LONG REACH®

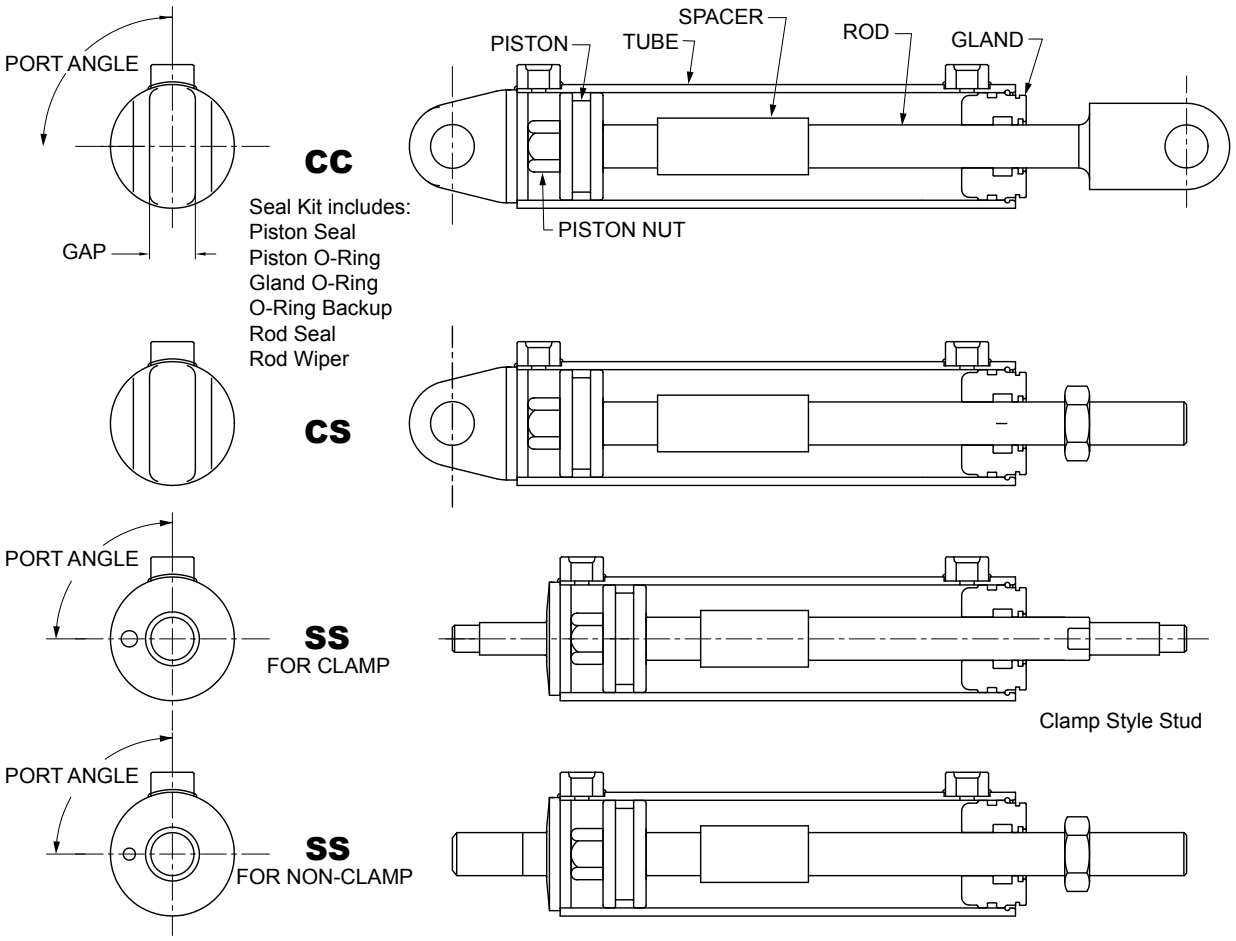
A Division of Allied Systems Company

New Concept Cylinder Parts & Service Instructions

Cylinder Parts List

Notice: Long Reach has updated many of its 'old design' cylinders and both OLD and NEW numbers may be in your attachment parts listing. New cylinders are interchangeable, as a unit, with the old cylinders. The new cylinders have a part number in the form of YXX.XXX. This parts page is for **all** new cylinders with this form of part number.

