

# SECTION 5B1 DISC BRAKE CALIPER ASSEMBLY 3000/3100 SERIES B-G CARLINE CONTENTS

<b>GENERAL DESCRIPTION</b> .....	5B1-1	Shoe and Lining Assembly .....	5B1-3
<b>ON-CAR SERVICE</b> .....	5B1-2	<b>UNIT REPAIR</b> .....	5B1-4
Caliper Assembly .....	5B1-2	Caliper Overhaul .....	5B1-4

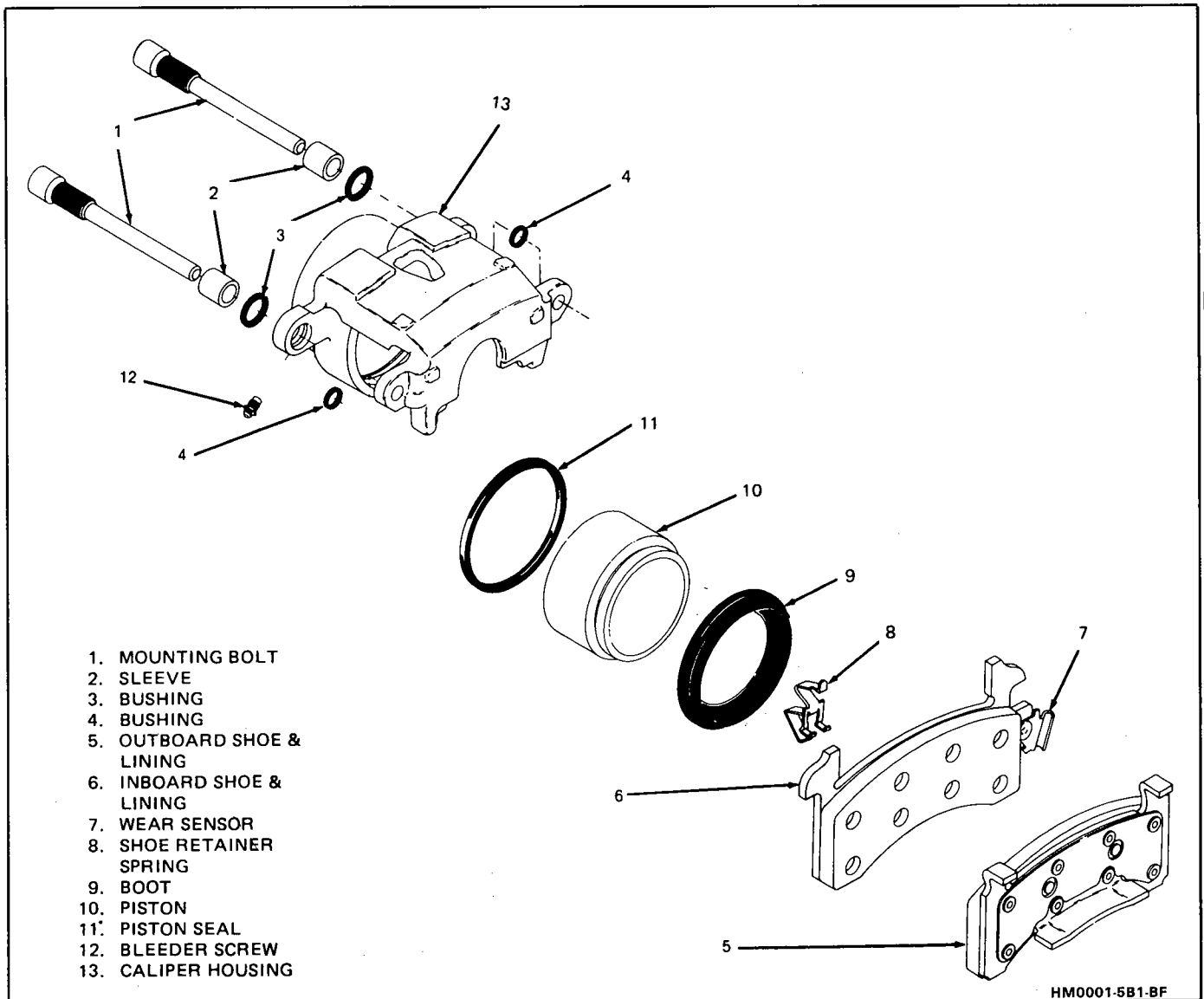


Figure 1 3000/3100 Caliper Disassembled View

## GENERAL DESCRIPTION

This caliper has a single bore and is mounted to the support bracket with two mounting bolts. Hydraulic pressure, created by applying the brake pedal, is converted by the caliper to a stopping force. This force acts equally against the piston and the bottom of the caliper bore to move the piston outward

and to move (slide) the caliper inward resulting in a clamping action on the rotor. This clamping action forces the linings against the rotor, creating friction to stop the vehicle.

**!** Important

- Replace all components included in repair kits used to service this caliper.
- Lubricate rubber parts with clean brake fluid to ease assembly.
- Do not use lubricated shop air on brake parts as damage to rubber components may result.
- If any hydraulic component is removed or disconnected, it may be necessary to bleed all or part of the brake system.
- Replace shoe and linings in axle sets only.
- The torque values specified are for dry, unlubricated fasteners.
- Perform service operations on a clean bench free from all mineral oil materials.

