



## **THOUGHTS FROM THE MODEL T GARAGE...**

**By Ed Moran**

I'm pleased to be able to bring you another article written by Ron Patterson, The Coilman. Ron has a well-earned reputation as a master coil re-builder and expert on the Model T electrical system. He recently sent me the following information on replacing the condensers in the Model T coil.

Much has been written about rebuilding Model T ignition coils and the correct part to use as a replacement capacitor.

When operating, the ignition coil has high voltage spikes occurring in the primary circuit. To withstand this environment the correct type capacitor must be used or it will fail very quickly.

In addition to a .47uF and 400 VDC rating, the capacitor must have a sufficient capability to withstand these high voltage spikes. This specification is dV/dt. I won't go into all the details, but suffice it to say this specification is expressed in Volts per Microsecond.

You can obtain capacitors with correct UFarad and VDC ratings, but do not have sufficient dV/dT rating. These capacitors are usually smaller and many rebuilders make the mistake of selecting them because they are easy to get into the coil box.

This brings me to - Coilman's - first law: "if the replacement capacitor is small and easy to fit inside the coil box it is the wrong type"! The correct capacitor needs to be shoehorned into the coil box!

The correct part is film foil type construction (**not** metalized Mylar®) with a rating of .47 uF, 400 VDC and a rating in volts per microsecond in the range of 500 to 900. I have installed over 7000 of this type capacitor in rebuilt Model T ignition coils and never had a failure. The smaller metalized Mylar® type construction capacitors desired because of their size, have ratings in the range of 40-60 volts per microseconds. They will fail very quickly in Model T ignition coils.

The term - Orange Drop®" has been commonly referred to as the correct capacitor, but beware, Orange Drop® capacitors are made in several different types and you have to specify the correct type for Model T ignition coil rebuilding.

The correct Orange Drop® capacitor in small quantities can cost \$4-\$6 each when purchased from an electrical component distributor. Lang's Old Car Parts and T-Nuts Model T parts suppliers carry the correct part, buy them in quantity and pass along a significant savings to the Model T hobby.

*Ron the Coilman - [modeltcoils@widstream.net](mailto:modeltcoils@widstream.net)*

Tour Season is here again and this might be a good time to quickly review some safety tips that will help us have a trouble-free fun tour in our T's.

1) Check your tire pressures before beginning the tour. Clincher tires **MUST** have 55 to 60 pounds pressure in each tire! NOT 35 pounds like the later 21 inch balloon tires. If you don't have 55 to 60 pounds, the tire and tube will very likely creep on the rim and the result will be a blowout from a severed valve stem!



2) Make sure your spokes are tight! If your spokes are talking to you by clicking when you drive slowly through the parking lot, they are begging you to tighten them. If you ignore their plea, you are very likely to have a wheel collapse when turning a corner or letting a wheel run off the paved surface. This brings up another point... If a wheel accidentally goes off the pavement, don't jerk the steering wheel to try and force the wheel back on the road! This puts far too much lateral strain on the spokes! Slow down and gently ease the wheel back onto the pavement.

3) Make sure the rear wheels are TIGHT on the axles and check and grease the front wheel bearing. When re-installing the bearings, tighten them until the wheel binds, then back off about a quarter turn. Turn the wheel until the valve stem is at the 3 or 9 o'clock position and let the wheel go. It should be free enough to turn slowly till the valve stem is at the bottom. This won't work if you have balanced wheels but you should be able to give a small push and have the wheel continue to turn easily. Re-check after you tighten the bearing retaining nut! Many times the nut will force the bearing in enough to lose the free play in the bearing! Don't forget the cotter pins in the axles!

4) Make sure the front axle radius rod ball cap is snug and wired with safety wire! If not wired, the nuts may stay tight but the double threaded bolt can unscrew from the cap housing! Have a great touring season and...

*I'll see you down the road...*