

PTO Popping Out of Gear, How to Fix

After having it happen to me, I have seen several discussions on the problem of having the PTO pop out of gear. I think that would be a useful topic area.

If your PTO shift lever does not stay engaged, the problem is probably not in the PTO transmission, but rather is due to forward/aft movement of the PTO shaft itself. Grab the PTO (tractor off) and see if you can move the shaft back and forth - if so, this is almost certainly the problem. The most likely cause is a PTO connecting shaft with your implement either being too long or binding. Either case will put pressure to push the PTO shaft on the tractor forward. The reason it is able to move is that the only thing holding the tractor PTO shaft in position is the friction fit of the bearing and oil-seal sleeve.

Fortunately, the PTO shaft is extremely simple to work on - just remove the 4 bolts at the PTO shaft housing at the back of the tractor and the shaft slides right out. If you are not experiencing significant oil leaks, you may just decide to press the bearing and oil-seal sleeve back into position and re-install the PTO shaft. However, for about \$20 you can replace the bearing, seal, and sleeve while you have everything in front of you (replace the gasket too). If you have the smaller 1 1/8" PTO shaft, you may want to take this opportunity to simply purchase a replacement 1 3/8" PTO shaft assembly for about \$120. This will include everything you need - just take out the 4 bolts, slide out the old shaft, slide in the new one and replace the 4 bolts, and that's it!

Before you take out those 4 bolts, you must drain the rear axle/hydraulic fluid. Some folks park their tractor on a down slope (nose down) to eliminate the need to drain the fluid (I recommend against propping up the rear wheels to put the tractor at a steep angle). If you choose the 'park on a hill' method, you are likely to drain most of your rear axle fluid into your hydraulic reservoir when you remove the PTO shaft. Make sure all your fluid levels are back to normal when you finish the job.

Oh, and don't forget to address the root of the problem - that PTO connecting shaft. Check to see that it doesn't bind or that it isn't too long for you to take tight turns before you put your tractor back to work.

Don Hoying
Ford 850 owner



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