**ON-CAR SERVICE**

**CALIPER ASSEMBLY**

See Figures 1 thru 6

**↔** Remove or Disconnect

1. 2/3 of brake fluid from master cylinder assembly.
2. Raise car and suitably support, see Section 0A.
  - Mark relationship of wheel to axle flange.
3. Wheel and tire.
  - Reinstall two wheel nuts to retain rotor.
4. Bottom piston into caliper bore to provide clearance between linings and rotor.
  - Position C-clamp over inboard brake shoe tab and the inboard caliper housing.
5. Bolt attaching inlet fitting (15) only if caliper is to be removed from vehicle for unit repair (overhaul). If only shoe and linings are being replaced, there is no need to disconnect inlet fitting.
  - Plug openings in caliper and pipe to prevent fluid loss and contamination.
6. Mounting bolts (1) and sleeves (2).
7. Caliper (13) from rotor and mounting bracket (18). If only shoe and linings are being replaced, suspend with a wire hook (17) from strut.

**🔍** Inspect

- Mounting bolts and sleeves for corrosion.
- If corrosion is found, use new parts, including bushings, when installing caliper.
- Do not attempt to polish away corrosion.
- See NOTICE on page 5-1.

**↔** Install or Connect

1. Lubricate sleeves (2) and bushings (3 and 4) with silicone grease.
2. Sleeves (2) in caliper ears.
3. Caliper (13) over rotor in mounting bracket (18).
4. Mounting bolts (1) to 51 N·m (38 lb-ft).

**📏** Measure

- Clearance between caliper (13) and bracket (18) stops.

