

# Brake Booster




## Index and Inspection

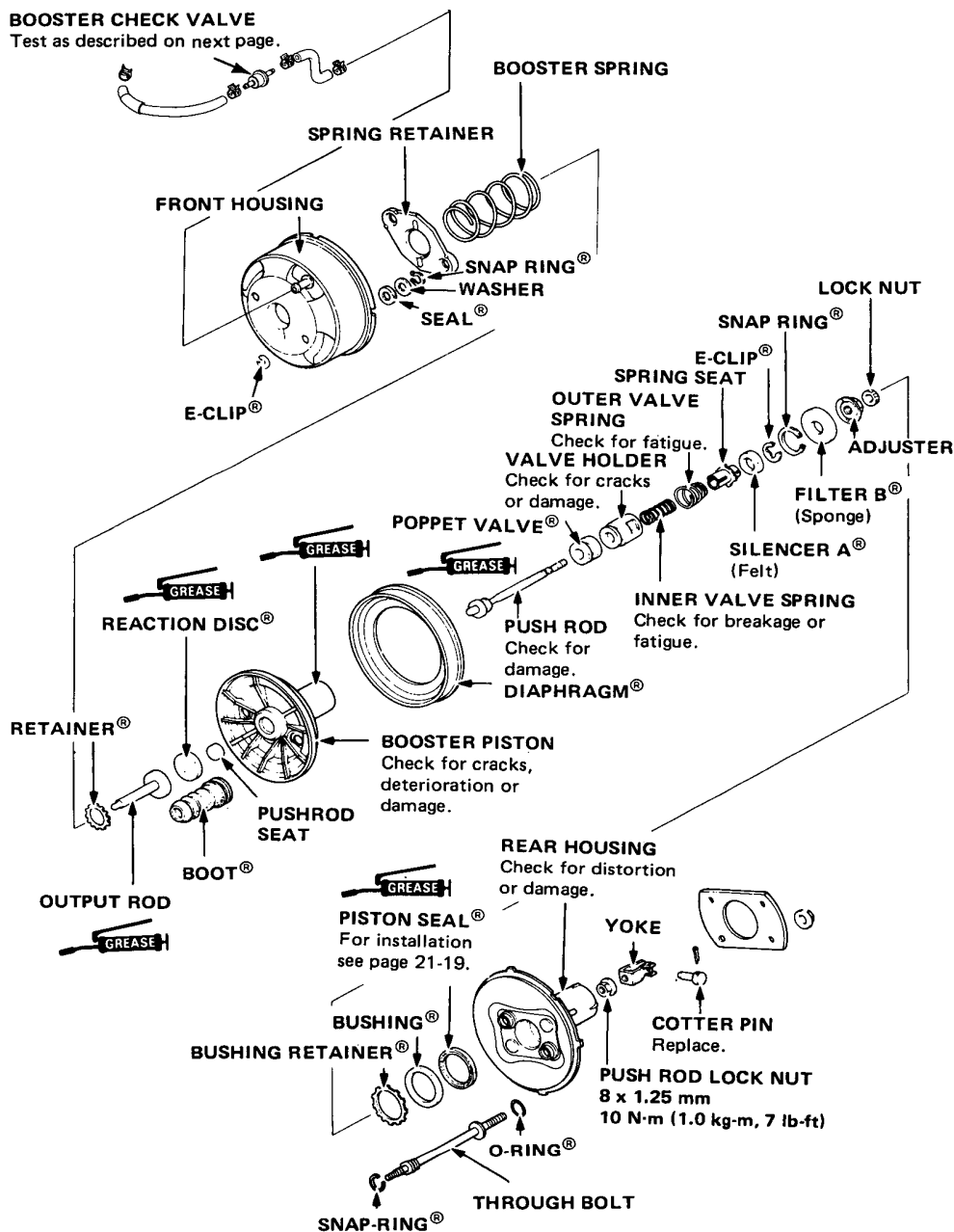
Booster testing is on next page.

### NOTE:

- Parts marked® are available with rebuild kit and must be replaced whenever disassembled.

-  on this page refers to silicon grease.

NOTE: Scribe an alignment mark across the front and rear housings so you can reassemble them in their original positions.



