8 bar, 12.04 kg/cm^2, 171.1 psi) or more
Malfunction of engine coolant temperature sensor system	Detected
Malfunction of engine oil temperature sensor system	Detected
Malfunction of vehicle speed sensor system	Detected
Malfunction of CAN communication system	Detected

ACTIVE GRILLE SHUTTER SYSTEM : Circuit Diagram

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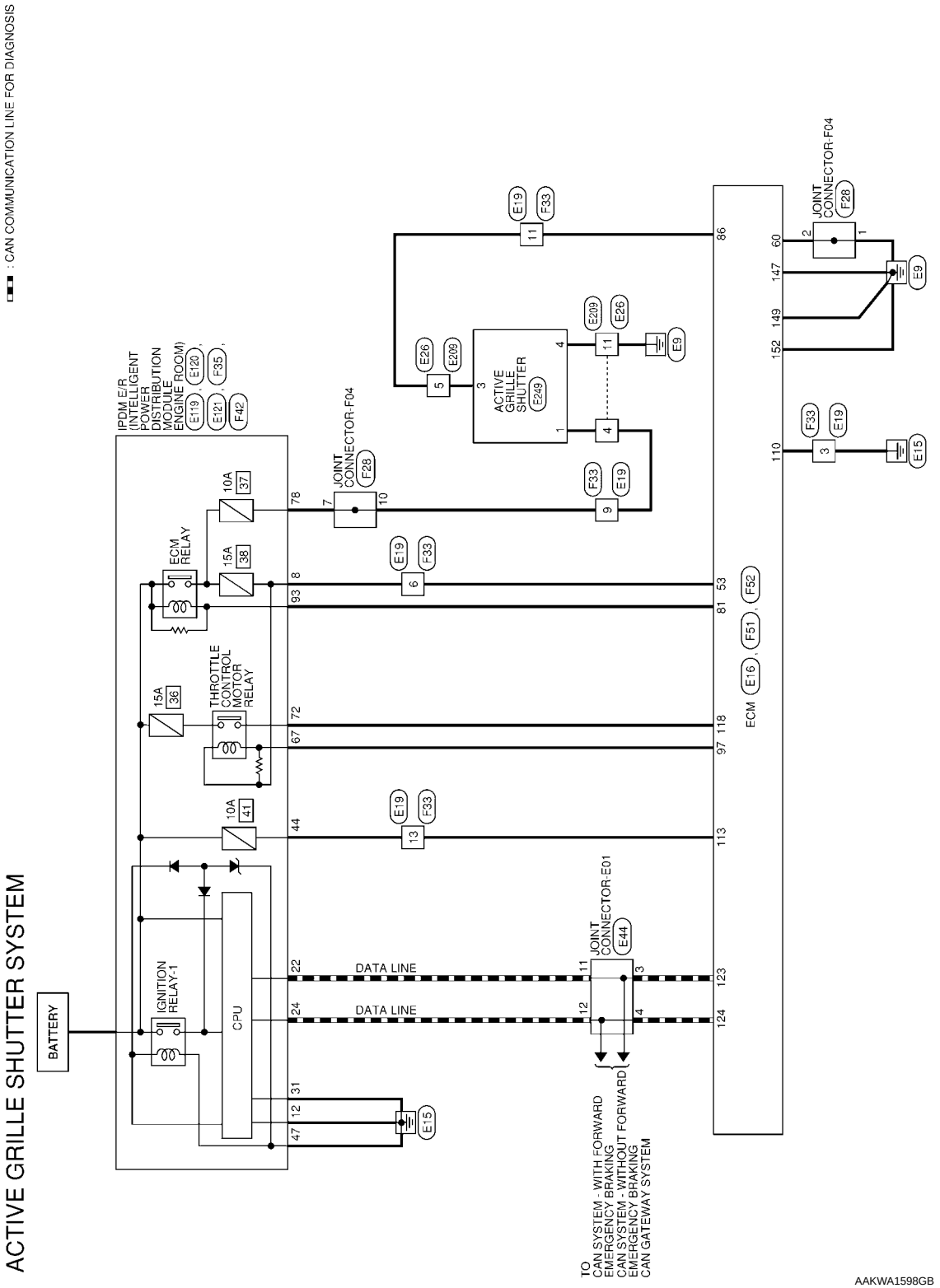


WIRING DIAGRAM

ACTIVE GRILLE SHUTTER

Wiring Diagram

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ACTIVE GRILLE SHUTTER SYSTEM CONNECTORS

Connector No.	E16
Connector Name	ECM
Connector Type	RH24FB-RZ8-L-LH
Connector Color	BLACK

H.S.

121	125	129	133	137	141	145	149
122	126	130	134	138	142	146	150
123	127	131	135	139	143	147	151
124	128	132	136	140	144	148	152

Terminal No.	Color of Wire	Signal Name
121	L	EVAP CONTROL SYSTEM PRESSURE SENSOR
122	–	–
123	P	CAN-L
124	L	CAN-H
125	R	SENSOR POWER SUPPLY
126	–	–
127	–	–
128	BG	FUEL TANK TEMPERATURE SENSOR
129	–	–
130	–	–
131	–	–
132	–	–
133	LG	IGNITION SWITCH
134	–	–
135	–	–
136	–	–
137	G	HEV CAN-L
138	L	HEV CAN-H
139	Y	STOP LAMP SWITCH
140	GR	BRAKE PEDAL POSITION SWITCH
141	Y	EVAP CANISTER VENT CONTROL VALVE
142	–	–
143	–	–
144	–	–
145	G	ECM POWER SUPPLY
146	–	–
147	GR	ECM GROUND
148	B	SENSOR GROUND
149	GR	ECM GROUND
150	–	–
151	–	–
152	GR	ECM GROUND

Connector No.	E19
Connector Name	WIRE TO WIRE
Connector Type	NS16MBR-CS
Connector Color	BROWN

H.S.

1	2	3		4	5	6	7
8	9	10	11	12	13	14	15	16

Terminal No.	Color of Wire	Signal Name
1	B	TO ENGINE CONTROL HARNESS
2	BG	TO ENGINE CONTROL HARNESS
3	B	TO ENGINE CONTROL HARNESS
4	B	TO ENGINE CONTROL HARNESS
5	B	TO ENGINE CONTROL HARNESS
6	B	TO ENGINE CONTROL HARNESS
7	B	TO ENGINE CONTROL HARNESS
8	W	TO ENGINE CONTROL HARNESS
9	BR	TO ENGINE CONTROL HARNESS
10	BR	TO ENGINE CONTROL HARNESS
11	L	TO ENGINE CONTROL HARNESS
12	BR	TO ENGINE CONTROL HARNESS
13	R	TO ENGINE CONTROL HARNESS
14	G	TO ENGINE CONTROL HARNESS
15	W	TO ENGINE CONTROL HARNESS
16	W	TO ENGINE CONTROL HARNESS

Connector No.	E26
Connector Name	WIRE TO WIRE
Connector Type	TH12MW-NH
Connector Color	WHITE

H.S.

1	2	3	4	5	6
7	8	9	10	11	12

Terminal No.	Color of Wire	Signal Name
1	V	TO FRONT END MODULE HARNESS
2	L	TO FRONT END MODULE HARNESS
3	W	TO FRONT END MODULE HARNESS
4	BR	TO FRONT END MODULE HARNESS
5	L	TO FRONT END MODULE HARNESS
6	GR	TO FRONT END MODULE HARNESS
7	SHIELD	TO FRONT END MODULE HARNESS
8	LG	TO FRONT END MODULE HARNESS
9	–	TO FRONT END MODULE HARNESS
10	–	TO FRONT END MODULE HARNESS
11	B	TO FRONT END MODULE HARNESS
12	GR	TO FRONT END MODULE HARNESS

Connector No.	E44
Connector Name	JOINT CONNECTOR-E01
Connector Type	NH24FG-J
Connector Color	GREEN

H.S.

4	3	2	1
8	7	6	5
12	11	10	9
16	15	14	13
20	19	18	17
24	23	22	21

Terminal No.	Color of Wire	Signal Name
1	V	SENSOR GROUND
2	LG	I BRAKE SW2
3	P	CAN-L
4	L	CAN-H
5	B	SENSOR GROUND
6	LG	I BRAKE SW2
7	P	CAN-L
8	L	CAN-H
9	W	SENSOR GROUND
10	Y	STOP LAMP SWITCH
11	P	CAN-L
12	L	CAN-H
13	–	–
14	R	STOP LAMP SWITCH
15	P	CAN-L
16	L	CAN-H
17	BR	EVAP CONTROL SYSTEM PRESSURE SENSOR
18	–	–
19	P	CAN-L
20	L	CAN-H
21	L	EVAP CONTROL SYSTEM PRESSURE SENSOR
22	–	–
23	–	–
24	–	–

Connector No.	E119
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	NS16FGY-CS
Connector Color	GRAY

H.S.

9	8	7	6		5	4	3
18	17	16	15	14	13	12	11	10

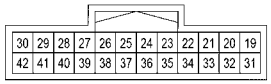
Terminal No.	Color of Wire	Signal Name
3	P	O IGN NOT COLUMN LOCK
4	Y	O LIGHT POSITION REAR LH
5	–	–
6	–	–
7	–	–
8	BR	O ACTUATOR4 CABIN (3FB4)
9	L	LO HORN RLY
10	–	–
11	V	O IGN AIRBAG
12	B	SIGNAL GROUND
13	–	–
14	–	–
15	–	–
16	G	O LIGHT REVERSE LAMP
17	W	O LIGHT POSITION REAR RH
18	–	–

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ACTIVE GRILLE SHUTTER SYSTEM CONNECTORS

Connector No.	E120
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH24FGY-NH
Connector Color	GRAY

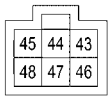
H.S.



Terminal No.	Color of Wire	Signal Name
19	LG	O IGN ECM
20	–	–
21	–	–
22	P	CAN-L
23	–	–
24	L	CAN-H
25	–	–
26	–	–
27	SB	CABIN MOTOR 5
28	R	CABIN MOTOR 6
29	LG	CABIN MOTOR 7
30	Y	CABIN MOTOR 8
31	B	2ND SIGNAL GROUND
32	GR	LI PUSH SW
33	BR	I AUTO STOP WIPER
34	–	–
35	–	–
36	–	–
37	–	–
38	–	–
39	L	HEV CAN-H
40	G	HEV CAN-L
41	W	CABIN MOTOR 3
42	R	CABIN MOTOR 4

Connector No.	E121
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	243405408R
Connector Color	RED

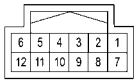
H.S.



Terminal No.	Color of Wire	Signal Name
43	–	–
44	R	O BAT ABS VALVE
45	V	O FR WIPER HI
46	W	O FUEL PUMP
47	B	POWER GROUND
48	Y	O FR WIPER LO

Connector No.	E209
Connector Name	WIRE TO WIRE
Connector Type	TH12FW-NH
Connector Color	WHITE

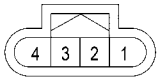
H.S.



Terminal No.	Color of Wire	Signal Name
1	V	TO ENGINE ROOM HARNESS
2	L	TO ENGINE ROOM HARNESS
3	W	TO ENGINE ROOM HARNESS
4	BG	TO ENGINE ROOM HARNESS
5	L	TO ENGINE ROOM HARNESS
6	GR	TO ENGINE ROOM HARNESS
7	SHIELD	TO ENGINE ROOM HARNESS
8	LG	TO ENGINE ROOM HARNESS
9	–	TO ENGINE ROOM HARNESS
10	–	TO ENGINE ROOM HARNESS
11	B	TO ENGINE ROOM HARNESS
12	GR	TO ENGINE ROOM HARNESS

Connector No.	E249
Connector Name	ACTIVE GRILLE SHUTTER
Connector Type	RH04FB
Connector Color	BLACK

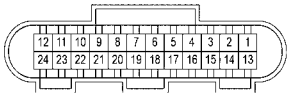
H.S.



Terminal No.	Color of Wire	Signal Name
1	BG	IGNITION
2	–	–
3	L	ENGINE COMMUNICATION LINE
4	B	GROUND

Connector No.	F28
Connector Name	JOINT CONNECTOR-F04
Connector Type	SAA24FB-J
Connector Color	BLACK

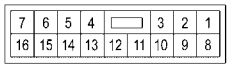
H.S.



Terminal No.	Color of Wire	Signal Name
1	B	GROUND
2	B	GROUND
3	SHIELD	SHIELD
4	SHIELD	SHIELD
5	SHIELD	SHIELD
6	–	–
7	BR	IGNITION
8	L	IGNITION
9	Y	IGNITION
10	BR	IGNITION
11	BR	IGNITION
12	BR	IGNITION
13	L	SENSOR POWER SUPPLY
14	L	SENSOR POWER SUPPLY
15	L	SENSOR POWER SUPPLY
16	R	SENSOR GROUND
17	R	SENSOR GROUND
18	R	SENSOR GROUND
19	B	SENSOR GROUND
20	B	SENSOR GROUND
21	–	–
22	B	RING POSITION SENSOR
23	BR	RING POSITION SENSOR
24	–	–

Connector No.	F33
Connector Name	WIRE TO WIRE
Connector Type	NS16FBR-CS
Connector Color	BROWN

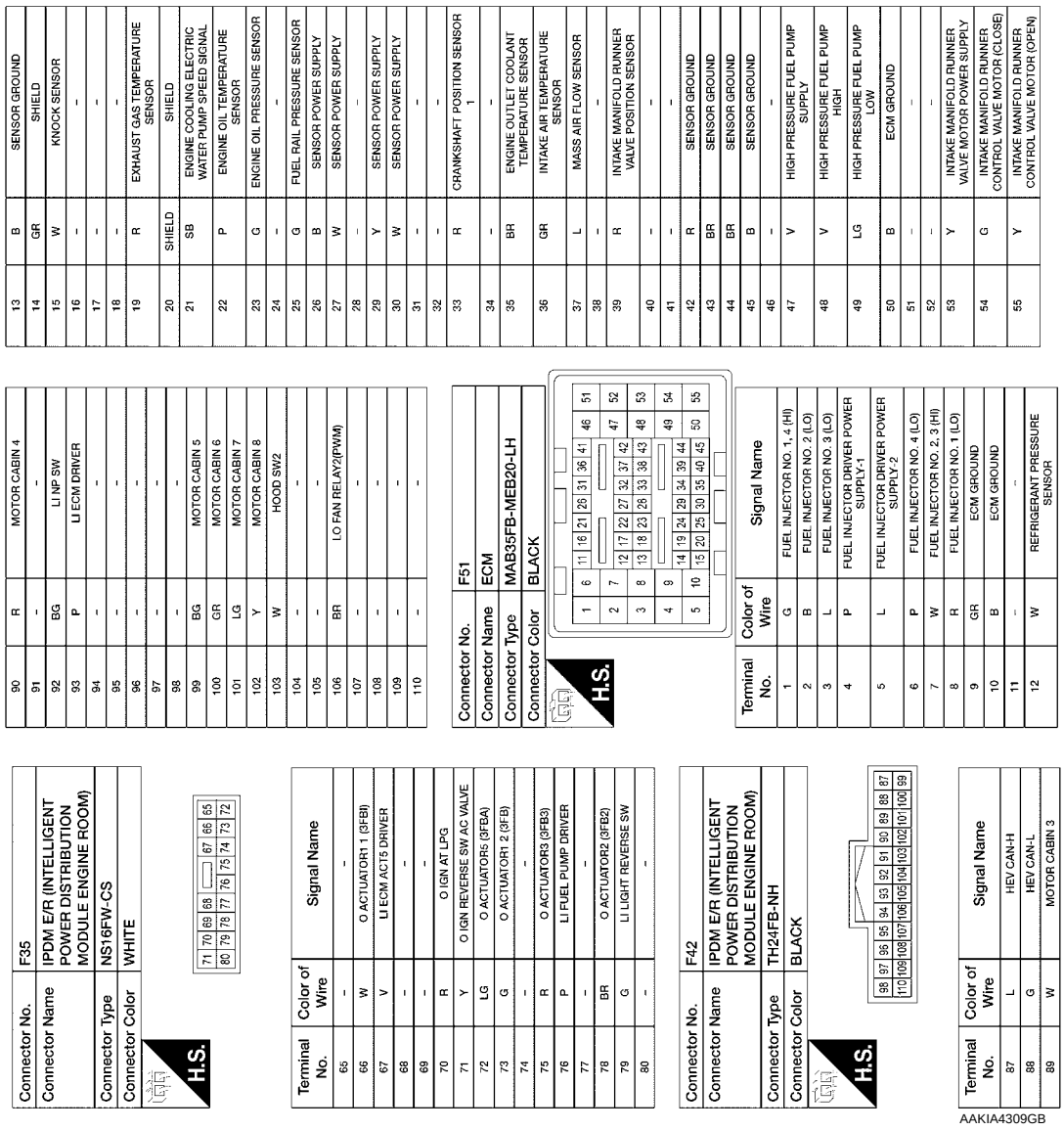
H.S.



Terminal No.	Color of Wire	Signal Name
1	R	TO ENGINE ROOM HARNESS
2	BG	TO ENGINE ROOM HARNESS
3	B	TO ENGINE ROOM HARNESS
4	B	TO ENGINE ROOM HARNESS
5	B	TO ENGINE ROOM HARNESS
6	GR	TO ENGINE ROOM HARNESS
7	B	TO ENGINE ROOM HARNESS
8	W	TO ENGINE ROOM HARNESS
9	BR	TO ENGINE ROOM HARNESS
10	BR	TO ENGINE ROOM HARNESS
11	L	TO ENGINE ROOM HARNESS
12	Y	TO ENGINE ROOM HARNESS
13	R	TO ENGINE ROOM HARNESS
14	G	TO ENGINE ROOM HARNESS
15	W	TO ENGINE ROOM HARNESS
16	W	TO ENGINE ROOM HARNESS

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ACTIVE GRILLE SHUTTER SYSTEM CONNECTORS

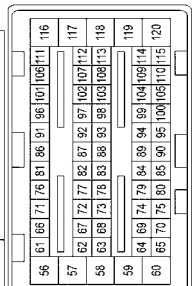


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ACTIVE GRILLE SHUTTER SYSTEM CONNECTORS

Connector No.	F52
Connector Name	ECM
Connector Type	MAB55FB-MEB10-LH
Connector Color	BLACK

H.S.



