#### **SECTION 4C**

#### **POWER BOOSTER**

#### **TABLE OF CONTENTS**

Specifications 4C-1	Vacuum Hose	4C-2
Fastener Tightening Specifications 4C-1	Power Booster Assembly	4C-3
Diagnosis 4C-1	General Description and System	
Power Booster Functional Check 4C-1	Operation	4C-9
Maintenance and Repair 4C-2	Power Booster	4C-9
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#### **SPECIFICATIONS**

#### **FASTENER TIGHTENING SPECIFICATIONS**

Application	N•m	Lb•Ft	Lb•ln
BoostertoDash Panel Nuts	22	16	-
Booster Pushrod Hex Nut	18	13	
Pushrod Clevis	18	13	-

#### **DIAGNOSIS**

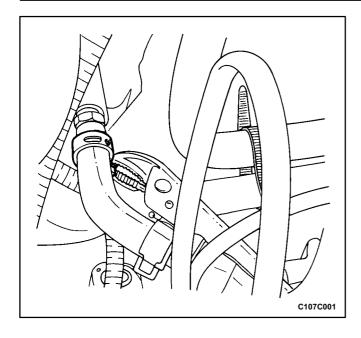
## POWER BOOSTER FUNCTIONAL CHECK

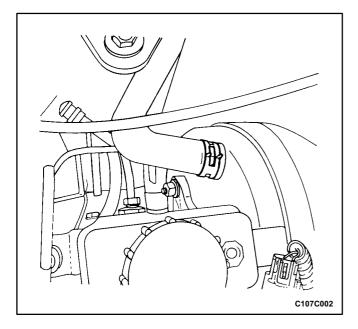
- 1. With the engine stopped, eliminate vacuum in the booster by pumping the brake pedal several times.
- 2. Push the pedal down and hold in this position.

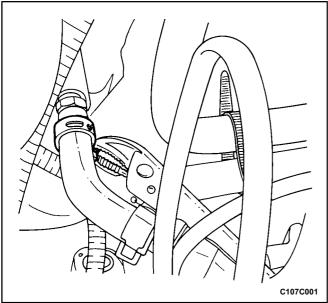
- 3. Start the engine.
- 4. The booster is OK if the pedal drops further because of extra force produced.

If the brake pedal does not drop, the vacuum system (vacuum hoses, check valve, etc.) is probably defective and should be checked.

If no defect is revealed by checking the vacuum system, the defect is in the booster itself.







# MAINTENANCE AND REPAIR ON-VEHICLE SERVICE

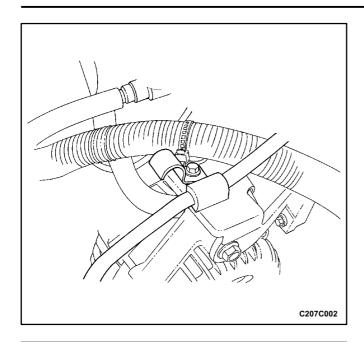
#### **VACUUM HOSE**

#### **Removal Procedure**

- 1. For vehicles with a DOHC engine, remove the clip on the vacuum hose connection at the intake manifold.
- 2. Pull the hose from the union nut connection. If the hose does not remove easily or is deteriorated, pry off and discard the hose.
- For vehicles with an SOHC engine, similarly remove the clip on the vacuum hose nut connection to the intake manifold.
- Pull the hose from the union nut connection. If the hose does not remove easily or is deteriorated, pry off and discard the hose.
- 5. Remove the clip on the vacuum hose connection to the brake booster.
- 6. Remove the vacuum hose.

#### **Installation Procedure**

- Mount the vacuum hose (DOHC engine connection shown), and ensure the connections are tight on each end.
- 2. Install the vacuum hose clips.
- 3. Check the function of the booster. Refer to the "Power Booster Functional Check" in this section.

