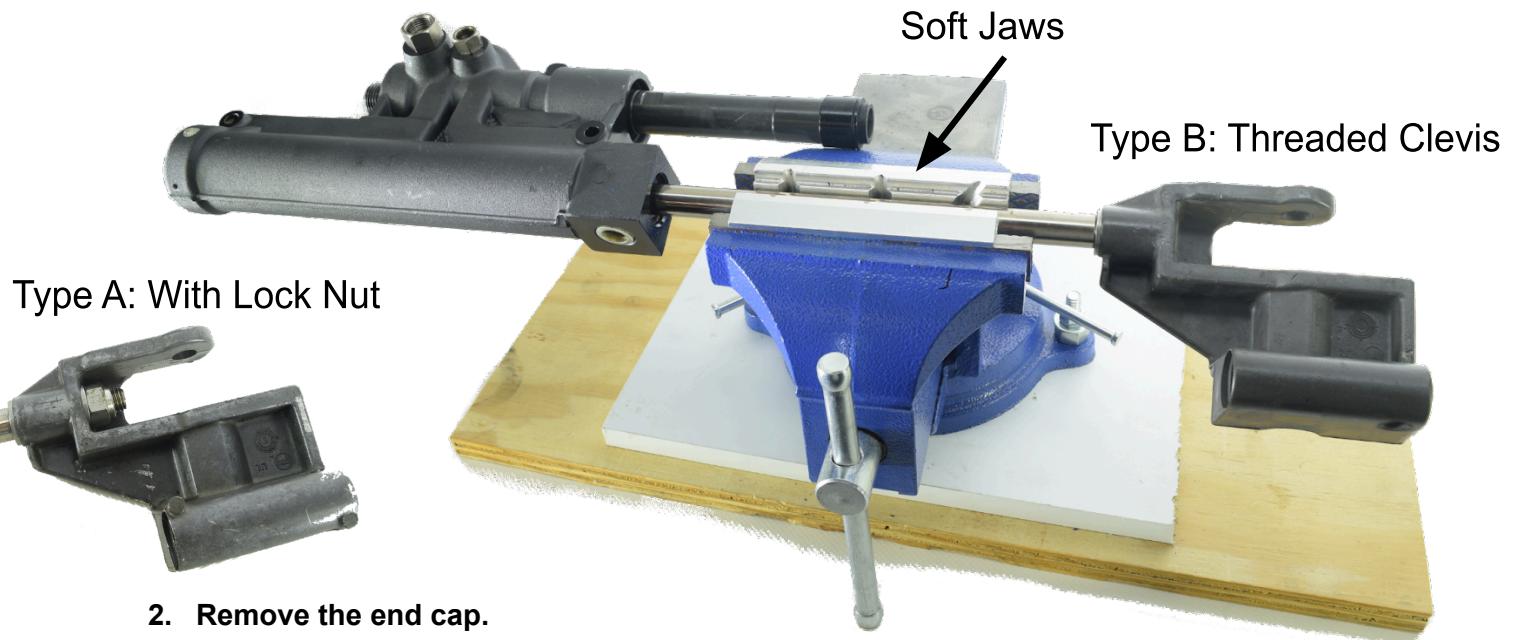


Volvo Penta 3858128 Seal Kit Instructions

1. Remove the clevis. (There are 2 different styles of clevis.)

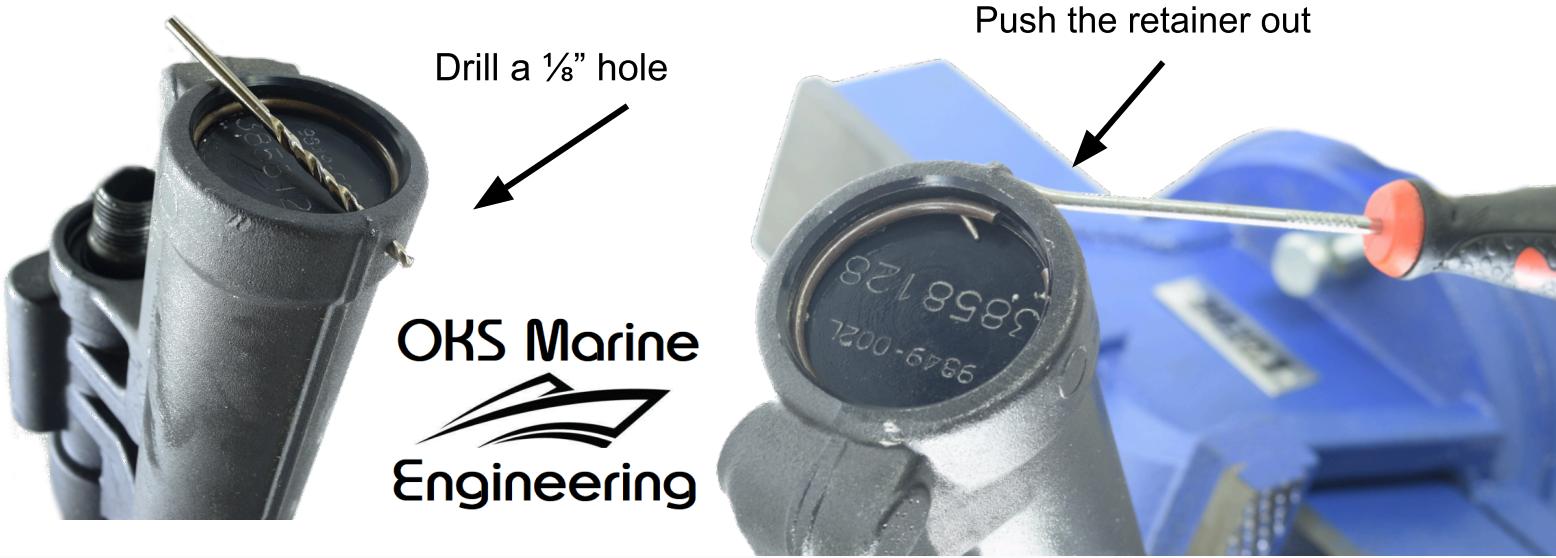
- a. Type A: The rod goes through the clevis and tightens with a lock nut. If you have this style, the easiest way to remove it is with a small impact wrench. If you don't have an impact wrench, clamp the rod and remove the nut with a 19mm socket.
- b. Type B: The rod is threaded into the clevis, and held with some strong retaining compound. (Locktite) The best way to remove this is to use a propane torch to break down the compound, then the clevis will unscrew easily. Clamp the rod and heat the clevis until the residual oil starts to smoke. Unscrew the clevis, and try not to get burned. DO NOT hammer on the clevis, even with a soft hammer. The end of the rod will bend.

HOT TIP: The best way to clamp the rod is with aluminum v-block soft jaws in a bench vice. If that isn't available, clamp the rod between 2 clean plywood scraps. DO NOT use vice grips on the rod.



2. Remove the end cap.

- a. The best way to remove the end cap retaining ring is to drill a $\frac{1}{8}$ " hole through the cylinder body- inside the retainer groove. This will allow you to push the retainer out of the groove with a pick from the outside.
- b. Use the rod to push the end cap out. Remove the rod from the cylinder.
- c. Replace the end cap o-ring.



3. Remove the rod seal and wiper.

- Use snap ring pliers to remove the snap ring that retains the wiper seal.
- Use the rod (carefully) or a wooden dowel to push the rod seal and wiper out of their bore.
- Inspect and clean the cylinder body. Be sure to clean out any debris that may have come off the crumbling rod seal.

4. Install the new rod seal and wiper.