# Brake Booster

## Testing

### Functional Test

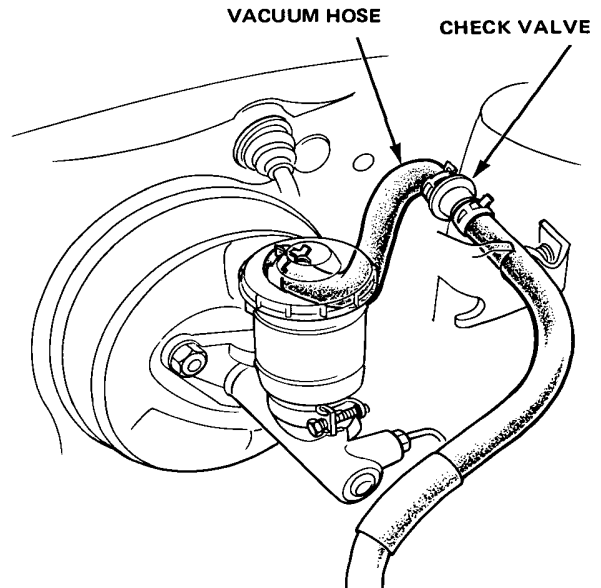
1. With the engine off, depress the brake pedal several times, then depress the pedal hard and hold that pressure for 15 seconds. If the pedal sinks, a brake line, a wheel cylinder, or the master cylinder is faulty.
2. Start the engine with the pedal depressed. If the pedal sinks slightly, the vacuum booster is working. If the pedal height does not vary, the booster or check valve is faulty.

### Leak Test

1. Depress the brake pedal with the engine running, then stop the engine. If the pedal height does not vary while depressed for 30 seconds, the vacuum booster is OK. If the pedal rises, the booster is faulty.
2. With the engine off, depress the brake pedal several times, using normal pressure. When the pedal is first depressed, it should be low. On consecutive applications, pedal height should gradually rise. If the pedal position does not vary, check the booster check valve.

### Check Valve Test

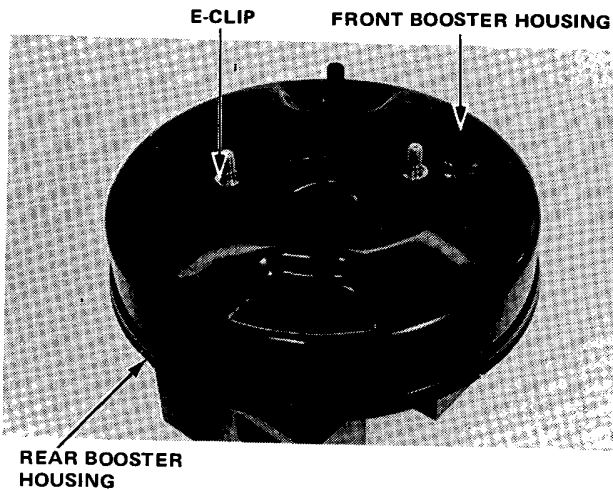
1. Disconnect the brake booster vacuum hose at the booster.
2. Start the engine and let it idle. There should be vacuum available. If no vacuum is available, the check valve is not working correctly. Replace the check valve and retest.



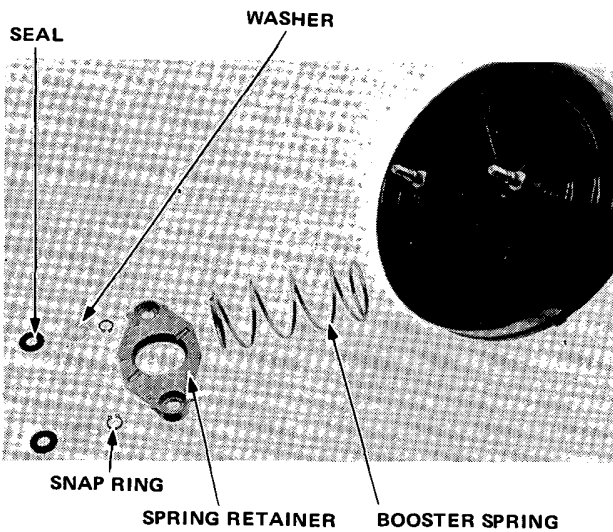


## Disassembly

1. Scribe an aligning mark across the front and rear booster housings to ensure proper positioning of parts on reassembly.
2. Remove the master cylinder.
3. Remove the E-clips, and separate the front booster housing and the rear booster housing.

