

The generator tubs

A lifetime collection of generators and regulators to play with.

I have more Sportster generators than any rational person needs.

Some of it is due to the fact that I have been designing a voltage regulator for Sportster generators.

My hope is to make one that will work on a magneto bike without a battery yet without a big, clunky electrolytic capacitor.

Accordingly, I have these tubs in the lab area, where they are handy for testing. The first thing I need to do is get them out and run each of them, to see which are dead and which produce voltage.

This effort will create entries in the Repair section as well as the Design section of this site.



Here is a tub full of generator parts, voltage regulators, and some wiring harnesses. You can see the backside of an [Electric Frank's voltage regulator](#), but it might be the one that failed on me. That is another thing I intend to test on my generator test stand. Frank D. Worsham died in 2004 and these are no longer available.

For all the work I have done on regulators, I have to admit the mechanical regulator works pretty good and can be just as solid as an electronic regulator.



Another project is to convert all my Sportsters to the later-model (1983, 84) Hitachi generator. I have a test bench I will be hooking these up to. Then I can document exactly how much better they are than the earlier model generators or aftermarket ones. Here you see 6 Hitachi generators, but I don't know if they all work.

Unfortunately, the Hitachi is not a drop-in replacement. The diameter is a bit larger, but I am sure I can grind back any interference on the cases. The real issue is that the center ring is a bit bigger on these generators. I cannot fathom why the factory would do this. I can only think that they didn't want us putting them on older Sportsters for some reason.

As I get settled in my home in Florida, I will set these up in the test bench and see which ones work and which ones have problems.



The next Sportster generator bin has one Hitachi-style unit, and four earlier-model generators. Also a Nippondenso alternator I want to test. It will just fit into the frame rails. I note [a guy on eBay is making a mounting system for it](#), but he needs 400 bucks or so for the complete setup and that is a bit of sticker shock for me. This is not to be confused with [the permanent-magnet alternator](#) that has been sold on the aftermarket for over a decade.

I hear that permanent magnet alternator works OK but is nousey, you can hear it coming for a mile. I guess the guys with drag pipes don't care because they can't hear it over the exhaust.

I would like a full-redundant charging system on my bikes-- two alternators and two batteries.



This bin has some factory regulators, and lots of parts I used in my home-brew voltage regulator design.

That finned thing upper left is the Curtis controller for an electric car. I converted a 1975 Honda Civic to electric years ago. After the batteries went bad in a few years I scrapped it out but saved this controller and the Advanced DC 9-inch motor.

So much of success in life is due to organizaion. I can see I have to get this stuff organized to understand what I have and what I need to do. That is a big part of making a list of all the parts I have in this section of the website. I have already looked at the pictures to see what I have, so I don't have to dig through boxes looking for some part I can't remember if I have or not.