Terminal No.	Color of Wire	Signal Name
56	–	–
57	–	–
58	–	–
59	–	–
60	B	ECM GROUND
61	–	–
62	BR	CRANKSHAFT POSITION SENSOR 2
63	W	SENSOR GROUND
64	SHIELD	SHIELD
65	–	–
66	L	SENSOR POWER SUPPLY
67	B	CAMSHAFT POSITION SENSOR
68	–	–
69	BR	EXHAUST VALVE TIMING CONTROL POSITION SENSOR
70	–	–
71	R	SENSOR GROUND
72	B	SENSOR GROUND
73	R	SENSOR POWER SUPPLY
74	W	AIR FUEL RATIO (A/F) SENSOR 1
75	–	–
76	–	–
77	BR	ENGINE INLET COOLANT TEMPERATURE SENSOR
78	B	SENSOR GROUND
79	B	AIR FUEL RATIO (A/F) SENSOR 1
80	W	THROTTLE POSITION SENSOR 2
81	P	ECM RELAY (SELF SHUT-OFF)
82	P	FUEL PUMP RELAY
83	R	SENSOR POWER SUPPLY
84	L	HEATED OXYGEN SENSOR 2
85	B	SENSOR GROUND
86	L	ENGINE COMMUNICATION LINE
87	–	–
88	G	THROTTLE POSITION SENSOR 1
89	–	–
90	–	–
91	–	–
92	–	–
93	–	–
94	GR	ENGINE COOLING ELECTRIC WATER PUMP RELAY
95	LG	IGNITION SIGNAL NO. 2
96	P	IGNITION SIGNAL NO. 1
97	V	THROTTLE CONTROL MOTOR RELAY
98	–	–
99	–	–
100	–	–
101	SB	IGNITION SIGNAL NO. 4
102	–	–
103	–	–
104	Y	IGNITION SIGNAL NO. 3
105	–	–
106	–	–
107	–	–
108	–	–
109	Y	ENGINE COOLING ELECTRIC WATER PUMP DRIVE SIGNAL
110	B	ECM GROUND
111	G	INTAKE VALVE TIMING CONTROL SOLENOID VALVE
112	GR	EXHAUST VALVE TIMING CONTROL SOLENOID VALVE
113	R	POWER SUPPLY FOR ECM (BACK-UP)
114	P	INTAKE VALVE TIMING INTERMEDIATE LOCK CONTROL SOLENOID VALVE
115	L	EVAP CANISTER PURGE VOLUME CONTROL SOLENOID VALVE
116	Y	AIR FUEL RATIO (A/F) SENSOR 1 HEATER
117	G	HEATED OXYGEN SENSOR 2 HEATER
118	LG	THROTTLE CONTROL MOTOR POWER SUPPLY
119	P	THROTTLE CONTROL MOTOR (OPEN)
120	L	THROTTLE CONTROL MOTOR (CLOSE)

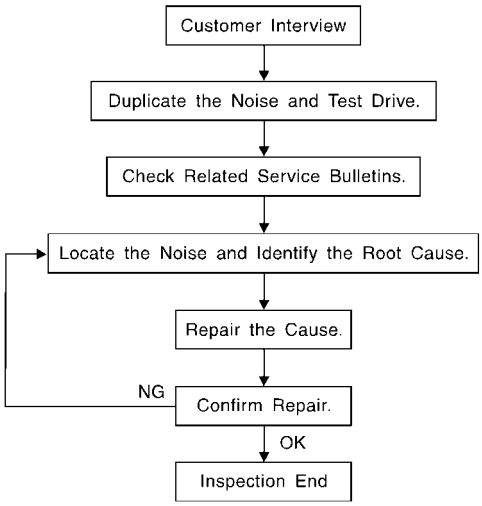
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SYMPTOM DIAGNOSIS

SQUEAK AND RATTLE TROUBLE DIAGNOSES

Work Flow

INFOID:0000000014625640



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-23, "Diagnostic Worksheet". This information is necessary to duplicate the conditions that exist when the noise occurs.

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

DUPLICATE THE NOISE AND TEST DRIVE

If possible, drive the vehicle with the customer until the noise is duplicated. Note any additional information on the Diagnostic Worksheet regarding the conditions or location of the noise. This information can be used to duplicate the same conditions when you confirm the repair.
If the noise can be duplicated easily during the test drive, to help identify the source of the noise, try to duplicate the noise with the vehicle stopped by doing one or all of the following:
1) Close a door.
2) Tap or push/pull around the area where the noise appears to be coming from.
3) Rev the engine.
4) Use a floor jack to recreate vehicle “twist”.
5) At idle, apply engine load (electrical load, half-clutch on M/T model, drive position on CVT and A/T models).
6) Raise the vehicle on a hoist and hit a tire with a rubber hammer.

- Drive the vehicle and attempt to duplicate the conditions the customer states exist when the noise occurs.
- If it is difficult to duplicate the noise, drive the vehicle slowly on an undulating or rough road to stress the vehicle body.

CHECK RELATED SERVICE BULLETINS

After verifying the customer concern or symptom, check ASIST for Technical Service Bulletins (TSBs) related to that concern or symptom.
If a TSB relates to the symptom, follow the procedure to repair the noise.

LOCATE THE NOISE AND IDENTIFY THE ROOT CAUSE

1. Narrow down the noise to a general area. To help pinpoint the source of the noise, use a listening tool (Chassis Ear: J-39570, Engine Ear: J-39565 and mechanic's stethoscope).
2. Narrow down the noise to a more specific area and identify the cause of the noise by:
   - removing the components in the area that you suspect the noise is coming from.
     Do not use too much force when removing clips and fasteners, otherwise clips and fasteners can be broken or lost during the repair, resulting in the creation of new noise.
   - tapping or pushing/pulling the component that you suspect is causing the noise.
     Do not tap or push/pull the component with excessive force, otherwise the noise will be eliminated only temporarily.
   - feeling for a vibration with your hand by touching the component(s) that you suspect is (are) causing the noise.
   - placing a piece of paper between components that you suspect are causing the noise.
   - looking for loose components and contact marks.
     Refer to EXT-20, "Generic Squeak and Rattle Troubleshooting".

REPAIR THE CAUSE

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

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

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

- Always check with the Parts Department for the latest parts information.
- The materials contained in the NISSAN Squeak and Rattle Kit (J-50397) are listed on the inside cover of the kit; and can each be ordered separately as needed.
- The following materials not found in the kit can also be used to repair squeaks and rattles.

- SILICONE GREASE: Use instead of UHMW tape that will be visible or does not fit. The silicone grease will only last a few months.
- SILICONE SPRAY: Use when grease cannot be applied.
- DUCT TAPE: Use to eliminate movement.

CONFIRM THE REPAIR

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

Generic Squeak and Rattle Troubleshooting

INFOID:0000000014625641

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

INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

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

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

CAUTION:

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

CENTER CONSOLE

Components to pay attention to include:

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

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

DOORS

Pay attention to the:

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

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

TRUNK

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

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

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

SUNROOF/HEADLINING

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

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

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

OVERHEAD CONSOLE (FRONT AND REAR)

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

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:

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

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

UNDERHOOD

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

Causes of transmitted underhood noise include:

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

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.

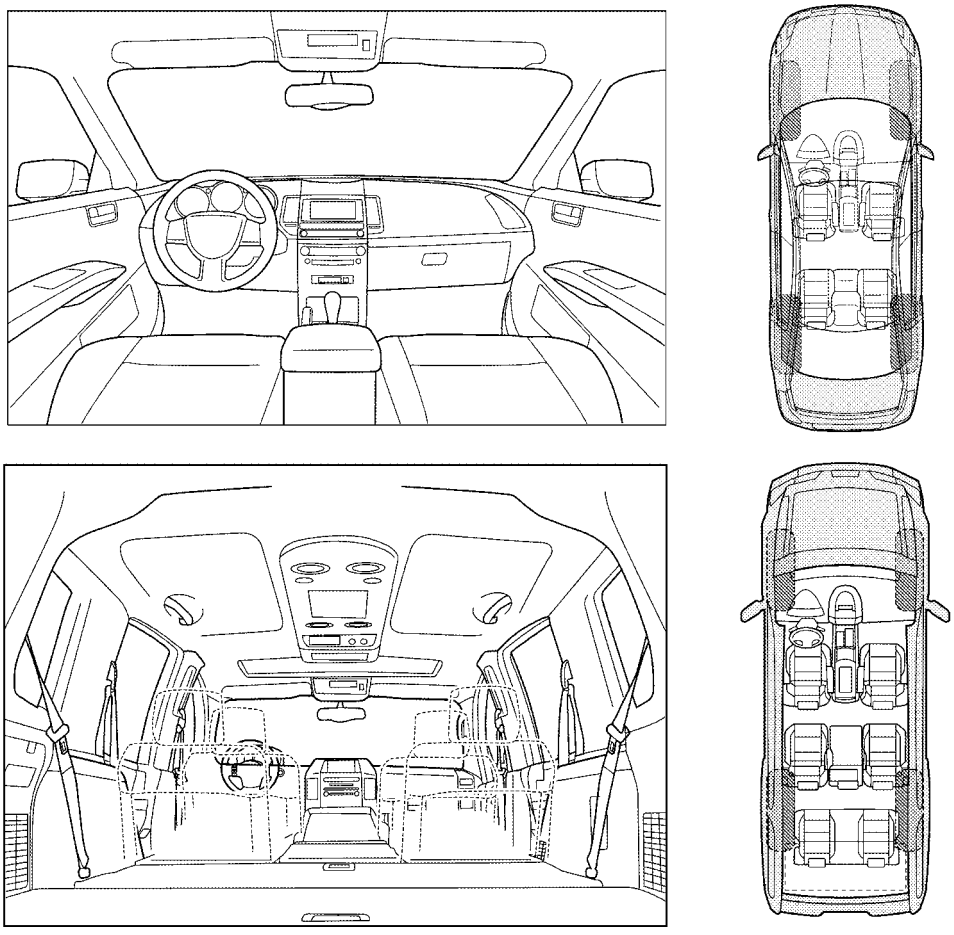
Diagnostic Worksheet

INFOID:0000000014625642

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.

LAIA0072E

SQUEAK & RATTLE DIAGNOSTIC WORKSHEET - page 2

Briefly describe the location where the noise occurs:

_____

_____

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

- ☐ Anytime
- ☐ 1st time in the morning
- ☐ Only when it is cold outside
- ☐ Only when it is hot outside
- ☐ After sitting out in the rain
- ☐ When it is raining or wet
- ☐ Dry or dusty conditions
- ☐ Other:

III. WHEN DRIVING:

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

IV. WHAT TYPE OF NOISE

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

TO BE COMPLETED BY DEALERSHIP PERSONNEL

Test Drive Notes:

_____

_____

_____

	YES	NO	Initials of person performing
Vehicle test driven with customer	☐	☐	_____
- Noise verified on test drive	☐	☐	_____
- Noise source located and repaired	☐	☐	_____
- Follow up test drive performed to confirm repair	☐	☐	_____

VIN: _____ Customer Name _____

W.O.# _____ Date: _____

This form must be attached to Work Order

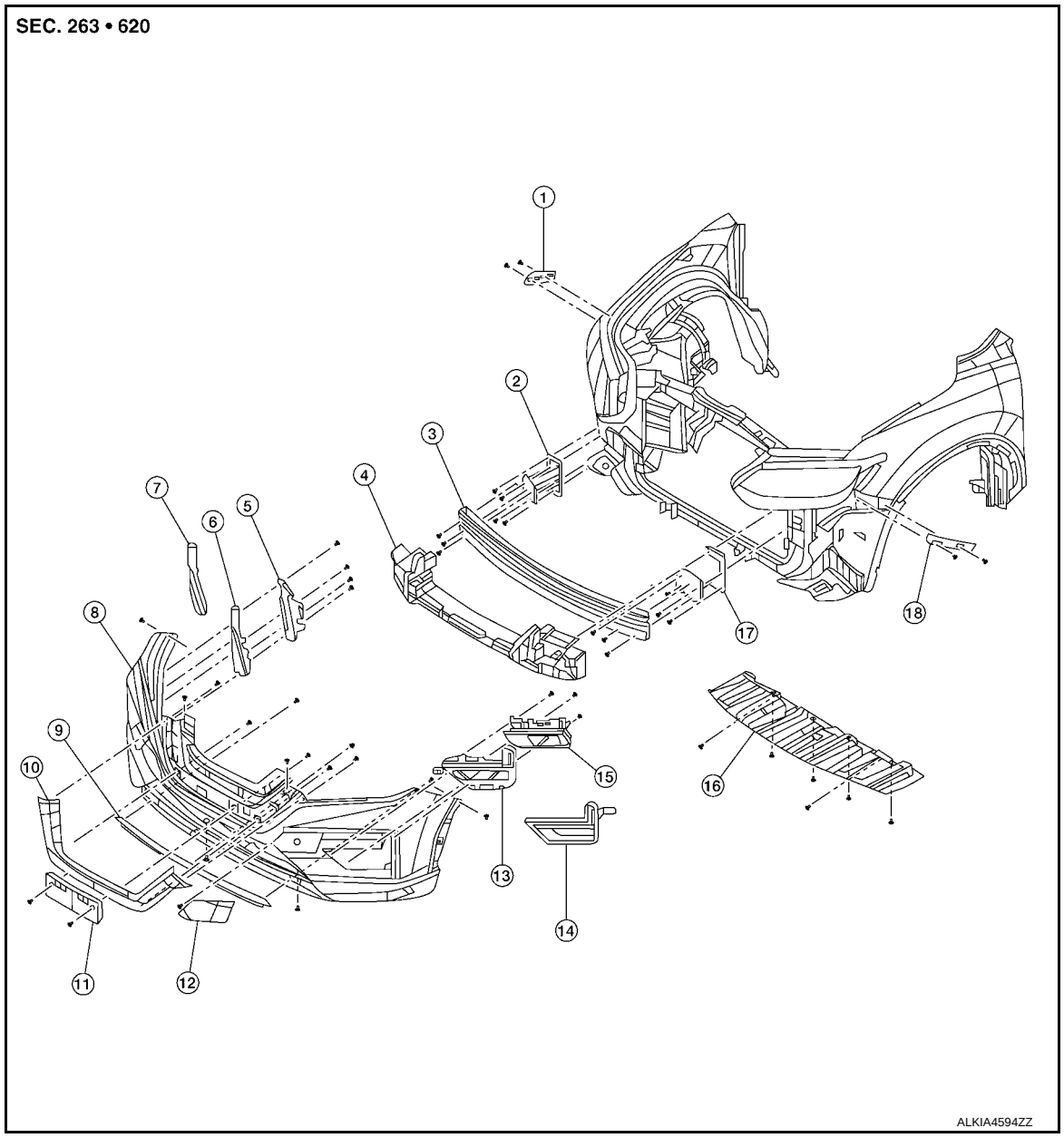
LAIA0071E

REMOVAL AND INSTALLATION

FRONT BUMPER

Exploded View

INFOID:0000000014625643



1. Front bumper fascia side bracket (RH)
2. Front bumper reinforcement support (RH)
3. Front bumper reinforcement
4. Front energy absorber
5. Front fog lamp (RH) (if equipped)
6. Front fog lamp finisher (RH) (if equipped)
7. Front bumper fascia finisher (RH) (if equipped)
8. Front bumper
9. Front bumper fascia molding
10. Grill cover
11. Front license plate bracket
12. Tow cover
13. Front fog lamp finisher (LH) (if equipped)
14. Front bumper fascia finisher (LH) (if equipped)
15. Front fog lamp (LH) (if equipped)
16. Front under cover
17. Front bumper reinforcement support (LH)
18. Front bumper fascia side bracket (LH)

Removal and Installation

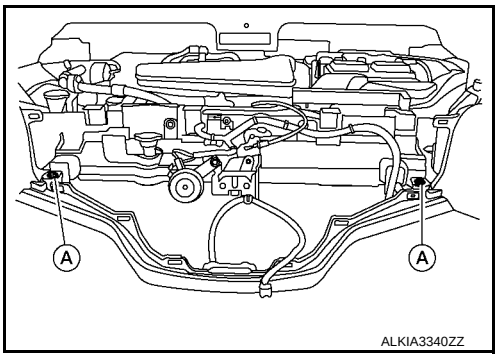
INFOID:0000000014625644

REMOVAL

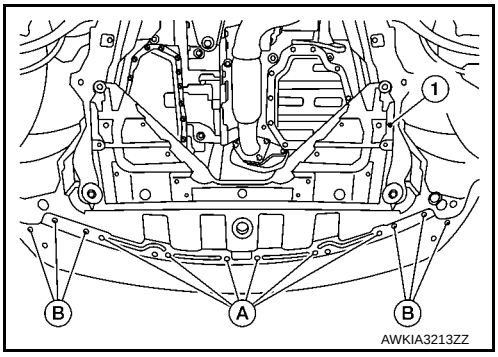
CAUTION:

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

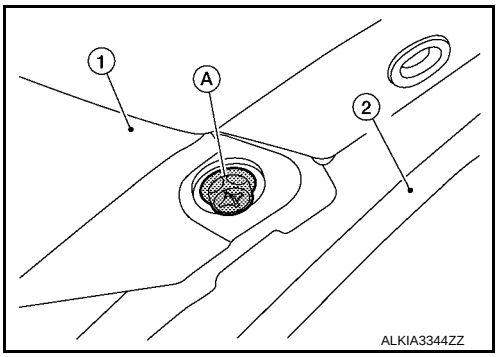
1. Remove front grille. Refer to EXT-33, "Removal and Installation".
2. Remove front bumper fascia clips (A).