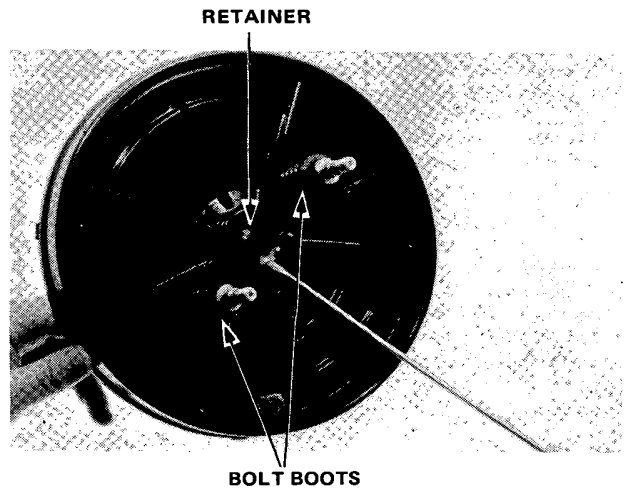


4. Remove the washers and seals from the rear housing, then remove the snap ring.

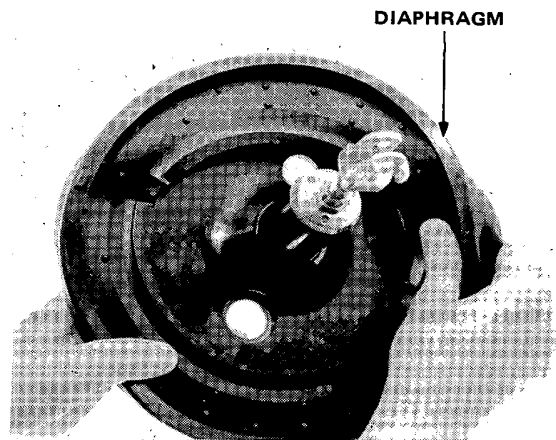


5. Remove the spring retainer and booster spring.

6. Remove the retainer and the through bolt boots.



7. Remove the diaphragm from the rear housing.

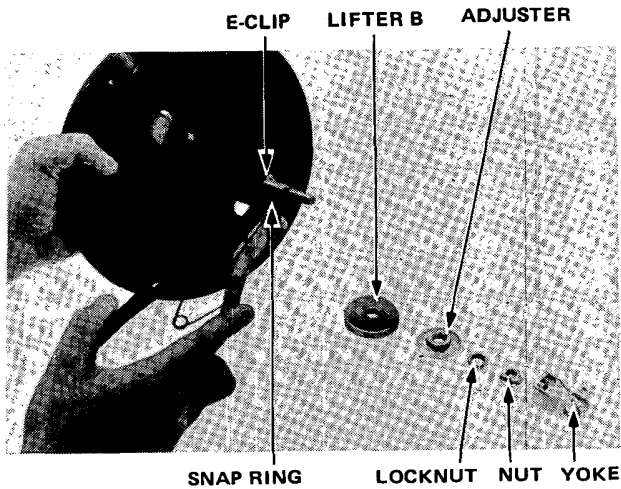


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# Brake Booster

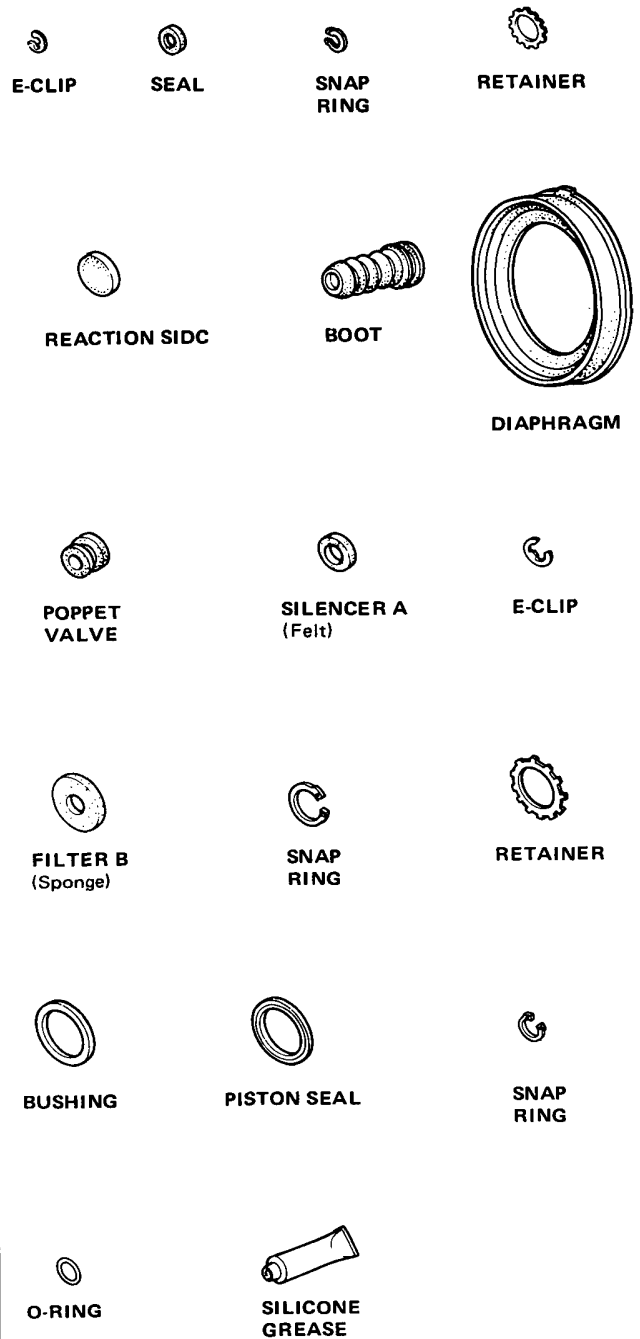
## Disassembly (cont'd)