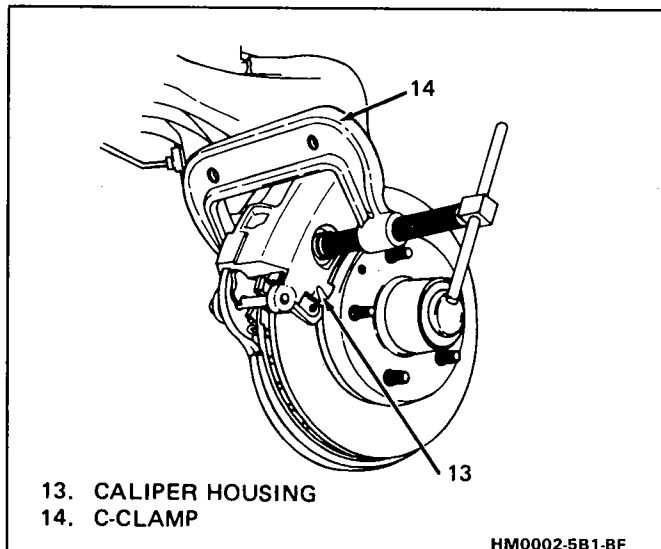


Figure 2 Compressing Piston

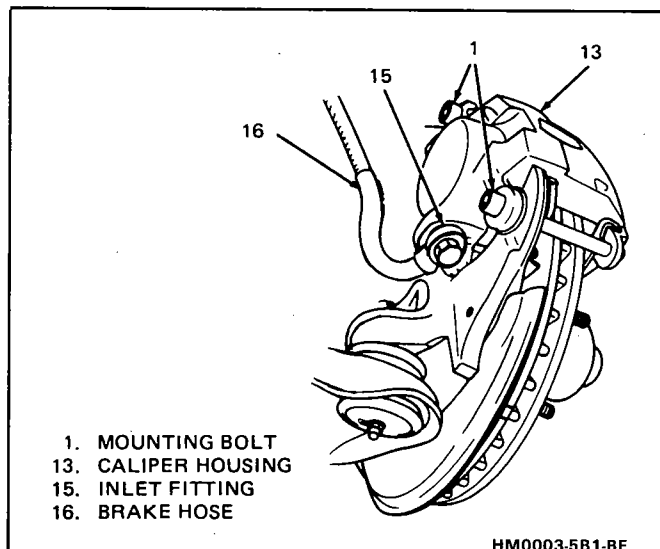


Figure 3 Caliper Attachment

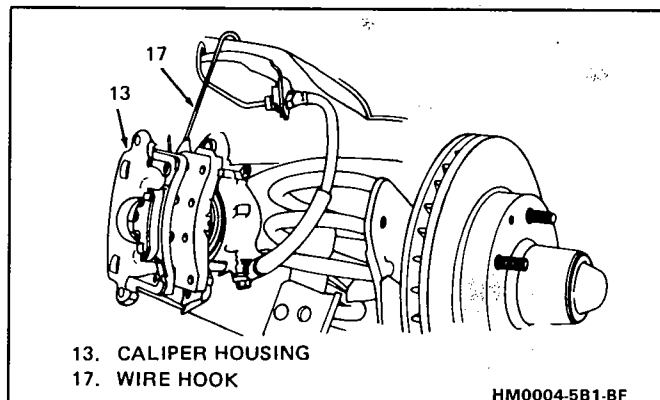


Figure 4 Suspending Caliper

- If necessary, remove caliper and file ends of bracket (18) stops to provide proper clearance.
5. Inlet fitting (15), if removed, to 45 N·m (33 lb-ft).
  6. Wheels and tires, aligning previous marks.
    - Remove wheel nuts securing rotor to hub.
    - Lower car.

- Torque wheel nuts. See Section 3E WHEELS AND TIRES.
- 7. Fill master cylinder to proper level with clean brake fluid.
  - Bleed caliper if inlet fitting was removed.
  - Recheck fluid level.

