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PRECAUTIONS

PRECAUTIONS PFP:00001

Precautions 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 SRS and SB section of this Service Man-

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 SRS 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 harness connec-

PREPARATION

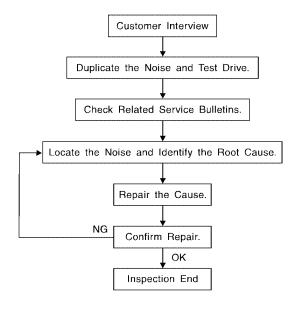
PREPARATION PFP:00002 Α **Special Service Tools** EIS0056K The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here. В Tool number (Kent-Moore No.) Description Tool name Locating the noise C (J-39570) Chassis ear D Е SBT839 Repairing the cause of noise (J-43980) NISSAN Squeak and Rattle kit Н SBT840 **Commercial Service Tools** EIS0056L (Kent-Moore No.) Description Tool name (J-39565) Locating the noise Engine ear M SIIA0995E Power Tool Loosening bolts and nuts

PBIC0191E

SQUEAK AND RATTLE TROUBLE DIAGNOSES Work Flow

PFP:00000

EIS0056M



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 IP-8, "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 A/T model).
- 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 IP-6, "Generic Squeak and Rattle Troubleshooting".

REPAIR THE CAUSE

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

CAUTION:

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

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

URETHANE PADS [1.5 mm (0.059 in) thick]

Insulates connectors, harness, etc.

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

INSULATOR (Foam blocks)

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

50×50 mm (1.97×1.97 in)

INSULATOR (Light foam block)

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mm (0.59×0.98 in)

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

Revision: September 2005

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

FELT CLOTH TAPE

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

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

UHMW (TEFLON) TAPE

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

SILICONE GREASE

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

Note: Will only last a few months.

SILICONE SPRAY

Use when grease cannot be applied.

DUCT TAPE

Use to eliminate movement.

CONFIRM THE REPAIR

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

Generic Squeak and Rattle Troubleshooting

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

INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

- The cluster lid A and instrument panel
- 2. Acrylic lens and combination meter housing
- 3. Instrument panel to front pillar garnish
- 4. Instrument panel to windshield
- Instrument panel mounting pins
- Wiring harnesses behind the combination meter
- 7. A/C defroster duct and duct joint

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

CAUTION:

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

CENTER CONSOLE

Components to pay attention to include:

- Shifter assembly cover to finisher
- A/C control unit and cluster lid C
- 3. Wiring harnesses behind audio and A/C control unit

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

DOORS

Pay attention to the:

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

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

TRUNK

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

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- 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.

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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 headliner and squeaking

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

OVERHEAD CONSOLE (FRONT AND REAR)

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

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

SEATS

IP

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
- 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.

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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 mounted to the engine wall
- 2. Components that pass through the engine wall
- 3. Engine wall mounts and connectors
- 4. Loose radiator mounting 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

EIS00560



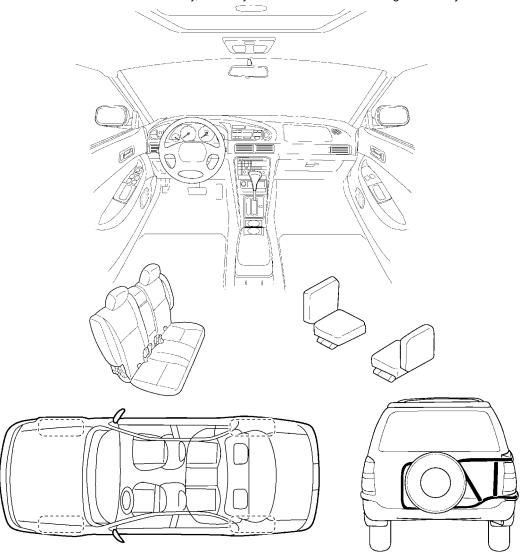
SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

Dear Nissan Customer:

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

I. WHERE DOESTHE 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 the back 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.

