



Technical Bulletin

D- Series Sideshifter Service Kits 553861 and 553866 Installation Instructions

This sheet describes service procedures for all D-Series Sideshifter Cylinders.

Cylinder Disassembly

- 1 Clamp the cylinder in a soft-jawed vise. Clamp lightly at the extreme base end only.
- 2 Position the cylinder rod in the fully extended position. Remove the spiral snap ring from the retainer. See illustration below.

- 3 Tap the retainer into the shell approximately 2 in. (50 mm). Remove the round wire retaining ring by placing a screwdriver on one side of the ring near the split and tapping with a hammer. The retaining ring will compress and turn sideways. Remove the retaining ring.

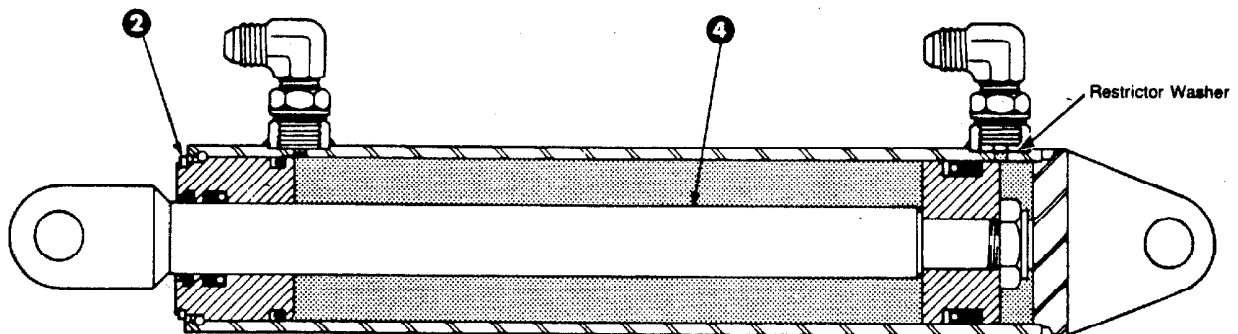
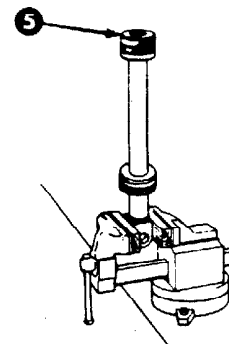
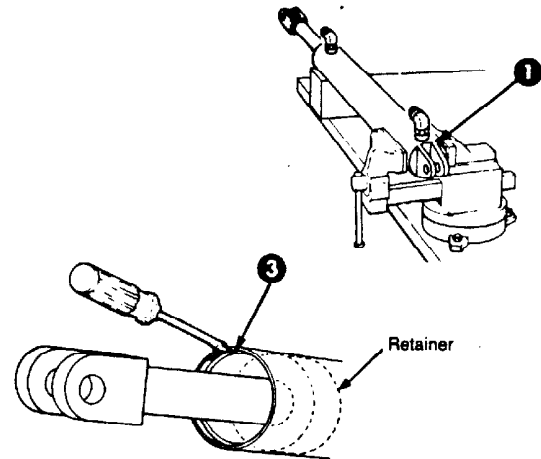
CAUTION: Do not scratch the cylinder bore.

- 4 Remove the rod assembly from the cylinder. See illustration below.

- 5 Clamp the rod assembly in a soft-jawed vise or between two blocks of wood. Never clamp directly on the rod sealing surface. Remove the nut fastening the piston to the rod. Remove the piston and retainer.

- 6 Place the piston or retainer in a soft-jawed vise to remove the seals. Pry the seals up with a blunt screwdriver. Cut the seal to remove it.

CAUTION: Do not scratch the seal grooves.



Part No. 676812

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For Technical Assistance . . .

Call: 1-800-CASCADE or 503-669-6300

OR

Write: Cascade Corporation, P.O. Box 20187, Portland, OR 97220

To Order Parts . . .

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Write: Cascade Corporation, P.O. Box 360, Springfield, OH 45505

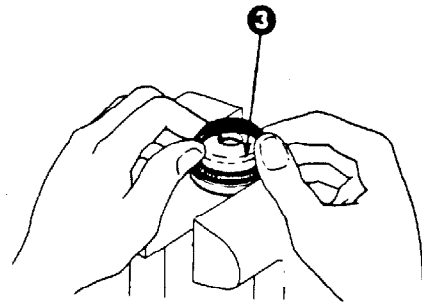
Cylinder Inspection

- Inspect the rod, piston, and retainer for nicks or burrs. Minor nicks and burrs can be removed with emery cloth. If they cannot be removed with emery cloth, replace the part.
- Inspect the cylinder shell bore and snap ring groove. Remove any minor nicks and burrs with emery cloth. Special care must be given to possible burrs at the snap ring groove outer edge. Burrs here may cut the piston seal during reassembly.
- Inspect the outside of the shell for any deformities that could weaken the shell's performance when under pressure. Replace if necessary.

Cylinder Reassembly

- 1 Lubricate all new seals and rings with petroleum jelly or equivalent.
- 2 Note the direction of the U-cup seals. If installed backward, the seals will not work properly. For proper seal placement see illustration below.
- 3 Polish the piston and retainer chamfer angle with emery cloth. This allows the seal to slide over the chamfer easier.
- 4 Install the new seals on the piston and retainer. Hook one side of the seal in the groove and push it over the piston or retainer as shown.
- 5 Install the retainer and piston on the rod and tighten the piston retaining nut to the torque value below:

30D/35D-	70-75 ft.-lbs. (95-102 N·m)
60D/55D-	70-75 ft.-lbs. (95-102 N·m)
100D-	100-120 ft. lbs. (135-163 N·m)
- 6 Apply a thick film of petroleum jelly to the inside of the cylinder shell, piston seals, and retainer.
- 7 Insert the rod assembly into the cylinder shell. If resistance is encountered, tap the rod end with a rubber mallet.
- 8 Tap the retainer into the shell far enough to install the retaining ring in its groove.
- 9 Pull the rod out to the fully extended position. This will position the retainer so the spiral snap ring can be installed.



4 Install new seals.