8. Remove the yoke, push rod locknut, star locknut, adjuster and filter.
9. Remove the snap ring, then remove the valve holder assembly.



Remove the E-clip from the valve holder assembly and disassemble.

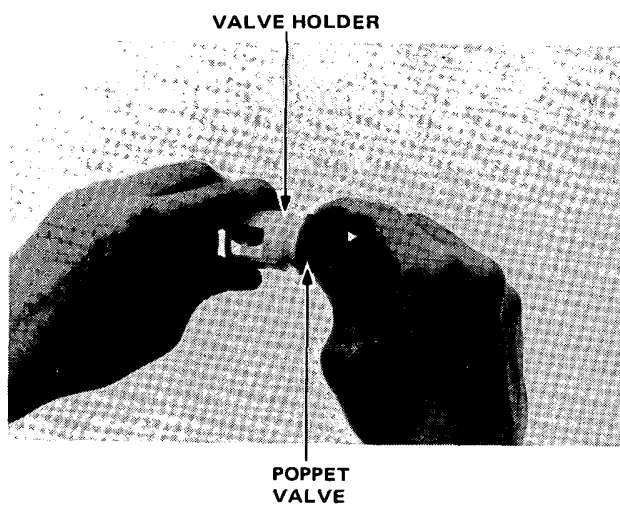
## Rebuild Kit



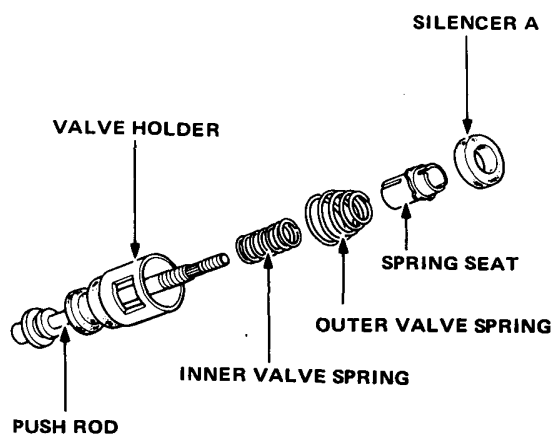


## Reassembly

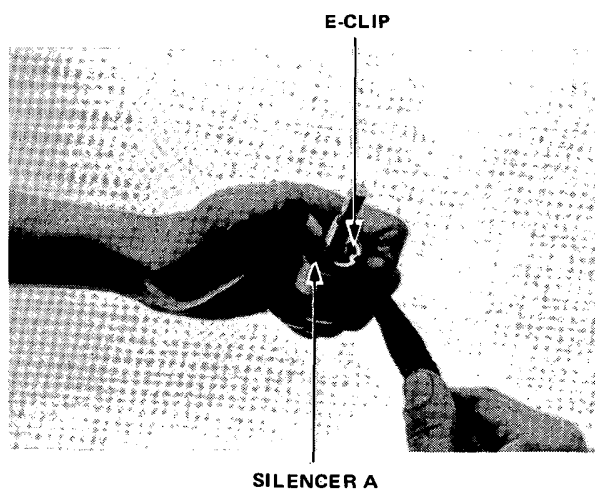
1. Install the poppet valve on the valve holder.