LIWA0276E

SQUEAK & RATTLE DIAGNOSTIC WORKSHEET- page 2						
Briefly describe the location v	vhere the noise oc	curs:			В	
					C	
II. WHEN DOES IT OCCUP	R? (check the boxe	s that	apply)		D	
□ anytime		after sitting out in the sun				
☐ 1 st time in the morning	when it	when it is raining or wet				
☐ only when it is cold outside ☐ only when it is hot outside	☐ dry or d	_			Е	
a only when it is not outside						
III. WHEN DRIVING:	IV.	WHAT	TYPE O	F NOISE?	F	
□ through driveways□ over rough roads□ over speed bumps	□ cre	☐ squeak (like tennis shoes on a clean floor) ☐ creak (like walking on an old wooden floor) ☐ rattle (like shaking a baby rattle)				
☐ only at about mph☐ on acceleration	☐ tick	knock (like a knock on a door)tick (like a clock second hand)				
☐ coming to a stop☐ on turns: left, right or either (c	□ thump (heavy, muffled knock noise) either (circle) □ buzz (like a bumble bee)					
☐ with passengers or cargo	•	`		,	IP	
other: miles or	minutae					
TO BE COMPLETED BY DEA		INEI			J	
Test Drive Notes:		****			K	
		YES	NO	Initials of person performing		
Vehicle test driven with custome	er				M	
- Noise verified on test drive	nirad					
 Noise source located and repair formed Follow up test drive performed 		ū	<u>.</u>			
VIN:	Customer Name	:			_	
W.O. #:	Date:			9	SBT844	

This form must be attached to Work Order

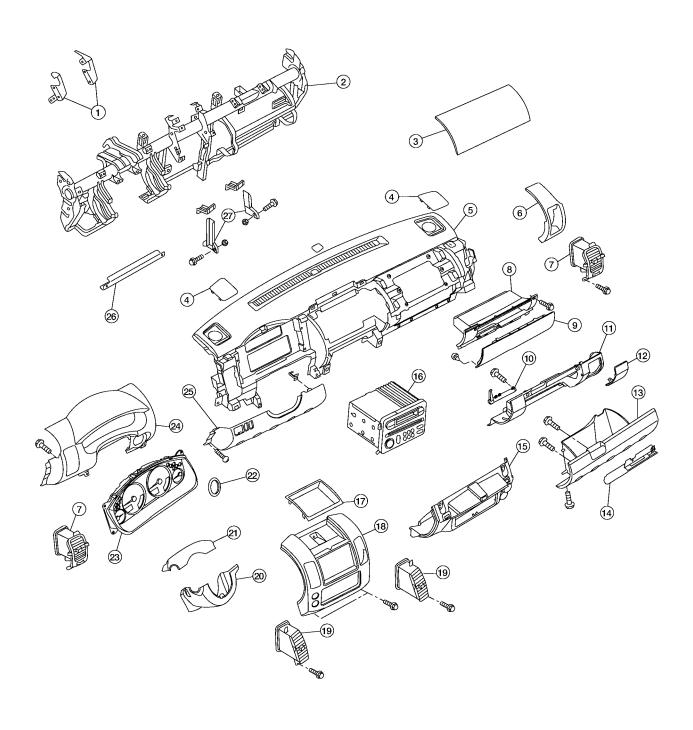
INSTRUMENT PANEL ASSEMBLY

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Removal and Installation INSTRUMENT PANEL

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WIIA0562E

- 1. Display unit bracket RH/LH
- 4. Speaker grille RH/LH
- 7. Side ventilator assembly RH/LH
- 10. Lower glove box damper assembly
- 2. Steering member assembly
- 5. Instrument panel and pad assembly 6.
- 8. Upper glove box bin
- 11. Lower instrument panel RH
- 3. Passenger air bag module cover
- Instrument side finisher
- 9. Upper glove box door
- 12. Fuse block cover

Removal

CAUTION:

Before servicing, turn the ignition switch off, disconnect both battery cables and wait at lease 3 minutes.

