

# John Deere 410, 419, 420, 430 and 460 Loader Cylinder Repair

Example: Lift Cylinder ( - 008801) - ST406425 Parts

<https://partscatalog.deere.com/jdrc/sidebyside/equipment/80717/referrer/navigation/pgld/14406003>

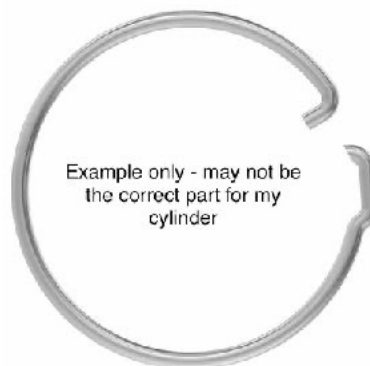
Both of my lift cylinders were leaking. I ordered the seal repair kits to rebuild them. The task was how do I get the cylinder apart. Having never encountered this type cylinder design with help from the dealer, web searches and friends I was able to accomplish the task.

**Important:** Mark the rod guide location on the cylinder. Note CW/CCW movement to push out and in the wire and direction entering the cylinder. Note the location of the steel tubing to the forward hose connection so the hoses lie correctly when put back. We did not do that and it was off a bit more than I expected. Work on one at a time so parts don't mix.

The cylinder:



The cylinder wire appears to be a staple, lift the end up to enable movement:



H169904: Lift Cylinder Wire Lock Ring

Part Number: H169904

\$17.44

- 1 +

Available for Shipping

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2173 Winder Highway, Dacula GA 30019

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You may find it is easy to turn cylinder rod guide to back the wire out. We had to soak the wire with penetrating oil for a couple of days first. One was nearly impossible to turn the wire out. A 5 foot breaker bar was used.

When we got it out the hook end of the wire was broken off into the hole of the cylinder rod guide, shown below. Getting the broken end out of the hole was difficult. The other cylinder was "easy".



Note that the cylinder is still on the loader and a 2x4 is used to hold it in a very favorable position. This would not be possible on a bench vise. We used a large pipe wrench since we did not have a large spanner wrench. Turning the rod guide with the wire hook in the hole will either draw in or push out the wire by rotation.

Replacing the seals in the kit takes a bit of technique (crush round into kidney shape, etc.). Cleaning and lubrication is very important!

Here are some valuable pages to review for how to accomplish the removal and replacement of the seals.

How-to:

[Cylinder Repair Tips & Info | HW Part Store](#)

How-to install a cupped seal inside:

[Installing U-Cup Seals in Hydraulic Cylinders | HW Part Store](#)

[PTFE Teflon Piston Seal Installation Instructions | HW Part Store](#)

More info:

<https://degelman.com/pub/resources/manuals/cylinders/cylinder-repair/143367-Hyd-Cylinder-Repair-Guide.pdf>

My son helped me on the first cylinder and then he did the second one alone. Thank you Michael! He said these tips may help you:

- \* use slight air gun heat to get the hard rings to slip over the cylinder
- \* prepare to capture fluid that comes out of the main cylinder (instead of dumping on ground)
- \* be mindful of o-rings on hoses that attach to the cylinder, replace if needed
- \* hook/probe tool was handy for removing the old o-ring pieces from cylinder
- \* penetrating oil and some rapping/hitting with a big hammer to loosen things up
- \* using the tractor hydraulic system to get the hydraulics pulled back in (it was too hard to push)