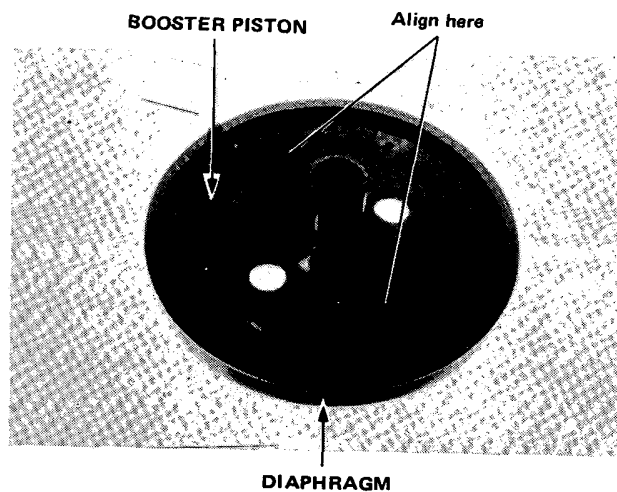
2. Install the valve holder, inner valve spring, outer valve spring, and spring seat onto the push rod.



3. Install the silencer with the E-clip.



4. Install the diaphragm onto the booster piston with the diaphragm tabs aligned with the slots in the piston.

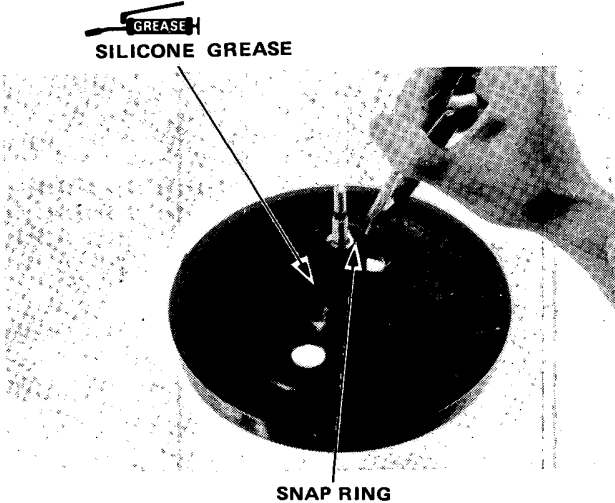


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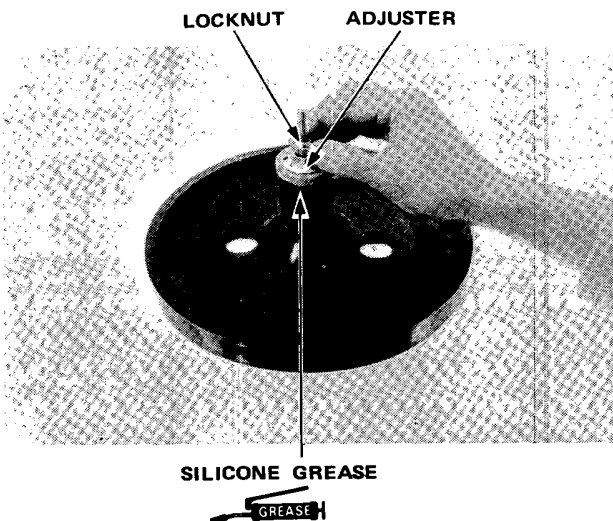
## Reassembly(cont'd)

5. Apply silicone grease to the inner and outer surfaces of the piston tube.

Press the valve holder assembly into the booster piston tube, and install the snap ring.



6. Slip the filter (foam) over the end of the pushrod. Thread the adjuster and locknut onto the shaft but do not tighten.