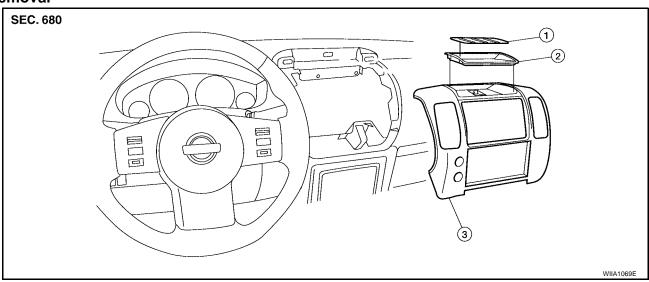
- 1. Disconnect battery negative terminal.
- 2. Disconnect battery positive terminal.
- 3. Remove the center console. Refer to IP-14, "CENTER CONSOLE".
- 4. Remove the combination meter. Refer to IP-13, "COMBINATION METER".
- 5. Remove front pillar upper finisher. Refer to EI-35, "BODY SIDE TRIM".
- 6. Remove optical sensor. Refer to LT-54, "Removal and Installation of Optical Sensor".
- 7. Remove audio unit. Refer to AV-59, "AUDIO UNIT" .
- 8. Remove cluster lid D. Refer to IP-12, "CLUSTER LID D".
- 9. Remove the passenger air bag module. Refer to SRS-47, "FRONT PASSENGER AIR BAG MODULE".
- 10. Remove the instrument stay RH/LH bolts.
- 11. Remove instrument panel.
 - Disconnect all remaining harnesses.

Installation

Installation is in the reverse order of removal.

CLUSTER LID C

Removal



Storage tray liner

2. Storage tray

Cluster lid C

CAUTION:

Before servicing, turn the ignition switch off, disconnect both battery cables and wait at lease 3 minutes.

- 1. Disconnect battery negative terminal.
- 2. Disconnect battery positive terminal.
- 3. Pull cluster lid C rearward to release clips.
- Disconnect electrical connectors and remove cluster lid C.

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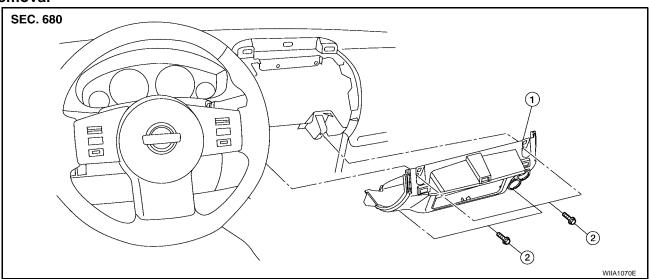
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Installation

Installation is in the reverse order of removal.

CLUSTER LID D

Removal



1. Cluster lid D

- 2. Screws
- 1. Remove center console.
- 2. Remove lower instrument panel LH. Refer to IP-12, "LOWER INSTRUMENT PANEL LH" .
- 3. Remove lower instrument panel RH. Refer to IP-14, "LOWER INSTRUMENT PANEL RH AND LOWER GLOVE BOX".
- 4. Remove cluster lid C. Refer to IP-11, "CLUSTER LID C".
- 5. Disconnect the electrical connectors and remove cluster lid D.

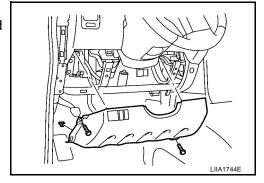
Installation

Installation is in the reverse order of removal.

LOWER INSTRUMENT PANEL LH

Removal

- 1. Remove front pillar lower finisher. Refer to EI-37, "FRONT PILLAR LOWER FINISHER".
- 2. Remove lower instrument panel LH screws, using power tool.
- 3. Pull rearward to release clips, disconnect connectors, and remove lower instrument panel LH.