3. Remove front bumper fascia clips (A) and screws (B).
   (1): Engine under cover

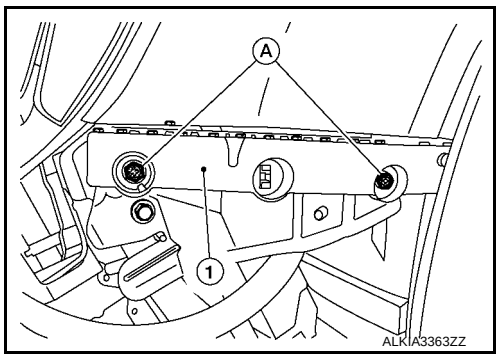


4. Remove front air spoiler. Refer to EXT-42, "FRONT OVER FENDER : Exploded View".
5. Remove engine side cover. Refer to EXT-40, "FENDER PROTECTOR : Exploded View".
6. Partially remove front fender protectors (LH/RH). Refer to EXT-40, "FENDER PROTECTOR : Exploded View".
7. Partially remove front over fender (LH/RH). Refer to EXT-42, "FRONT OVER FENDER : Exploded View".
8. Remove front bumper fascia screws (A) (LH/RH).
   (1): Front bumper fascia
   (2): Front over fender

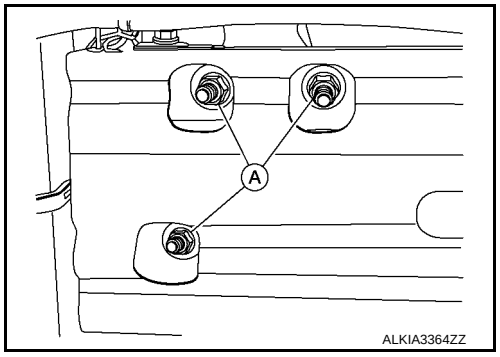


9. Disconnect fog lamp harness connectors (LH/RH) (if equipped).
10. Release front bumper fascia pawls from front bumper fascia side brackets (LH/RH) and remove.
    CAUTION:
    When removing front bumper fascia, two people are required to avoid damaging.

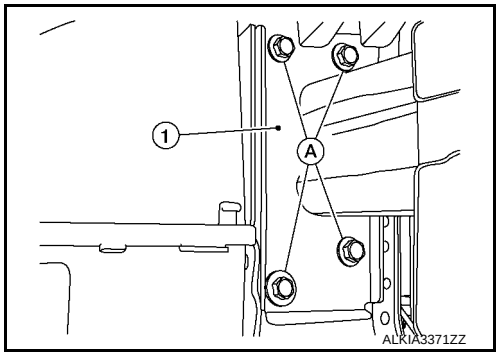
11. Remove front bumper fascia bolts (A) and the front bumper side bracket (1) (LH/RH) (if necessary).



12. Remove Intelligent Key warning buzzer. Refer to DLK-336, "Removal and Installation".
13. Remove the front energy absorber.
14. Release harness connector clips from bumper reinforcement, then remove bumper reinforcement nuts (A) and bumper reinforcement (1) (LH/RH).



15. Remove front bumper reinforcement support bolts (A) and front bumper reinforcement supports (1) (LH/RH).



16. Remove the following parts (if necessary) after removing front bumper fascia assembly.
    - Front fog lamps (if equipped). Refer to EXL-118, "Removal and Installation".
    - Front fog lamp finishers (if equipped).
    - Front fascia grille.
    - Front license plate bracket.
    - Tow cover.
    - Front bumper chrome molding.

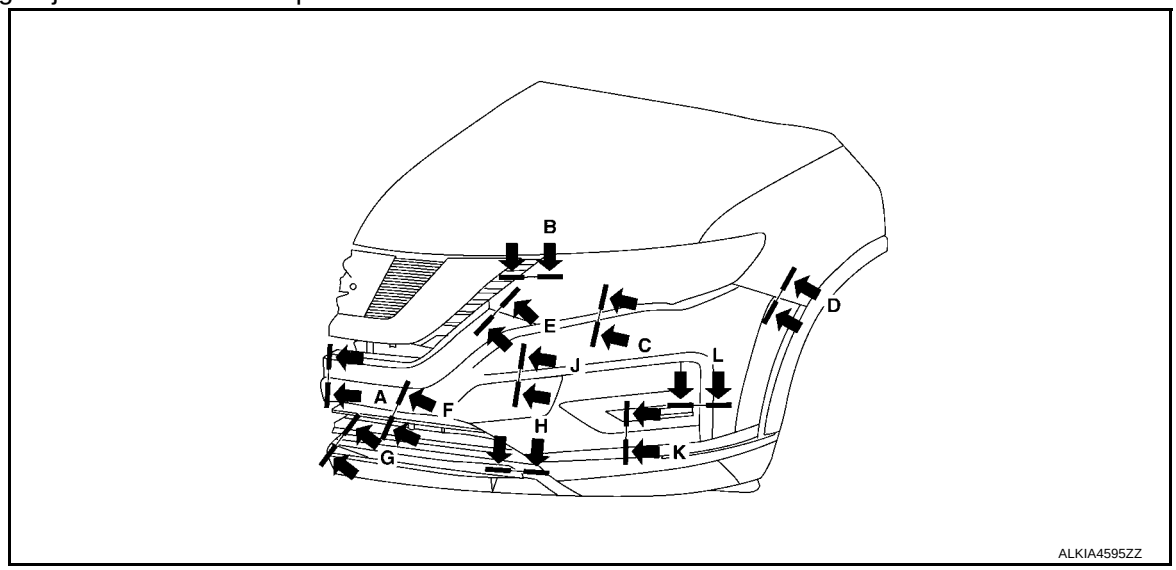
INSTALLATION

Installation in the reverse order of removal.

NOTE:

- The following table shows the specified values for checking normal installation status.

- Fitting adjustment cannot be performed.



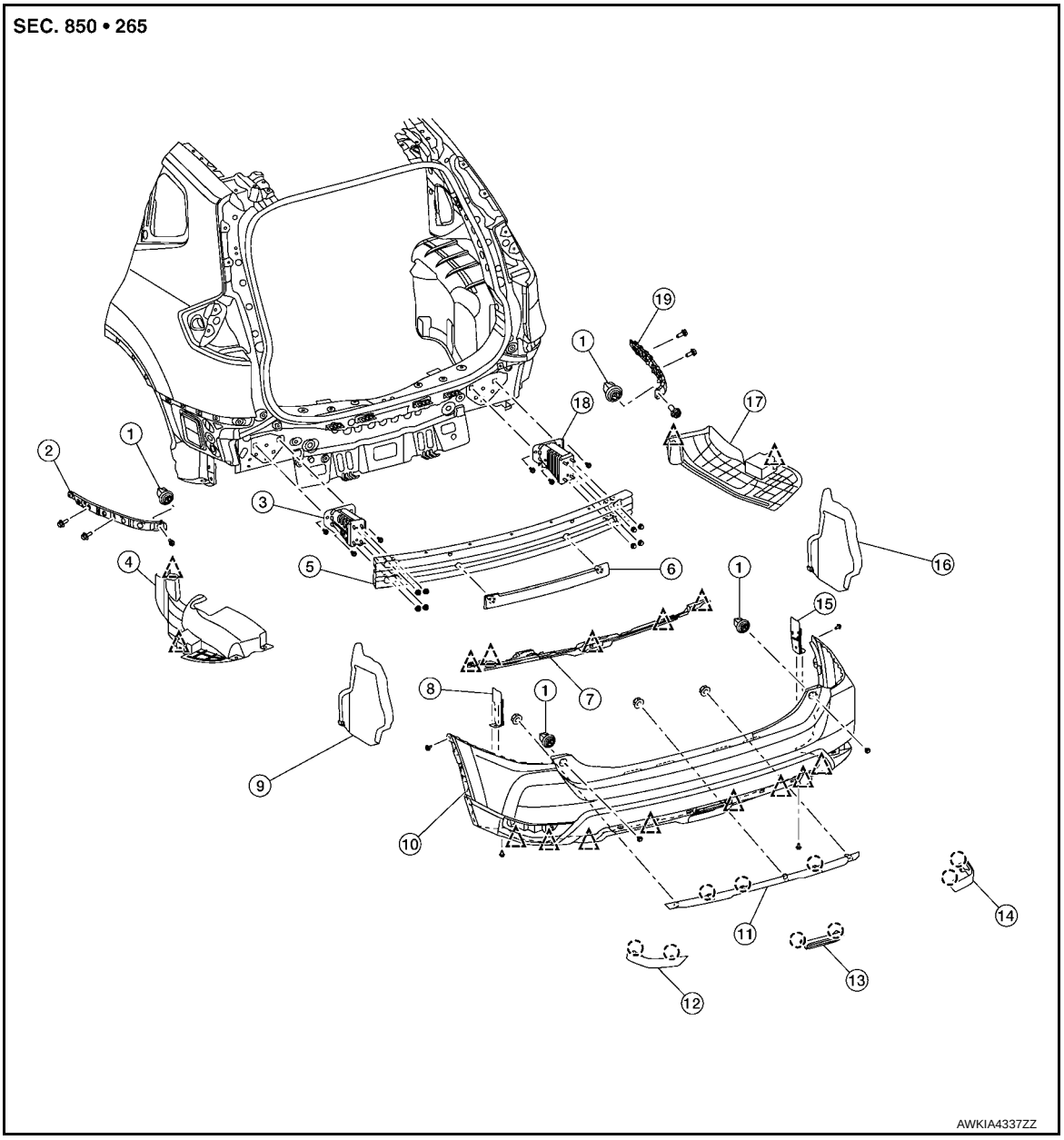
mm (in)

Section	Measurement	Minimum	Target Value	Maximum
A-A	Clearance	0.0 (0.0)	1.0 (0.04)	2.0 (0.08)
A-A	Surface height	0.5 (0.02)	1.5 (0.06)	2.5 (0.10)
B-B	Clearance	1.3 (0.05)	1.3 (0.05)	1.3 (0.05)
C-C	Clearance	0.1 (0.004)	1.5 (0.06)	2.9 (0.11)
D-D	Clearance	0.3 (0.01)	0.3 (0.01)	1.3 (0.05)
D-D	Surface height	-0.3 (-0.01)	0.7 (0.03)	1.7 (0.07)
E-E	Clearance	2.5 (0.10)	3.5 (0.14)	4.5 (0.18)
E-E	Surface height	0.0 (0.0)	0.5 (0.03)	1.0 (0.04)
F-F	Clearance	0.0 (0.0)	1.0 (0.04)	2.0 (0.08)
G-G	Clearance	0.0 (0.0)	1.0 (0.04)	2.0 (0.08)
G-G	Surface height	0.0 (0.0)	1.0 (0.04)	2.0 (0.08)
H-H	Clearance	0.0 (0.0)	2.0 (0.08)	3.5 (0.14)
H-H	Surface height	0.5 (0.02)	1.0 (0.04)	2.0 (0.08)
J-J	Clearance	0.5 (0.02)	0.5 (0.02)	1.0 (0.04)
J-J	Surface height	0.5 (0.02)	0.5 (0.02)	1.0 (0.04)

REAR BUMPER

Exploded View

INFOID:0000000014625645



1. Grommet	2. Rear bumper fascia side bracket (LH)	3. Rear bumper reinforcement support (LH)
4. Rear bumper fascia undercover (LH)	5. Rear bumper reinforcement	6. Rear energy absorber
7. Motion activated back door bracket	8. Rear bumper fascia	9. Closing plate (LH)
10. Rear bumper fascia	11. Rear bumper fascia reflector (LH)	12. Rear bumper finisher
13. Rear bumper fascia reflector (RH)	14. Rear bumper bracket (RH)	15. Closing plate (RH)
16. Rear bumper fascia undercover (RH)	17. Rear bumper bracket (RH)	18. Rear bumper fascia side bracket (RH)

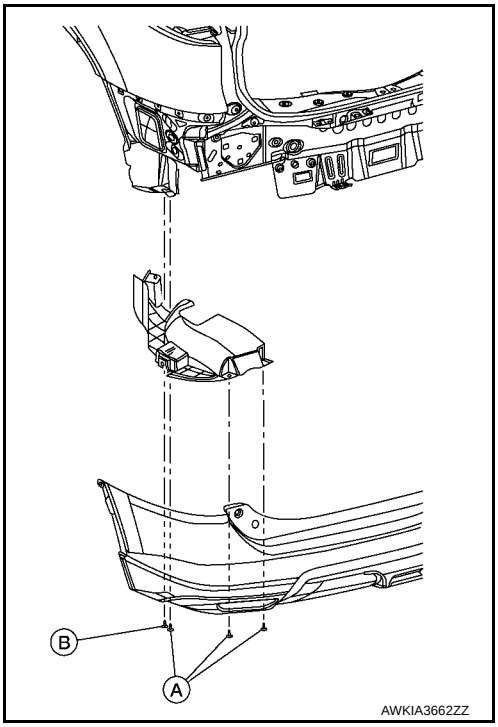
Removal and Installation

INFOID:0000000014625646

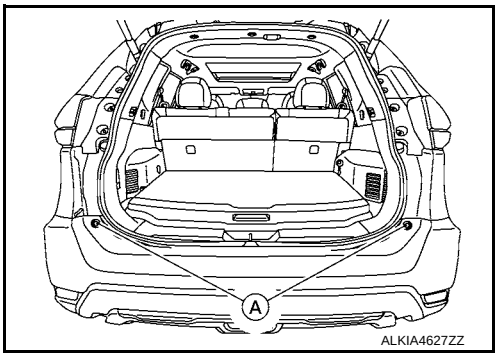
REMOVAL

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

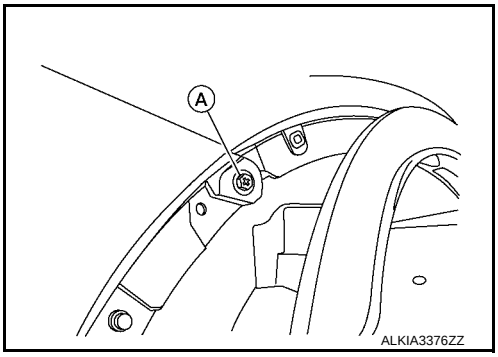
1. Remove rear mudguard (LH/RH) (if equipped). Refer to EXT-46, "Removal and Installation".
2. Partially remove rear over fender molding (LH/RH). Refer to EXT-44, "REAR OVER FENDER : Exploded View".
3. Partially remove rear wheel house protector (LH/RH). Refer to EXT-41, "REAR WHEEL HOUSE PROTECTOR : Exploded View".
4. Remove clips (A) and screw (B) from rear bumper fascia undercover (LH/RH).



5. Remove rear bumper fascia upper screws (A).

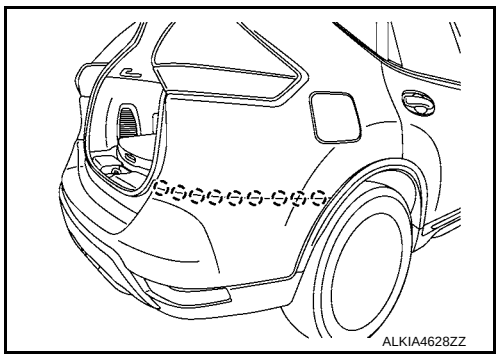


6. Remove rear bumper fascia screw (A) (LH/RH).

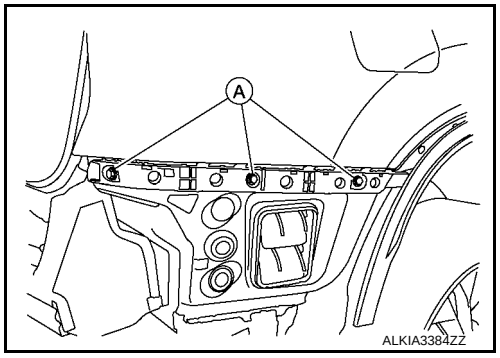


7. Disconnect harness connector from rear sonar sensors (if equipped).

8. Release pawls (LH/RH) using a suitable tool and remove rear bumper fascia.
   ◌: Pawl
   CAUTION:
   When removing rear bumper fascia, two people are required to avoid damaging.



9. Remove energy absorber.
10. Remove bolts (A) and remove rear bumper side bracket (LH/RH) (if necessary).

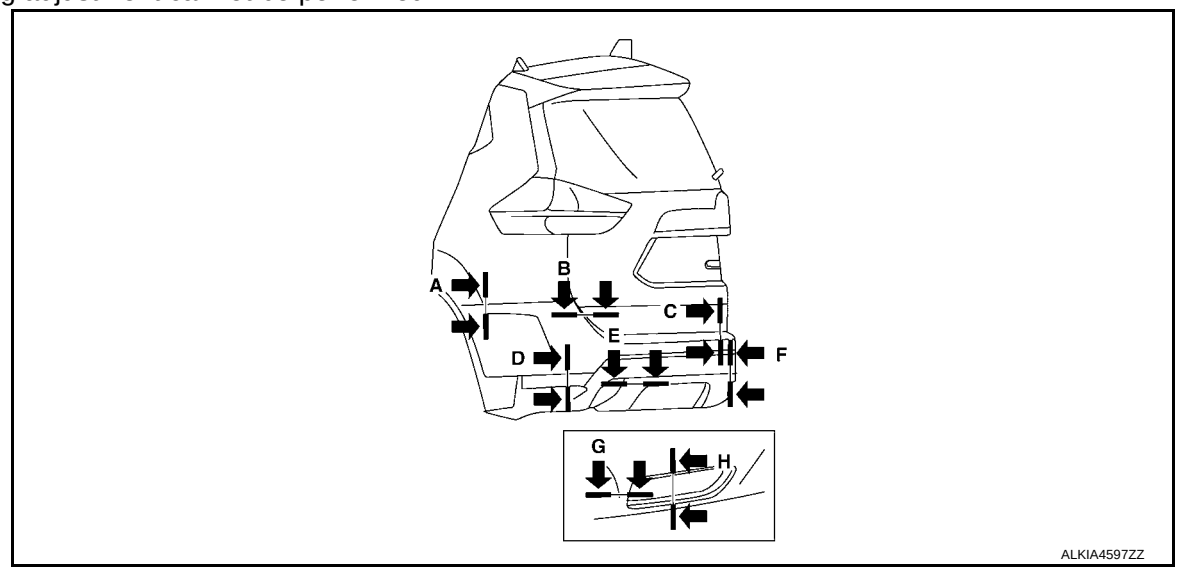


11. Remove rear bumper reinforcement nuts (LH/RH), then remove rear bumper reinforcement (if necessary).
12. Remove bumper stay bolts, then remove bumper stay (if necessary).
13. Remove rear bumper reinforce support bolts and rear bumper reinforcement (LH/RH).

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.