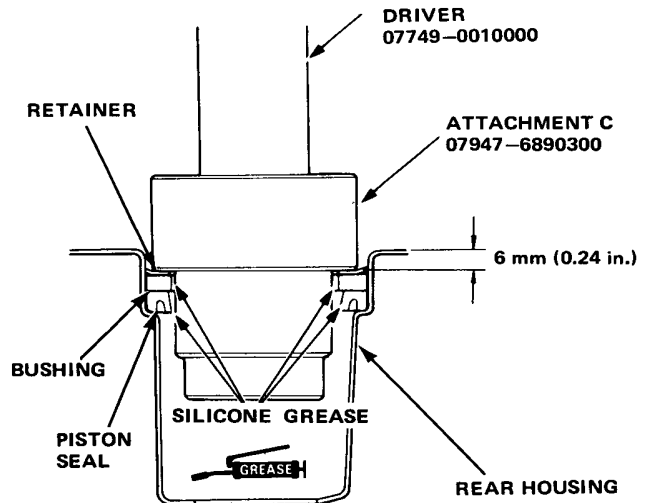
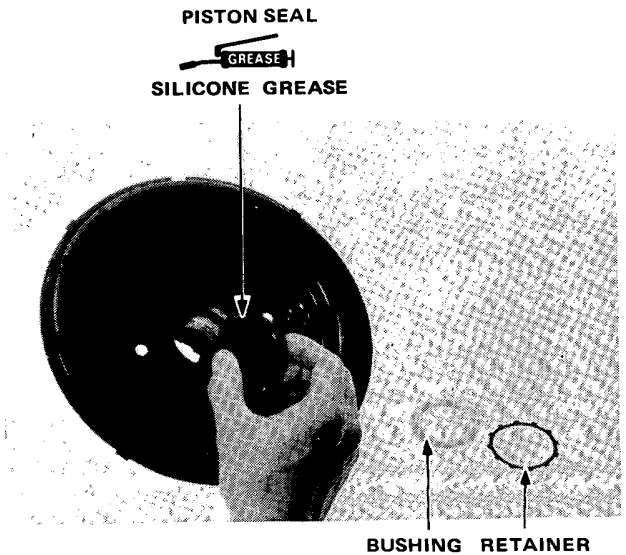


7. Apply silicone grease to the piston seal, then set the seal in position on the housing.

NOTE: Make sure the lip of the seal is facing in, as shown in drawing below.

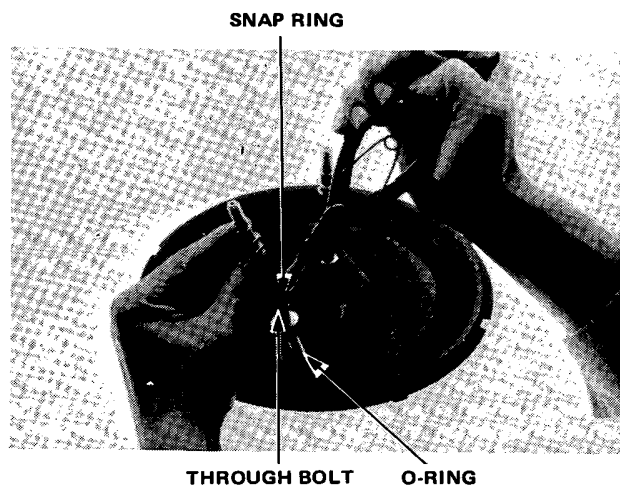
8. Install the piston seal and bushing in the rear housing, and gently drive the retainer in until it is 6 mm below the edge of the rear housing.

CAUTION: If you drive in the retainer more than 6 mm, you may distort the piston seal.

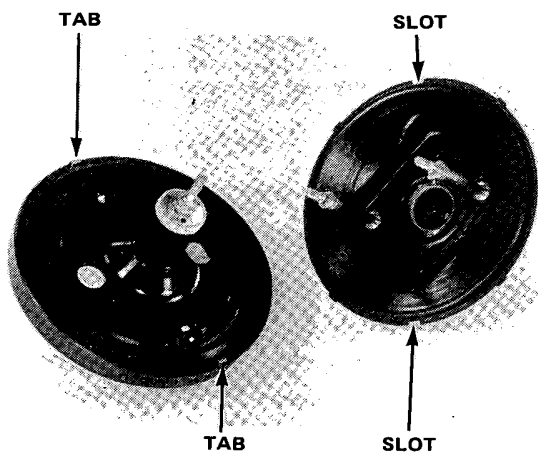




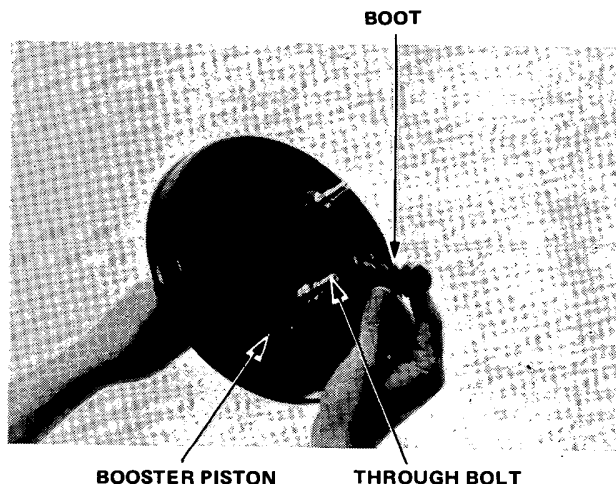
9. Install both through bolts, using the O-rings and snap rings.



