

SERVICE REFILL INSTRUCTIONS / TOOL HOLDERS

Your Hydra-Lock Tool Holder will provide ease of use with minimal maintenance or wear while providing maximum holding pressure and accuracy. Tool Holders can be serviced promptly by Hydra-Lock Corporation. Our service technicians will thoroughly inspect and test each tool.

The tool holder is made up of two major components, the sleeve and the body. The sleeve is assembled inside the body and has a finished inner diameter (I.D.) that does the actual tool holding. The sleeve consists of a thin walled pocket contained by "O" ring seals. These seals contact the body and contain the grease. The body has the ports for filling and bleeding as well as the "Actuating" port. The Actuator consisting of a screw, ball, and piston. When tightened, the screw pushes on the ball which pushes on the piston, which compresses the grease to create the hydraulic pressure (20,000 to 30,000 PSI) necessary to hold the tool.

This pressure is applied evenly around the sleeve and between the "O"-Ring seals. This pressure forces the inner wall of the sleeve inward, thereby gripping the part. Since the pressure is uniform around the diameter of the sleeve wall, this tool holder is self-centering. The hydraulic fluid as well as holding the tool acts to dampen the vibration transferred from the spindle to the tool.

HOW TO CHECK A TOOL HOLDER FOR PROPER HOLDING:

1. Using a hex wrench, turn the actuating screw counter-clockwise until the screw is flush with the top of the threads on the body and remove the worn tool.
2. Clean the inside of the holder to remove any chips or contaminates.
3. Wipe the tool clean and check for any burrs or scratches, re-insert the cutting tool (do not force).
4. Start turning the actuating screw clockwise until the tool holder starts gripping the tool. At this point start counting the turns to make sure the holder builds up the proper holding force. This should be a minimum of one and a half (1½) turns after starting to grip the tool. (If this minimum grip is not met, stop and remove the tool holder from service!).

TO REFILL A TOOL HOLDER:

Note: During the warranty period (and if the supply of tool holders permits). Simply return the tool holder to the Hydra-Lock Corporation and they will service it for you. If the holder must be used immediately use the following refill procedure.

1. Back-out the actuating screw until it is flush with the body or the top of the threads.
2. Take out the wax and remove the "fill" screw.
3. Install grease fitting into the "fill" hole (finger tight).
4. Put a cutting tool or proper size protective plug into the tool holder to protect the contracting area.
5. Attach a hand-operated cartridge type grease gun filled with a multi-purpose grease, such as Gulflex "A", or equivalent. (Note: pre-fill grease fitting to avoid introduction of air) Pump grease into unit. Normally 1/2 to one shot of grease will totally fill the system. You can usually "feel" the piston move back against the actuation plunger.

CAUTION- DO NOT OVER-PRESSURIZE TOOL CHUCK WITH THE GREASE GUN.

6. Excessive pressure possibly developed during normal refilling will be detrimental to the function of this unit. Tool Holders being refilled must always have a sample tool or protective plug in place when pressurizing with a grease gun!
7. Remove the grease fitting and wipe the grease out to the bottom of the tapped hole, so that the unit will not become pre-loaded.
8. Replace the fill screw and tighten securely then wipe off any excess grease from the tool holder.
9. With the sample tool or protective plug still in place turn the actuating screw to the bottom.
10. Put the holder aside and let it set for 48 hours, to bleed any air from the system and to check for leaks.
11. If any loss of grease is noted after the 48-hour period this must be corrected and the refill procedure repeated!

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12. The Hydra-Lock Tool Chuck is now ready for use. Proceed to "TO CHANGE A WORN TOOL"

Hydra-Lock Corporation Recommends that a log of each tool holder be kept. The holders have an "AC" number and serial marked on the body. Keeping a log will allow the tool setter to tell which holder's tools are wearing out more often and for keeping a record of the speed and feed, as well as the best time to change tools for re-sharpening.

If a tool has spun, or if the station has had a wreck return the tool holder to Hydra-Lock Corporation for a complete re-inspection.

Never leave a tool holder actuated without a tool in proper place. This could lead to a permanent deformation of the inner sleeve. When storing we recommended that it be protected from rust with a light coat of oil.

If after proper filling, the tool holder still will not hold the cutting tool securely, the holder should be returned to Hydra-Lock.

HOW TO CHANGE A WORN TOOL:

1. Using a hex wrench turn the actuating screw counter-clockwise until the screw is flush with the top of the threads, and remove the worn tool.
2. Clean the inside of the tool holder with a "Bottle Brush" (this can be supplied by Hydra-Lock) to remove any chips or contaminates.
3. Wipe the tool clean and check for any burrs or scratches, insert the new cutting tool (do not force). *Make sure that the cutting tool shank completely engages the sleeve contraction area (to avoid sleeve damage).*
4. Start turning the actuating screw clockwise until the tool holder starts gripping the tool. At this point start counting the turns to make sure the holder builds up the proper holding force. This should be a minimum of one and one half (1 1/2) turns after starting to grip the tool. *(If this minimum grip is not met, stop and remove the tool holder from service!)*
5. Continue turning the actuating screw until it stops at the bottom of the hole, this will insure the proper balance of the tool holder is meet.

GENERAL NOTES:

- Improper tampering or disassembly may void the unit warranty.
- Do not force cutting tools into the holder - VERIFY SIZE AND TOLERANCE*
- Never fill without a cutting tool or a protective plug in position
- The cutting tool shank must engage the entire contraction area
- Always leave contracted 48 HOURS after refilling
- The Actuating screw must be completely bottomed to maintain proper balance of the tool holder

Any questions please contact:

Hydra-Lock Corporation
25000 Joy Blvd.
Mt.Clemens, MI 48043 USA

Phone: (586) 783-5007
Fax No:(586) 783-7578

e-mail: mail@hydralock.com
website: www.hydralock.com

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