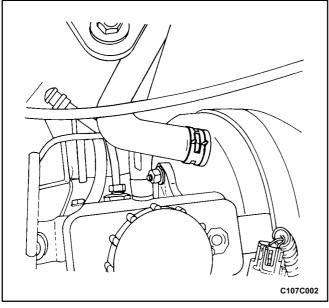


#### POWER BOOSTER ASSEMBLY

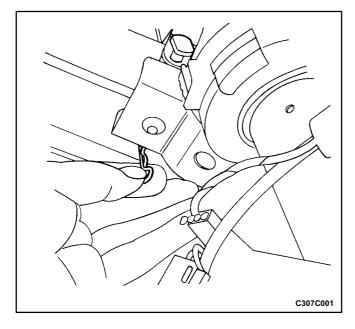
### (Left-Hand Drive Shown, Right-Hand Drive Similar)

#### **Removal Procedure**

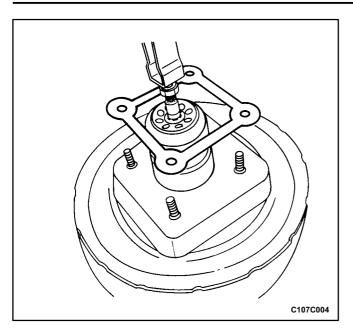
- 1. For right-hand drive vehicles, remove the air intake tube. Refer to Section 1C, DOHC Egnine mechanical and Section 1B, SOHC Engine Mechanical.
- 2. For right-hand drive veicles, loose the retaining clip located above the alternator and piston it away from the pressure line.



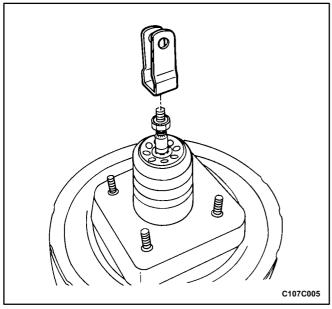
- 3. Remove the master cylinder. Refer to Section 4B, Master Cylinder.
- 4. Remove the clamp on the vacuum hose connection to the booster (DOHC engine shown).
- 5. Remove the vacuum hose from the booster. Refer to "Vacuum Hose" in this section.



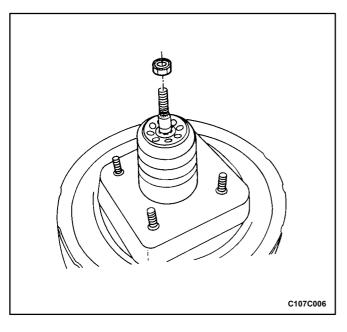
- 6. Disconnect the brake stoplamp switch. Refer to Section 4A, Hydraulic Brakes.
- 7. Remove the brake pedal spring.
- 8. Disconnect the clip and remove the pushrod pin from the pedal bracket assembly.



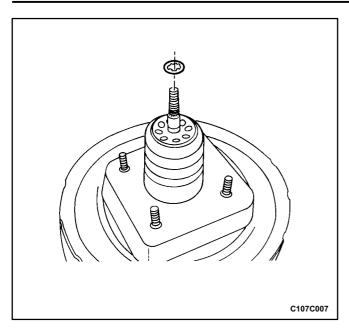
- 9. Remove the booster mounting nuts from the studs protruding from the dash panel, and remove the booster.
- 10. Remove and discard the gasket.



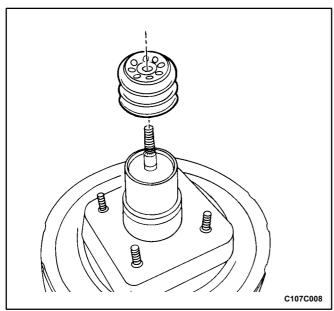
11. Remove the pushrod clevis.



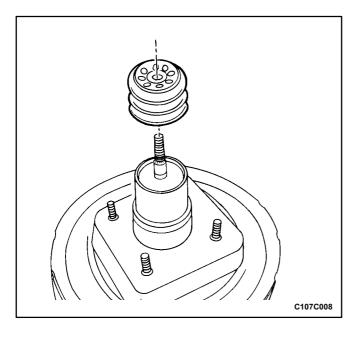
12. Remove the hex nut from the pushrod.



13. Remove the spring clip.

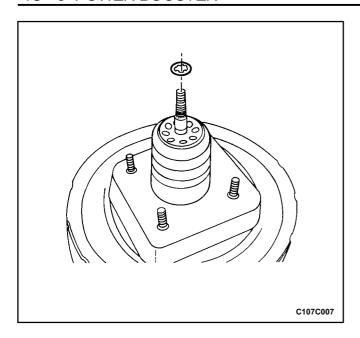


- 14. Remove the rubber boot and the packings.
- 15. Discard the rubber boot, if deteriorated, and discard the packings.

