A few years ago I bought a Lodi 815 backhoe from a friend of mine. I got it for $2,500 and he threw in a brand new Kohler Command replacement engine he had but never installed. The backhoe is a clone of the Terramite TC5. The hours meter showed 400 hours on it. I estimate that it is from the mid 80's. The Lodi ran and the backhoe dug but notably had a broken bucket lift cylinder and mount. The original Kohler Magnum ran well once started but had regularly occurring starting problems. My buddy had replaced perhaps 40% of the hydraulic hoses and included a bunch of mis-measured extra hoses in the purchase.

I got it home and immediately pulled off the cylinder with the broken shaft eye. The cylinder's mount was twisted outward (buddy had been back-dragging when it broke) with the weld ripped apart. Lots of signs of previous bad repair jobs. Some grinding, extension pipe work, and ratchet strap work brought the mount back to its original location. I welded it up with the MIG that had only one working setting. Luckily it was about right for the 1/4 to 3/8 inch thickness metal.

I dressed the cylinder shaft and eye with a grinder and did the best I could. Moving the stinger in a tight circle I got a decent weld with the flux core (I was still getting use to how flux core went down). Reassembled everything, fired it up and the bucket moves up and down as she should.

I used it to dig out some stumps until a boom hose broke. I sorted through what my buddy had given me, found two or three hoses that actually were useful, measured the rest, then ordered a few hundred dollars of hoses. I replaced all but the two large hoses that supplied the hydrostatic drive motor.

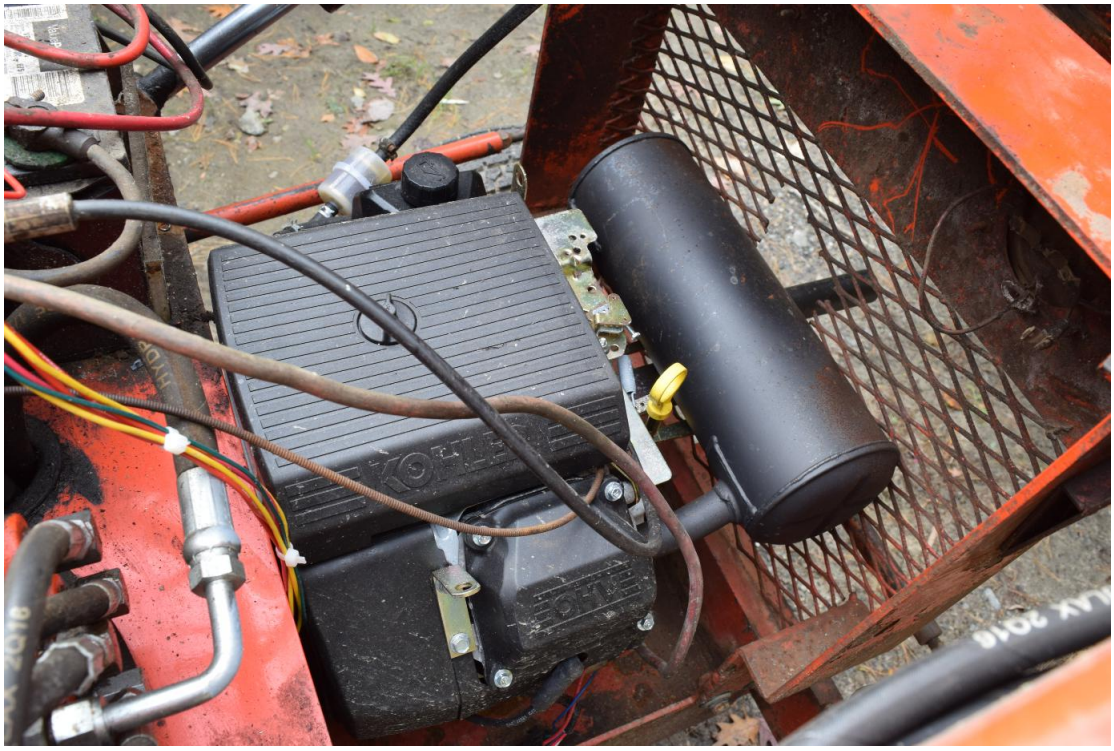
The starting issue was getting worse so I moved a sheet metal cover enough to see a mouse nest interfering with the starter's bendix so I cleaned it out. After that, it worked better but only in the warm weather. I looked at what it would take to change out just the starter and it looked like I would have to pull the engine at least part way out. If I had to go that far I might as well put the new

engine in, it was just hanging around the garage and in the way. I decided to wait until I had more time.

