Saving a 3 point moldboard plow

~ Paul Moroni

In the last newsletter I mentioned a land plow I picked up, and I finally had some time to dig in (pun intended) and get it ready for the next plow day.

When I first rolled it into the yard, it was clear it had been sitting for ages. The coulters were completely frozen - wouldn't spin and wouldn't swivel. For about two weeks I walked by that plow every day with a can of PB Blaster, giving every bolt, nut, and moving part a good soaking.

On a free afternoon, I hooked a chain to the plow and dragged it closer to the shop door. Out came the cutting torch. After heating the coulter assemblies, I finally got them to move side to side and pulled them off the posts. The spindle bolts had to come out too so I could free the bushings and repair the spacer washers.

For anyone curious, those coulter wheels have a spacer bushing they spin on, with a grease fitting, plus cupped washers on each side to help hold the grease in and the dirt out. The posts mount to the plow frame with a welded-on bushing, held in place with two set screws for adjusting the height. Those posts were rusted solid and needed plenty of heat before they'd let go.

The plow bottoms weren't any better. Every bolt was rusted tight, so I cut the hardware off instead of wasting time and risking my knuckles trying to save them. Taking it apart was the only way to deal with all the rust that had built up between the parts from sitting outside so long.

The biggest headache, though, was the cross bar for the 3-point lift arms. Originally a 1½" round stock, it had rotted down to about ¾" between two of the brackets. That was a no-go. I ran over to the steel supplier for a new piece of stock, but here was the problem: one end of that bar needed to be reduced to ¾" to fit the lift arm, and the piece was too big for my lathe.

I thought about it for a few days and came up with a plan. Tractor Supply sells replacement #3-point pins with 13/16" threaded ends. I drilled and tapped the end of the new bar so I could screw one in, then welded it for good measure. The other end of the bar has a flat plate welded on to create a 5" offset. That offset is important—it keeps the plow level when the tractor is running in the furrow, and it can also pivot to fine-tune the steering of the plow. If it's out of adjustment, you'll notice quick: your tractor will be pulling to one side, and the front tires will look like they're arguing with you the whole way down the field.

With the hard parts fixed, it was finally time for cleanup. Sandblasting took about four hours once I got all the equipment set up. (If you've ever got a big blasting job, I'd recommend buying a 1-ton bag of sand. It's way cheaper in bulk.) After blasting, I hung everything up, gave it a good coat of primer and paint, and let it dry a couple days.

Next came the hardware. I measured up everything I needed and found a company called Bolt Depot that had all the correct bolts for a plow. With the right hardware on hand, reassembly went pretty smooth. While I was at it, I added grease fittings to the pivot bolts that hold the bottoms to the frame. These bolts double as the pivot for the shear-pin trip mechanism. I learned the hard way with my Massey Ferguson—when the plow tripped, the pivot was rusted solid and wouldn't swing down, which meant replacing the shear pin was a real chore. Grease fittings should help keep that from happening again.

Now the old plow is back together, painted, and ready to see some dirt at the next event. One more piece of iron saved from the weeds.