



## THOUGHTS FROM THE MODEL T GARAGE...

By Ed Melon

In past issues of the  Spark Coil  we have talked about various parts of the electrical system but we touched only briefly on the Model T generator. A recent discussion in the E-Mail Model T Forum got me thinking this might be a good topic for discussion.



Its ability to contribute to the daily life of her children, as well as to her own, is a feature the modern mother is quick to appreciate in the Ford Four-door Sedan. It opens to her a precious participation in their busy affairs. With a Ford Closed Car she can share their good times and yet hold to the necessary schedule of her day. She finds in it the qualities she desires most, and at a price extremely low in comparison with its high value. She enjoys driving it herself; and the children look forward eagerly to their rides with mother at the wheel.



Beginning with the 1919 closed cars, Ford added a generator and starter to the Model T. By 1921, it was available on both closed and open models. The addition of the starter made the Model T a much more practical car for the ladies to drive and Ford was quick to point out the advantages to these new potential customers.

When the generator is working properly, we seldom give it much thought but when it stops charging the battery, we very quickly become aware of it whether we want to or not! So, let's take a few minutes to discuss generator problems and how we diagnose and repair them.

The generator cutout will also need to be checked. The cutout is really a simple mechanical switch which disconnects the generator from the electrical circuit when the generator is not putting out sufficient current. The cutout is needed because if the circuit

is not broken, the generator will act as a motor and will DRAW current instead of producing it! This would quickly discharge the battery. A cutout that fails to close will not only prevent a charge but can cause the generator to burn out!

First, make sure the battery is fully charged. Use a charger, if necessary, to charge it. Then, using an analog voltmeter, we should first make sure we have voltage on the battery side of the cutout when the engine is not running. We should use an analog



(meter with a pointer) rather than a digital one because the digital meter (being an averaging device) will not display changes in readings as accurately as analog. We should have approximately 6 volts on the battery side of the cutout. If not, check the wiring from the cutout to the dash wiring block. These screws can get loose and corrosion can also cause an open circuit.

Now start the engine and set it at a high idle. Take a heavy wire or a pair of pliers and jumper from one side of the cutout to the other. If the ammeter registers a charge, the cutout is bad. Replace it. If the ammeter shows a heavy discharge, the generator is probably shorted and will need to be removed and repaired. If the ammeter doesn't move, then the cutout is probably ok but we are not getting any generator output. Turn off the engine.

Remove the generator brush cover and check for drops of solder on the cover. If you find them, the generator has overheated and thrown solder and will need to be removed and repaired. If all looks ok, start the engine again and press a piece of medium fine sandpaper (not emery cloth!) against the armature until it is clean and shining copper. Raise the engine speed and see if you have a charge now. If you do, adjust the third brush to give about 6 to 8 amps charge. 6 if you drive mostly in the daytime. 8 if you drive much at night.

If you still have no charge after the above tests, you may have a shorted or open armature or field coil or a shorted or open third brush assembly. The insulator strip under the moveable third brush is also a likely spot for a short but you'll need to disassemble the generator to check it.

If none of the above has helped, you should probably consider letting an electrical shop rebuild the generator or buy one from the model T parts suppliers. Ron Patterson (Coilman) also rebuilds and sells generators and starters and has an excellent reputation. You can find his ad in any issue of either club magazine. Get that generator working and

I'll see you down the road...