

Filling and Bleeding Instructions:



**Clark® BA - HBA - HLA - TLA**

1. Be sure the lifter units and barrels do not contain any foreign matter.
2. Clamp the lifter upright in a vise below the outer tube on the bottom 2" of the pushrod. Slip the inner barrel out.
3. Fill the reservoir with 30 weight oil or equivalent. Other oils are used in special cases. (Check with a CECO Sales Representative.)
4. Insert the inner barrel into the pushrod and work it down until the cap is almost even with the top of the brass bushing. (NOTE: The lifter should be spongy at this point.) Press down on the lifter 2 or 3 times to be sure the unit is seated properly and the spring is still intact. The cap should return to the same position each time it is fully released.
5. Insert a piece of clean, bare wire or rod, long enough to reach the lifter unit ball check, through the hole in the top of the cap. (NOTE: The wire must not be larger than 1/8" in diameter.) The weight of the wire alone is sufficient to hold the check valve open and allow the oil to flow into the inner chamber of the lifter unit.
6. With the wire holding the check valve open, pull down on the cap until the lifter is bottomed out. Release and repeat 3 or 4 times, with the wire holding the check valve open. On the last stroke, hold the cap all the way down and lift the wire out. Let the cap return to its relaxed position. The lifter should act solid almost instantly when any downward pressure is applied to the cap. Repeat 2 or 3 times or until there is no sponginess.
7. If the lifter is to be stored for any length of time, it is necessary to seal the upper and lower barrels with tape and plug the upper Teflon insert. If possible, store in an upright position.
8. CECO Magnum Hydraulic Pushrods should be inspected once a year. If the oil is contaminated, wash out the pushrod with a clean solvent. Replace with clean oil. Magnum units must be kept clean.

**Ingersoll-Rand® SVG/PSVG Engine**

1. Remove the plunger and hydraulic lifter assembly from the pushrod body.
2. Inspect all the components for dirt or contamination. If the components are dirty, cleanse in Varsol or a similar product. If reinstalling a used pushrod . . . inspect the hydraulic lifter for unusual wear and/or spring fatigue.
3. Reinstall the hydraulic lifter assembly.
4. Fill the body with 30 weight oil to approximately 3 inches from the top.
5. Slowly insert the body plunger into the body. A little oil should overflow from the top of the body.

6. Insert the bleed wire through the top of the plunger. With fingertip pressure, push the wire down to open the check valve in the hydraulic unit.
7. Cycle the plunger, with the check valve open, 6 to 10 times.
8. After removing the bleed wire, exert firm pressure with the palm of your hand on the plunger. The plunger should not move unless air remains in the hydraulic unit. (If the plunger does feel "spongy", repeat the procedure.)
9. Do not invert the pushrod after filling. Storage should be in an upright position.
10. Do not interchange the components between the hydraulic units, as they are matched sets.
11. The outer tube is made of thin-walled aluminum for heat conductivity and should not be clamped in a vise.
12. CECO Magnum Hydraulic Pushrods should be inspected once a year. If the oil is contaminated, wash out the pushrods with cleaning solvent. Replace with clean oil. Magnum units must be kept clean.