

## **CONTENTS**

PRECAUTIONS  Precautions for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TEN-	2
SIONER"	2
PREPARATION	
Special Service Tools	3
Commercial Service Tools	3
SQUEAK AND RATTLE TROUBLE DIAGNOSIS	4
Work Flow	4
CUSTOMER INTERVIEW	4
DUPLICATE THE NOISE AND TEST DRIVE	5
CHECK RELATED SERVICE BULLETINS	5
LOCATE THE NOISE AND IDENTIFY THE	
ROOT CAUSE	5
REPAIR THE CAUSE	5
CONFIRM THE REPAIR	6

Generic Squeak and Rattle Troubleshooting	
INSTRUMENT PANEL	
CENTER CONSOLE	
DOORS	6
TRUNK	7
SUNROOF/HEADLINING	7
OVERHEAD CONSOLE (FRONT AND REAR).	7
SEATS	7
UNDERHOOD	7
Diagnostic Worksheet	8
INSTRUMENT PANEL ASSEMBLY	
Removal and Installation	10
REMOVAL AND INSTALLATION	11
Disassembly and Assembly	15
CENTER CONSOLE ASSEMBLY	

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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 harnesses or harness connectors.

## **PREPARATION PREPARATION** PFP:00002 Α **Special Service Tools** EIS001CS 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** EIS001CT Tool name Description J-39565 Locating the noise Engine ear

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PBIC0191E

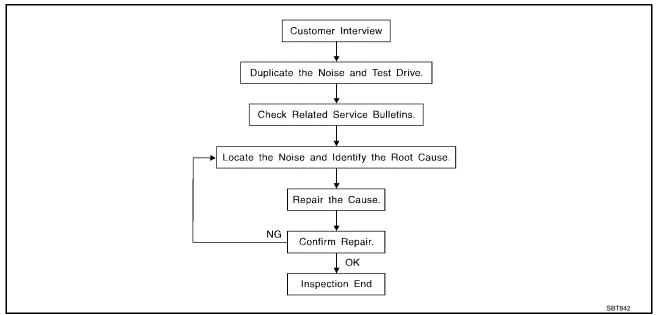
Loosening bolts and nuts

Power Tool

#### SQUEAK AND RATTLE TROUBLE DIAGNOSIS

PFP:00000

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 <a href="Moleon of P-8">IP-8</a>, "Diagnostic Worksheet"</a>. 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 bumblebee)
   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:

- 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 mechanics 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 x 135 mm (3.94 x 5.31 in)/76884-71L01: 60 x 85 mm (2.36 x 3.35 in)/76884-71L02: 15 x 25 mm (0.59 x 0.98 in)

IP-5

INSULATOR (Foam blocks)

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

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

INSULATOR (Light foam block)

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

**FELT CLOTH TAPE** 

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

68370-4B000: 15 x 25 mm (0.59 x 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 in place 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:

- 1. The cluster lid A and instrument panel
- 2. Acrylic lens and combination meter housing
- Instrument panel to front pillar garnish
- 4. Instrument panel to windshield
- 5. Instrument panel mounting pins
- 6. Wiring harnesses behind the combination meter
- 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
- 2. A/C control unit and upper/lower cluster lid C
- 3. Wiring harnesses behind audio and A/C control unit
- 4. Console lid to console bin.

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

#### **DOORS**

Pay attention to the:

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

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

#### TRUNK

Trunk noises are often caused by a loose jack or loose items put into the trunk by the owner.

- In addition look for:
- 1. Trunk lid bumpers out of adjustment Trunk lid striker out of adjustment
- 3. The trunk lid torsion bars knocking together
- A loose license plate or bracket

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

#### SUNROOF/HEADLINING

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

- 1. Sunroof lid, rail, linkage or seals making a rattle or light knocking noise
- Sunvisor 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:

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

**SEATS** 

When isolating seat noises it is 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 holders
- A squeak between the seat pad cushion and frame
- 3. The rear seat back 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 noises 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 noises include:

