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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 seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SR section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

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

WARNING:

- When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery, and wait at least three minutes before performing any service.

Precaution Necessary for Steering Wheel Rotation After Battery Disconnect

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NOTE:

- This Procedure is applied only to models with Intelligent Key system and NATS (NISSAN ANTI-THEFT SYS-TEM).
- Remove and install all control units after disconnecting both battery cables with the ignition knob in the "LOCK" position.
- Always use CONSULT to perform self-diagnosis as a part of each function inspection after finishing work. If DTC is detected, perform trouble diagnosis according to self-diagnostic results.

For models equipped with the Intelligent Key system and NATS, an electrically controlled steering lock mechanism is adopted on the key cylinder.

For this reason, if the battery is disconnected or if the battery is discharged, the steering wheel will lock and steering wheel rotation will become impossible.

If steering wheel rotation is required when battery power is interrupted, follow the procedure below before starting the repair operation.

OPERATION PROCEDURE

1. Connect both battery cables.

NOTE:

Supply power using jumper cables if battery is discharged.

- 2. Use the Intelligent Key or mechanical key to turn the ignition switch to the "ACC" position. At this time, the steering lock will be released.
- Disconnect both battery cables. The steering lock will remain released and the steering wheel can be rotated.
- 4. Perform the necessary repair operation.

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PRECAUTIONS

< PRECAUTION >

- 5. When the repair work is completed, return the ignition switch to the "LOCK" position before connecting the battery cables. (At this time, the steering lock mechanism will engage.)
- Perform a self-diagnosis check of all control units using CONSULT.

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.
- Then rub with a soft, dry cloth.
- Oilv 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.

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PREPARATION

PREPARATION

Special Service Tool

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ne actual shape of the tools may differ fror	n 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	ALJIA12322Z	Repairing the cause of noise
— (J-46534) Trim Tool Set		Removing trim components

Commercial Service Tool

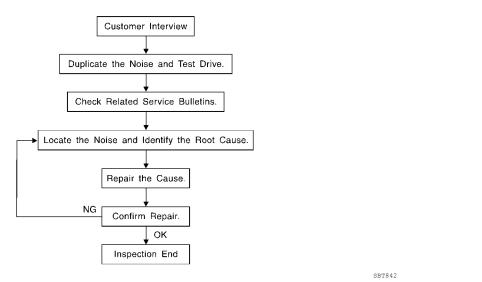
INFOID:0000000011289355

(TechMate No.) Tool name		Description
(J-39565) Engine Ear	SIIA0995E	Locating the noise
(—) Power Tool		Loosening nuts, screws and bolts
	PIIB1407E	

SYMPTOM DIAGNOSIS

SQUEAK AND RATTLE TROUBLE DIAGNOSES

Work Flow



CUSTOMER INTERVIEW

Interview the customer if possible, to determine the conditions that exist when the noise occurs. Use the Diagnostic Worksheet during the interview to document the facts and conditions when the noise occurs and any customer's comments; refer to IP-9, "Diagnostic Worksheet". This information is necessary to duplicate the conditions that exist when the noise occurs.

• The customer may not be able to provide a detailed description or the location of the noise. Attempt to obtain all the facts and conditions that exist when the noise occurs (or does not occur).

• If there is more than one noise in the vehicle, 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

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< 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.
- 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 <u>IP-6</u>, "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

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

< SYMPTOM DIAGNOSIS >

INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

- Cluster lid A and the instrument panel
- Acrylic lens and combination meter housing
- Instrument panel to front pillar finisher
- Instrument panel to windshield
- 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 har-

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
- 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
- Inside handle escutcheon to door finisher
- Wiring harnesses tapping
- Door striker out of alignment causing a popping noise on starts and stops

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

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< 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
- 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.

< SYMPTOM DIAGNOSIS >

Diagnostic Worksheet

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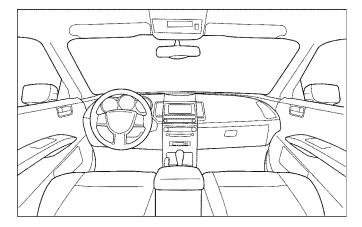
Dear Customer:

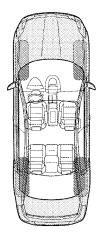
We are concerned about your satisfaction with your vehicle. Repairing a squeak or rattle sometimes can be very difficult. To help us fix your vehicle right the first time, please take a moment to note the area of the vehicle where the squeak or rattle occurs and under what conditions. You may be asked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

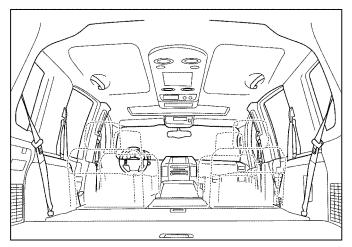
SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

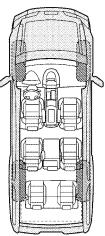
I. WHERE DOES THE NOISE COME FROM? (circle the area of the vehicle)

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.