- The new rod seal has a cup shape on one side. Insert the seal with the cup side facing in, towards the pressurized fluid. Use a finger or wooden dowel to push the seal in, don't use sharp tools
- Insert the new nylon wiper seal and push it firmly until it seats below the snap ring groove. If necessary, use an appropriately sized socket as a tool to press the wiper in.
- Reinstall the snap ring. Make sure it is fully seated in the groove.

5. Replace the piston ring set.

- Pick the old piston ring and back-up o-ring out of the piston groove. Avoid scratching the piston or stabbing yourself with the pick.
- Slide the new back-up o-ring over the rod first then stretch it into place from the rounded end of the piston. Do the same with the sealing ring.

6. Reinstall the rod and piston assembly.

- Inspect the end of the rod where it will enter the rod seal. It must be smooth to avoid damaging the new seal. If it has burrs or corrosion/pitting, sand it smooth before continuing.
- Lubricate everything with fresh power steering fluid. (As with most things in life, lubrication is critical)
- Insert the rod into the cylinder body and carefully position it in the new rod seal.
- Push the piston into the body by hand. The new seals will feel tight.
- Once the piston is fully inside the cylinder body, you may need to tap it farther in with a soft tool to get the piston ring past the last shoulder inside the bore.

7. Reinstall the end cap.

- Push the cap into the cylinder by hand. It is not necessary to press it in with tools. If it sticks, use the rod to push it out and try again.
- Install the end cap retaining ring. It can be inserted by hand.

8. Replace the port adapter o-rings.

- Unscrew each port adapter and replace the o-rings
- Tighten the adapters.
 - The small -4 fitting should be tightened to 13 ft-lbs
 - The large -6 fitting should be tightened to 22 ft-lbs



23x16x5
Rod Seal



Port Adapter
O-rings

Kit Contents: Almost Actual Size on 8.5x11 paper.

