



# THE MODEL T FORD ITS REPAIR, SERVICE, AND RESTORATION

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## An Unexpected Tour Repair

On a recent tour in the hilly Cumberland Plateau in east Tennessee, your Technical Editor had a bit of difficulty in finishing the first day's travel. The morning ride was nice and uneventful, and the T handled well for the first 30 miles. While descending the road into the lunch stop, our 1927 Touring developed a rapid stiffness to the steering. I was unable to turn the steering wheel slightly left, then unable to turn it slightly to the right. Eventually I only had straight-on travel! Fortunately, the grassy parking area was ahead and I was able to bring the T to a safe stop, but I could not turn the steering wheel!

Trying to determine the cause of the steering wheel binding, I found no issues in the spindle, tie rod, steering rod, or pitman arm, but discovered the binding was in the steering case, or rather the pinion shaft that the steering wheel is mounted to. That shaft was bound up with the steering case cover bushing. The background story is that I had just replaced the steering case cover, as the old one had been rattling at road speed and I wanted to eliminate that pesky, noisy rattle! When installed, the cover fit snug to the pinion and I reasoned that as suitable. My afterthought was that fit was in error.

With considerable help from fellow Model T'ers, we persuaded the steering case cover, with the pinion stuck tight, to come off the case with a lot of effort, a heavy pipe wrench, and jawed pliers! We removed the steering wheel nut, turned the front wheel to full travel, and while holding the steering wheel spider tight, twisted the cover around until it was free. The pinion shaft was still bound tight to the cover.

I tried to do a field repair with support from other willing tour helpers, but we could not separate the pinion shaft from the cover while using a makeshift wood support and soft blow hammer. So, unable to continue the tour, my wife, Julia, and I were left behind to wait for the rollback tow truck to return the disabled T back to the hotel. Oh, the sadness and disappointment of realizing my error.



Able bodied helpers pulling and wrenching that stuck cover off!



Steering pinion stuck solid in cover



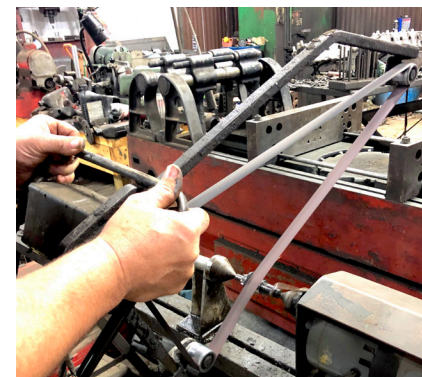
Wood 2x4's for base and soft hammer blows to no avail



Returning to the hotel on rollback

The next morning, a local engine repair shop just five miles away provided the necessary tools and assistance. Shane, the shop proprietor, took pity on me and pushed that stuck pinion shaft out of the cover using a 20-ton press. It was stuck solid! Examination of the shaft showed a lot of galling and roughness, so with a quick spin between centers and using a crocus cloth strap, he burnished the shaft back to a usable condition. The steering case cover bushing was also too rough, but a travel back and forth in Shane's hands on a turning spindle reamer machine made the cover usable again.

Back at the hotel, we buttered up the case with fresh grease, applied a suitable smear to the cover bushing and the steering pinion shaft, replaced the re-worked pieces, and we were under way for that day's tour.



Burnishing pinion shaft with polishing cloth strip on lathe



Re-worked steering case cover and steering pinion shaft

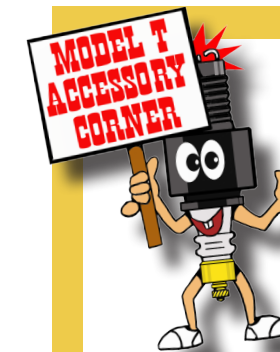


Installing pinion shaft into cluster, with lots of grease on shaft and cluster gears



Fitting steering wheel back in place, and ready to go on tour again!

In retrospect, the cause of this problem was fitting that replacement cover without ensuring that the parts were clean enough, or that adequate lubrication was applied. For any moving parts on the T, oil and grease are the most important preventive measures and remedies you need to abate problems while touring!



A showcase of aftermarket accessories from the past, often found on the Ford. Many thousands of inventive products were sold to dealers and owners to upgrade, customize, or improve over the factory parts...in most cases, not so much!

by Dan Treace  
Technical Editor

## Aerobelle Air Shock

This unique shock absorber for the Ford has a rubber bladder inside the dome-shaped shock that can be filled with air pressure - 'Ride on Air'!



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