Posted on Sunday, October 2, 2005 - 12:44 am:

hey folks, start a new folder on yer hard drive, it's class time again.
This class will be rebuilding that old hydro lift pump you been wanting to get put on yer cub.

some of you may have the knowledge already and been through the process. as of late,(two weeks ago) i went to get all the rebuild gaskets from the cub dealer locally and only the pump body gasket(rubber) and the o-ring for the spool valve were still obtainable. roll pins, nuts, etc. i get from other sources cheaper than cub dealer. Geezy-Pete! $2.00 for a pump boss screw? i don't think so! i'll re-use the ones in it! anyway, this is PHASE 1- BREAKING DOWN THE PUMP.

the reason i'm doing this now is because i have to have this pump next week-end for a Plow Day which failed to operate correctly at AW's Plow Day, resulting in not using the 125 which is my plowing tractor.
SO HERE WE GO!
first of all, i use a piece of cardboard box or something similar to poke holes in to keep all the bolts labeled and together. i also put down something like cardboard or an old sheet as a clean work area.

here is the pump that needs cleaning or rebuilt.

the first thing is to remove the mounting bolts and nut and label them on the cardboard.use a drywall or whatever screw to hold the nut to the box.

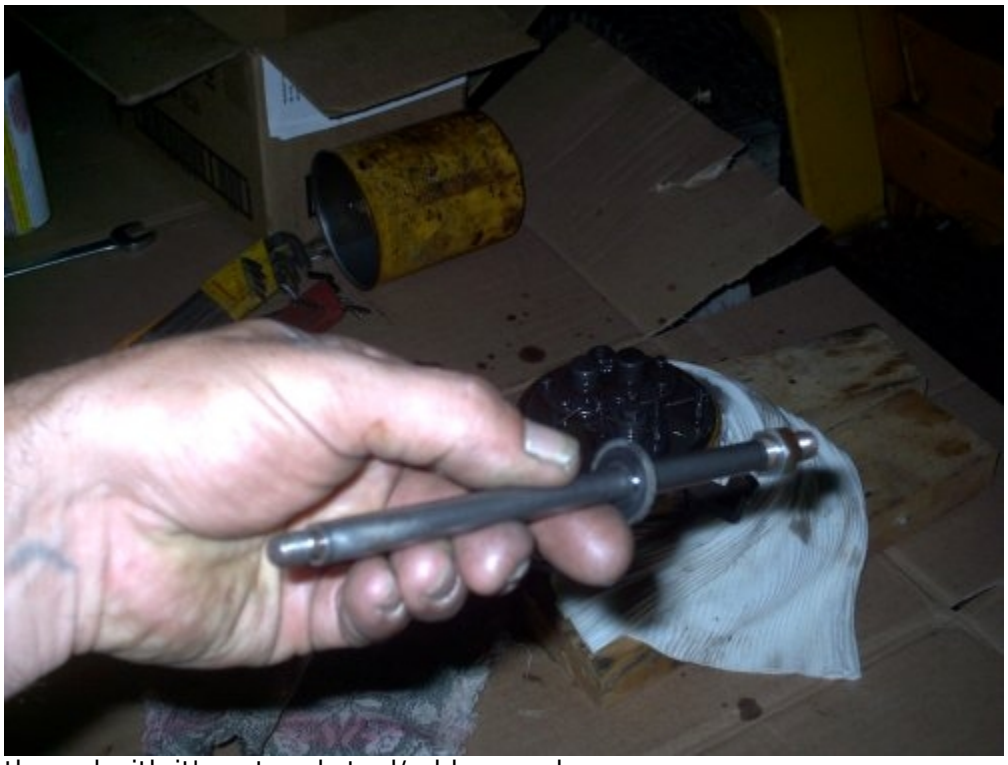

with an 11/16" wrench, remove the fill plug and drain any hytran into a container.

next i loosen the set screw that holds the sheave on, but i leave the sheave on the pump as it acts like a stand. this can be a bear to get out and may require some blaster a few days before the rebuild. it is about impossible to get a standard allen wrench on it in the regular fashion unless you have an extended reach set. another alternative is T-Handle allen wrenches. since i don't have any, i use the long end and a crescent wrench. crescent wrench gives the leverage needed with a quick snap action.

now with a 9/16" wrench, loosen the pump reservoir nut. now one of two things will happen here: 1. the nut alone will come off, or 2. the rod will back out of the pump assembly depending on whether it is rusted around the thread area. on this one, the rod unscrewed, saving me the labor of using a pair of pliars or visegrips to remove once the reservoir was off.

wrap a rag around the pump boss to catch any oil left inside when removing the reservoir.

take a clean rag and wipe out the reservoir.



the rod with it's nut and steel/rubber washer.

this is what the pump will look like when the reservoir is off showing the center return spring on the reservoir side of the spool, and the pump, which is built into the casting with the gear cover with six screws holding it on.

now with a 1/2" wrench, loosen and remove the bolt with upper washer,spacer,spring, and lower washer.

the spring componants laid out in order of reassembly.

next thing to do is remove the two roll pins which act as retainers to keep the spool valve in the end casting. these may be hard to remove also. here is the method i use: electrical side cutters, sueezing really hard next to the spool and prying them out a little at a time. this one came out real easy.

