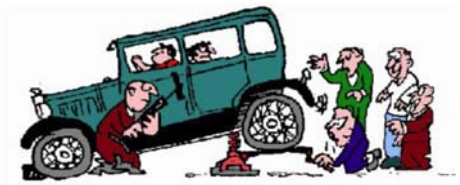
From the Garage -

by Paul Hunter



Repairing The Brake Crossbar

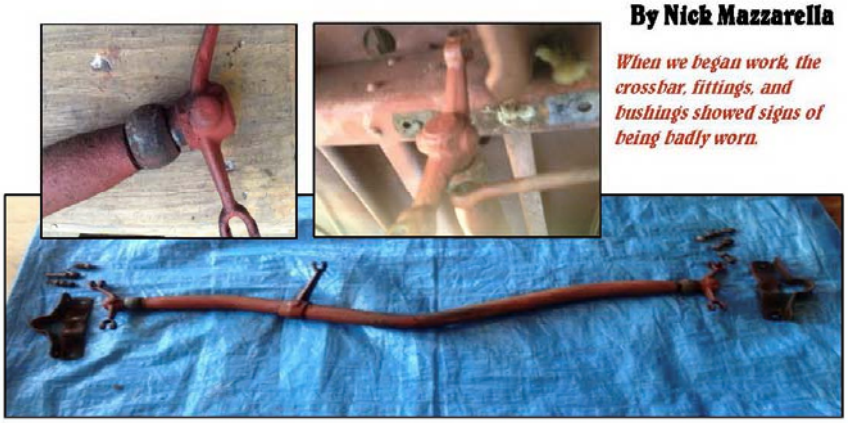
By Nick Mazzarella

I acquired my late 1931 Murray "Slant" Fordor Model "A" in 2004. When I first saw the car, it had been neglected for some time and needed lots of repairs and TLC. Although I was able to get it home without incident, it started erratically and had so much wrong with it that I hardly knew where to begin fixing things.

At the time, my day job required frequent travel out of the country, so I did just enough to keep her running for several years. Then, we started working on the "Slant" in earnest in 2012. Because I wanted to keep the car running in good weather, that ruled out doing a total teardown.

So, instead we created a priority list of things to correct as soon as possible. The checklist included addressing carburetion, ignition, and electrical systems. Those basic things even turned out to be quite problematical. To this day, I still experience issues with the ignition, partly self-inflicted. But that topic must wait for a later discussion. My topic today is the Brake Cross-bar Repair department.

When I drove the car, it rattled and banged constantly. I couldn't keep the brakes properly adjusted and the loose movement caused them to act differently each time I stopped. The steering and brakes clearly needed repair. So, we spent the entire Winter of 2013 rebuilding the front brakes, the steering and the suspension. The improvement was amazing! But it also led to determining that much of the remaining chatter was being caused by the brake activators and the crossbar.



When we began work, the crossbar, fittings, and bushings showed signs of being badly worn.

Because the crossbar bushings were severely worn and the activation rods had no return springs, I decided to tackle those issues as the next project. So, last Spring we dropped the crossbar and brackets and examined them for wear. Originally, it seemed like the crossbar would have to be sent out for resurfacing. But then we were surprised to learn that much of the wear was confined to the bushings themselves. We found that the actual surfaces — while a bit scored and worn — were not that severely bad. According to my trusty micrometer, the surfaces were within tolerance to accept the new brass split bushings I was planning to use. That eliminated having to remove the end levers.

The original bushings seemed to be made of an unknown alloy that looked like to pot metal to me. They also featured graphite-impregnated fiber sleeves between the bar and bushings that had apparently protected the crossbar itself from worse wear. One major wear point was located on the shoulder on one end, which had been caused, I suspect, by lateral movement of the bar. The width of the surface thus needed to be brought back to the correct size. I was able to manage that objective by applying steel epoxy material, then shaping it to a proper fit after hardening. I lightly sanded and polished the bar surfaces and was able remove the grooves and burrs. Micrometer measurements now indicated that the clearances were roughly .0156", thus allowing unrestricted movement within the bushings without too much play.

All original surfaces of the cross-bar and brackets were cleaned and steel-brushed, then recoated with Rustoleum satin black paint. I purchased new return springs, clevis pins, and all required bolts along with the split bushings from Bratton's Antique Auto Parts. Then, we thoroughly greased the crossbar surfaces and installed the split bushings with the split in a horizontal position. The brackets fit perfectly. Most of the rattling is now gone too!

My next project is a biggie: replacing the universal joint and clutch assembly. Stay tuned for another installment after we complete Winter, 2014-2015 work....