Mustang Hydraulic Project

~ Paul Moroni

Back in November, I was working on the rear hydraulic cylinder. I knew that I had an oil leak on the back of the tractor and the rod seal didn't look good. I had the one that came on the tractor and one from the parts tractor. The parts tractor had a better-looking cylinder on it, so I decided I would use that one.

I brought it over to the work bench and took it apart. I first removed the large snap ring on the rod end of the cylinder. Then I pulled the rod and head (the part that holds the seal) from the barrel (the outside part). I removed the bolt-on clevis on the end of the rod and clamped the very end in the vise. There are two flat sides that the clevis mounts to, so that makes a good place to clamp on to.

You have to be careful not to put any marks or nicks in the rod because that's where the seal rides. You need to point the oil port hole on the barrel down with a drain pail under it because the cylinder will have oil in it. When you pull the barrel back, the rod will move and shoot oil out the port holes. (It will get you!)

I removed all the O-rings and the rod wiper seal. I used my digital caliper to measure them, then checked the MSC catalog to find the right seal. *Take a look at their website, there is a lot of info in it.*

I got all the parts cleaned and put it back together.

Let's skip forward on the project. I sandblasted and painted the tractor; and as I put it back together, I saw an oil leak at the back of the tractor. Because it was all painted, it was hard to see what was leaking, but it was hydraulic oil. I added leak detecting dye to the hydraulic tank and looked at the cylinder. The seals were not leaking. But with a blacklight I could see the fluorescent green oil leaking from between the clevis in the barrel end on the cylinder up under the seat mount. My first thought was there must be a crack in the casing, because there were no hoses or fittings there. I had a spare on, so I changed the barrels and use the rod and seals from this one.

I got the old one off the shelf and took it apart. I started start cleaning it and getting it ready for sandblasting and paint. I looked in between the clevis and there was a small circle with two flat sides where the clevis was cased. Looking inside the barrel where the piston slides in and out, I could see a machined surface for the piston to bottom out on. It was about a ½ inch wide and looked like a ring. Closer to the center, I could see about one inch of casted surface making another ring. In the very center, there was a one-inch circle that was machined. It occurred to me that it was a plug. I took a punch in between the clevis and tapped on it, and it was a plug with an O-ring on it. That was the problem with the other one.

Lesson learned - remember to always put the dye and be sure what is leaking first and save yourself some time. The oil dye can be bought at most auto parts stores.