

I realize it has been a long time since my last update, but to be quite honest, there is nothing new to report. What I mean is to say that all pieces for the current run of engines, are machined and in the assembly process. Every day is spent trying to complete these engines. When you see all the engines stacked up, you are probably asking yourself what more does he need to do. To try and explain everything that needs to be done would take a long time but I will attempt to tell everyone about a couple of items.

Although the ignition modules and coils are in stock, the distributors must be totally assembled and tested, prior to installing them in the crankcase. This entails, pressing 8 magnets around the circumference of a rotating disc. It isn't just a matter of pressing them in, but the aluminum disc must be deformed around each magnet which holds it in place. This process is called "staking" and must be done very carefully, taking care not to break the magnet or press it in too far. Once each is finished, then to two pieces of the rotor must be machined and assembled. Although this sounds easy, keep in mind, if this is not done exactly, then the engine absolutely will not run. My ignition system generates about 20,000 volts and all this electricity must be distributed accurately and at the exact time. The tolerances between the rotor and the contacts inside the cap should be kept to about .005 tolerances. Just to put this in perspective, this is about the thickness of two human hairs, laid side by side. When the internal parts have been assembled, the Hall Effect printed circuit boards are installed. Just a reminder, there are two Hall Effect sensors, which are needed to give me the electronic retard and advance, for starting and running. I then need to install a small ring of heat shrink tubing to hold the sensors tight against the distributor body.

When I am satisfied that everything in the distributor is operating correctly, then I can install it into the block. The position of the rotor must be in the exact position, so the correct spark plug can fire when needed. Remember the engine is four cycle, so there are two complete revolutions of the crankshaft for each cylinder. Knowing this, each piston must be on the compression stroke. Each spark plug must fire at the exact time. If just one of these items I have been talking about, is off, then it could take hours to find the problem. Sadly in the process of trying to get some engines to run, other adjustments may be made, which alter the outcome. This could be camshaft timing, carb adjustments, valve adjustments, spark plug connectors, etc.

Now you can see why making an engine takes so long. I wanted everyone to know every day is spent on completion of these engines, but sadly "things" do not always go as planned. Sometimes, I put an engine on the test stand and it starts almost immediately and all that is needed is to check the timing, adjust the carbs, re-check the valve adjustment and re-torque the head bolts. This is done three separate times for each engine and could take the better part of a day. Other times, it could very well take the better part of a week before I am satisfied that the engine is as good as it can be. Remember, my motto "Perfection is almost good enough" and that "I would rather explain a delay or problem, rather than apologize for the quality".

If there is any extra time, then it is spent in the design of the test stand, cars, brakes, suspension, etc. I also need to answer all the emails, mail packages, inventory stock, etc. I am tired just thinking of what needs to be done.

I just want everyone to know, the updates section of my web will be less and less. Once again, there simply is nothing new to report. If you have any specific questions or concerns, do not hesitate to contact me.

Pic #1 (Staking magnets in aluminum rotor)



Pic #2 (Components of distributor)



Pic #3 (Prototype test stand with water and oil tank installed)



Pic #4 (Prototype test stand with basic engine installed to check placement & alignment)