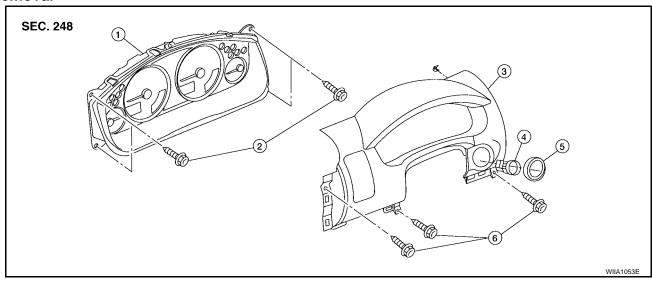


Installation

Installation is in the reverse order of removal.

COMBINATION METER

Removal



- 1. Combination meter
- 2. Screws
- 5. Steering lock escutcheon
- Cluster lid A
- Screw

1. Disconnect the negative battery cable.

Ignition key lamp assembly

- 2. Remove front pillar upper finisher. Refer to EI-37, "FRONT PILLAR UPPER FINISHER" .
- 3. Remove lower instrument panel LH. Refer to IP-12, "LOWER INSTRUMENT PANEL LH".
- 4. Remove steering lock escutcheon.
- 5. Remove cluster lid A, using power tool.
- 6. Remove combination meter, using power tool.
- 7. Disconnect combination meter electrical connectors.

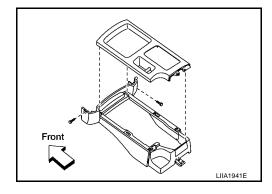
Installation

Installation is in the reverse order of removal.

A/T FINISHER

Removal

- 1. Remove cup holder finisher.
- 2. Pull up to release clips and remove the A/T finisher.
- 3. Remove A/T finisher bezel.



Installation

Installation is in the reverse order of removal.

M/T FINISHER

Removal

- 1. Remove cup holder finisher.
- 2. Remove shift knob. Refer to MT-12, "SHIFT CONTROL" (FS5R30A) or MT-63, "SHIFT CONTROL" (FS6R31A).

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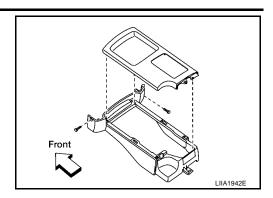
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3. Pull up to release clips and remove the M/T finisher.



Installation

Installation is in the reverse order of removal.

LOWER INSTRUMENT PANEL RH AND LOWER GLOVE BOX

Removal

- 1. Remove front pillar lower finisher. Refer to EI-37, "FRONT PILLAR LOWER FINISHER".
- 2. Remove lower instrument panel RH screws, using power tool.
- 3. Remove lower instrument panel RH and lower glove box.

Installation

Installation is in the reverse order of removal.

NOTE:

Upper glove box assembly must be installed prior to lower glove box assembly.

UPPER GLOVE BOX

Removal

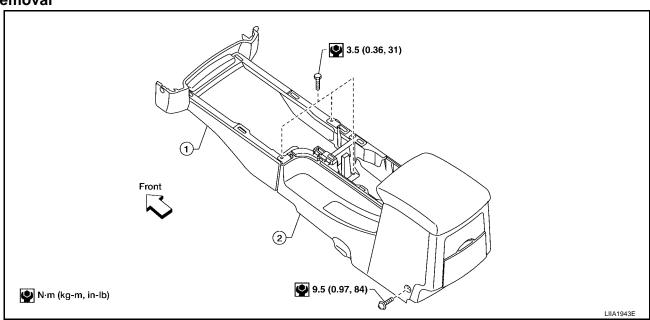
- 1. Remove lower instrument panel RH and lower glove box. Refer to IP-14, "Removal".
- 2. Remove cluster lid C. Refer to IP-11, "CLUSTER LID C".
- 3. Remove upper glove box screws, using power tool.
- 4. Remove upper glove box.

Installation

Installation is in the reverse order of removal.

