# KURT MANUFACTURING COMPANY

## INDUSTRIAL PRODUCTS DIVISION

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**PRECISION MACHINING GEARING DIE CASTING ENGINEERED SYSTEMS KURT KINETICS**

**KURT W. KUBAN, FOUNDER STEVE CARLSEN, PRESIDENT & CEO**



T Mardaus **Hydraulic Unit Removal and Installation** September 2018

Removing your old unit:

1. Remove 4 SHCS of 2 piece retaining nut. Remove the first (smaller) retaining nut.
2. Remove set screw from bottom of vise. This will release the nut/screw assembly from the vise, but still have the screw connected to the hydraulic unit. Slide hydraulic unit slightly out of the counter bore of the vise body.
3. Install 2 SHCS removed in Step 1 opposite one another, threading them approximately half way in.
4. Using the two SCHS as a sort of handle, loosen the second (larger) portion of the retaining nut. You should notice a washer and spring coming out of the end of the hydraulic unit.
5. Remove the second (larger) portion of the 2 piece retaining nut. Slide hydraulic unit off of screw. You may leave the washer/spring/washer on the screw, or replace them with new (if available).

Installing new unit:

1. Ensure the washer/spring/washer assembly is on screw. Slide new hydraulic unit onto screw. Ensure the new hydraulic unit has the washer/bearing/washer installed on the side which the 2 piece retaining nut will be installed.
2. Using the larger portion of the 2 piece retaining nut and the partially screwed in SHCS, tighten the 2 piece retaining nut, which will compress the spring. Continue to do so until the washer is flush/inside the hydraulic unit. This is crucial, otherwise the spring will keep the hydraulic unit from completely bottoming out in the vise body counter bore. Slide hydraulic unit into counter bore on vise body.
3. Tighten the set screw located on the bottom side of the body while slowly rotating the hydraulic unit back and forth, this will ensure the set screw seats properly in the machined divot on the hydraulic unit. You should feel the amount you can rotate the unit slowly diminish unit it is rigid and the set screw is tight. Hand tight is sufficient.
4. IMPORTANT: Loosen the larger portion of the 2 piece retaining nut, and then tighten to just snug. This allows the spring force to be held between the vise body and hydraulic unit only, not on the shoulder of the screw. This also allows the screw turn freely on the bearings. Remove SHCS’s.
5. Install the smaller portion of the 2 piece retaining nut until it touches, then back it off to align it with the nearest screw holes. Then, turn it an additional half turn, or 2 screw holes. The gap between the 2 pieces is crucial.
6. Tighten the SHCS in a star pattern, using an Allen wrench, until they are tight