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< SYMPTOM DIAGNOSIS >

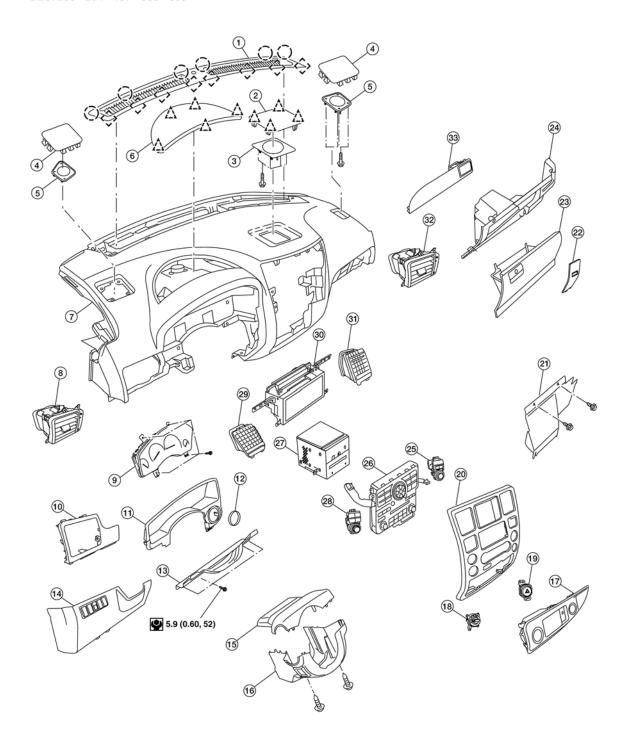
Briefly describe the location where the noise	occur	s:		
II. WHEN DOES IT OCCUR? (please check	the b	oxes that appl	у)	
☐ Anytime☐ 1st time in the morning☐ Only when it is cold outside☐ Only when it is hot outside		fter sitting out Vhen it is raini Pry or dusty co Other:	ng or wet	
III. WHEN DRIVING:	IV. V	VHAT TYPE O	F NOISE	=
☐ 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: Miles or minute ☐ After driving miles or minute ☐ TO BE COMPLETED BY DEALERSHIP PER ☐ Test Drive Notes:	C C R C T C T C T C T C T C T C T C T C	Creak (like walk lattle (like shak nock (like a kr ick (like a cloc hump (heavy r luzz (like a bur	king on ai king a bal nock at th ik second muffled kr	ne door) I hand) nock noise)
		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 r	epair			
VIN:				
W.O.#		e: ched to Work		

REMOVAL AND INSTALLATION

INSTRUMENT PANEL ASSEMBLY

Exploded View

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INSTRUMENT PANEL ASSEMBLY

< REMOVAL AND INSTALLATION >

1.	Defroster grille	2.	Center speaker grille	3.	Speaker center
4.	Speaker grille outer	5.	Speaker outer	6.	Instrument panel upper cover
7.	Instrument panel and pad assembly	8.	Side ventilator grille (LH)	9.	Combination meter
10.	Instrument upper panel (LH)	11.	Cluster lid A	12.	Key cylinder escutcheon
13.	Lower knee protector	14.	Instrument lower panel LH	15.	Steering column upper cover
16.	Steering column lower cover	17.	Cluster lid C lower	18.	4WD switch (if equipped)
19.	Hazard switch	20.	Cluster lid C	21.	Instrument lower cover (RH)
22.	Fuse access cover	23.	Glove box	24.	Instrument lower panel RH
25.	Audio switch (RH)	26.	A/C and AV switch assembly	27.	Audio unit
28.	Audio switch (LH)	29.	Center ventilator grille (LH)	30.	Display unit
31.	Center ventilator grille (RH)	32.	Side ventilator grile (RH)	33.	Instrument upper panel (RH)
[]	Metal clip	<u>^</u>	Clip	(_)	Pawl

Removal and Installation

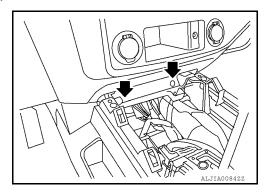
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REMOVAL

CAUTION:

Disconnect both the negative and positive battery terminals, then wait at least three minutes.

- 1. Disconnect the negative and positive terminals, then wait at least three minutes.
- 2. Remove A/T finisher. Refer to IP-19, "Removal and Installation".
- 3. Remove the front center console assembly upper screws.

