



# Installation Instructions

## Cylinder Service Kits 222391 (Type A) or 222337 (Type B) for B-Series Integral Sideshifter

This sheet describes the installation of Cylinder Service Kits for Cascade B-Series Integral Sideshifters. The kit contains seals and piston bearings and may be installed without removing the sideshifter frame. Attachment or fork removal may be necessary for working clearance.

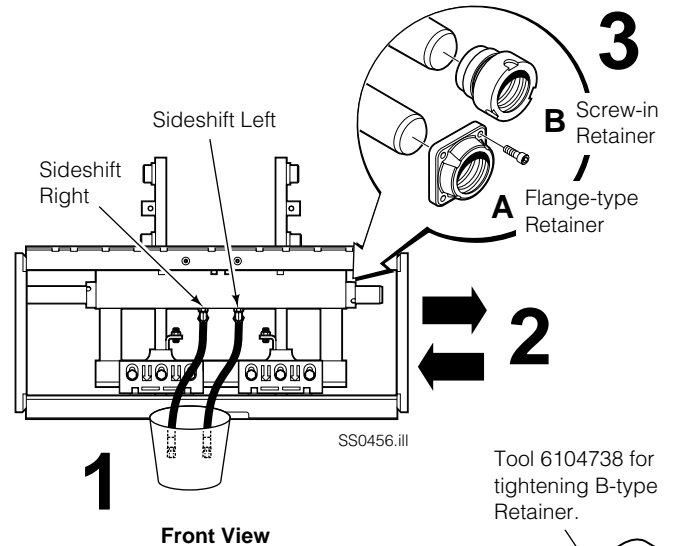
- 1 Disconnect both hoses at the carriage terminal fittings. Route hoses into a drain bucket.
- 2 Slide the sideshifter frame fully each way to purge the cylinder chambers of hydraulic fluid.
- 3 Remove the piston-rod retainers. **NOTE:** Tool 6104738 is available to remove and properly tighten the screw-in B-type retainer.
- 4 Replace the seals in the retainer as shown. Withdraw the piston and replace the bearing. **CAUTION:** Do not scratch the seal grooves or cylinder chambers (brass seal removal tool 674424 available). Use 400-grit emery paper to break any sharp edges on the piston rod end.
- 5 For reassembly, reverse the above procedures with the following exceptions:

- Tighten retainer as follows:

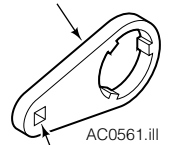
**Flange-type Retainer (Type A)** – Tighten capscrews to 70 in.-lbs. (8 Nm).

**Screw-in Retainer (Type B)** – Use special tool 6104738 (see illustration) and tighten retainer to 175 ft.-lbs. (235 Nm).

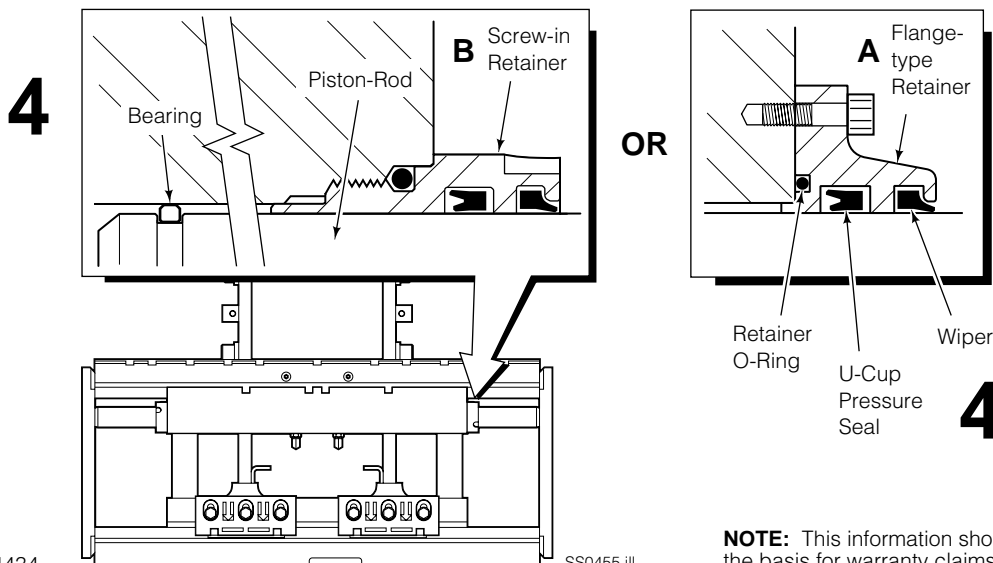
**CAUTION:** Cylinder retainers must be checked for tightness every 300 hours. Failure to keep the retainers tightened can result in hydraulic leaks and possible equipment or product damage.



Tool 6104738 for tightening B-type Retainer.



1/2 in. drive for torque wrench.



Part No. 6024434

SS0455.ill

**NOTE:** This information should not be interpreted as the basis for warranty claims unless so designated.

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**corporation**

For Technical Support . . .

Call: 1-800-CASCADE (227-2233)

OR

Write: Cascade Corporation, PO Box 20187, Portland, OR 97294-0187

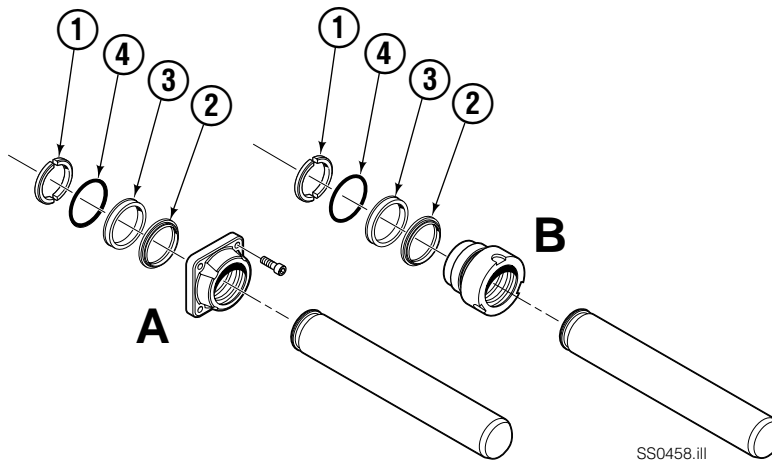
To Order Parts . . .

Call: 1-888-CASCADE (227-2233)

OR

Write: Cascade Corporation, 2501 Sheridan Ave., Springfield, OH45505

# Cylinder Service Kit



35B, 50B				
REF	QTY	A-Type	B-Type	DESCRIPTION
		PART NO.	PART NO.	
		222391	222337	Cylinder Service Kit
1	4	797087		Piston-Rod Bearings
2	2	797090		Wiper
3	2	797091		Seal
4	2	797089	218228	O-Ring

Reference: S-6430