Match the part number stamped near the base of your cylinder to those in the table below. Then read across to find the part number for replaceable parts.



CYL P/N	SEAL KIT	PISTON	P NUT	GLAND	LOCKWIRE	SNAP RING
Y11.XXX	Y056830	Y047179	Y32D-09	Y047175	Y047177	Y435242.38
Y12.XXX	Y056831	Y048623	Y32D-09	Y046849	Y047140	204774
Y13.XXX	Y056832	Y048623	Y32D-09	Y055715	Y047140	204774
Y14.XXX	Y056833	Y049063	Y32D-09	Y049062	Y049064	Y435242.43
Y21.XXX	Y056834	Y047152	Y32D-09	Y046999	Y047150	Y435242.48
Y22.XXX	Y056835	Y047152	Y32D-09	Y047155	Y047150	Y435242.48
Y23.XXX	Y056836	Y047152	Y32D-09	Y055716	Y047150	Y435242.48
Y25.XXX	Y056837	Y047172	Y32D-12	Y047169	Y047170	Y435242.56
Y26.XXX	Y056838	Y047172	Y32D-12	Y055717	Y047170	Y435242.56
Y27.XXX	Y056839	Y047172	Y32D-12	Y049055	Y047170	Y435242.56
Y31.XXX	Y056840	Y047893	Y32D-12	Y047888	Y044401	Y435242.62

SECTION 1 NEW CONCEPT CYLINDER PARTS & SERVICE INSTRUCTIONS

Seal Kit Instructions

1. Position machinery so cylinder may be safely removed.
2. Turn off the truck's power and activate the hydraulic functions in both directions several times to relieve built up hydraulic pressure.

⚠ WARNING

Crush hazard.

Serious injury could result if residual hydraulic pressure causes equipment to drift during service procedures.

Cycle the hydraulic circuit as described to relieve all system pressure.

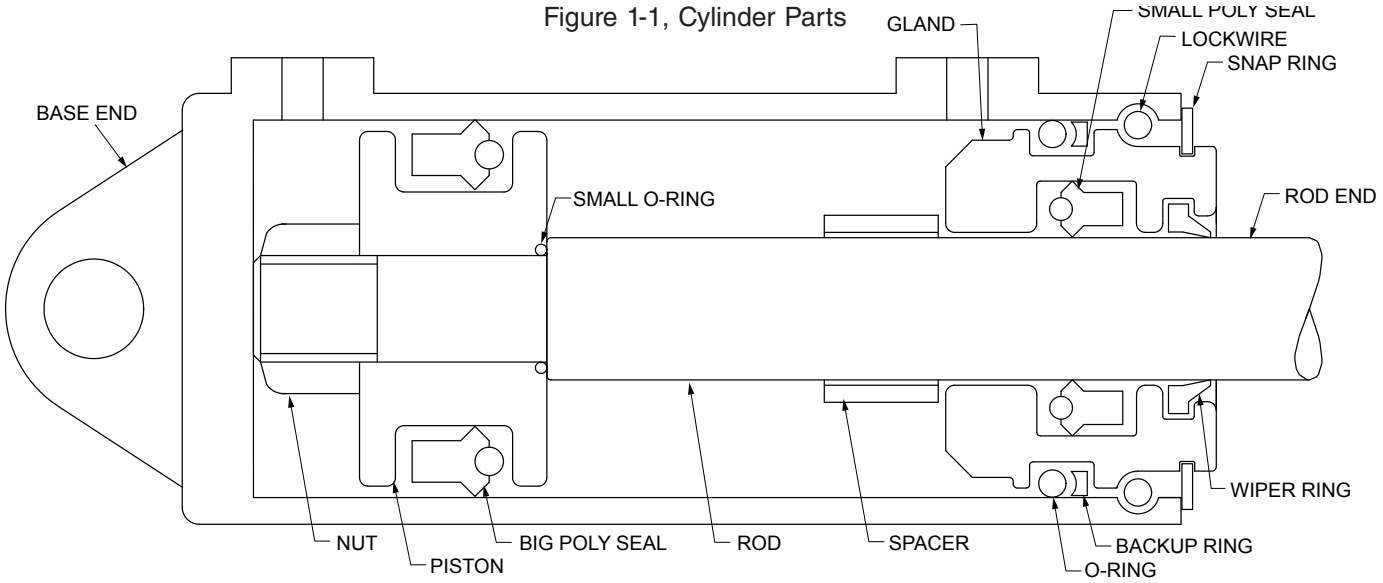
3. Disconnect hoses. Cap hoses to prevent contamination and tag for reassembly.
4. Remove cylinder from attachment and save end hardware (nuts, pins, etc.) for reuse.