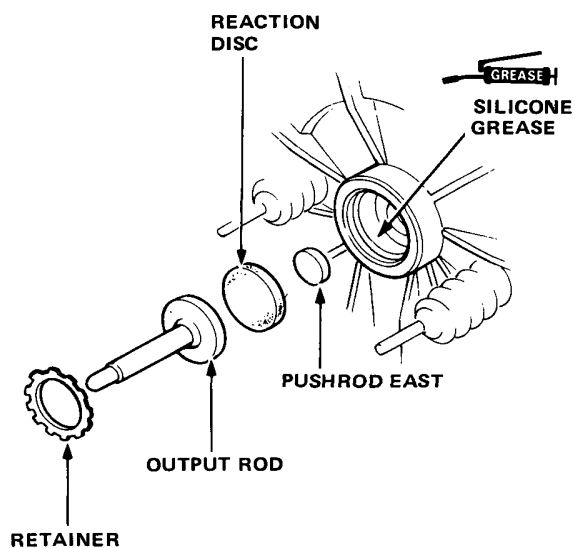
10. Attach the booster piston to the rear housing, aligning the tab of the booster piston with the slot in the rear housing.



11. Install the boots onto the through bolts.



12. Apply silicone grease to the bore of the booster piston, then install the push rod seat, reaction disc, output-rod, and retainer.

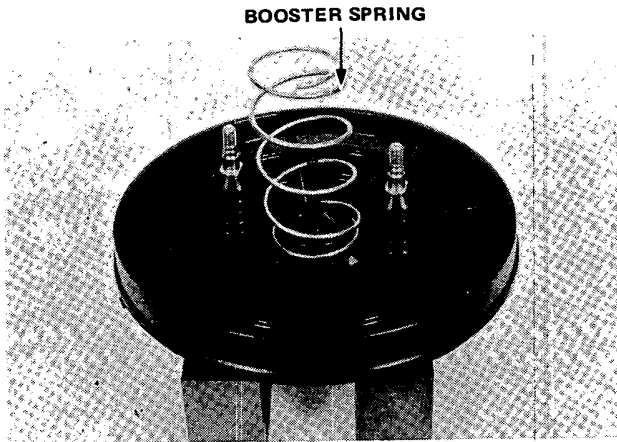


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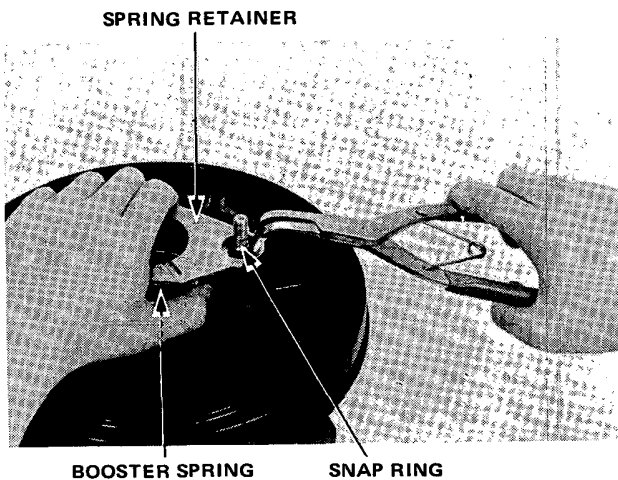
# Brake Booster

## Reassembly(cont'd)

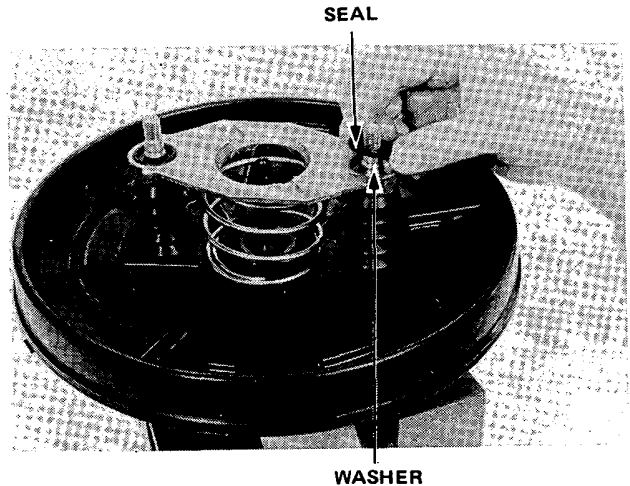
13. Install the booster spring.