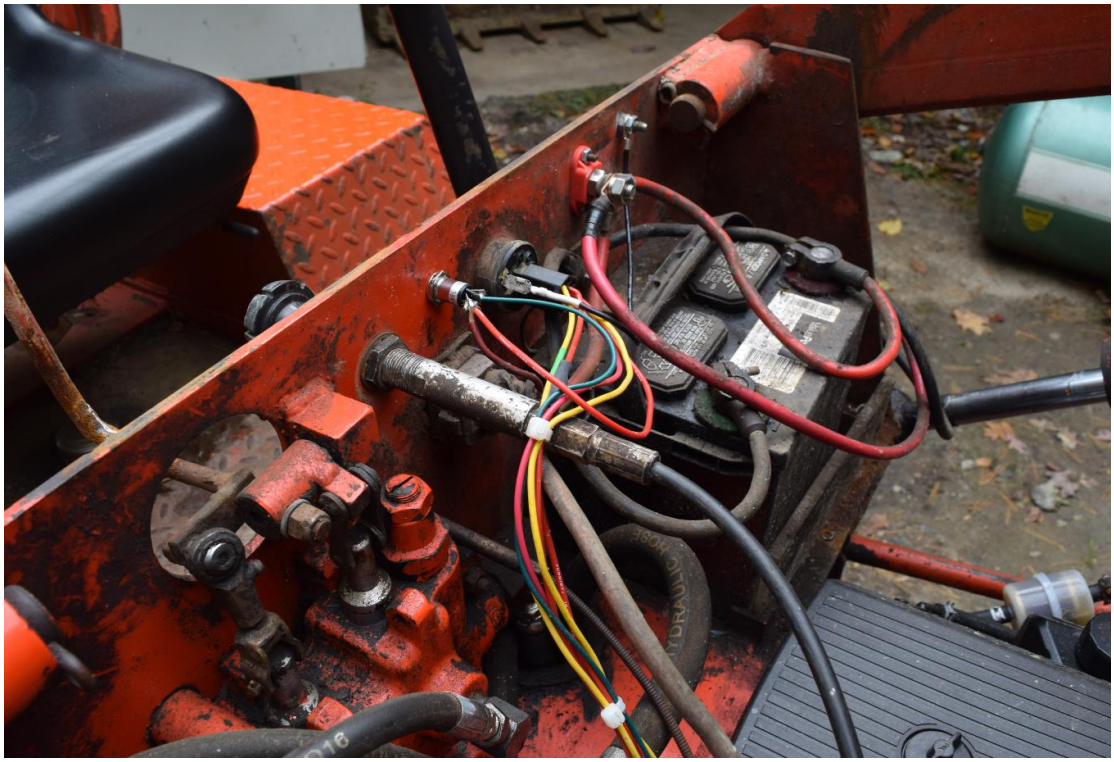
Next issue was a broken shaft seal on the dipper cylinder. Pulled the cylinder, took it apart, and brought the old seals to the local tractor dealer and the old-timer behind the desk said “just leave them with me for a few days son”. He got me the parts and the reassembly went well.

I used the Lodi periodically and picked away making some small improvements. Among them, I welded on fold up foot rest that I got on Amazon, bought new front tires to replace the dry rotted and hanging on by a thread tires, wired in a power pole connector for quick charging access, and installed a new seat my buddy had also thrown in.

The starting problem got worse so I decided to finally install the new engine. The old engine came out easily with no seized bolts or other issues. The output shaft diameter, height, and key way dimensions all matched between the two engines. The coupler looked to be in great shape. The main problem was that the four engine mount holes were in a very different pattern with one mount location being directly over a rectangular cutout for oil changing access and another being a half a hole off. I welded the cutout up to create a flat clean surface and drilled four news holes to match the new engine. I plasma cut a new access hole for oil changes. Overall clearances were very tight to the front grill and rear firewall but it all fit and the shaft met up with the coupler correctly.