CENTER CONSOLE

Removal



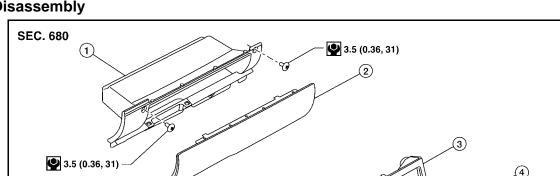
- Remove lower instrument panel RH. Refer to IP-14, "LOWER INSTRUMENT PANEL RH AND LOWER GLOVE BOX".
- Remove cluster lid C.
- 3. Remove A/T or M/T finisher. Refer to IP-13, "A/T FINISHER" or IP-13, "M/T FINISHER".
- 4. Remove center console screws.
- 5. Disconnect electrical connectors and remove center console.
- Remove center console screws. 6.
- Disconnect electrical connectors and remove center console.

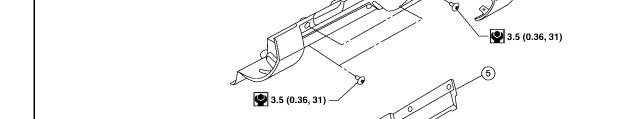
Installation

Installation is in the reverse order of removal.

Disassembly and Assembly LOWER GLOVE BOX

Disassembly





Upper glove box

: N·m (kg-m, in-lb)

- Upper glove box door
- Lower instrument panel RH

Lower glove box

- Fuse block cover
- Lower glove box latch assembly cover 6.
- Lower glove box latch assembly
- 1. Remove fuse block cover.
- 2. Remove lower glove box latch cover.
- Remove lower glove box latch assembly. 3.
- Remove lower glove box from lower instrument panel RH.

Assembly

Assembly is in the reverse order of disassembly.

IP-15 2006 Frontier Revision: September 2005

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UPPER GLOVE BOX

Disassembly

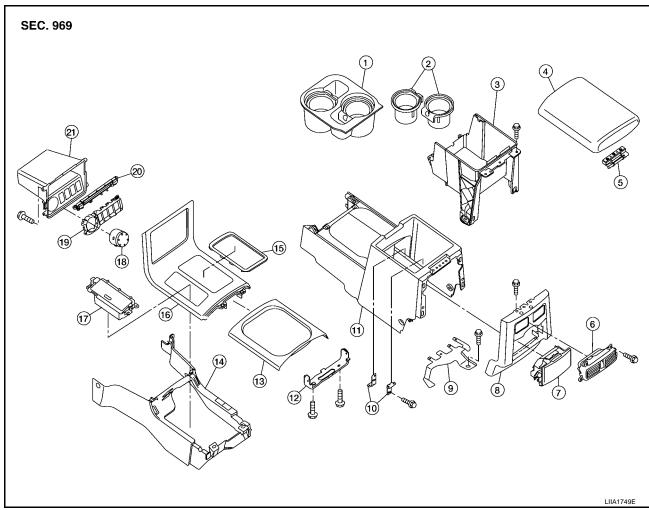
- Remove upper glove box door screws.
- 2. Remove upper glove box door.

Assembly

Assembly is in the reverse order of disassembly.

CENTER CONSOLE

Disassembly



- 1. Cup holder assembly
- 4. Center console lid
- 7. Rear cup holder assembly
- 10. Bracket DVD
- 13. Cup holder finisher
- 16. A/T finisher
- 19. Switch finisher

- 2. Cup holder insert
- 5. Hinge
- 8. Rear finisher assembly
- 11. Center console rear base
- 14. Center console front base
- 17. Ash tray
- 20. CD changer door

- 3. Center console bin
- 6. Ventilator console grille
- 9. Wire harness bracket
- 12. Bracket
- 15. A/T finisher bezel
- 18. Switch assembly
- 21. Console bin
- 1. Remove center console. Refer to IP-14, "CENTER CONSOLE".
- 2. Remove center console lid.
- 3. Remove latch from center console lid.
- 4. Remove hinge from center console lid.
- 5. Remove rear finisher assembly.
- 6. Remove rear cup holder assembly.
- 7. Remove DVD player, if equipped.

- 8. Disconnect center console harness connectors.
- 9. Remove cup holder insert and cup holder assembly.
- 10. Remove center console bin.
- 11. Remove center console bracket.
- 12. Remove wire harness bracket.

Assembly

Assembly is in the reverse order of disassembly.

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