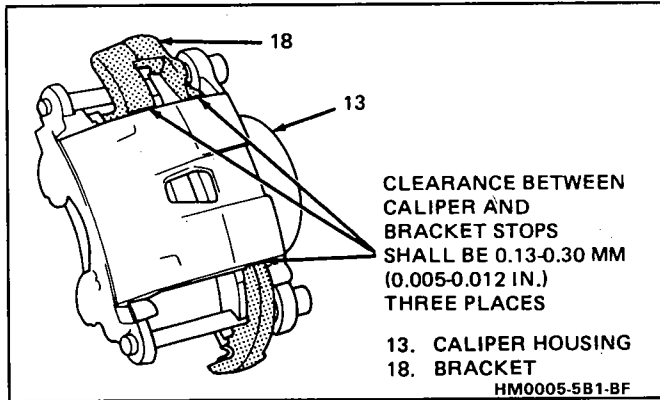


Figure 5 Caliper to Bracket Clearance

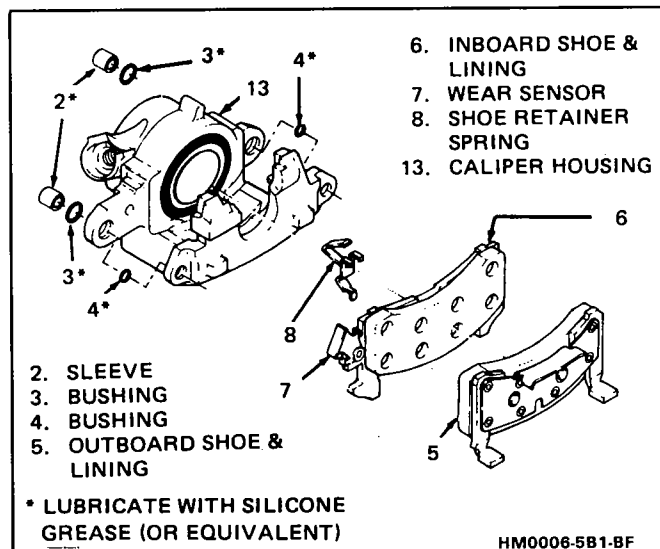


Figure 6 Shoe & Lining Assembly

## SHOE AND LINING ASSEMBLIES

See Figures 6 thru 10

### ↔ Remove or Disconnect

1. Caliper as previously described.
2. Outboard shoe and lining (5).
3. Inboard shoe and lining (6).
4. Bushings (3 and 4) from grooves in mounting bolt holes.

### →← Install or Connect

1. Lubricated new bushings (3 and 4) in grooves in mounting bolt holes.
2. Lubricated sleeves (2) in mounting bolts holes.
3. Retainer spring (8) on inboard shoe (6).
4. Inboard shoe and lining (6) by snapping retainer spring (8) into piston (1) ID. Wear sensor (7) should be at the leading edge of shoe during