Unit: mm (in)

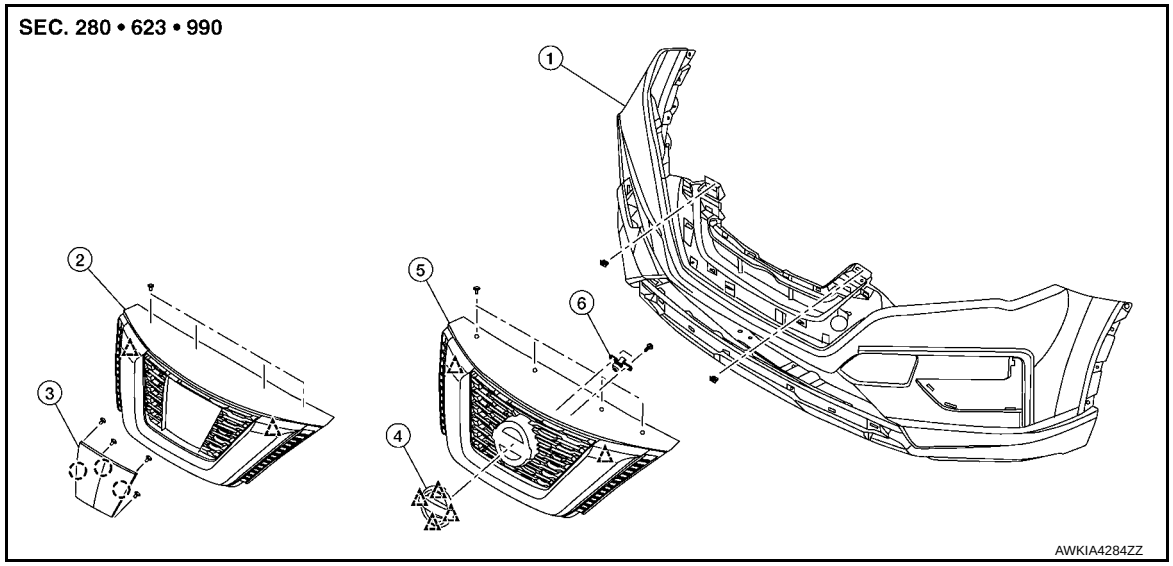
Section	Measurement	Minimum	Target Value	Maximum
A-A	Clearance	0.1 (0.004)	0.3 (0.01)	1.0 (0.04)
A-A	Surface height	-1.7 (-0.07)	-0.7 (-0.03)	0.3 (0.01)
B-B	Clearance	2.9 (0.11)	5.0 (0.20)	7.1 (0.28)

Section	Measurement	Minimum	Target Value	Maximum
B-B	Surface height	-2.4(-0.09)	-0.3 (-0.01)	1.8 (0.07)
C-C	Clearance	5.5 (0.22)	7.5 (0.30)	9.5 (0.37)
D-D	Clearance	0.5 (0.02)	1.5 (0.06)	2.5 (0.10)
E-E	Clearance	0.5 (0.02)	2.0 (0.08)	3.5 (0.14)
E-E	Surface height	-1.0 (-0.04)	0.0 (0.00)	1.0 (0.04)
F-F	Clearance	0.0 (0.0)	1.0 (0.04)	2.0 (0.08)
G-G	Clearance	0.4 (0.02)	1.0 (0.04)	2.4 (0.09)
H-H	Clearance (Upper)	1.0 (0.04)	2.0 (0.08)	3.0 (0.12)
H-H	Clearance (Lower)	0.4 (0.02)	1.0 (0.04)	2.4 (0.09)

FRONT GRILLE

Exploded View

INFOID:0000000014625647



1. Front bumper fascia
2. Front grille (with ICC sensor)
3. Front emblem (with ICC sensor)
4. Front emblem
5. Front grille
6. Front camera (if equipped)

◌ Pawl

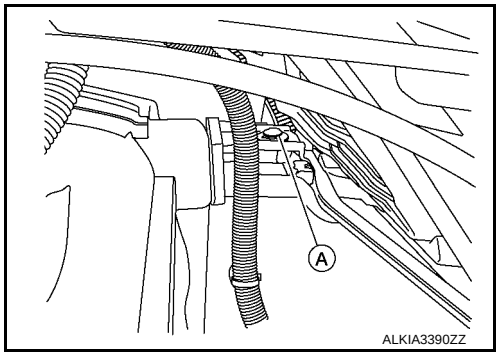
△ Clip

Removal and Installation

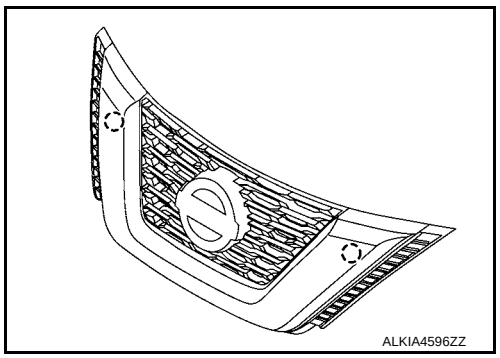
INFOID:0000000014625648

REMOVAL

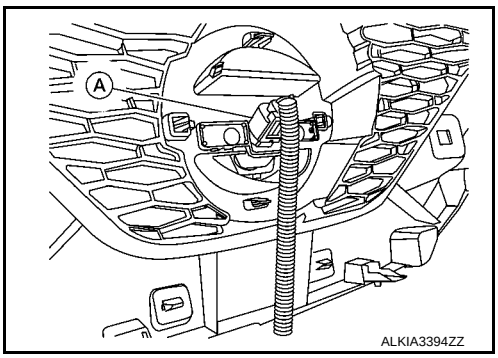
1. Remove the four front grille upper clips (A).



2. Release pawls, then remove front grille.
◌: Pawl



3. Disconnect harness connector (A) from front camera (if equipped).



4. Remove the following parts after removing front grille (if necessary).
   - Front camera (if equipped). Refer to AV-442, "Removal and Installation".
   - Front emblem.

INSTALLATION

Installation is in the reverse order of removal.

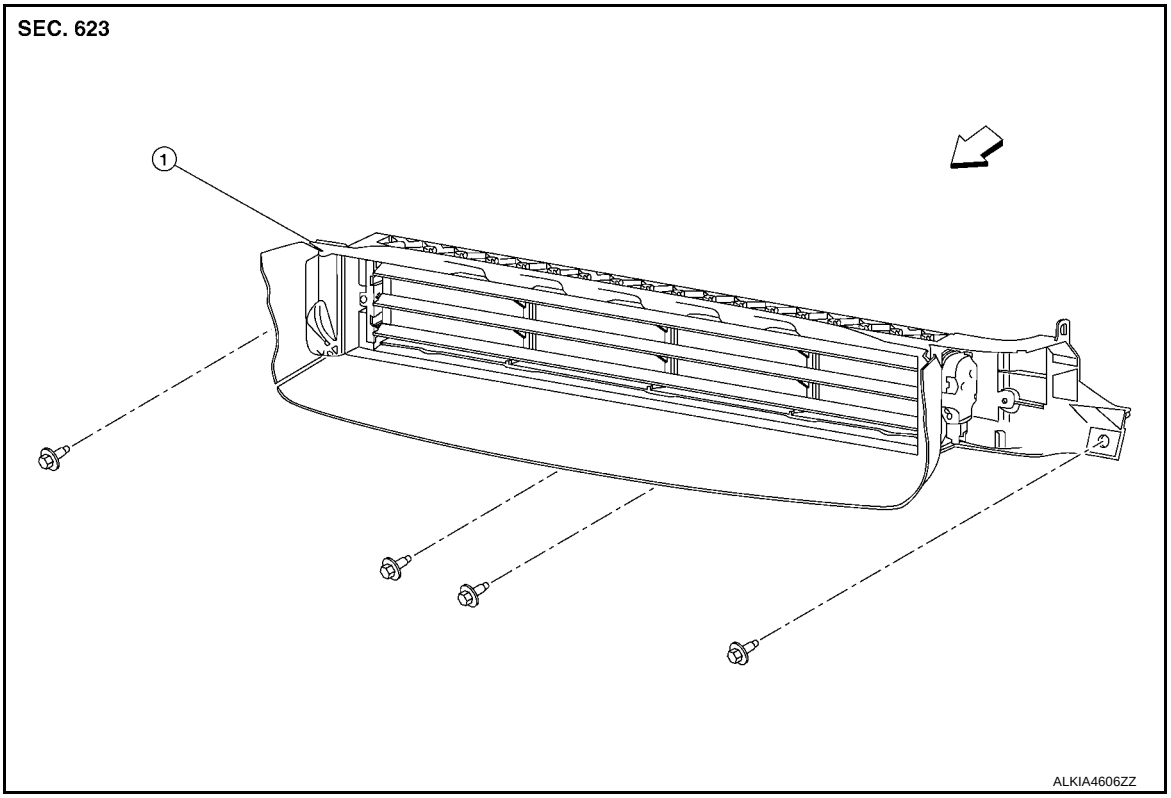
NOTE:

Calibration must be performed after removing/replacing the front camera (if equipped). Refer to AV-406, "Description".

ACTIVE GRILLE SHUTTER

Exploded View

INFOID:0000000014904406



1. Active grille shutter ⇦ Front

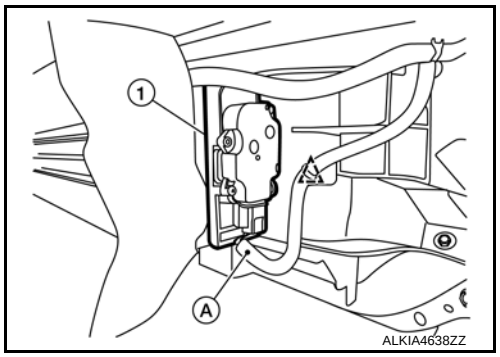
Removal and Installation

INFOID:0000000014904407

REMOVAL

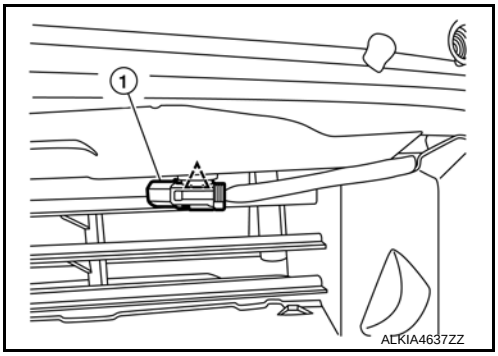
1. Remove front bumper fascia. Refer to EXT-26, "Removal and Installation".
2. Release clip and disconnect harness connector (A) from active grill shutter (1).

△ : Clip



3. Release clip and place ambient sensor (1) aside.

: Clip



4. Remove bolts and active grille shutter.

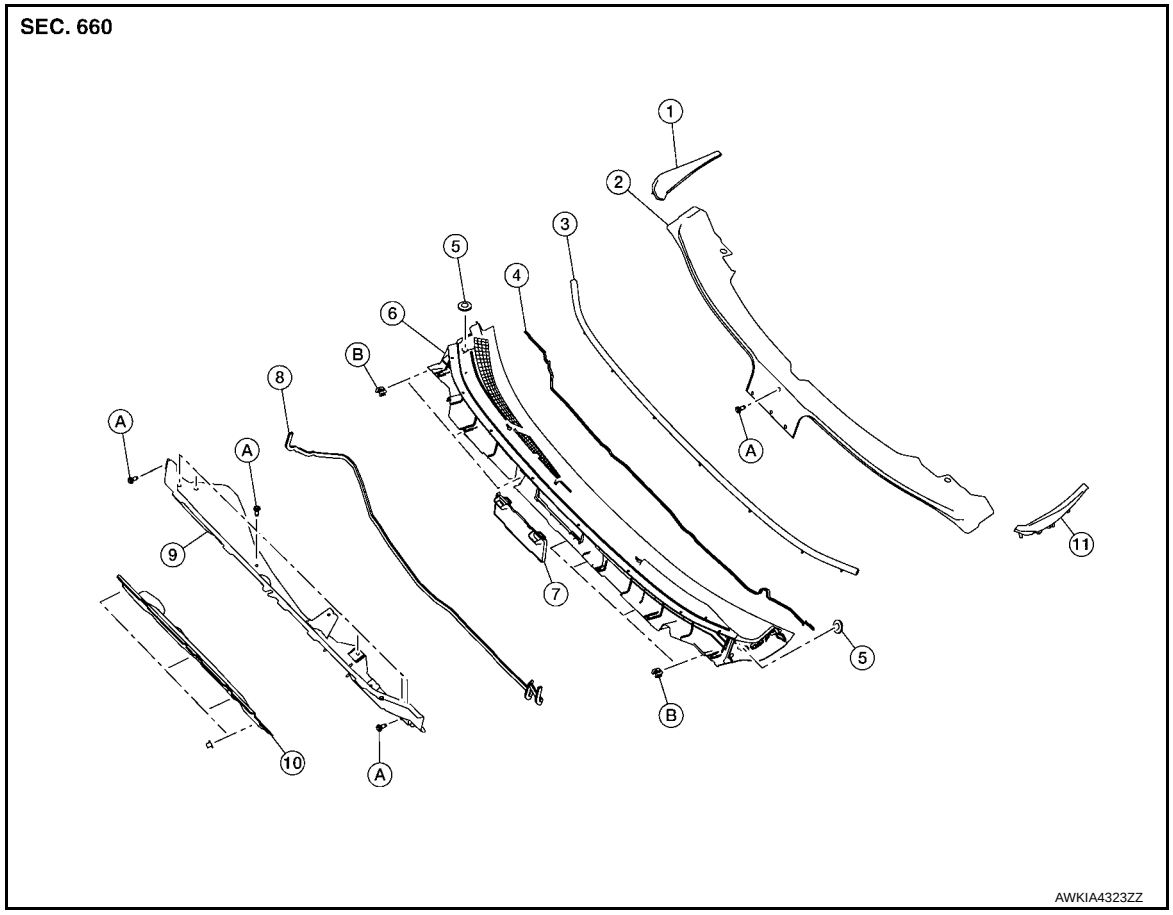
INSTALLATION

Installation is in the reverse order of removal.

COWL TOP

Exploded View

INFOID:0000000014625649



1. Cowl top side trim cover (RH)
2. Cowl top cover screen
3. Cowl top cover seal
4. EPT seal
5. Cowl top cover plug
6. Cowl top cover
7. Cowl top cover mask
8. Cowl top extension seal
9. Cowl top extension
10. Cowl top insulation
11. Cowl top side trim cover (LH)
A. Refer to INSTALLATION

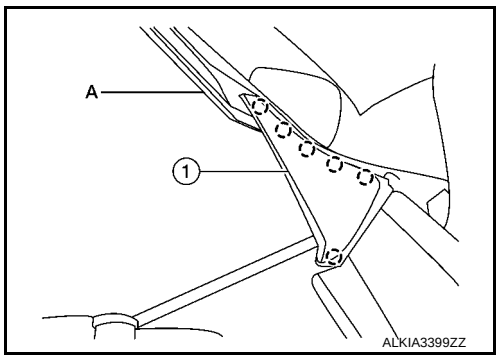
Removal and Installation

INFOID:0000000014625650

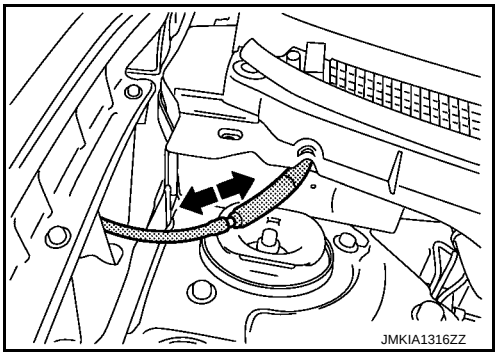
COWL TOP COVER

Removal

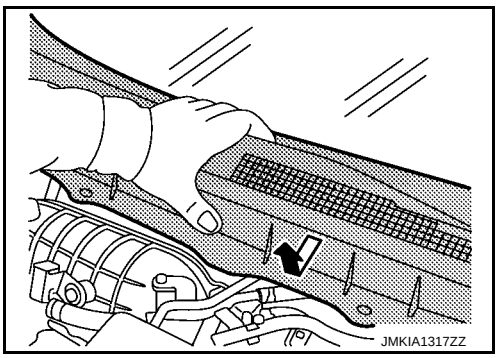
1. Remove front wiper arms (LH/RH). Refer to WW-61, "Removal and Installation".
2. Release pawls using suitable tool (A) and remove cowl top side trim cover (1) (LH/RH).
   ◌: Pawl



3. Disconnect front washer tube connector.



4. Remove cowl top cover clips, then pull forward to release cowl top cover and remove.
   CAUTION:
   When performing the procedure after removing cowl top cover, cover the lower end of windshield glass with urethane etc.



5. Remove the following parts after removing cowl top cover (if necessary).
   - Cowl top cover seal.
   - Cowl top cover plug.
   - Washer nozzle. Refer to WW-58, "Removal and Installation - Front Washer Nozzle".
   - Washer tube. Refer to WW-58, "Removal and Installation - Front Washer Tube".
   - EPT seal.

Installation

Installation is in the reverse order of removal.

CAUTION:

When installing cowl top cover, check that clips are securely fitted in body panel holes and then press them in.

COWL TOP EXTENSION

Removal

1. Remove the front wiper drive assembly. Refer to WW-67, "Removal and Installation".
2. Remove the cowl top extension bolts and the cowl top extension.

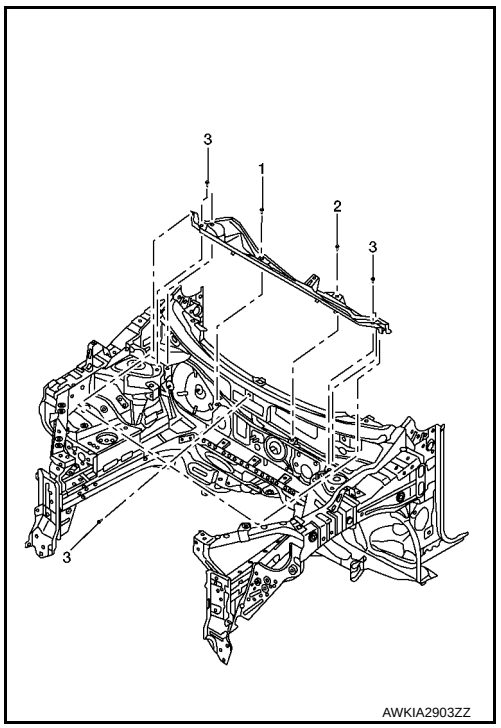
INSTALLATION

Installation is in the reverse order of removal.

