

## Suggestions for Removing a Stuck Steering Wheel

Removing a steering wheel from its shaft can be difficult, particularly if the tractor has sat out in the elements for a long period of time. While various methods for removal have been utilized, they fall into two categories: exerting force from below and pulling from above (or a combination of the two). This article discusses several removal methods along with various removal tools and aides.

Remove the steering wheel acorn nut and washer first. The wheel is mounted on the tapered end of the steering shaft, using a woodruff key. The nut seen underneath the steering column cap is part of the top bearing and has nothing to do with holding the wheel on. The steering wheel was designed to be removed with minimal upward force. If the wheel cannot be easily pulled off, penetrating oil should be applied and allowed to soak before again attempting to remove it.

Upward force on the wheel may be applied with your legs. Sit in the tractor seat, place your feet on the footrest pegs and lift up with your legs. If the wheel still does not come off, then applying a shock force with a hammer may be needed. Before striking the steering shaft, care should be taken to protect the steering shaft threads by snugly

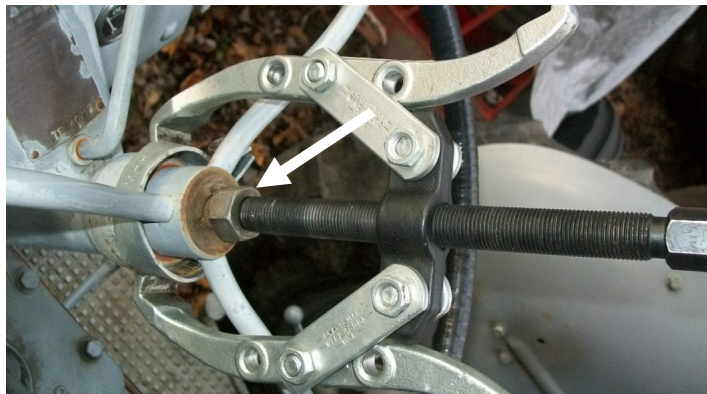
threading on a properly-sized nut and then loosening it two turns. Place a ball peen hammer on the nut and use another hammer to strike the ball peen. Lift up your legs as hard as you can under the steering wheel, but not so hard as to bend the wheel. At this point, strike the ball peen placed on the nut to shock the wheel loose. Avoid striking so hard as to compress your lifting and

cause the rollers in the bearings to strike the bearing race. To avoid potential recoil, use of a dead-blow hammer is recommended.

If this method doesn't work, the use of a wheel puller may be required. There are several pullers available but not all will work. Modern steering wheel pullers do not work because they are designed to thread into existing pulling points on the modern steering column. They are incompatible with the spoke-style wheels used on Ferguson tractors.

Ferguson dealers used a special wheel puller designed to pull on the spokes. It was a modification of the standard three-leg puller. The claws were turned 90 degrees to grab the spokes. This style puller is not always readily available and spending the money for a special puller that is seldom used may not be a good investment.

A third option is a two-leg bearing puller. This puller has straight legs and the clawed ends are slim enough to fit under the steering wheel hub and above the cap. The drawback to this design is its wide legs that are incompatible with a three-spoke wheel. The puller just simply cannot be centered and one leg will pull off the steering wheel hub.



*The chain link fence post clamp provides a good edge for the puller claws to grab. Note: nut is used to protect threads.*

The puller that works best is the standard three-leg type. However, there is not enough room for this type of puller to properly grip the steering wheel hub, nor can it grip the spokes. To solve this problem, purchase or make a close-fitting ring large enough for the puller claws to get a full grip and the strength to transfer the pulling force to the wheel spokes. An ideal, inexpensive solution is a tensioning bracket used for chain link fences (see photo). The 1/2"-wide bracket is used to clamp on a round, vertical fence post to hold the chain link fence. The wheel puller grips the bracket and is tightened to pull the steering wheel off, using upward leg pressure on the wheel if necessary and striking the top of the puller screw with a hammer to shock it loose. Again, protect the steering shaft threads from damage or mushrooming by using a properly-sized nut.

If you do not own a puller, many auto parts stores have free tool loan programs. If you are considering the purchase of one, avoid discount pullers as they are not rated for the force required to perform any serious work and may break if used to pull a steering wheel.

Putting graphite grease on the end of the shaft and inside the wheel hub before replacing the steering wheel will make it easier to remove in the future.

*The methods described above reflect the collective wisdom and practical experience of Duner (WI), John (UK) and Jeff-oh (aka Jeff Miller) who often post on the Yesterday's Tractors Harry Ferguson web site. Jeff, the author, may be contacted at [TE20Ferguson@aol.com](mailto:TE20Ferguson@aol.com).*



*A 1/2" wide chain link fence post tensioning bracket is available at many hardware or home improvement stores.*



*While using legs to apply upward pressure on the steering wheel, swift strikes with a hammer are applied to shock the steering wheel loose.*