

## Adjusting the Model T Generator Brush Plate Null Point with the Generator Installed

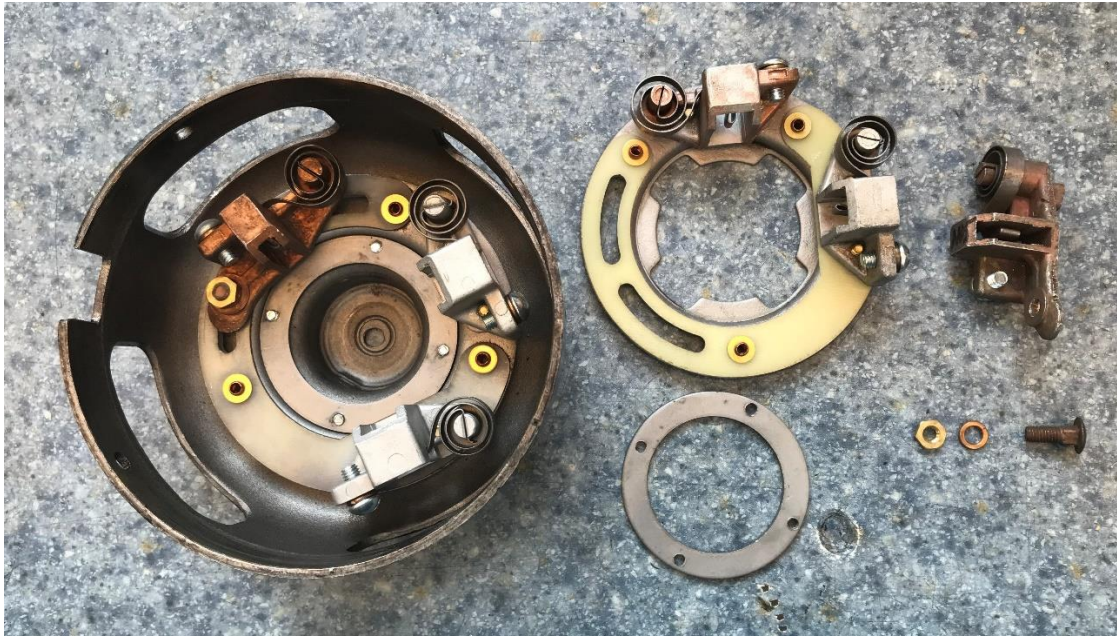
In many cases the Model T generator brushplate lead (Null Point) has been changed by people who do not fully understand what they are doing. The usually results in a generator that is charging excessively, not charging at all or will not “build up” to starting charging on its own (a detailed description of the term “Building up” may be found at <https://modeltfordfix.com/the-model-t-ford-battery-charging-system-by-ron-patterson/> ). Brushplate lead should **not** be used to set the generator charging rate. The brushplate lead should only be adjusted when the generator is rebuilt or repaired and would not normally be changed when doing normal maintenance by the vehicle operator.

Here is a procedure that will allow you to correctly reset the brushplate lead with the generator mounted on the engine as opposed to removing the generator and setting the brush plate lead on a test bench. (This is **not** the procedure for setting the brushplate lead on a dynamic generator test stand)

To help familiarize yourself with brushplate lead adjustment procedure Figure 1, shows the location of the four brushplate clamp ring 6-32 X 5/16 machine screws (This 5/16 length is critical to prevent the end of the screws interference with the Commutator) and Figure 2 shows a brushplate installed in a brush cap, a clamp ring and the brushplate mortise which the brushplate moves within.



Figure 1. Generator Brush Cap Clamp Ring Screws



**Figure 2. Generator Brushplate and Brushplate Installed in the Brushcap**

You will need an assistant to watch the ammeter and report results to you while you are making the generator brushplate adjustments when the engine is running.

1. Loosen the third brush 5/16 clamping nut and move the third brush to the fully retarded (counterclockwise as viewed from the front of the car) position. Figure 3 shows the correct location of the third brush 5/16 clamp nut and Figure 4 shows special wrenches required to loosen/tighten the third brush adjustment nut with the generator installed on the engine.



**Figure 3 Third Brush Clamp Nut Location**





**Figure 4 Special Third Brush Adjusting Wrenches.**

2. Tighten the third brush 5/16 clamping nut just enough to hold the third brush from moving.
3. Start the engine, run at a moderate speed and loosen the four brushplate clamp ring 6-32 machine screws on the end of the generator brushplate cap about 1-2 full turns and no more. These four screws should have lock washers to prevent them from coming loose when tightened.
4. Using your fingers (Don't worry, it is only 6-8 volts, you won't get electrocuted, but you may feel a slight tingle) rotate the brushplate inside the brush cap back and forth till you find a point where the Ammeter registers 1- 2 amps charge.
5. Without moving the brushplate position found in step 4, tighten the four-clamp ring 6-32 machine screws.
6. Now set the third brush to the desired charging rate which is usually 5-7 Amps and tighten the third brush 5/16 clamp nut.

**A note about selecting your charging rate.**

During the Model T era drivers operated their cars on short trips and at low speeds. Under those conditions to keep the Battery fully charged it was necessary to set the Generator to the Ford recommended 10-12 Amps charging rate. Today our Model T's are driven at higher speeds and on longer trips, therefore requiring a reduced charge rate setting. If you insist upon

setting the Ford recommended charging rate 12-14 Amp and drive on long trips at faster speeds start thinking about getting spare generator.

The Model T Generator only has a capability to reliably produce a sustained 100 Watts of power. That means you should keep the charging rate as low as possible and still keep the Battery fully charged. Under normal driving conditions the Generator charging rate only needs to be set for 5-7 Amps. This rate is optimal to keep the Battery fully charged. If you drive a lot at night with headlamps you may find the 7 Amp rate better for keeping the Battery fully charged. After starting the engine and the generator is working it only takes a few minutes to replace the current used by the starting motor. Setting the charging rate too high will require constantly checking and replenishing the Battery water and can result in damaging the generator.

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