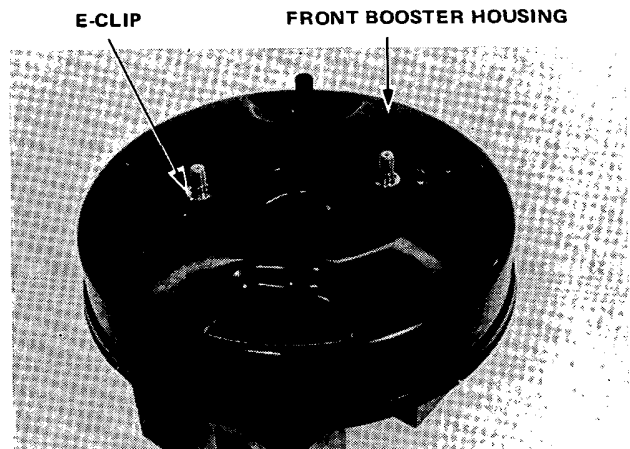
14. Install the spring retainer by compressing the booster spring, then installing the snap rings on the through bolts.



15. Install the washers and seals.



16. Assemble the front booster housing onto the rear booster housing, press down on the front housing, then install the E-clips on the through bolts.



17. Adjust the pushrod clearance (page 21-23), and install the master cylinder.



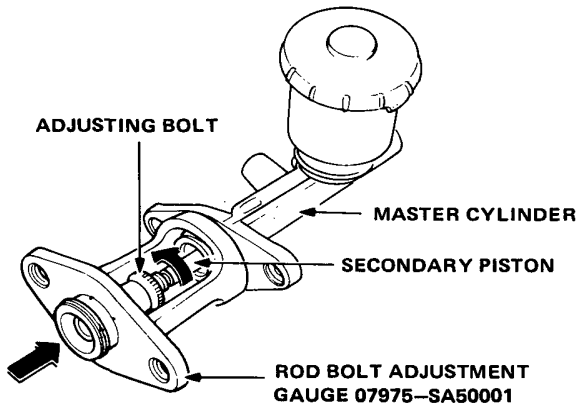
# Pushrod Clearance



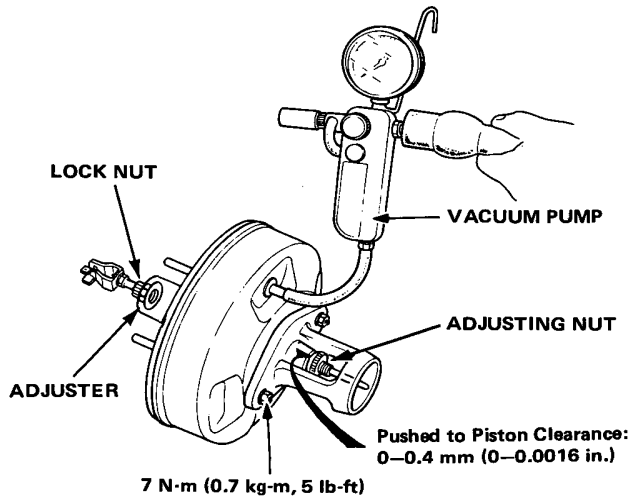
## Adjustment

**NOTE:** Master cylinder pushrod-to-piston clearance must be checked, and adjustments made if necessary, before installing master cylinder.

1. Using the Rod Bolt Adjustment Gauge, adjust bolt so the top of it is flush with end of master cylinder piston.



2. Without disturbing the adjusting bolt's position, put the gauge upside down on the booster.
3. Install the master cylinder nuts and tighten to the specified torque.
4. Connect the vacuum pump to the brake booster, and draw a vacuum of 500 mm Hg (20 in. Hg).
5. Measure the clearance between the out-put rod and adjusting bolt with a feeler gauge.



6. If clearance is incorrect, loosen star locknut and turn adjuster in or out to adjust.
7. Tighten locknut securely.