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

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

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## **Diagnostic Worksheet**

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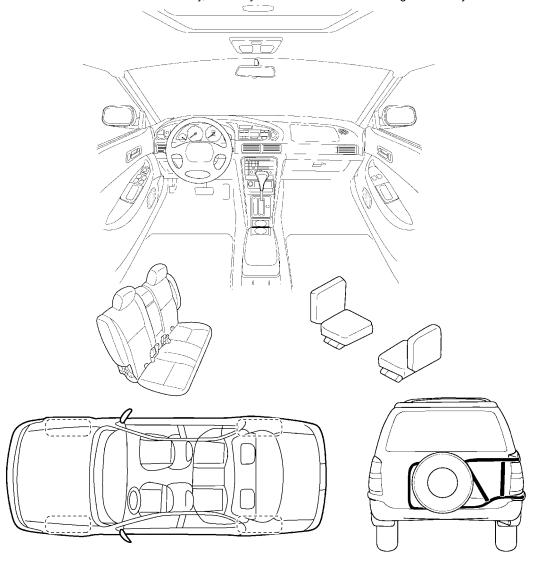
#### SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

#### 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.

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SQUEAK & RATTL	E DIAGNOSTIC WORKSHEET- page 2	А
Briefly describe the location when	e the noise occurs:	В
		- - C
II. WHEN DOES IT OCCUR? (d	heck the boxes that apply)	-
□ anytime	☐ after sitting out in the sun	D
☐ 1 <sup>st</sup> time in the morning	☐ when it is raining or wet	
☐ only when it is cold outside	☐ dry or dusty conditions	Е
u only when it is hot outside	🗀 other:	
III. WHEN DRIVING:	IV. WHAT TYPE OF NOISE?	F
☐ through driveways ☐ over rough roads ☐ over speed bumps	<ul><li>□ squeak (like tennis shoes on a clean floor)</li><li>□ creak (like walking on an old wooden floor)</li><li>□ rattle (like shaking a baby rattle)</li></ul>	G
☐ only at about mph	☐ knock (like a knock on a door)	Н
on acceleration	☐ tick (like a clock second hand)	
coming to a stop	☐ thump (heavy, muffled knock noise)	
<ul><li>□ on turns : left, right or either (circle)</li><li>□ with passengers or cargo</li></ul>	buzz (like a bumble bee)	IP
☐ other:		
after driving miles or m	 inutes	.1
TO BE COMPLETED BY DEALER Test Drive Notes:	SHIP PERSONNEL	K
	Initials of person <u>YES NO performing</u>	L
Vehicle test driven with customer - Noise verified on test drive	<u> </u>	M
<ul> <li>Noise source located and repaired</li> <li>Follow up test drive performed to d</li> </ul>		
VIN: Cu	ustomer Name:	
W.O. #: Da	ate:	

This form must be attached to Work Order

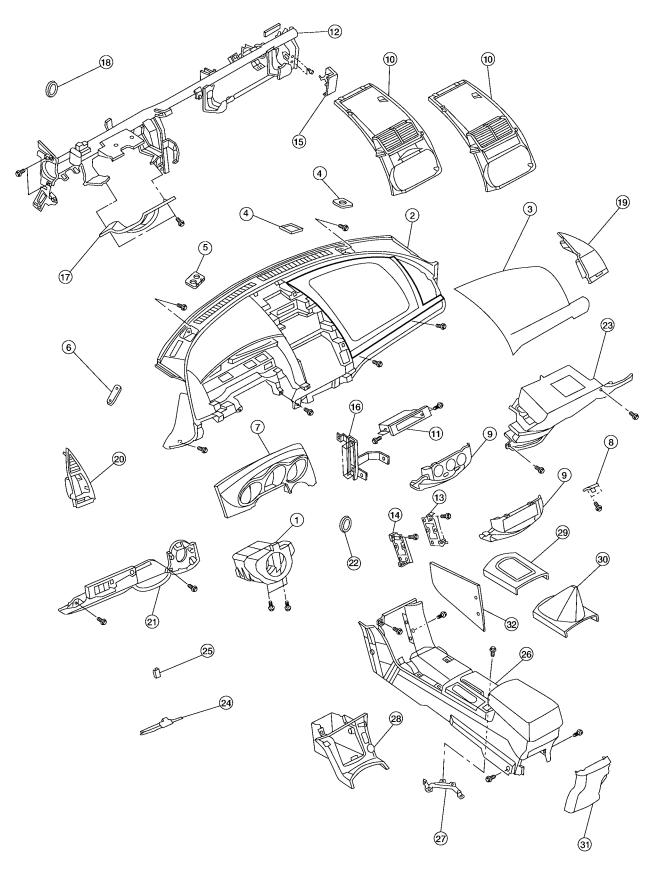
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## **INSTRUMENT PANEL ASSEMBLY**