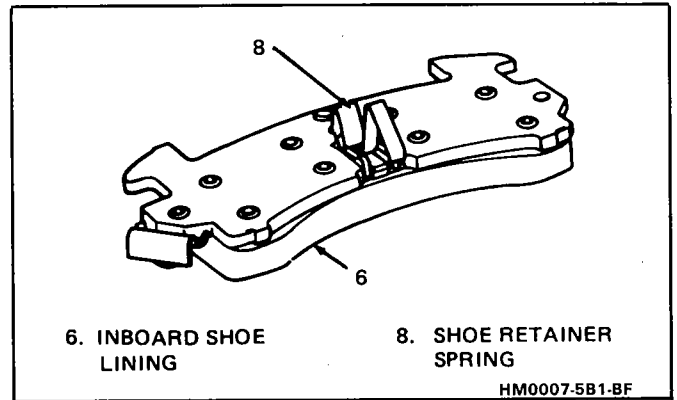


Figure 7 Inboard Shoe & Retainer

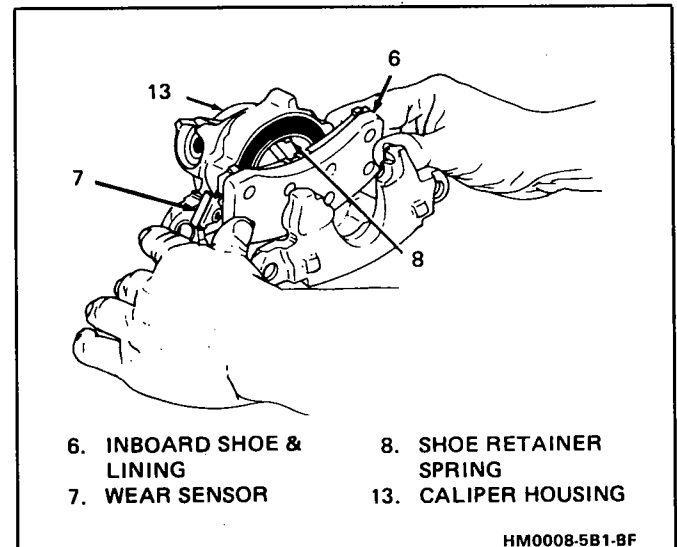


Figure 8 Installing Inboard Shoe and Lining

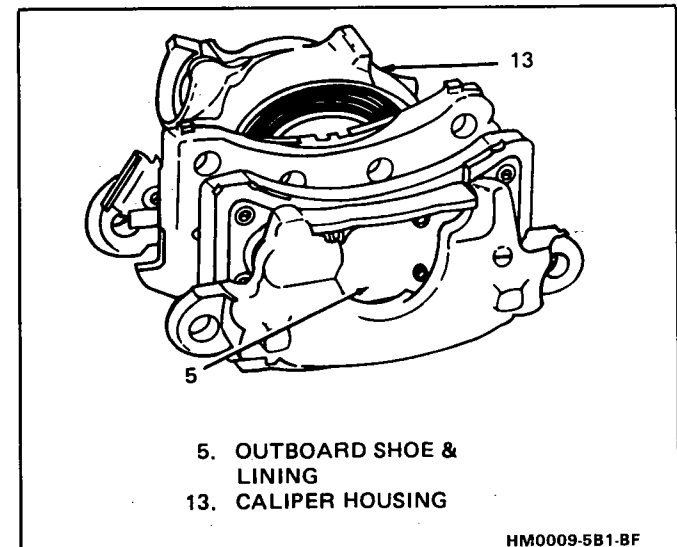


Figure 9 Installing Outboard Shoe & Lining

forward wheel rotation. Shoe must lay flat against piston.

5. Outboard shoe and lining (5). Back of shoe must lay flat against caliper.
6. Caliper as previously described.
7. Apply approximately 778 N (175 lb) force three times to brake pedal to seat linings.

- Position 12-inch channel lock pliers (19) over brake shoe ears and bottom edge of caliper (13). While holding moderate force (50 lbs) on brake pedal, clinch outboard shoe ears to caliper.