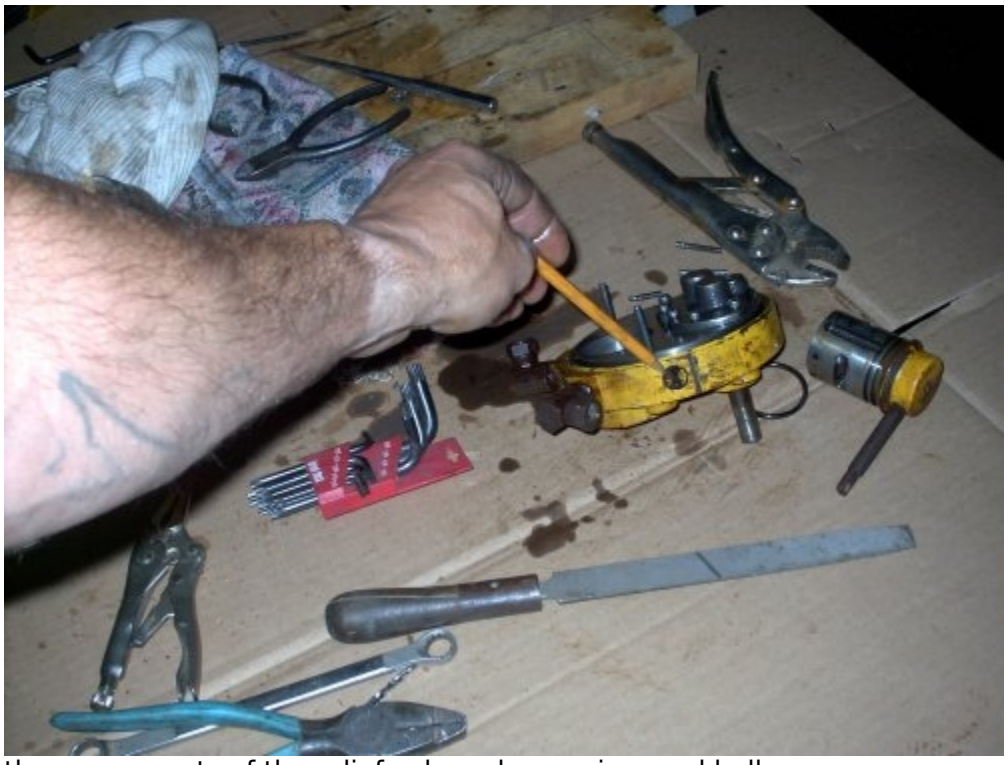
the second one did not! method #2: vise grips and tapping out with hammer. here are the two roll pins that hold the spring in tension, and the two retaining roll pins for the spool. you can see the one sitting by itself got crushed by the visegrips. they will

be replaced anyway!

now before you go getting anxious and pull out that spool, take a close look at the area where tools came into contact with the end of the spool when removing the retainer roll pins. you'll want to roll a fine file around the perimeter to make sure there is no marring or burrs that will scratch or score the bore that the spool rotates in. forcing the spool out through the bore without checking first may cause failure and leaking, and if real bad, cause bypassing of the oil.

these two parts are made to have a slide fit, if there is any hesitation to go thruogh, stop and file off the affected area. after the spool is out, remove the o-ring from the uppper most groove.

next we will remove the relief valve. it is the plug along the outter diameter with the screwdriver slot. it is spring loaded so be careful removing it. it may be under tension and jettison the plug!



the componants of the relief valve. plug, spring, and ball.

next remove the six screw driver slotted screws holding the pump end plate on, and remove the top lifting straight up exposing the gears of the pump. pull the one-piece gear and shaft out of the pump ONLY after removing the rust that may be present on the exposed shaft directly behind the drive sheave and oil it before doing so. then with a needlenose pliers grab the idler gear and lift it off of the stub shaft in the pump boss.

now the pump is apart except for the fittings the hoses attach to.
inspect all parts and clean with your choice of cleaning agants.
Phase 2 will be posted tomorrow as i put it back together.
after i had the pump torn apart, i inspected the spool and found it partially blocked in the port- cleaned it out with compressed air, should take care of the problem!
eric

all the componants of the pump laid out.
that's all for tonight!
eric
It doesn't hurt to overbuild a little.....does it?