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# Removal and Installation



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1.	Steering column cover	2.	Instrument panel assembly	3.	Passenger side air bag
4.	RH instrument mask	5.	LH instrument mask	6.	Vehicle identification plate
7.	Cluster lid A	8.	Glove box striker	9.	Cluster lid C
10.	Cluster lid D	11.	Deck pocket	12.	Steering member assembly
13.	RH audio bracket	14.	LH audio bracket	15.	RH instrument member bracket
16.	Driver instrument stay	17.	LH lower knee protector	18.	Bolt cap
19.	Side ventilator grille RH	20.	Side ventilator grille LH	21.	Instrument lower cover LH
22.	Key cylinder escutcheon	23.	Glove box assembly	24.	Fuse block cover
25.	Switch mask	26.	Center console assembly	27.	Front console bracket
28.	Front console box assembly	29.	A/T finisher	30.	M/T finisher
31.	Console finisher rear	32.	Center console side finisher RH		

#### **REMOVAL AND INSTALLATION**

#### **Work Steps**

When removing instrument panel and pad, combination meter, console assembly, or steering member take steps in the order shown by the numbers below.

Parts	Instrument panel and pad	Combination meter	Steering member	Console assembly
Cluster lid C	1		1	1
Cluster lid D	2		2	
Glove box assembly	3		3	2
Key cylinder escutcheon	4		4	
Cluster lid A	5	1	5	
Combination meter	6	2	6	
Fuse block cover	7		7	
Instrument lower cover LH	8		8	3
Center console side finisher RH	9		9	4
Audio unit	10		10	
Climate control unit	11		11	
A/T finisher or M/T finisher	12		12	5
Storage bin	13		13	
Front console box assembly	14		14	6
Console finisher	15		15	7
Center console assembly	16		16	8
Driver lower dash side trim	17		17	
Side ventilator grille LH	18		18	
Assistant lower dash side trim	19		19	
Side ventilator grille RH	20		20	
Front passenger air bag module	21		21	
RH and LH instrument masks	22		22	
Instrument panel and pad	23		23	
Steering column covers			24	
Steering column, place aside			25	
RH and LH audio brackets			26	
RH bolt caps			27	
Steering member			28	

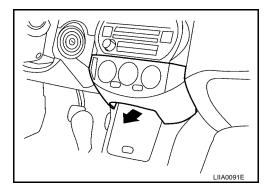
Number indicates step in removal procedures

#### Cluster Lid C

Pull lid toward rear of vehicle.

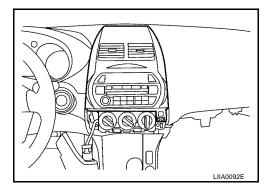
Disconnect electrical connectors.

Installation is in the reverse order of removal.



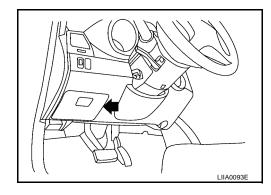
#### **Cluster Lid D**

- 1. Remove cluster lid C. Refer to IP-12, "Cluster Lid C".
- 2. Remove cluster lid D.
  - Remove screw using power tool.
  - Pull lid toward rear of vehicle to release clips.
- 3. Installation is in the reverse order of removal.

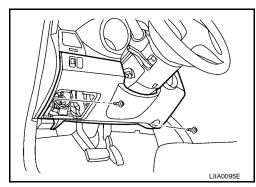


#### **Instrument Lower Cover LH**

- 1. Remove cluster lid C. Refer to IP-12, "Cluster Lid C".
- 2. Remove fuse box cover.

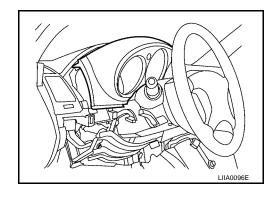


- 3. Remove screws using power tool, and instrument lower cover LH.
  - Pull to disconnect clips.
- 4. Installation is in the reverse order of removal.



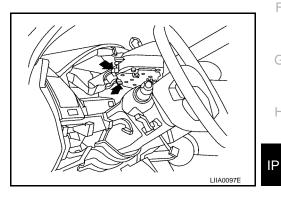
#### Cluster Lid A

- 1. Remove instrument lower cover LH. Refer to IP-12, "Instrument Lower Cover LH".
- 2. Pull toward rear of vehicle to release clips.
  - Disconnect indicator lamp sockets.
- 3. Installation is in the reverse order of removal.



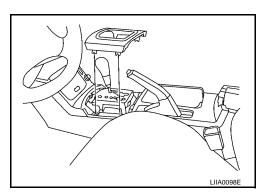
#### **Combination Meter**

- 1. Remove cluster lid A. Refer to IP-13, "Cluster Lid A".
- 2. Remove screws using power tool.
  - Pull cluster lid A from opening.
  - Disconnect electrical connectors.
  - Remove combination meter.
- 3. Installation is in the reverse order of removal.