NOTE:

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

Bolts 1-3	**: 10 Nm (1.0 kg-m, 7 ft-lb)**

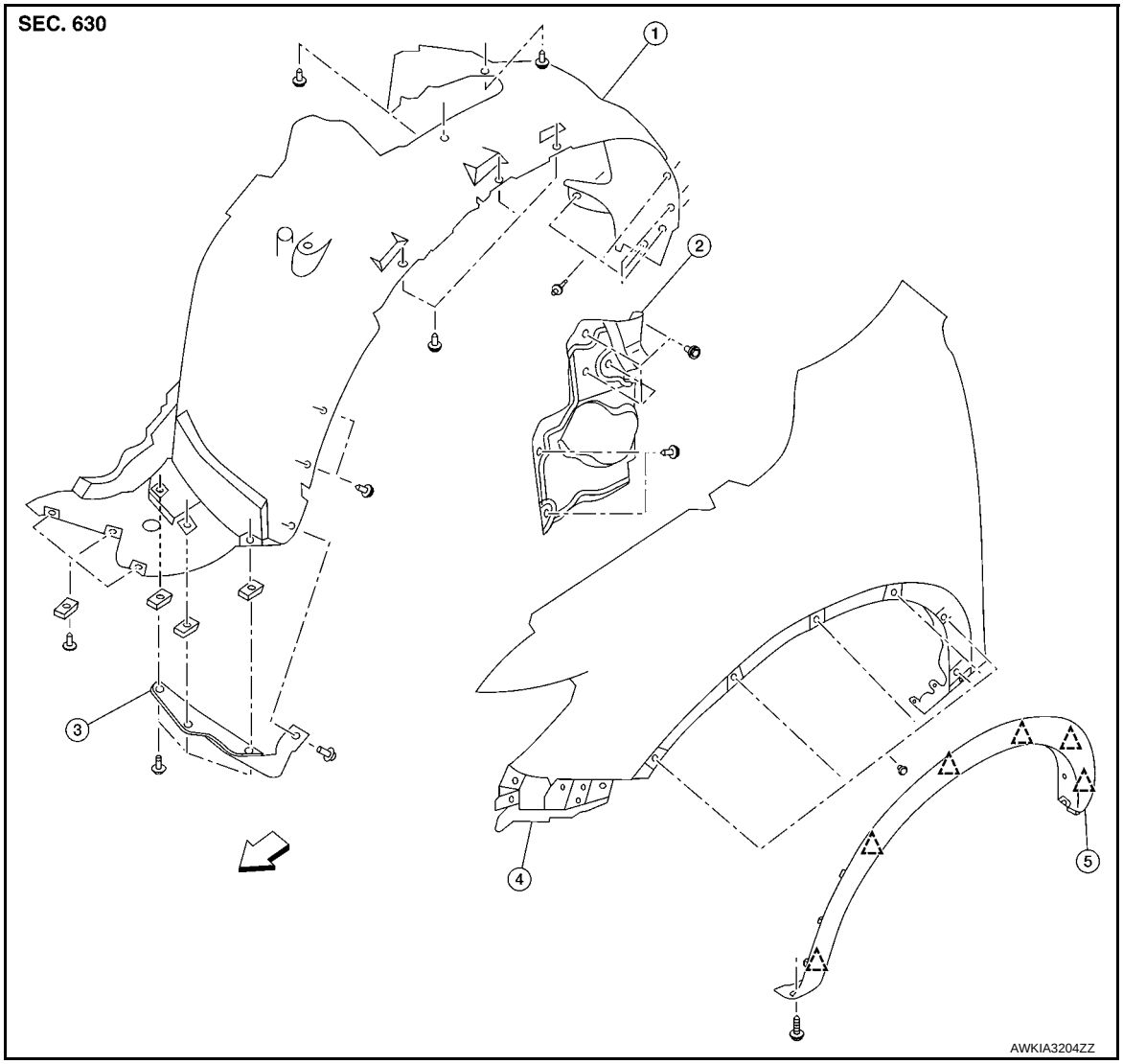


FENDER PROTECTOR

FENDER PROTECTOR

FENDER PROTECTOR : Exploded View

INFOID:0000000014625651



1. Front fender protector
2. Engine side cover
3. Wind deflector
4. Front fender
5. Front over fender
- Clip
- Front

FENDER PROTECTOR : Removal and Installation

INFOID:0000000014625652

REMOVAL

1. Remove wheel and tire using power tool. Refer to WT-67, "Removal and Installation".
2. Remove front over fender. Refer to EXT-42, "FRONT OVER FENDER : Removal and Installation".
3. Remove front air spoiler.
4. Remove center mudguard screw. Refer to EXT-47, "Exploded View - Center Mudguard".
5. Remove engine side cover.
6. Release front fender protector clips and remove front fender protector.

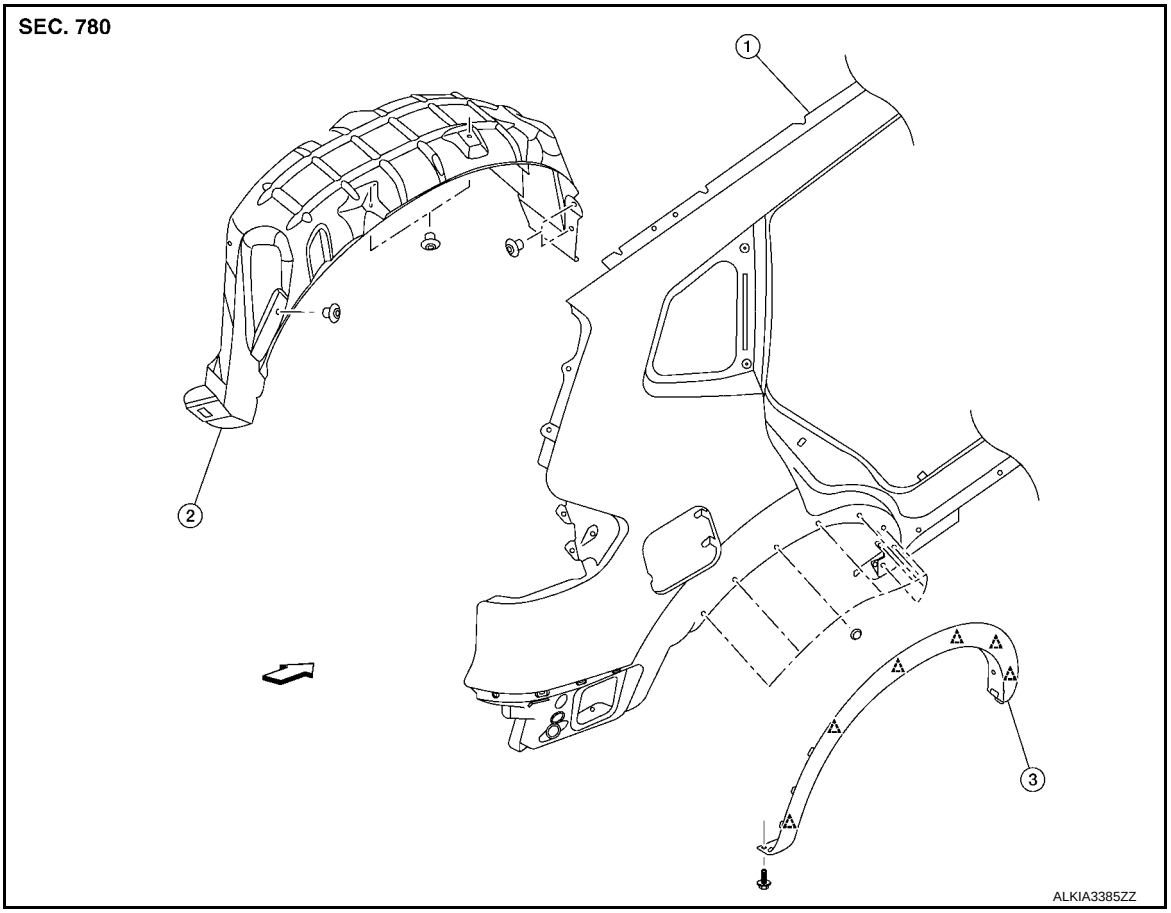
INSTALLATION

Installation is in the reverse order of removal.

REAR WHEEL HOUSE PROTECTOR

REAR WHEEL HOUSE PROTECTOR : Exploded View

INFOID:0000000014625653



1. Rear fender
2. Rear wheel house protector
3. Rear over fender
- Clip
- Front

REAR WHEEL HOUSE PROTECTOR : Removal and Installation

INFOID:0000000014625654

REMOVAL

1. Remove rear wheel house protector clips.
2. Remove rear wheel house protector nuts and rear wheel house protector.

INSTALLATION

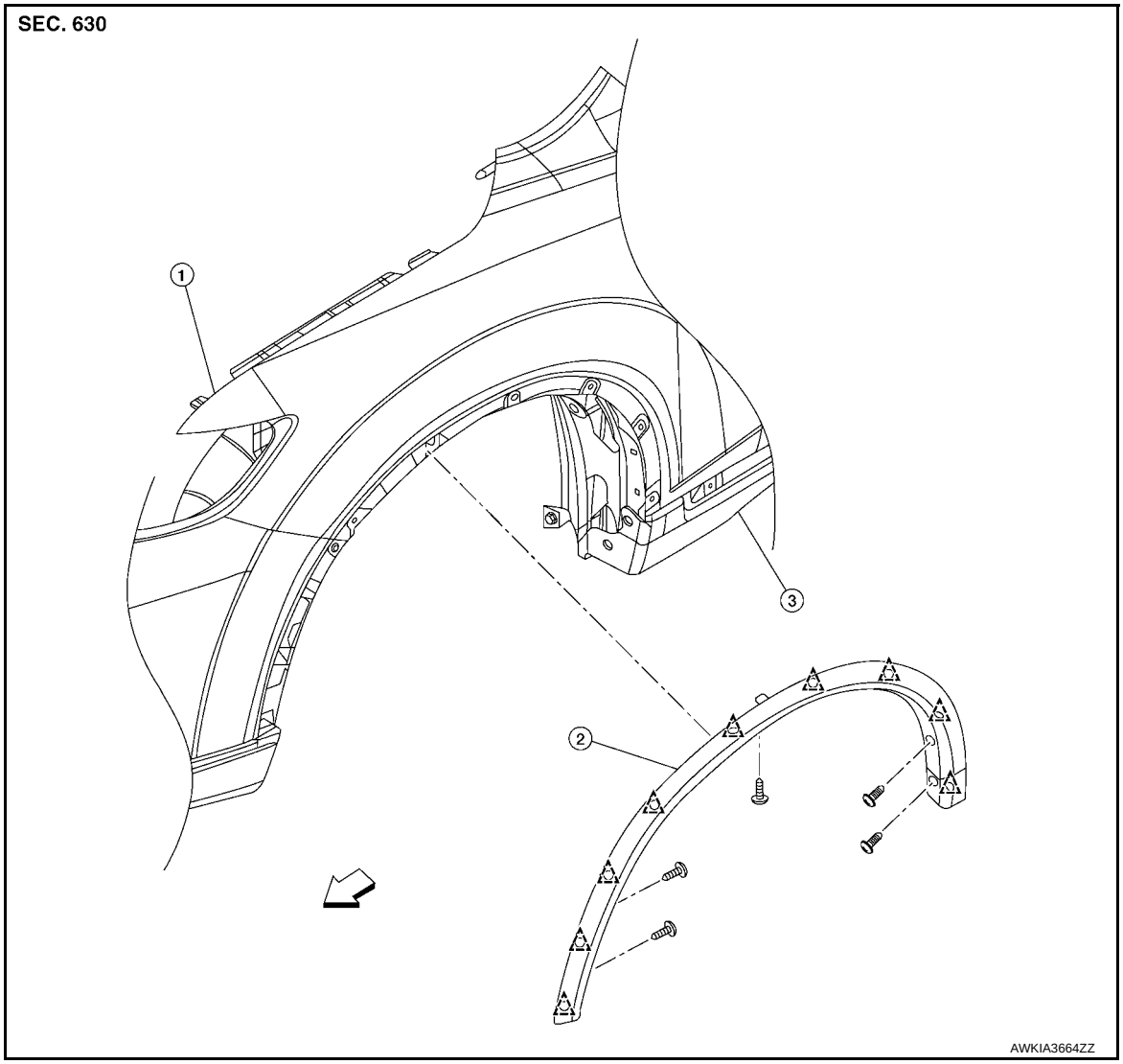
Installation is in the reverse order of removal.

OVER FENDER

FRONT OVER FENDER

FRONT OVER FENDER : Exploded View

INFOID:0000000014625655



1. Front fender
2. Front over fender
3. Center mudguard
- Front
- Clip

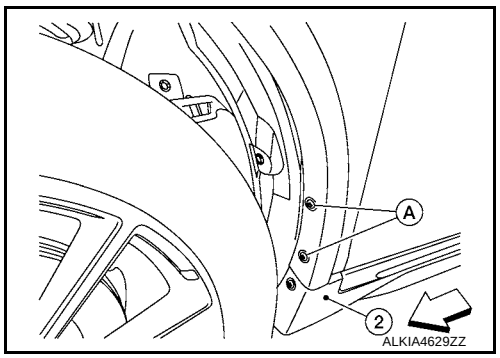
FRONT OVER FENDER : Removal and Installation

INFOID:0000000014625656

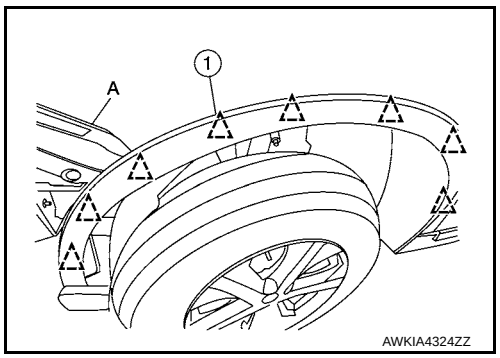
REMOVAL

1. Remove front mudguard (if equipped). Refer to EXT-46, "Removal and Installation".

2. Remove front and rear screws (A).
(1): Front over fender
(2): Center mudguard
⇦: Front



3. Release clips using suitable tool (A) and remove front over fender (1).
△: Clips



INSTALLATION

Installation is in the reverse order of removal.

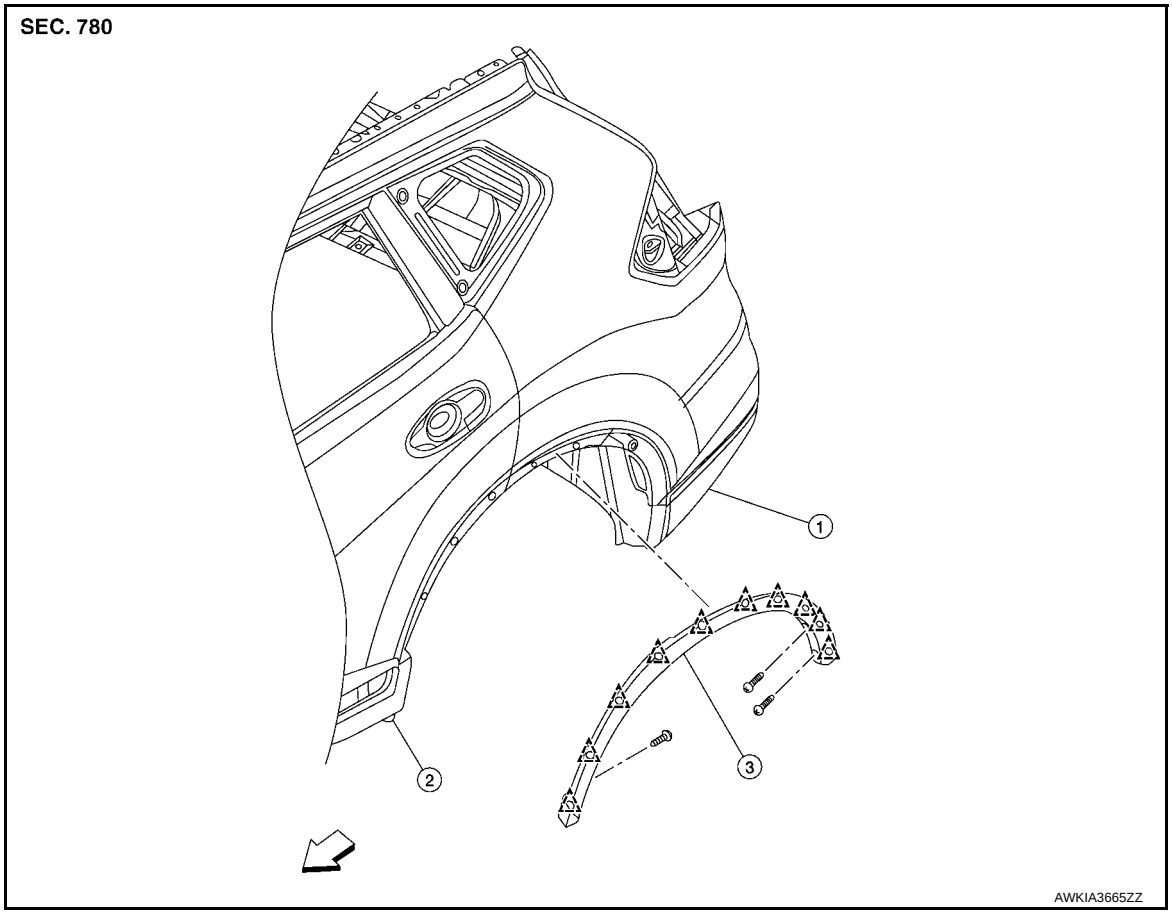
CAUTION:

- **Visually check the clips for deformation and damage during installation. Replace with new ones if necessary.**
- **When installing front over fender, check that clips are securely placed in body panel holes.**

REAR OVER FENDER

REAR OVER FENDER : Exploded View

INFOID:0000000014625657



1. Rear bumper fascia
2. Center mud guard
3. Rear over fender

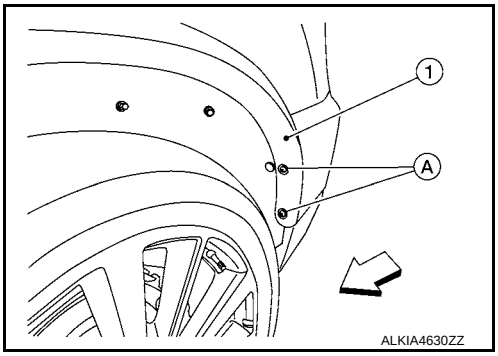
Clip
Front

REAR OVER FENDER : Removal and Installation

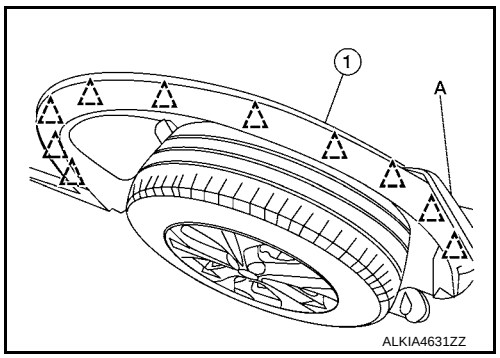
INFOID:0000000014625658

REMOVAL

1. Remove rear over fender screws (A).
   (1): Rear over fender
   (2): Rear bumper
   Front



2. Release clips using suitable tool (A) and remove rear over fender (1).
   : Clips



INSTALLATION

Installation is in the reverse order of removal.