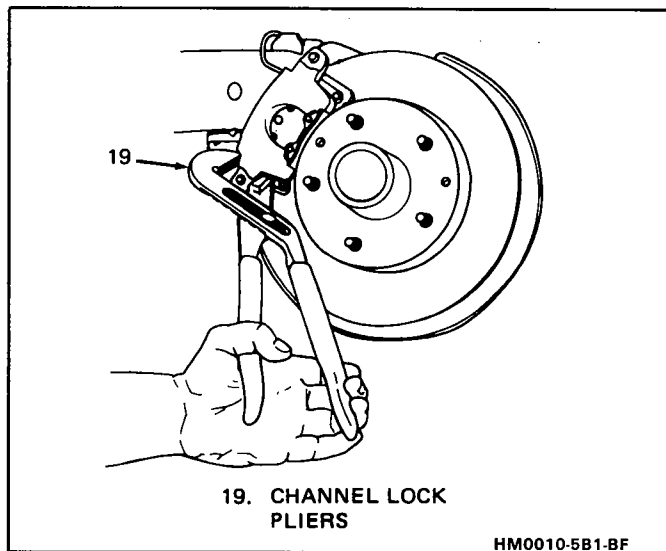


Figure 10 Clinching Procedure

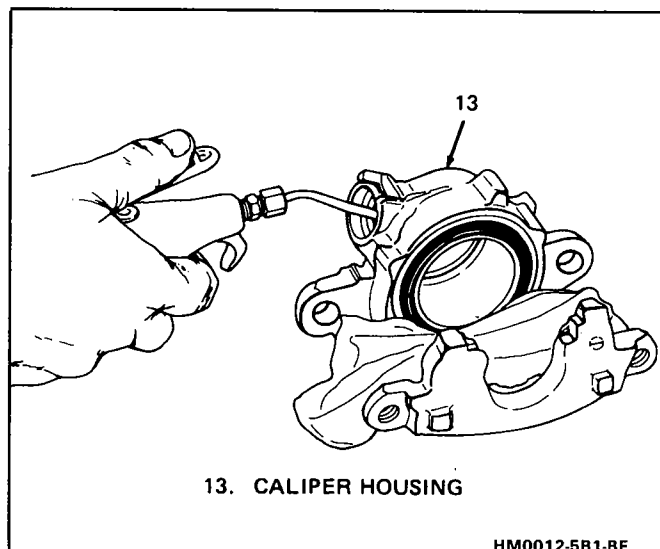


Figure 12 Removing Piston

**CAUTION:** Do not place fingers in front of the piston in an attempt to catch or protect it when applying compressed air. This could result in serious injury.

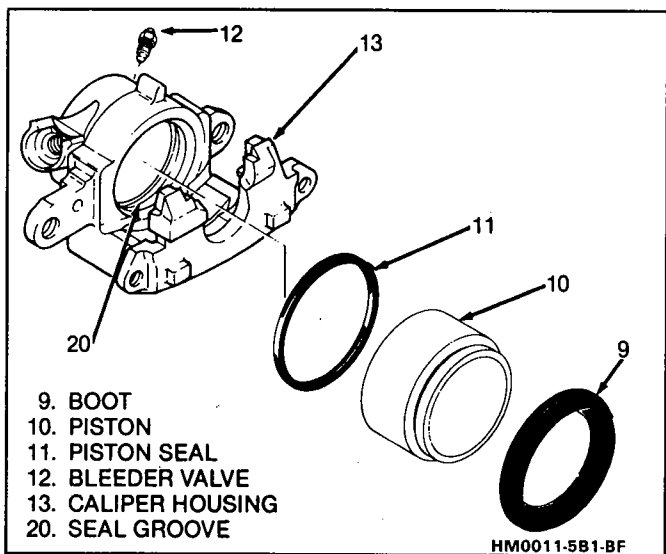


Figure 11 Caliper Assembly

## UNIT REPAIR

### CALIPER OVERHAUL

Tool Required:

J 26267 Boot Seal Installer (64 mm)

J 22904 Boot Seal Installer (74 mm)

J 28735 Boot Seal Installer (80 mm)

See Figures 11 thru 13



#### Disassemble

- Caliper completely from vehicle as previously described.
- Piston (10) using compressed air into the caliper inlet hole.



#### Important

- Use clean shop towels to pad the interior of the caliper (13) during removal.



#### Inspect

- Piston (10) for:
  - Scoring
  - Nicks
  - Corrosion
  - Worn or damaged chrome plating
- Replace piston if any of the above are found.
- Boot (9), being careful not to scratch housing bore.
- Piston seal (11) from groove (20) in caliper (13) bore with a small wood or plastic tool. Do not use a metal tool since this may damage caliper bore or seal groove.



#### Inspect

- Caliper bore and seal groove for:
  - Scoring
  - Nicks
  - Corrosion
  - Wear
- Use crocus cloth to polish out light corrosion.
- Replace caliper housing if corrosion in and around seal groove will not clean up with crocus cloth.
- Bleeder valve (12) from caliper (13).