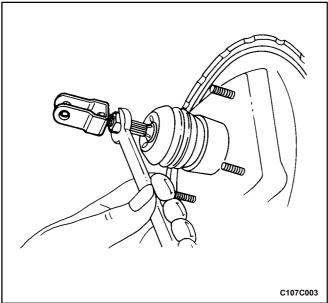


#### **Installation Procedure**

- 1. Check the pushrod and the pushrod clevis for damage and proper fit.
- 2. Install the new foam rubber and fiber packings, and install the new rubber boot on the booster shaft.



3. Install the spring clip.

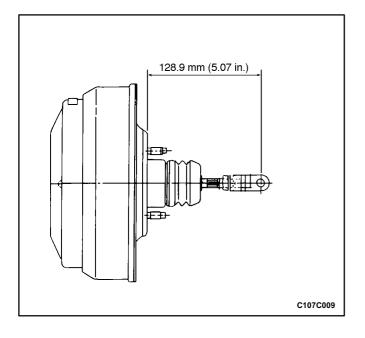


4. Install the hex nut and the pushrod clevis.

#### **Tighten**

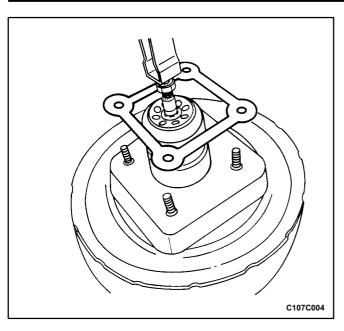
Tighten the booster pushrod hex nut to 18 N•m (13 lb•ft).

Tighten the pushrod clevis to 18 N•m (13 lb•ft).



5. Measure the distance from the booster to the center of the fork bin bore.

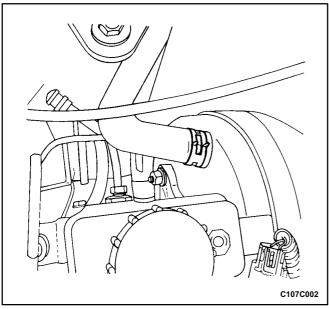
**Important:** This measurement should be 128.9 mm (5.07 inches).



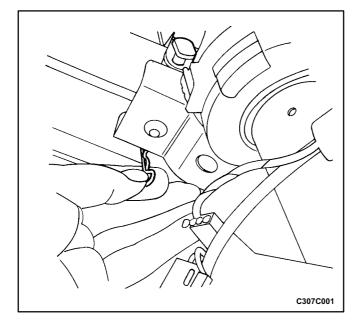
- 6. Install the new gasket.
- 7. Install the booster and the mounting nuts to the dash panel.

#### **Tighten**

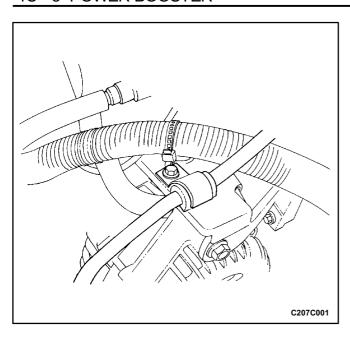
Tighten the booster to dash panel nuts to 22 N•m (16 lb•ft).



- 81 Install the master cylinder onto the booster. Refer to *Section 4B, Master Cylinder*.
- 9. Install the new vacuum hose to the booster (DOHC engine shown). Refer to "Vacuum Hose" in this section.
- 10. Install the hose clamp on the vacuum hose.



- 11. Install the pushrod pin to the brake pedal bracket assembly and connect the clip and the spring.
- 12. Connect the brake stoplamp switch. Refer to Section 4A, Hydraulic Brakes.



- 13. For right-hand drive vehicles, secure the pressure line with the retaining clip located above the alternator.
- 14 For right-hand drive vehicles, install the air intake tube. Refer to Section 1C, DOHC Engine Mechanical and Section 1B, SOHC Engine Mechanical.

## GENERAL DESCRIPTION AND SYSTEM OPERATION

#### **POWER BOOSTER**

This booster is a single diaphragm, vacuum suspended unit. In a normal operating mode, with the service brakes in the release position, a vacuum suspended booster operates with a vacuum on both sides of its diaphragm.

When the brakes are applied, air at atmospheric pressure is admitted to one side of the diaphragm to provide the power assist. When the brakes are released, atmospheric air is shut off from that side of the diaphragm. The air is then drawn from the booster through the vacuum check valve by the vacuum source.

**Important:** If any hydraulic component is removed or disconnected, it may be necessary to bleed all or part of the brake system.