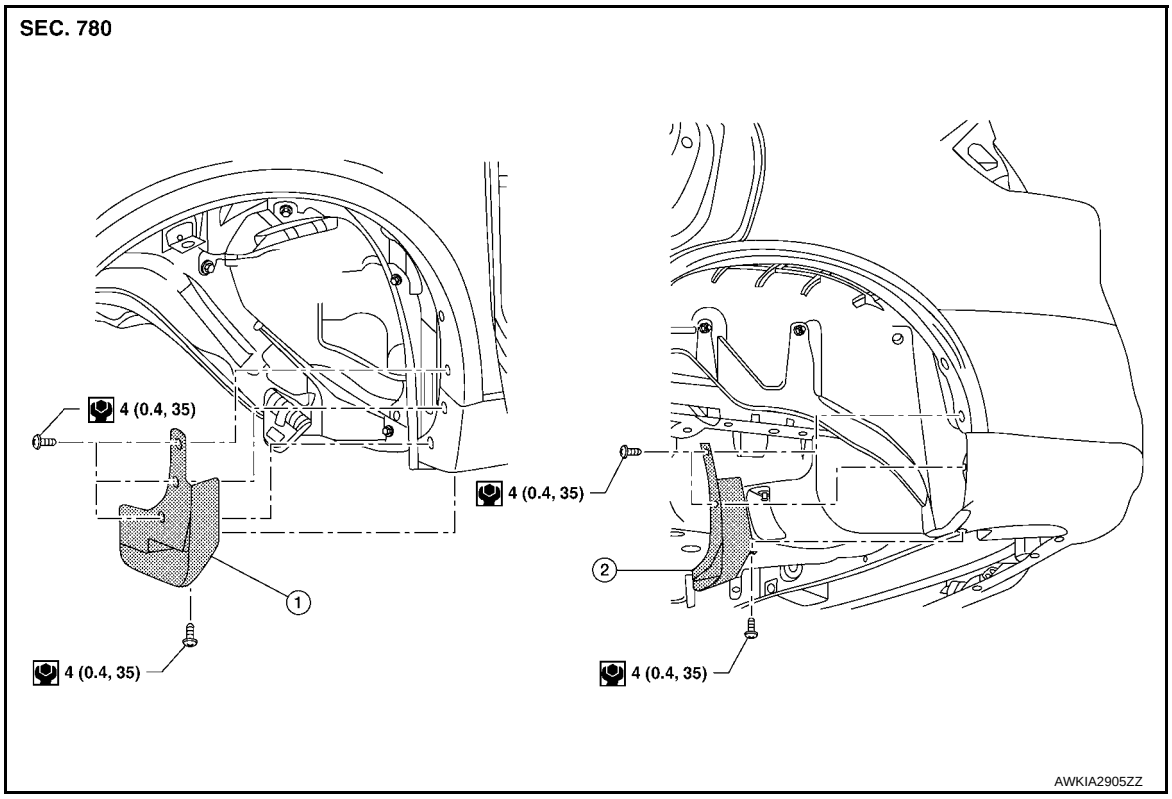
CAUTION:

- **Visually check the clips for deformation and damage during installation. Replace with new ones if necessary.**
- **When installing over fender, check that clips are securely placed in body panel holes.**

MUDGUARD

Exploded View

INFOID:0000000014625659



1. Front mudguard
2. Rear mudguard

Removal and Installation

INFOID:0000000014625660

FRONT MUDGUARD

Removal
Remove front mudguard screws and remove front mudguard.

Installation
Installation is in the reverse order of removal.

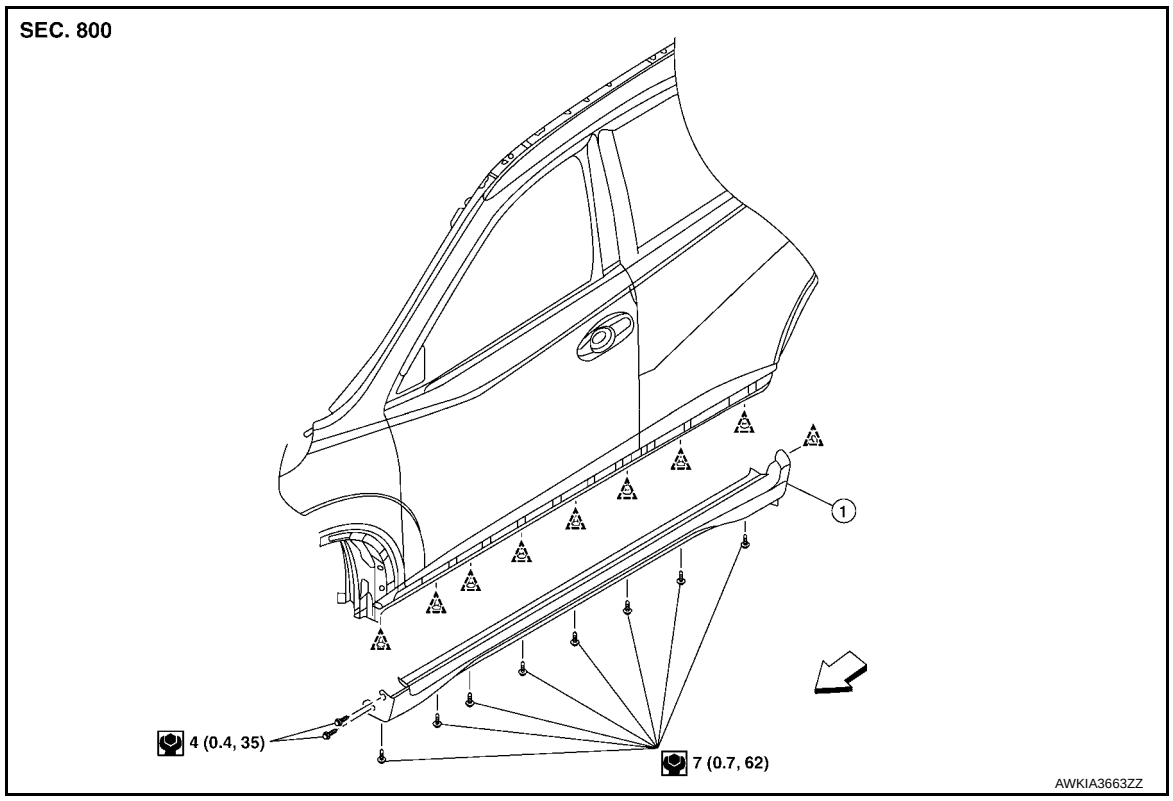
REAR MUDGUARD

Removal
Remove rear mudguard screws and remove rear mudguard.

Installation
Installation is in the reverse order of removal.

Exploded View - Center Mudguard

INFOID:0000000014625661



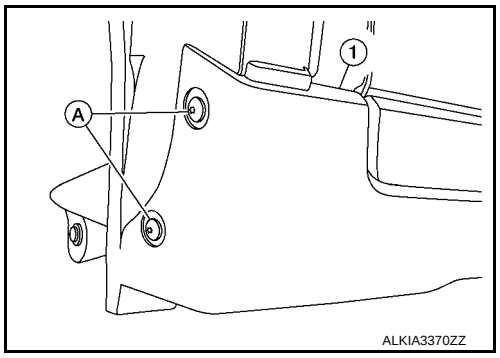
1. Center mudguard
Clip
Front

Removal and Installation - Center Mudguard

INFOID:0000000014625662

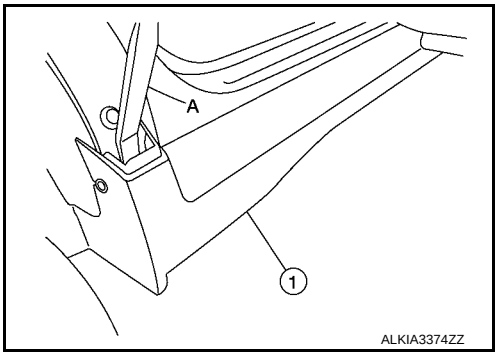
REMOVAL

1. Partially remove over fender moldings. Refer to EXT-42, "FRONT OVER FENDER : Exploded View".
2. Remove screws (A) from center mudguard (1).



3. Remove remaining screws from underside of center mudguard.

4. Release center mudguard clips with a suitable tool (A) and remove the center mudguard (1).
   CAUTION:
   Release clips slowly and carefully.



INSTALLATION

Installation is in the reverse order of removal.

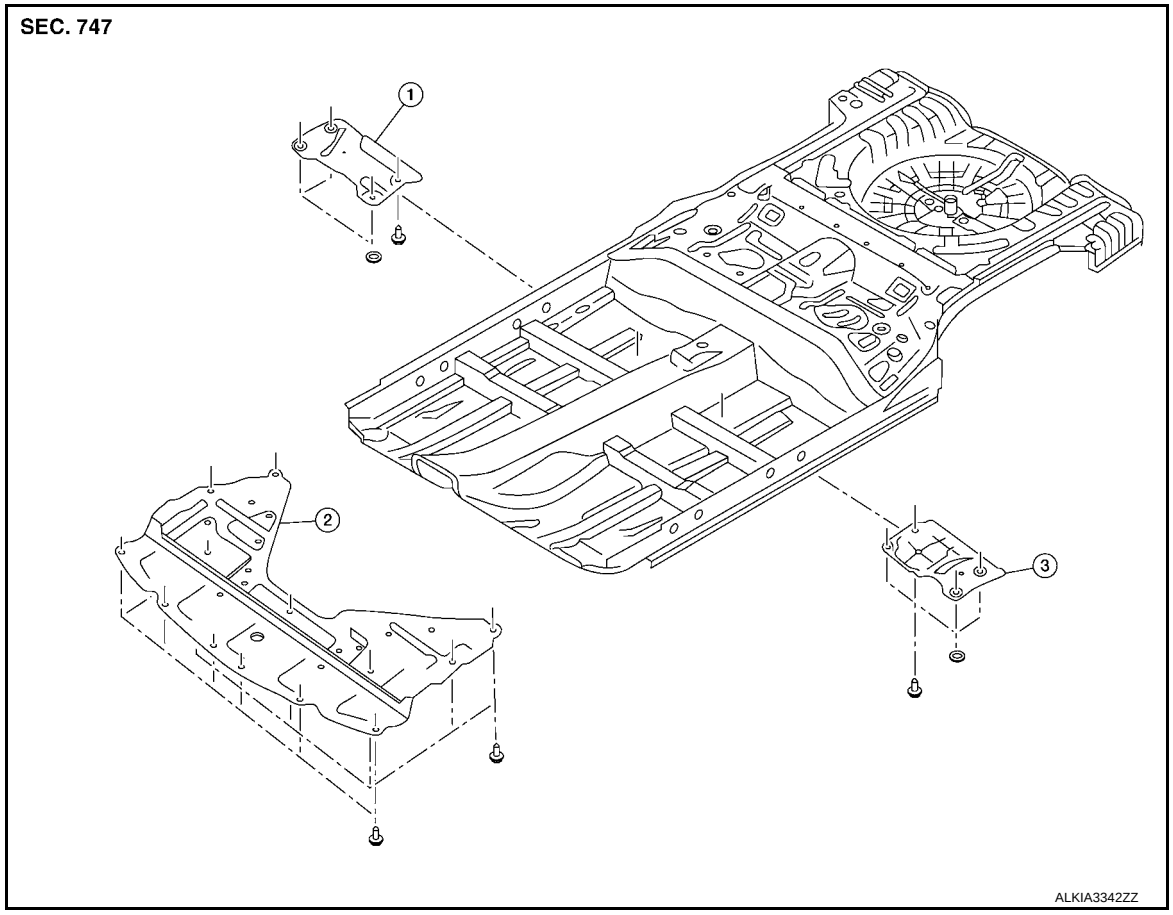
CAUTION:

- **Visually check the clips for deformation and damage during installation. Replace with new ones if necessary.**
- **When installing center mudguard, check that clips are securely placed in body panel holes.**

UNDER COVER

Exploded View

INFOID:0000000014625663



1. Floor under cover (RH)
2. Engine under cover
3. Floor under cover (LH)

ENGINE UNDER COVER

ENGINE UNDER COVER : Removal and Installation

INFOID:0000000014625664

REMOVAL

1. Remove engine under cover clips.
2. Remove engine under cover.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

When installing engine under covers, check that clips are securely placed in body panel holes.

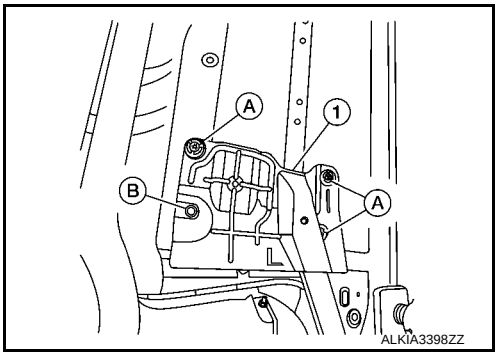
FLOOR UNDER COVER

FLOOR UNDER COVER : Removal and Installation

INFOID:0000000014625665

REMOVAL

1. Remove floor under cover clip (B) and nuts (A).
2. Remove floor under cover (1).



INSTALLATION

Installation is in the reverse order of removal.

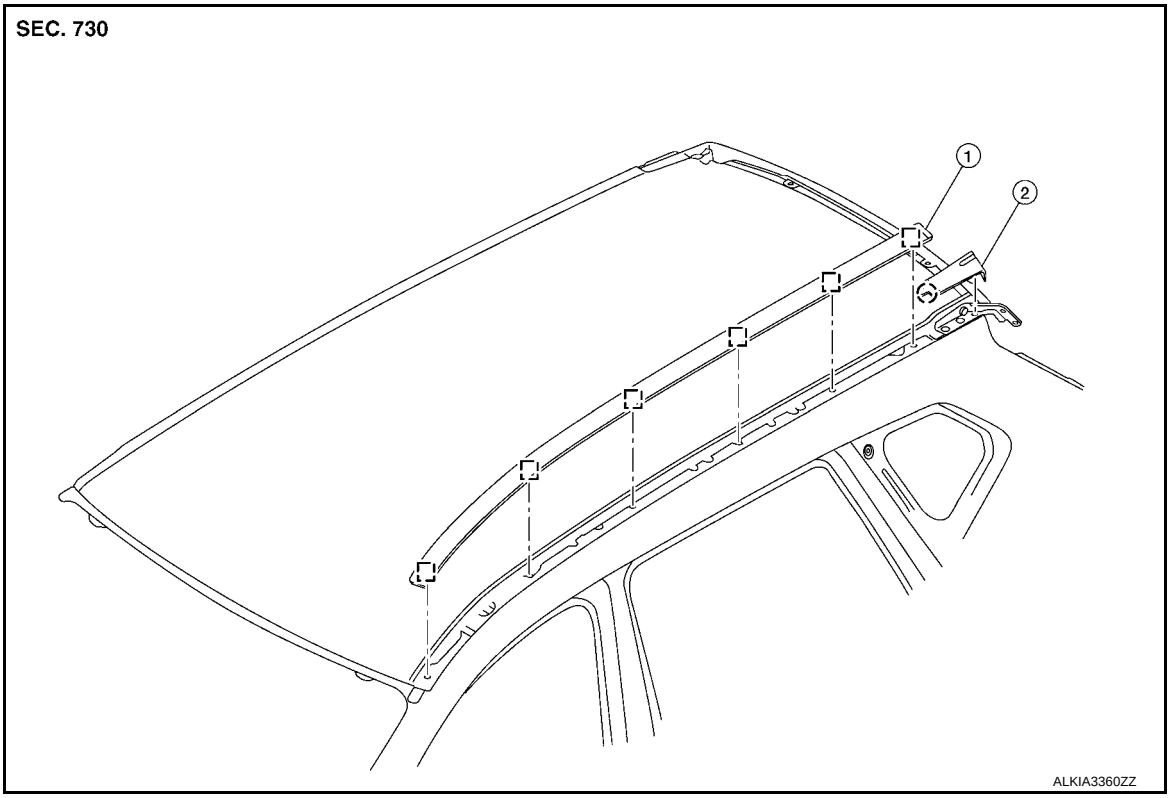
CAUTION:

When installing floor under covers, check that clips are securely placed in body panel holes.

ROOF SIDE MOLDING

Exploded View

INFOID:0000000014625666



1. Roof side molding
2. Back door hinge cover
Metal clip
Pawl

Removal and Installation

INFOID:0000000014625667

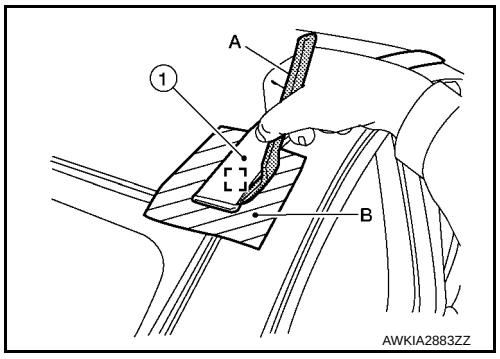
REMOVAL

Release roof side molding (1) using suitable tool (A) then remove.