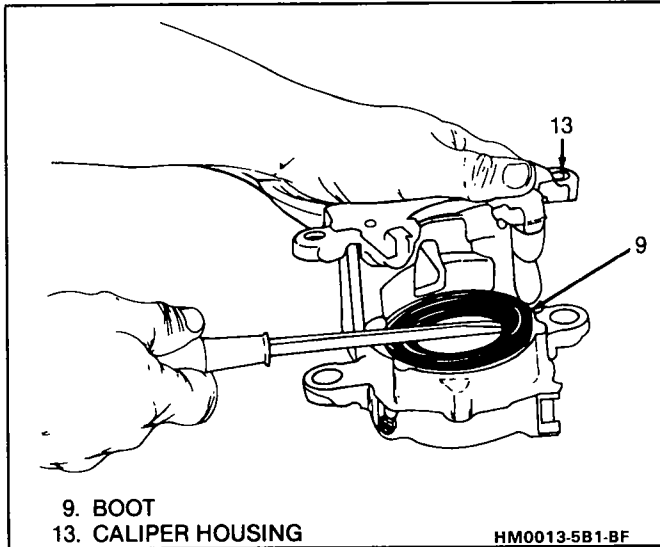


Figure 13 Removing Boot

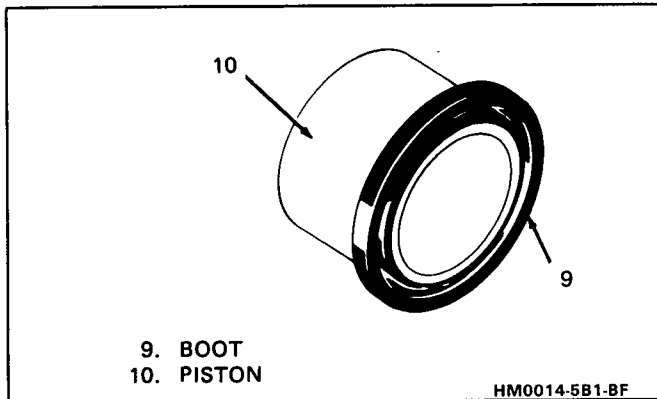


Figure 14 Installing Boot Onto Piston

See Figures 11, 14 and 15



**Assemble**

- See NOTICE on page 5-1.



**Clean**

- All parts in clean, denatured alcohol.
- Dry with unlubricated compressed air.
- Blow out all passages in housing (13) and bleeder valve (12).

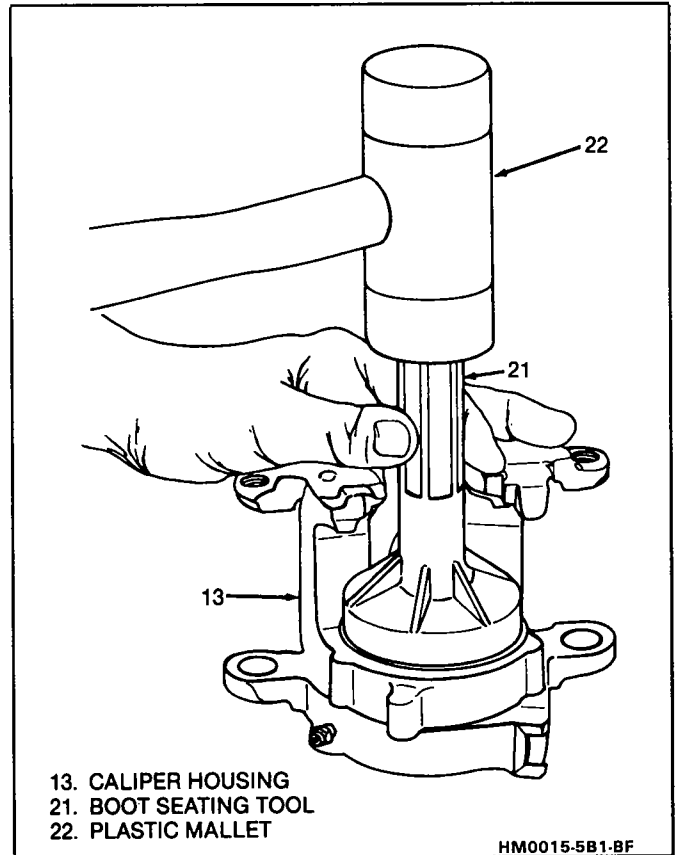


Figure 15 Seating Boot Into Housing

1. Bleeder valve (12) to 13 N·m (110 lb-in).
2. Lubricated new piston seal (11) into caliper bore groove (20).
  - Make sure seal is not twisted.
3. Lubricated boot (9) onto piston (10).
4. Piston (10) and boot (9) into bore of caliper (13) and push to bottom of bore.
5. Seat boot (9) in caliper housing (13) counterbore using appropriate boot seating tool.
6. Caliper as previously described.