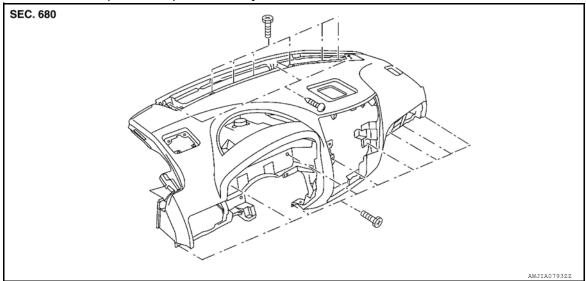


- 4. Remove instrument lower panel RH and glove box assembly. Refer to IP-17, "Removal and Installation".
- 5. Remove center console lower cover (RH/LH), then remove front center console assembly lower screws.
- 6. Open the console lid assembly and remove console bin mat, then remove the rear inner screws.
- 7. Move front seats forward.
- 8. Remove lower center console assembly screws at the rear.
- 9. Move the center console assembly rearward slightly to create additional clearance when removing the instrument panel and pad assembly.
- 10. Remove spiral cable. Refer to SR-14, "Removal and Installation".
- 11. Remove combination meter. Refer to MWI-99, "Removal and Installation".
- 12. Remove instrument panel upper cover and disconnect rear sonar speaker harness connector (if equipped).
- Remove cluster lid C. Refer to <u>IP-15, "Removal and Installation"</u>.
- 14. Remove display unit. Refer to AV-122, "Removal and Installation".
- 15. Remove instrument lower/upper panel RH and glove box. Refer to <u>IP-17, "Removal and Installation"</u> and <u>IP-18, "Removal and Installation"</u>.
- 16. Release the clips, disconnect the the harness connector from optical sensor and remove defroster grille.
- 17. Disconnect the speaker harness connectors from RH, LH and center speakers through the openings of removed components.
- Remove front pillar finishers (LH/RH) Refer to INT-19, "Removal and Installation".
- Remove the passenger air bag module nuts and disconnect the connectors. Refer to <u>SR-17</u>, "Removal and Installation".

INSTRUMENT PANEL ASSEMBLY

< REMOVAL AND INSTALLATION >

- 20. Disconnect remaining optional equipment harness connectors (if equipped).
- 21. Remove instrument panel and pad assembly bolts and screws.



22. Release instrument panel and pad assembly lifting rearward away from steering member, then carefully remove through front door opening.

CAUTION:

Always use an assistant to steady the instrument panel and pad assembly during removal from vehicle interior.

INSTALLATION

Installation is in the reverse order of removal.

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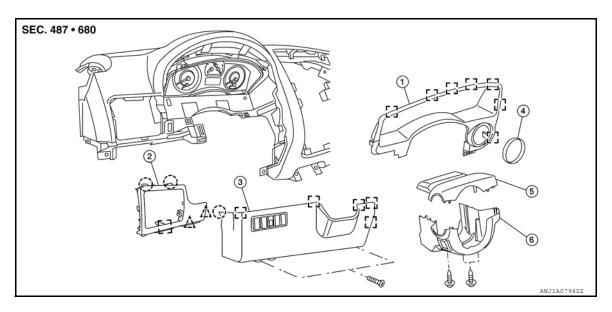
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CLUSTER LID A

Exploded View



- 1. Cluster lid A
- 4. Key cylinder escutcheon
- [] Metal clip

- 2. Instrument upper panel (LH)
- 5. Steering column upper cover
- ∕∖୍ Cli∣

- 3. Instrument lower panel LH
- 6. Steering column lower cover
- Pawl

Removal and Installation

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REMOVAL

- Disconnect battery negative terminal.
- 2. Release the clips and remove the screws, then disconnect the connectors and remove instrument lower panel LH.
- 3. Release the clips then remove instrument upper panel (LH).
- 4. Remove the screws, then remove steering column upper and lower covers from steering column.
- 5. Remove key cylinder escutcheon from cluster lid A.
- 6. Release the clips and remove cluster lid A from instrument panel and pad assembly.

INSTALLATION

Installation is in the reverse order of removal.

CLUSTER LID C

Exploded View

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- 1. A/C and AV switch assembly
- 4. Audio switch (LH)
- 7. Hazard switch
- ,^ Clip

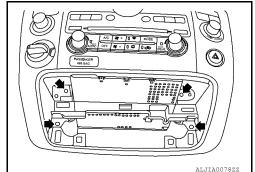
- 2. Cluster lid C
- 5. 4WD switch (if equipped)
- 8. Audio switch (RH)
- ? Pawl

- 3. Center ventilator grille (LH)
- 6. Cluster lid C lower
- 9. Center ventilator grille (RH)
- [] Metal clip

Removal and Installation

REMOVAL

- 1. Disconnect battery negative terminal.
- 2. Release the clips and remove cluster lid C lower.
- 3. Remove the upper and lower cluster lid C screws.
- 4. Release the clips, then pull cluster lid C rearward to release from instrument panel and pad assembly.
- 5. Disconnect harness connectors.



INSTALLATION

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