

## OVERHAUL (Continued)

**CAUTION:** Do not use a screwdriver or any similar tool to pry piston out of bore. It will result in damage to piston. Cushion piston's impact against caliper when blowing it out of bore by placing shop towels between piston and caliper bridge. Use care because the piston can develop considerable force from pressure buildup.

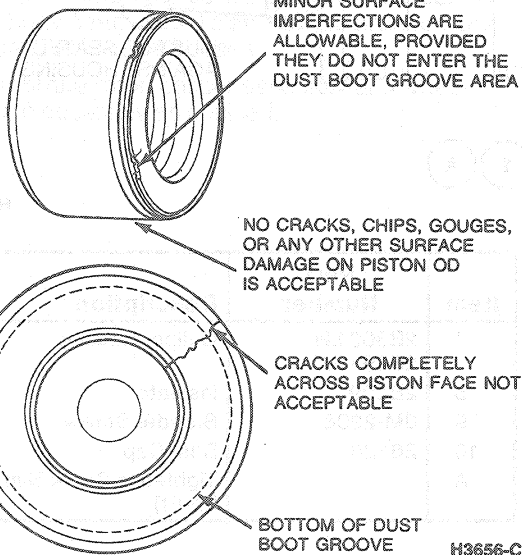
2. Disconnect the caliper from the hydraulic system, and blow the piston out by using air pressure. Apply air pressure to the fluid port in the caliper with Air Nozzle Assembly TOOL-7000-DE or equivalent to remove the piston. If the piston is seized and cannot be forced from the caliper, tap lightly around the piston while applying air pressure.
3. Remove the dust boot from the caliper assembly.
4. Remove the rubber piston seal from the cylinder and discard it.

## Cleaning and Inspection

Clean all metal parts and phenolic piston with isopropyl alcohol. Then clean out and dry the grooves and passageways with compressed air. Ensure that caliper bore and component parts are thoroughly clean.

Check the cylinder bore and piston for damage or excessive wear. Replace the piston if it is pitted, scored, corroded, or the plating is worn off. Do not replace phenolic piston for cosmetic surface irregularities or small chips between the piston boot groove and shoe face.

## PHENOLIC PISTON INSPECTION



## Assembly

1. When assembling caliper, examine piston for surface irregularities or small chips and cracks. Replace piston if damaged. Be sure to clean foreign material from piston surfaces and lubricate with brake fluid before inserting into caliper. Always install new seal and dust boot.

2. When installing piston back into bore, use wood block or another flat stock, like an old shoe lining assembly, between C-clamp and piston. Do not apply C-clamp directly to piston surface. This can result in damage to piston. Be sure piston is not cocked.
3. Ensure dust boot is tight in boot groove on piston and in caliper.
4. To install inner shoe with three-finger clip attached to shoe into piston, grab each end of shoe, making it square with piston. Push firmly until shoe clip snaps into piston. Do not allow shoe or clip tangs to cock during installation.

## Rotor Service

Refer to Section 06-00, Diagnosis and to the following information for servicing and conditions requiring rotor refinishing.

Brake pulsation (brake roughness) that is present during brake application is caused by either foreign material build-up or contamination on the rotor braking surface or uneven rotor thickness.

If there is a foreign material build-up or contamination found on rotor or lining surfaces, hand sand linings and rotors. Uneven rotor thickness (thickness variation) may be caused by the following:

- Rotor lateral runout in excess of 0.05mm (0.003 inch) when rotor is mounted on hub.
- Caliper drag.
- Abrasive action of brake lining.

If brake pulsation (brake roughness) is present, attempt stopping vehicle with transaxle in the NEUTRAL position. If the pulsation (roughness) is gone, the drivetrain should be inspected. If pulsation (roughness) remains, stop vehicle from 48 km/h (30 mph) using parking brake. If pulsation remains, inspect rear brakes. If pulsation is gone, inspect front brakes.

## Rotor Minimum Thickness

Rotor minimum thickness must not be less than 24.75mm (0.974 inch) or less than number cast on inside of the rotor after refinishing.

## Rotor Machining

## Tools Required:

- Rotunda Disc Brake Lathe 054-00080

Do not machine, cut or true up new rotors prior to installation on vehicle. Making a light cut on a new rotor may cause excessive runout and result in brake shudder several thousand miles later. It is best to clean oil film off a new rotor with solvent and install it on vehicle.