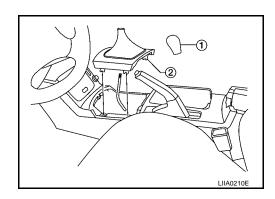
#### A/T Finisher

Pull up to release clips and remove A/T finisher. Installation is in the reverse order of removal.



#### M/T Finisher

- 1. Remove shifter knob.
- 2. Pull up to release clips and remove M/T finisher.
- 3. Installation is in the reverse order of removal.



**IP-13** Revision: May 2004 2004 Altima

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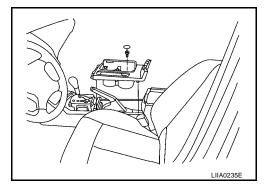
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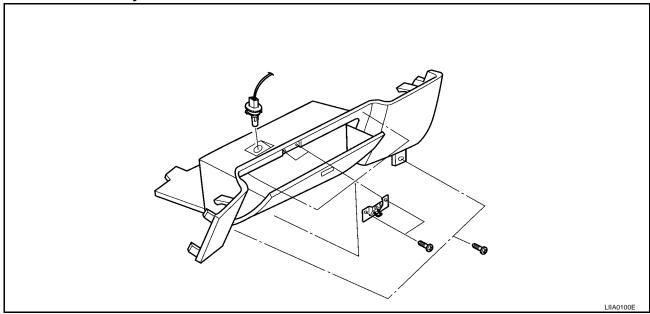
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#### **Cup Holder**

- 1. Open storage bin B.
- 2. Remove console finisher.
- 3. Remove screw cover and remove screw using power tool.
  - Pull up to release clips on cup holder and remove cup holder.
- 4. Installation is in the reverse order of removal.



**Glove Box Assembly** 



- 1. Remove screws from glove box striker and glove box assembly using power tool.
- 2. Pull glove box assembly towards rear of car to release clips.
- 3. Disconnect lamp socket, and remove glove box assembly.
- 4. Installation is in the reverse order of removal.

## **Disassembly and Assembly**

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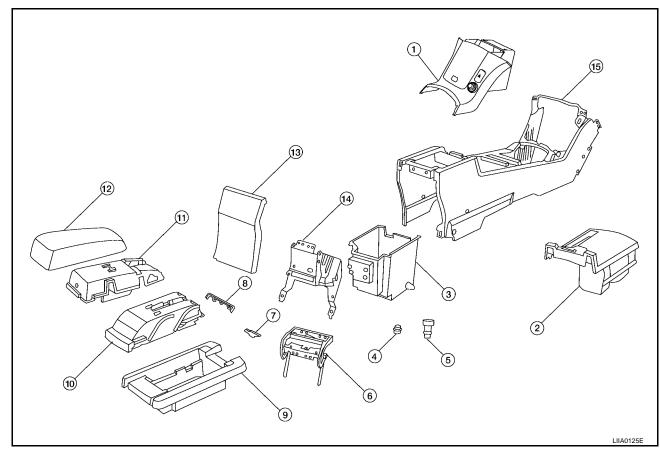
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#### **CENTER CONSOLE ASSEMBLY**



- 1. Console finisher
- 4. Power point cover
- 7. Latch
- Adjustable armrest track 10.
- Console rear cover 13.
- 2. Cup holder assembly
- 5. Power point assembly
- Adjustable armrest stop reinforce-
- 11. Adjustable armrest slide
- 14. Hinge reinforcement

- 3. Storage bin B
- 6. Hinge assembly
- 9. Storage bin A
- 12. Adjustable armrest trim cover
- 15.
- 1. Remove center console assembly. Refer to <a href="P-11">IP-11</a>, "Work Steps"</a>.
- 2. Remove cup holder assembly.
- 3. Remove armrest assembly.
- 4. Remove adjustable armrest track.
- 5. Separate adjustable armrest slide from adjustable armrest track.
- 6. Separate adjustable armrest trim cover from adjustable armrest slide.
- 7. Remove storage bin A.
- 8. Remove hinge assembly.
- 9. Remove hinge reinforcement and storage bin B.
- 10. Separate hinge reinforcement from storage bin B.
- 11. Remove power point from storage bin B.
- 12. Assembly is in the reverse order of disassembly.

Console base

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**IP-15** 2004 Altima Revision: May 2004