

Hydraulic Release Bearing Seal Replacement

INSTALLATION

In most cases there are two seals. The black seal is the hydraulic pressure seal. The orange seal is a wiper seal keeping dirt and debris away from the sliding surfaces. There are a few hydraulic release bearing assemblies that do not use a wiper seal.



1. Pull the piston/bearing assembly out of the base.

Note: Special instructions for Positive Stop (61-16XX Series) hydraulic release bearings: The piston is removed by first removing the bearing retaining clip, removing the bearing, and then using tool 62-1690 to remove the positive stop.

2. Remove the orange wiper seal.
3. Remove the pressure seal by placing the hydraulic base piston-groove-side down on a clean flat surface, blocking off one of the two hydraulic ports, and applying 5-20 PSI of air pressure to the other port. Hold the base down firmly keeping your hands away from the piston/seal groove. This will force the seal out of the base.

Warning: Use of higher pressures could cause injury.

4. Clean the base and dry it completely. Be aware that common "brake cleaning" solutions can cause severe swelling to and failure of hydraulic release bearing, master cylinder, and caliper seals. Therefore, all solvents must be completely removed before installing the seal.
5. Cover the entire seal with "rubber grease."

Important: Any other grease besides rubber grease may cause the pressure seal to fail. If rubber grease is not available use a liberal amount of brake fluid. However, installation without rubber grease will be more difficult.

Note: If using the Tilton seal installation tool, place the inner and outer guides on the HRB body. If you have no installation tool available, work the seal in by hand. Do not use sharp tools to install the seal.

6. Position the smooth flat side of the seal up when placing the seal on the HRB base. This side will ride against the piston.
7. Use the piston to push the seal down into the bore. If you do not have a Tilton seal installation tool you will need to work the seal into the HRB body carefully by hand first.
8. The orange wiper seal will pop in by hand. Work the seal fully into the groove.
9. Once pressed all of the way into the bore, remove the piston, remove the two guides, and visually inspect the seal to make sure that it has been properly installed with the flat side up.
10. Wipe off the excess rubber grease. Leaving a small amount will not harm the hydraulic system.
11. Install the new orange wiper seal.
12. Wipe clean the piston/bearing assembly. No lubricant is required on the piston or in the base hydraulic groove. Dry surfaces are best.
13. Reinstall the piston/bearing assembly. Press it down firmly to make sure that it has fully bottomed before checking for bearing clearance (distance between bearing and clutch spring fingers) if required.

Optional: You can check to see if the black pressure seal is working properly by using low air pressure only (10 PSI max.) to raise the piston. Hold one hand firmly on top of the piston and allow the piston to rise .25" and remember to prevent the seal from reaching the top and coming out. If the piston does not rise and air passes around the seal, disassemble and repeat the process.

Note: Recommended for DOT 3, DOT 4, and DOT 5.1 fluids, not recommended for DOT 5.

Tilton HRB Seal Tool Setup