Metal clip

CAUTION:

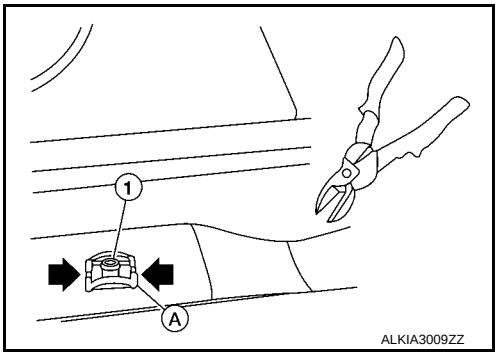
Apply protective tape (B) around the roof side molding.



INSPECTION

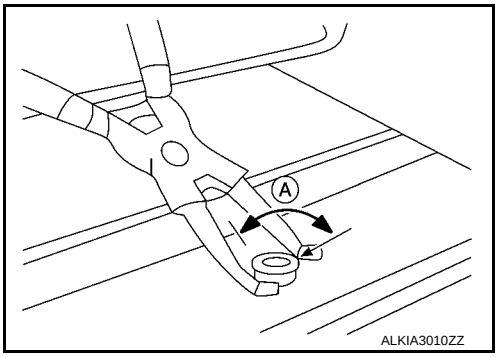
Remove any metal clips (A) that remain on roof posts (1) by cutting each side (⬅) of the clip.

CAUTION:
Make sure all old clips have been removed from posts on roof panel.
NOTE:
It is only necessary to cut and remove metal clips (A) that remain on the roof posts (1). Metal clips that remain in roof side molding can be reused if not damaged.



INSTALLATION

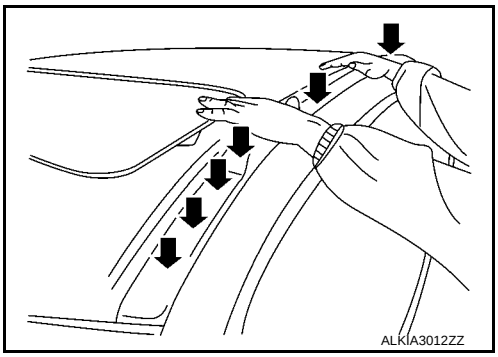
1. Rotate each roof post 90 degrees (A) using a suitable tool and remove.



2. Insert a new metal clip in any locations on the roof side molding where missing.

CAUTION:
When installing, make sure all clips are on roof side molding.

3. Install the roof side molding to the roof panel.
4. Tap firmly on the roof side molding to lock each of the remaining clips into place on the remaining posts.

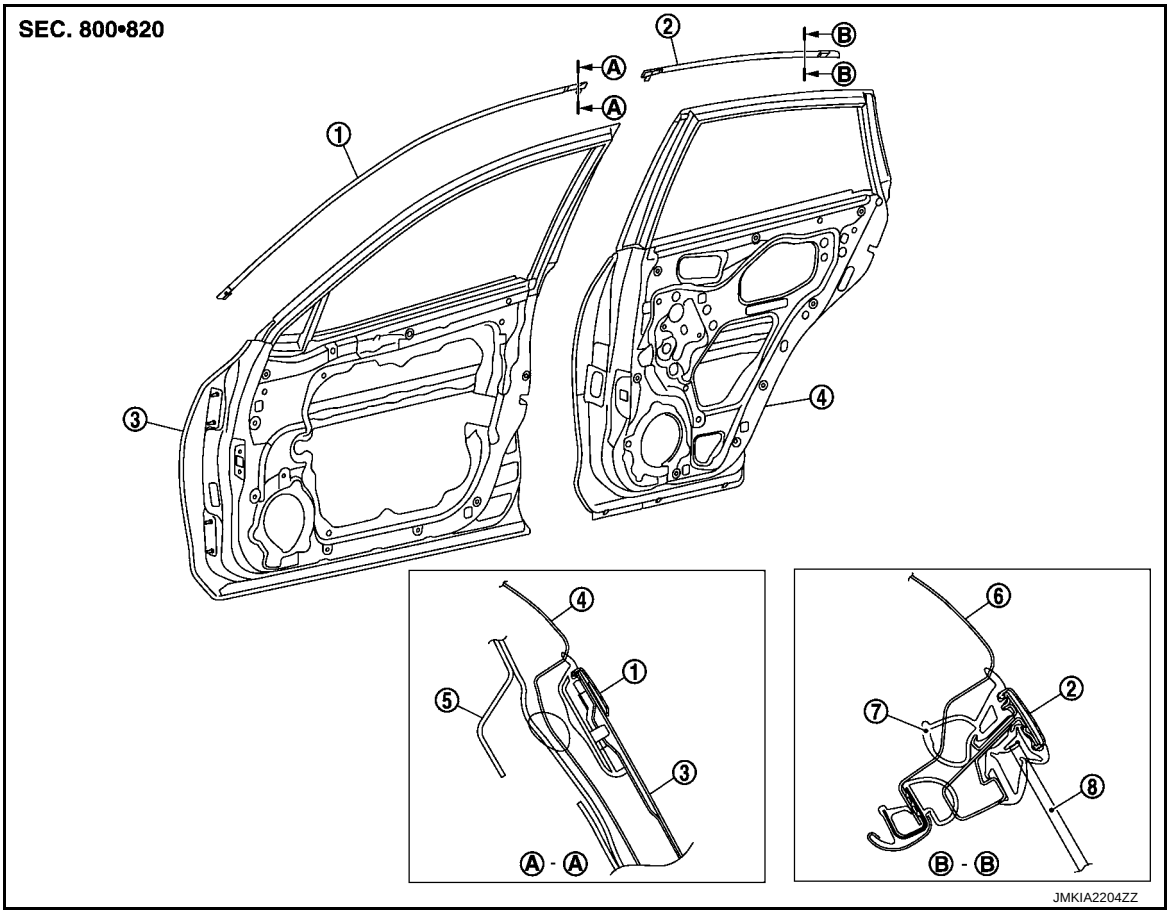


CAUTION:
Make sure all clips and pawls are firmly pressed into place.

DOOR SASH MOLDING

Exploded View

INFOID:0000000014625668



1. Front door sash molding
2. Rear door rear sash molding
3. Front door panel
4. Rear door panel
5. Roof rail side outer
6. Body side outer
7. Rear door weather strip
8. Rear door glass

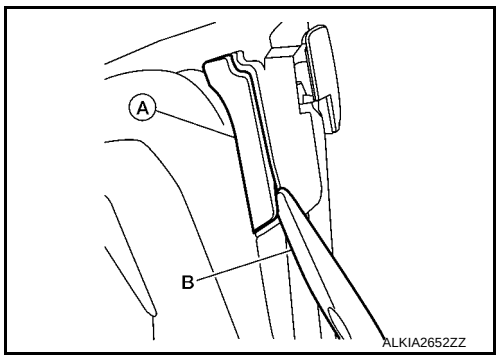
Removal and Installation

INFOID:0000000014625669

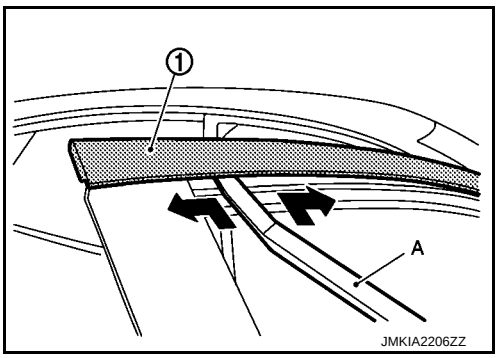
FRONT DOOR

Removal

1. Remove door mirror. Refer to MIR-23, "Removal and Installation".
2. Remove front door sash molding clip (A) using a suitable tool (B).
   CAUTION:
   Do not reuse the clip (A).



3. Using a suitable tool (A) release front door sash molding (1) as shown and remove.

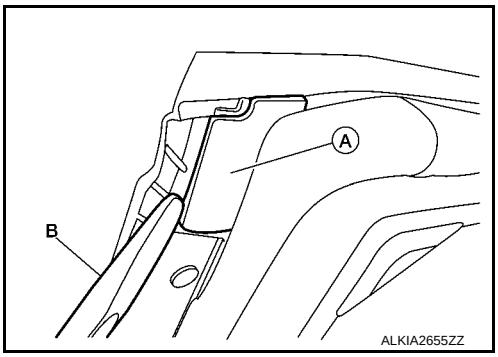


Installation
Installation is in the reverse order of removal.

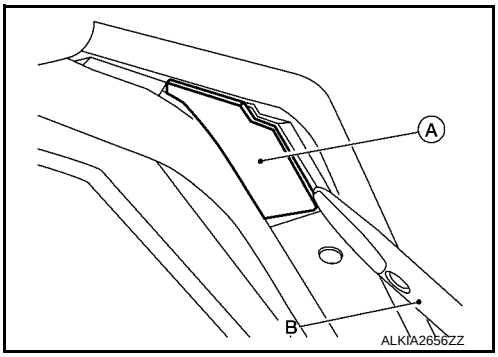
REAR DOOR

Removal

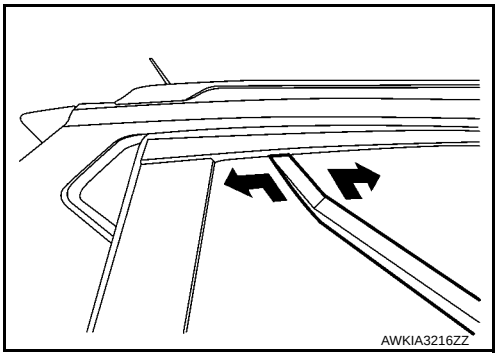
1. Remove rear door finisher. Refer to INT-18, "Removal and Installation".
2. Remove rear door front sash molding clip (A) using a suitable tool (B).
   CAUTION:
   Do not reuse the clip (A).



3. Remove rear door rear sash molding clip (A) using a suitable tool (B).
   CAUTION:
   Do not reuse the clip (A).



4. Using a suitable tool (A) release rear door sash molding (1) as shown and remove.

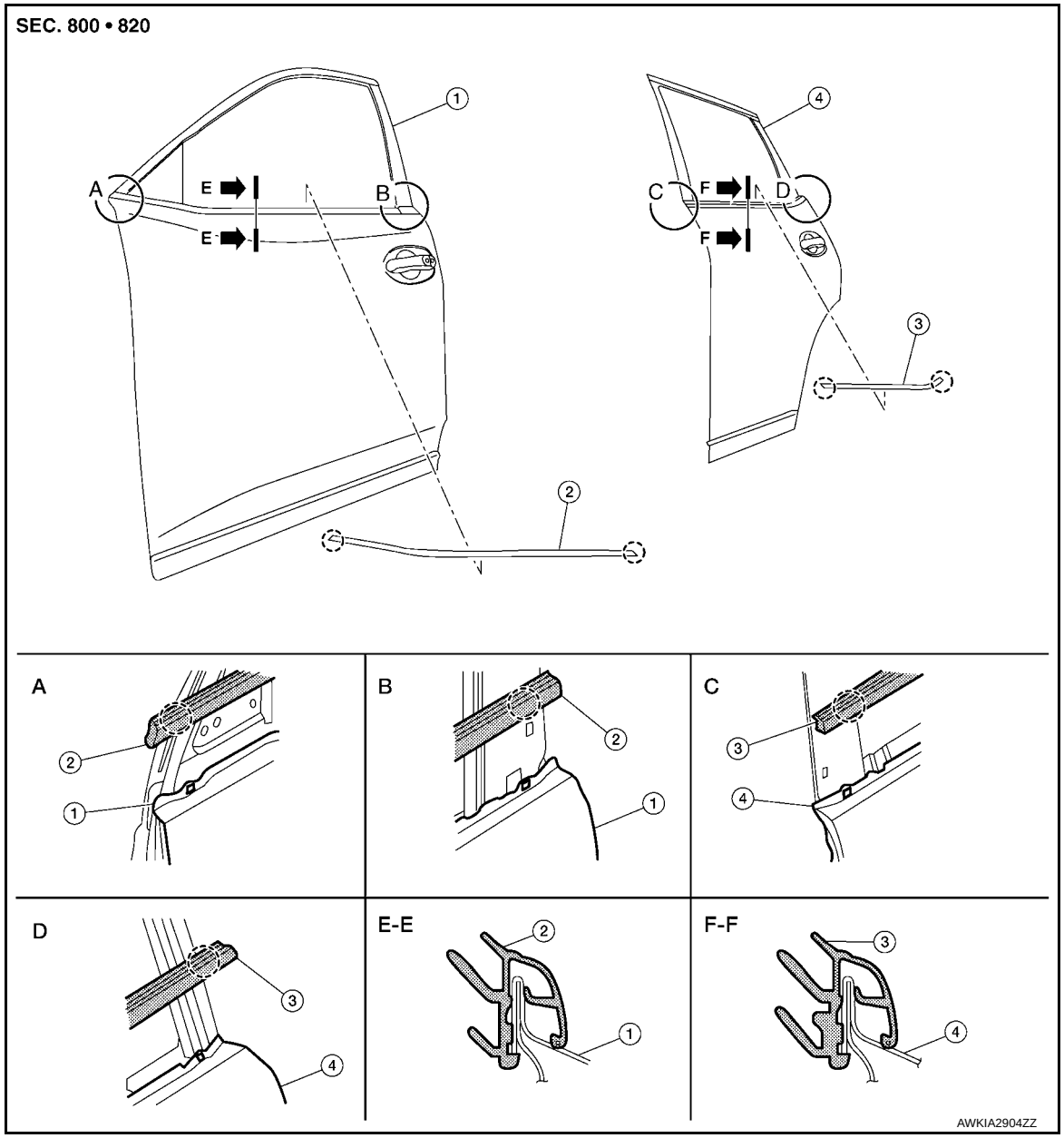


Installation
Installation is in the reverse order of removal.

DOOR OUTSIDE MOLDING

Exploded View

INFOID:0000000014625670



1. Front door panel
2. Front door outside molding
3. Rear door panel
4. Rear door outside molding
Pawl

Removal and Installation

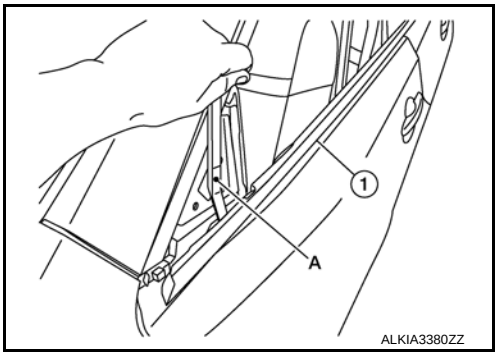
INFOID:0000000014625671

FRONT DOOR OUTSIDE MOLDING

Removal

1. Lower front door glass.
2. Remove door mirror. Refer to MIR-23, "Removal and Installation".

3. Release front pawl then rear pawl using a suitable tool (A) and remove door outside molding (1).

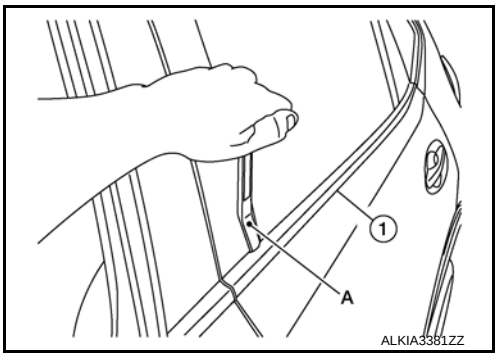


Installation
Installation is in the reverse order of removal.

REAR DOOR OUTSIDE MOLDING

Removal

1. Lower rear door glass.
2. Release front pawl then rear pawl using a suitable tool (A) and remove door outside molding (1).

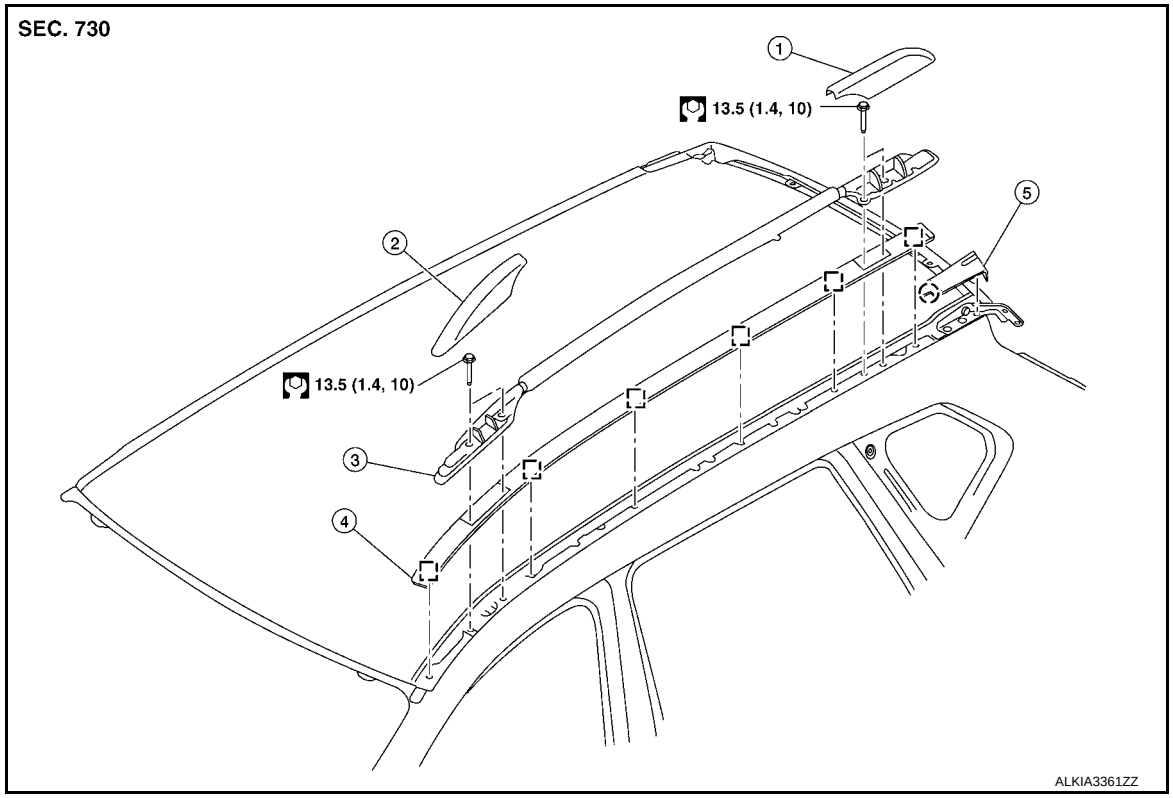


Installation
Installation is in the reverse order of removal.