NOTICE

Refer to the installation, operation and service manual for your attachment for complete cylinder disassembly/reassembly instructions.

5. Spread, remove and save exterior snap ring for reuse.
6. Push gland inward one inch, pry out and save lockwire for reuse.
7. Grasp rod and pull out complete inner assembly.
8. Remove and save piston and nut (and spacer, if used) for reuse.
9. Reassemble in reverse order, noting seal directions.
10. Use seal loader to install small O-ring beyond threads.
11. Install piston and apply Loctite 242 (Blue) to piston nut. Torque 9/16-18 nut to 90 ft-lbs., 3/4-16 nut to 225 ft-lbs.
12. Do not damage rod area that passes through gland seals.
13. Do not squeeze out-of-shape or dent tube while holding it in a vise.
14. Do not scar the cylinder bore. Do not reassemble unless perfectly clean.

Figure 1-1, Cylinder Parts



SECTION 2 CYLINDER SERVICE GUIDELINES

Any cylinder that leaks should be disassembled and repaired. The following information offers general guidelines for service.

1. Remove the cylinder from the attachment, following the instructions in the installation, operation and service manual for your attachment.
2. Disassemble the cylinder in a clean area, free from blowing dust and dirt.
3. After the cylinder is taken apart, examine each part of the cylinder to determine why it is leaking. Have an Allied Systems seal kit on hand at minimum, so that all soft parts can be replaced while you have the cylinder apart.

   Replace all soft parts whenever you have a cylinder open, since it is not possible to determine if a seal is effective just by looking at it. Seals will shrink, expand or get damaged in service. Or, the wrong seal may have been installed previously. Therefore, it is always best to replace seals.
4. See Figure 1-1 for a list of major cylinder parts. If you are unsure of the names of the parts listed, refer to the Long Reach parts page for your particular cylinder.

Piston

1. Examine the cylinder piston surfaces. If they are more than lightly scored, the cylinder walls may also be damaged. If the scoring is extreme, your new seal won't work or won't last long, and the cylinder may need replacing.
2. Look for scratches and nicks on the seal grooves. They can cause leaks.
3. Defects in the piston or piston seals may allow fluid to pass between the base and rod end, causing the cylinder to not hold a load.

Rod

1. If the rod is scored you must replace it.
2. If one side of the rod is polished and the other side is dull, the rod is probably bent and should be replaced. Check rod straightness by placing it on two rollers and checking the run-out with a dial gauge.
3. Damaged chrome on the rod will decrease seal life and effectiveness.
4. Check for stress cracks using dye penetrant at any point where the rod diameter changes. Stress cracks are a reason for replacement.
5. Defects to the rod may cause external oil leakage.

Gland

1. Defects to the gland may cause scoring on the rod and external oil leakage.
2. Measure the inside diameter of the gland. It should not wear more than 0.004 inch before considering replacement.

Barrel (Tube)

1. Inspect for pitting or scoring. Pits or scoring will reduce the life and serviceability of the seals.
2. The maximum bore diameter is the nominal bore diameter plus 0.010 inch. Replace the barrel if it is worn past this amount.
3. Look for out-of-roundness or deformities of the barrel. Either condition is a reason to replace the tube.
4. Defects to the barrel bore may allow fluid to pass between the base and rod ends leading to a cylinder that will not hold a load.
5. Examine the exterior of the barrel for weld or structural defects which could allow oil leaks.

Practice good installation procedures:

1. Clean your parts before reinstalling them.
2. Coat the seals and parts with hydraulic fluid before installation.
3. If using sharp objects (like screwdrivers) to install your seals, be very careful to not damage the seal or any cylinder surfaces.
4. If you use a screwdriver or prying tool, use one with a round shaft, not square.
5. Protect cylinder ports from dirt and debris until you have it re-mounted on the machine.

For parts and service, contact Allied Systems Company
www.alliedsystems.com
21433 SW Oregon St., Sherwood, Oregon 97140 USA
Phone: (503) 625-2560 • Fax: (503) 625-7269