Wiring was not straightforward. No diagrams came with the new engine and the Lodi differed from the Terramite schematics substantially. I should mention that the Lodi is so very close to the Terramite in almost every other way; the parts diagram and assembly guides are very similar to each other. I reasoned out most of the wiring and proceeded. In the end I stripped all of the original wiring, bought proper connectors, added some power and ground distribution points, and rewired successfully.

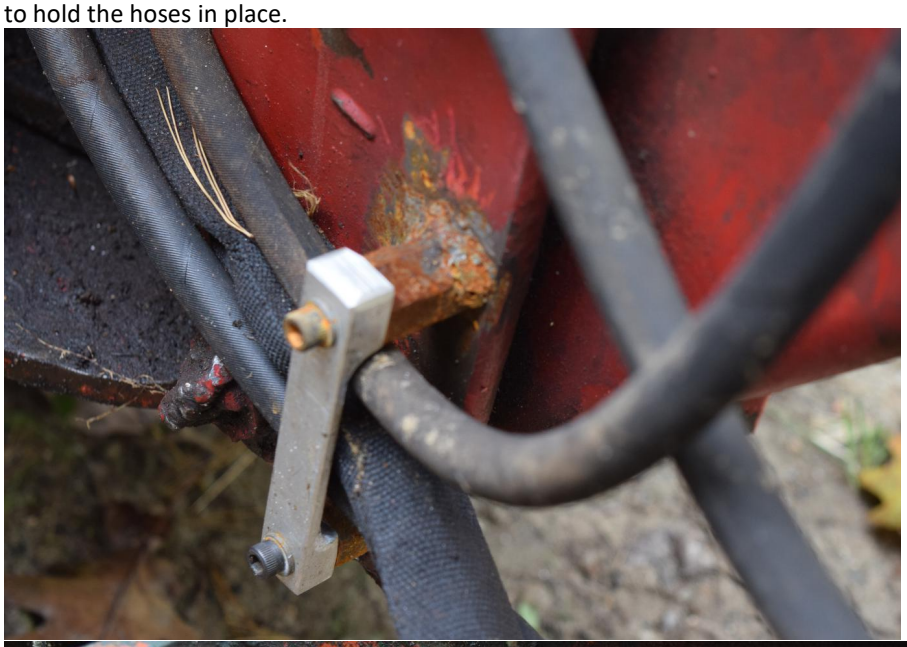


Some miscellany - The throttle and choke cables required some trickery meaning drilling new hole locations for the cable clamps and just-barely-made-it routing. The exhaust needed a different

section of the grill removed to clear. Fuel lines were replaced. I wired the low oil cut off switch to an LED indicator instead of the engine kill wire. I figured that if the engine became starved for oil it would be going either up hill or down hill. Seeing that the Lodi does not have brakes of any sort, I decided it was better to risk the engine rather than have it cut out on a hill and lose control. All I have are hills on my property. Having the new engine is is great - it starts.

First time out doing real work busted another hose. This time it was a dipper hose. Two things caused this to happen. First, the swing bump stops were rotted away and nonexistent. Second, the hoses were not constrained and were free to move to where they would get pinched at full swing. That is what happened. The hose was replaced.

I bought some suspension bump stops on Amazon, turned some spacers, drill and tapped holes, and mounted them. Next I welded on some small steel standoffs and made a deburred-by-design strap to hold the hoses in place.



Back in the fall of 2018 I got a new Lincoln 210 MP welder and used it to repair the frail looking rusty loader joy stick then welded on a backhoe thumb. The Lincoln Innershield wire made me look good on the long downhill welds.

That about catches up to where I am now. I have a few more things I want to address. I would like to make a canopy to keep the rain off, the manual steering box had a sizable chunk missing out of the housing, and the backhoe bucket teeth are a mismatch of either missing completely, welded on and half worn away, or are actually just weld themselves. I bought a Power King steering box and column because it looked pretty close but have not had time to try to put it in.