ROOF RACK

Exploded View

INFOID:0000000014625672



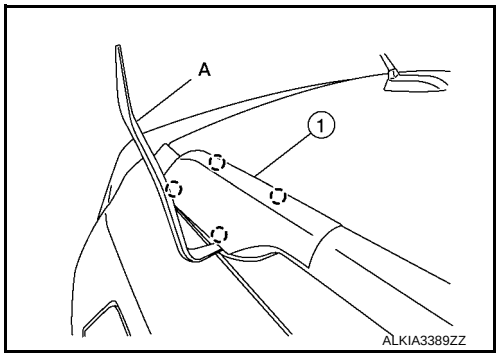
1. Roof rack rear bolt cover
2. Roof rack front bolt cover
3. Roof rack
4. Roof side molding
5. Back door hinge cover
- Metal Clip
- Pawl

Removal and Installation

INFOID:0000000014625673

REMOVAL

1. Release pawls and remove roof rack front and rear cover (1) using suitable tool (A).
   : Pawl



2. Remove bolts and remove roof rack.

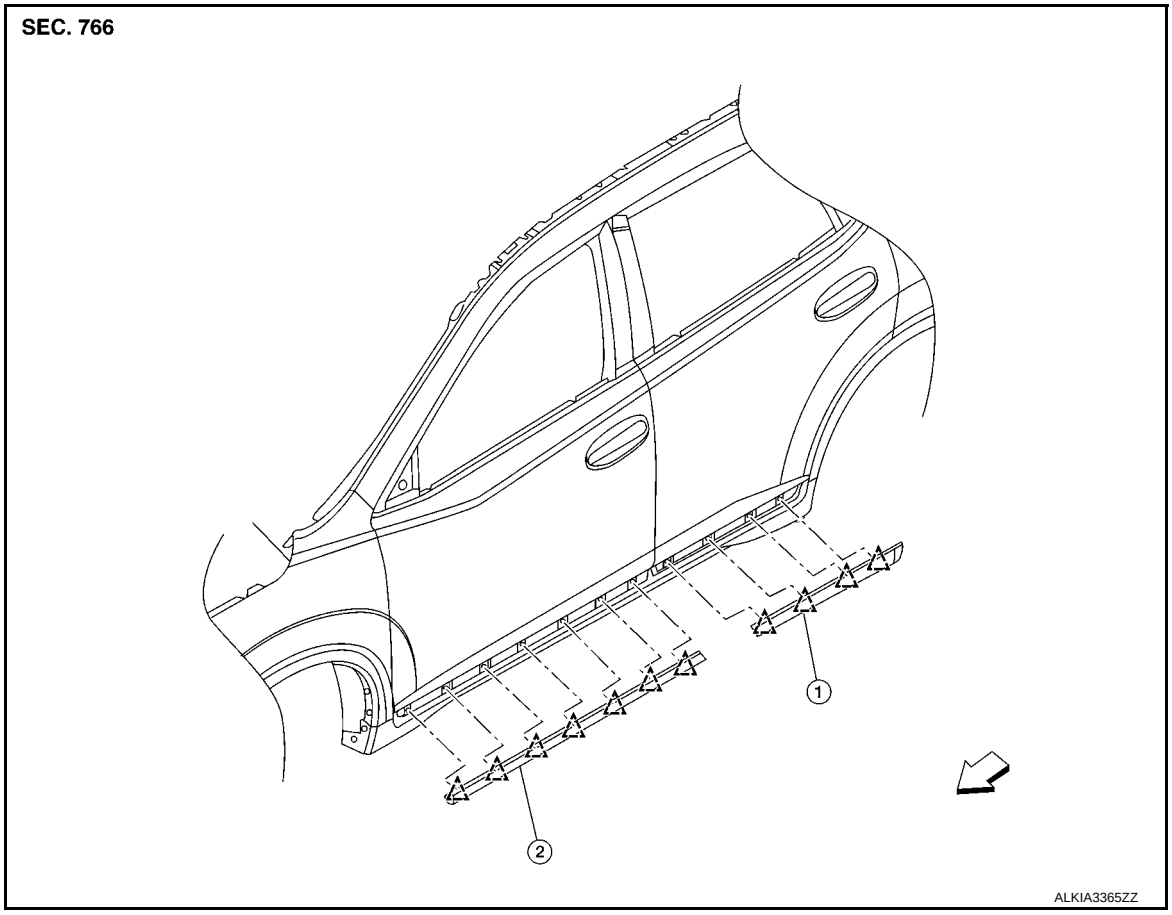
INSTALLATION

Installation is in the reverse order of removal.

DOOR OUTSIDE LOWER MOLDING

Exploded View

INFOID:0000000014625674



1. Rear door outside lower molding
2. Front door outside lower molding
Clip
Front

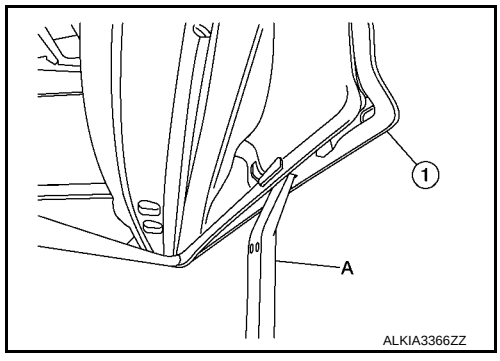
Removal and Installation

INFOID:0000000014625675

FRONT DOOR OUTSIDE LOWER MOLDING

Removal

1. Using a suitable tool (A) release clips from front door outside lower molding (1) starting at the rear and working forward.
   CAUTION:
   - **Release the clips slowly and carefully.**
   - **Do not pull the front door outside lower molding.**



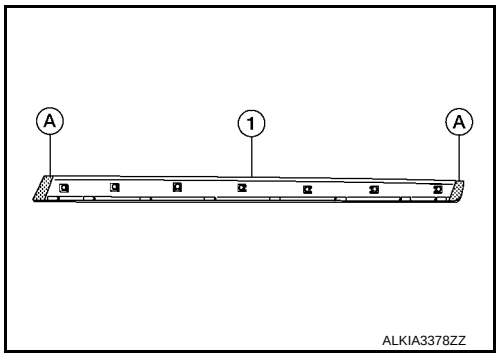
2. Remove the front door outside lower molding.

Installation

Installation is in the reverse order of removal.

CAUTION:
- **Do not reuse double-sided tape, always replace with new tape.**
- **When installing, visually check the front door outside lower molding and clips, replace with new clips if they have been damaged.**
- **When installing front door outside lower molding, make sure clips are attached to the molding. Make sure old clips have all been removed from door.**

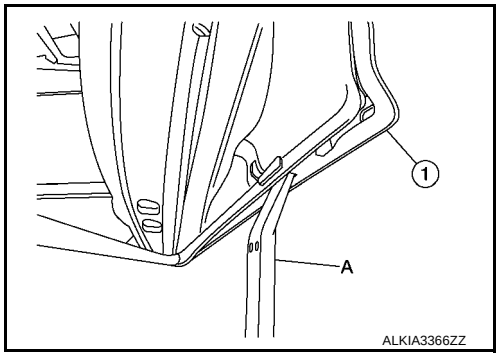
NOTE:
Install new double-sided tape (A) to front door outside lower molding (1) as shown.



REAR DOOR OUTSIDE LOWER MOLDING

Removal

1. Using a suitable tool (A) release clips from rear door outside lower molding (1) starting at the rear and working forward.
   CAUTION:
   - **Release the clips slowly and carefully.**
   - **Do not pull the front door outside lower molding.**



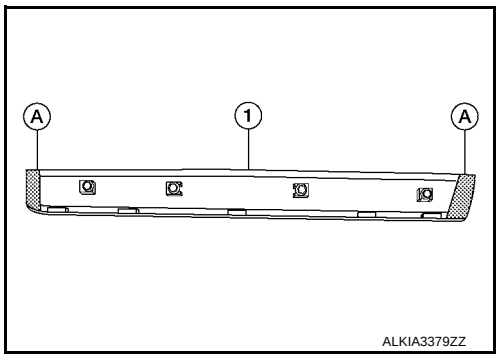
2. Remove the rear door outside lower molding.

Installation

Installation is in the reverse order of removal.

CAUTION:
- **Do not reuse double-sided tape, always replace with new tape.**
- **When installing, visually check the front door outside lower molding and clips, replace with new clips if they have been damaged.**
- **When installing front door outside lower molding, make sure clips are attached to the molding. Make sure old clips have all been removed from door.**

NOTE:
Install new double-sided tape (A) to front door outside lower molding (1) as shown.



REAR SPOILER

Removal and Installation

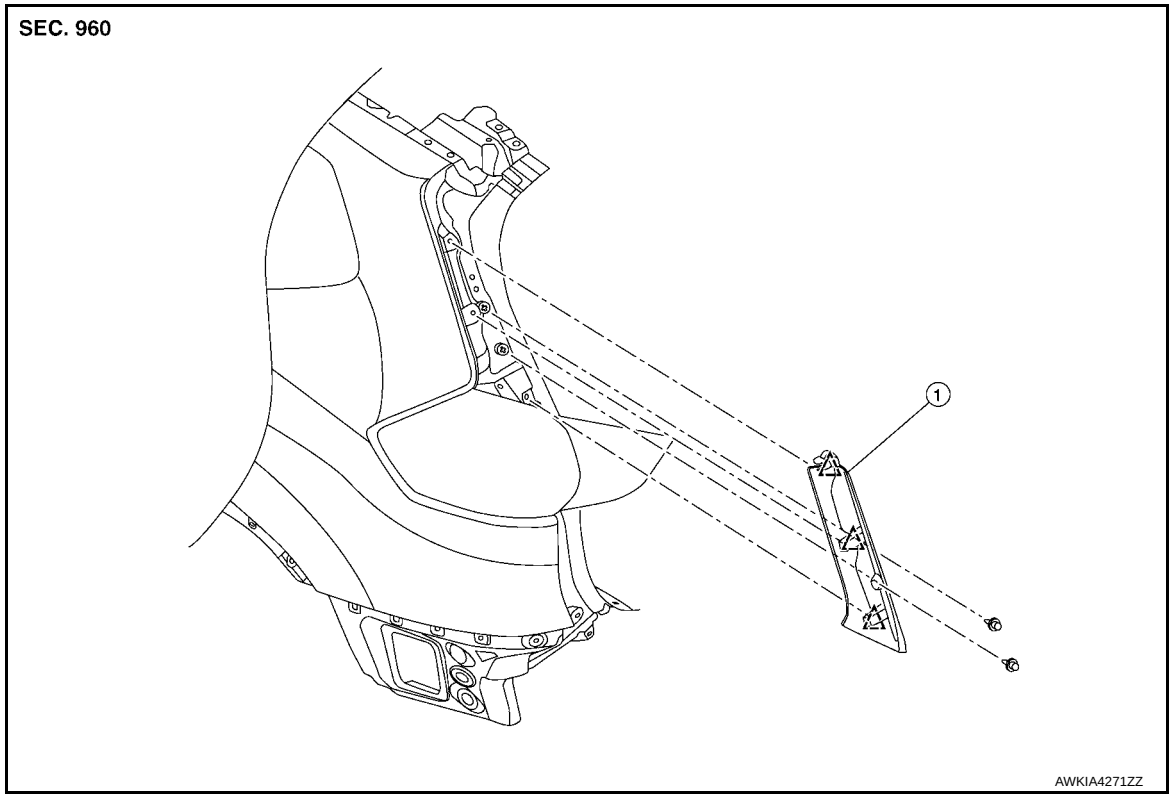
INFOID:0000000014625676

The rear spoiler is part of the back door assembly. Refer to DLK-311, "BACK DOOR ASSEMBLY : Removal and Installation" (WITH INTELLIGENT KEY SYSTEM).

SIDE AIR SPOILER

Exploded View

INFOID:0000000014625677



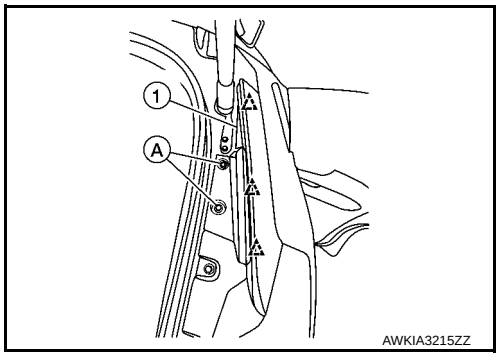
1. Side air spoiler
△ Clip

Removal and Installation

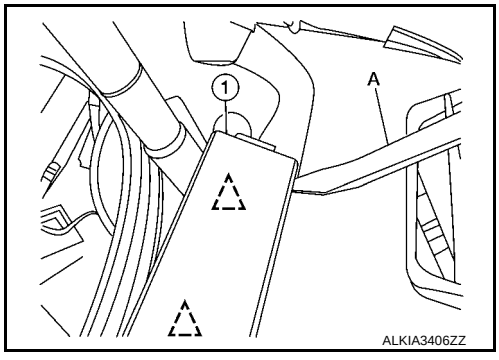
INFOID:0000000014625678

REMOVAL

1. Remove side air spoiler bolts (A).
(1): Side air spoiler
△: Clips



2. Release clips using suitable tool (A) and remove side air spoiler (1).
△: Clips



INSTALLATION

Installation is in the reverse order of removal.

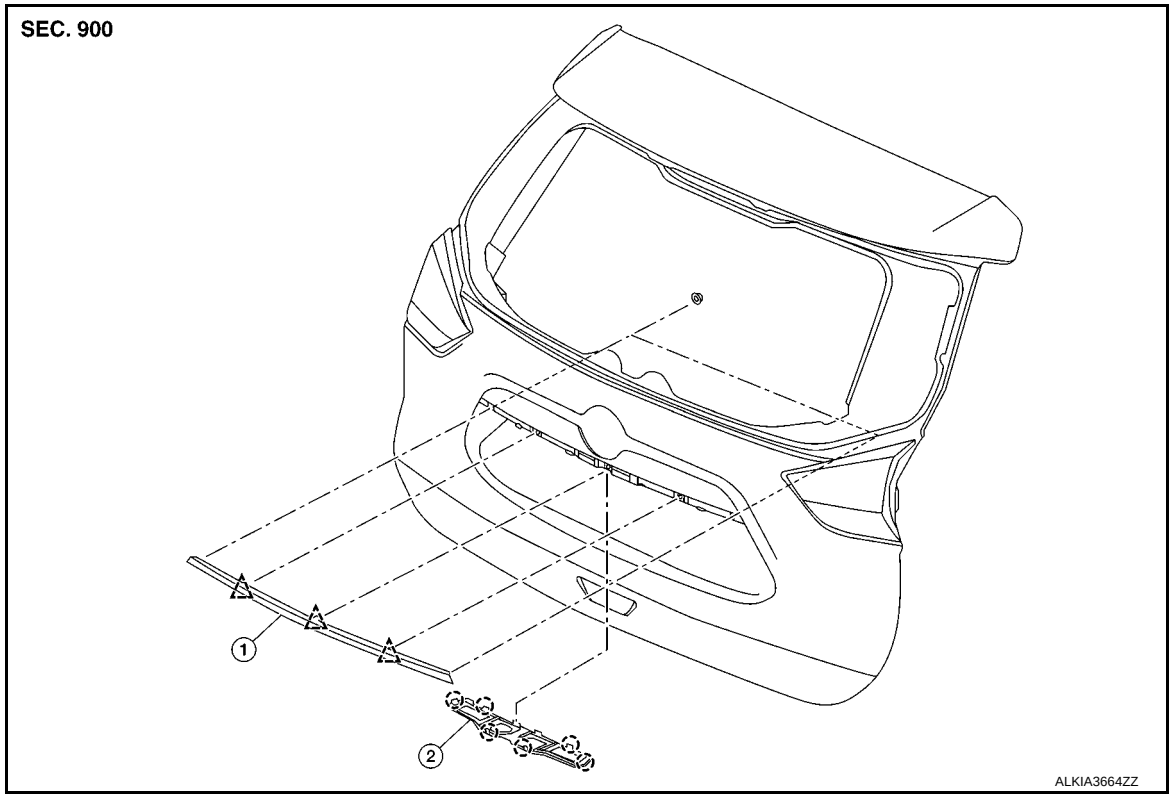
CAUTION:

- **When installing, visually check the side air spoiler and clips and replace them with new parts if they have been damaged.**
- **When installing side air spoiler, check that clips and bolts are securely placed in body panel holes.**

BACK DOOR OUTER FINISHER

Exploded View

INFOID:0000000014625679



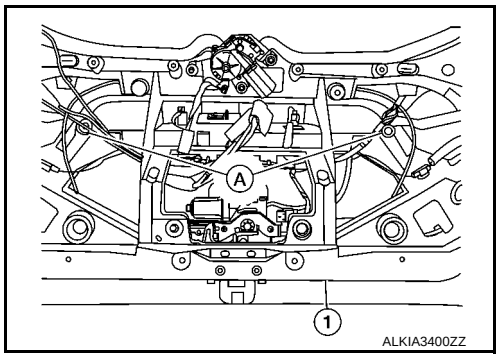
1. Back door outer finisher
2. License lamp finisher
3. Clip
4. Pawl

Removal and Installation

INFOID:0000000014625680

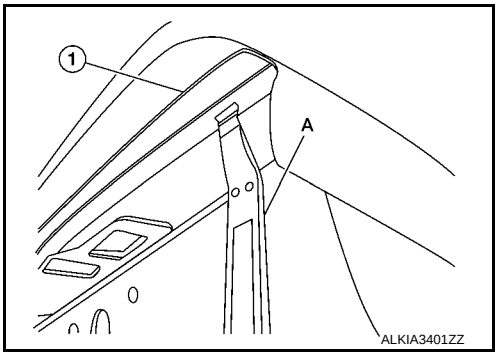
REMOVAL

1. Remove back door finisher. Refer to INT-35, "Removal and Installation".
2. Remove plugs (A) from back door (1).



3. Remove back door outer finisher nuts.

4. Release clips using suitable tool (A) and remove back door outer finisher (1).



INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

When installing back door outer finisher, check that clips are securely placed in back door panel holes.