

Power Steering Pump Replacement

By: JohnO in MI

The power steering pump on my 861 developed a severe leak, and unfortunately, parts for the early sleeve type pumps are non-existent. After searching the forums for replacement info, I pieced together what I need for a replacement, although none of the "how to" descriptions were as clear as I would have liked. So, now that my pump swap is complete, here is everything I know about the early hundred series power steering pumps:

First off, there are two type of pumps used: Sleeve (a cylindrical unit with integrated reservoir) and a gear pump (traditional car type of pump with reservoir mounted on top). Examples are shown below.

Sleeve Type Pump:



Sleeve Type Pump:



Gear Type Pump:



If you need to replace a gear pump, you're in luck as the swap is pretty easy. For the earlier sleeve type pumps, there is a little more work involved. The best thing to do is find an old gear pump so you can re-use the brackets and reservoir.

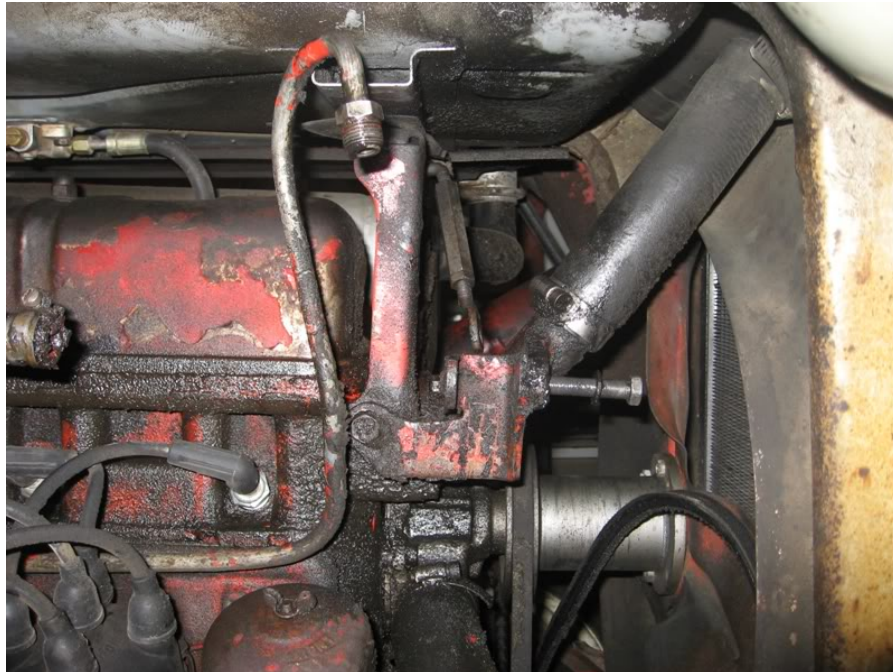
For the replacement pump, the often-recommended swap is a 64-65 Mustang pump. Unfortunately, when I went looking at the local auto parts stores, rebuilt pumps were unavailable. Apparently there is a lack of cores for rebuilding. I learned of a new replacement pump for the Mustang, the Cardone Select #96-6051. This is a brand new pump, and is virtually identical to the gear type pump on the tractors. It even comes with new gaskets for the reservoir, which I'm told are expensive from CNH. My local auto parts store was able to order the Cardone pump, but the cost was out of line compared with mail order (\$190 vs. \$137 delivered from www.rockauto.com), so I went with mail order. Note that the Cardone pump is available as a front mount or rear mount – **you will need the front mount.**



Here's a picture of the new and old pumps. The old pump shown here is junk pump from my local tractor guy that I bought for the reservoir and brackets.



The tractor mounted bracket and belt tensioner are the same for both types of pumps.



When converting from the sleeve pump to the gear type pump, these are the pieces you will need (in addition to the reservoir).

The mounting bracket:



Below is the hose fitting for the pressure line. After digging in a little farther, this isn't too important after all.



After cleaning everything up, I mounted the bracket and found a slight interference condition that required some grinding to the bracket. The shape of the Cardone pump is slightly different in this area perhaps for the bearings instead of bushings on the pump shaft.



Here are all the pieces cleaned and painted, ready for assembly:



The Assembled Pump:

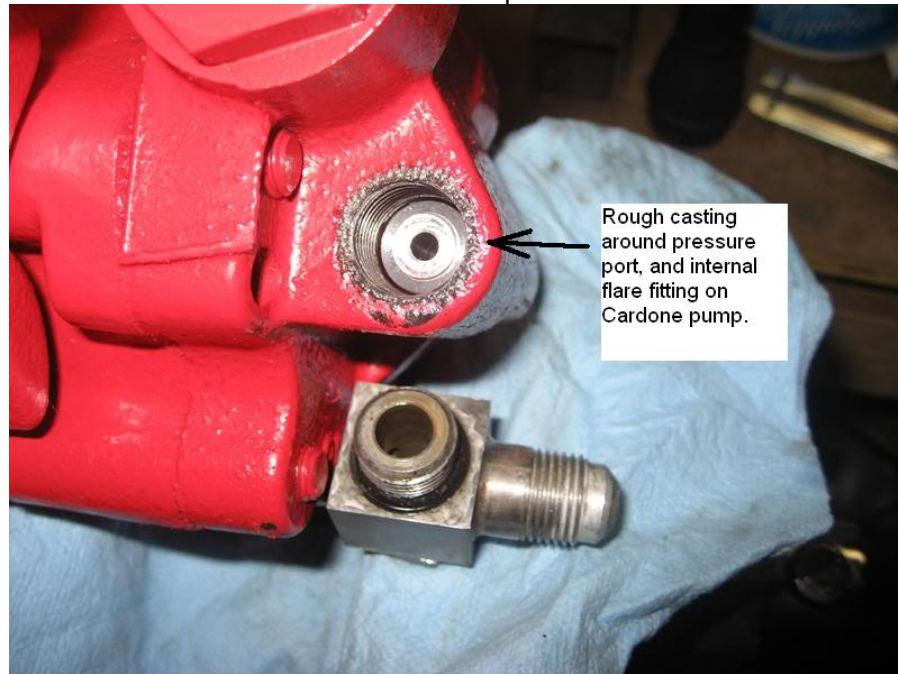


For anyone that needs one, the filter for this reservoir is CarQuest part number CFI 85653.

Next up were the fluid lines. The return was no big deal. The location was slightly different from the sleeve type, but a length of rubber hose would be fine.

Looking at the pressure side revealed another difference in the original pump and the Cardone replacement. The original pump is machined for a 3/8" SAE O-Ring fitting shown above. The Cardone pump has a 3/8" flare, which is the same as the sleeve type pump. Because of the location of the pressure port, a tight bend is required at the port, and I was not able to get it to work with regular hard line. This is where the original fitting is nice. The choices are to modify the pump (machine the casting smooth for the o-ring surface) and fitting (shorten so it does not bottom out on the flare), or find a pre-made fitting at the auto parts store. I wasn't able to find much, but was able to get a flare to hose fitting with a tight radius.

New Pump:



Original Pump:



And here is the nearly finished product. I still need a couple new hose clamps for the return side, but it holds just fine without them for now. I made a new hard line for the high pressure side with 3/8" brake line. This mates up to a 3/8" hydraulic hose, then back to the fitting with the 3/8" flare at the pump. Not the cleanest install, but it is functional. I may go back and machine the pump for the original pressure fitting, but I wanted to get everything working before the snow started to fly.



So there it is; everything I know about power steering pumps. Best of luck to anyone else that needs to replace a dying pump.



*Best internet source
of information and help
for old Ford tractors.*

www.ntractorclub.com