It is now 6:46 a.m., July 4th and I will try to finish this update. Before I get started I just want to take a minute to explain something. I recently had a customer who has been waiting for his engine for quite a long time and had some concerns as to why I could not just finish his engine. He further said," I see that you have a lot of semi-complete engines on the shelf and could you please explain why I have to wait, maybe until the end of the year". My response was, "Although the engines are getting near completion, it would be impossible for me to machine and assemble all parts needed to complete just one engine. Let me try to explain – the distributors are the only other major item needed to be competed. Although the distributor housings are machined, as the saying goes, is only the "tip of the iceberg".

- Each distributor housing must have a lower bearing pressed into place.
- Each distributor shaft must be threaded on one end for the timing gear.
- Each shaft must then have an "E" clip placed, and then a ball bearing installed, then another "E" clip.
- Once this has been completed each shaft is placed into the housing and an internal "C" clip is installed to hold it into place.
- The lower timing gear is placed onto the shaft and held in place with Loctite and a 5-40 round head screw.
- The spring clips, which hold the distributor cap in place must be installed
- The electronic board with the Hall effect sensors are then installed
- The aluminum rotors must be machined then 8 holes are drilled around the perimeter.
- Another hole must be drilled in the aluminum rotor to hold it in place on the distributor shaft.
- 8 sub-miniature magnets are pressed into placed, then "staked" to make sure they do not come out.
- The high voltage distributor insulating rotors are then machined.
- The brass center contact is then machined after which, the brass wire electrode is formed and solder into place.
- This completed brass assembly is then place on the insulating rotor and glued into place.
- A piece of "heat shrink" tubing is cut and placed over the "hall effect" sensors.
- The aluminum rotor is then installed on the distributor shaft.
- The completed insulating rotor is installed on top of the aluminum rotor and adjusted for initial starting.

When all is completed and double checked on the 70+ distributors, they can then be placed into the timing cover of each engine.

I hope this gives a little justification of the time needed for just one component and why it would be almost impossible to machine just one distributor.

On a different subject, much to my dismay, the supplier for the electric motors used for starting the engine, can no longer get me them. Since the engine was design around, what I thought was a standard electric motor, I have and to rethink the starter motor setup. After spending several days on the internet and purchasing a myriad of electric motors, I had to redesign an entirely new setup. Keep in mind most models are using brushless motors which will not work for my application. With the expert help of John Holms from

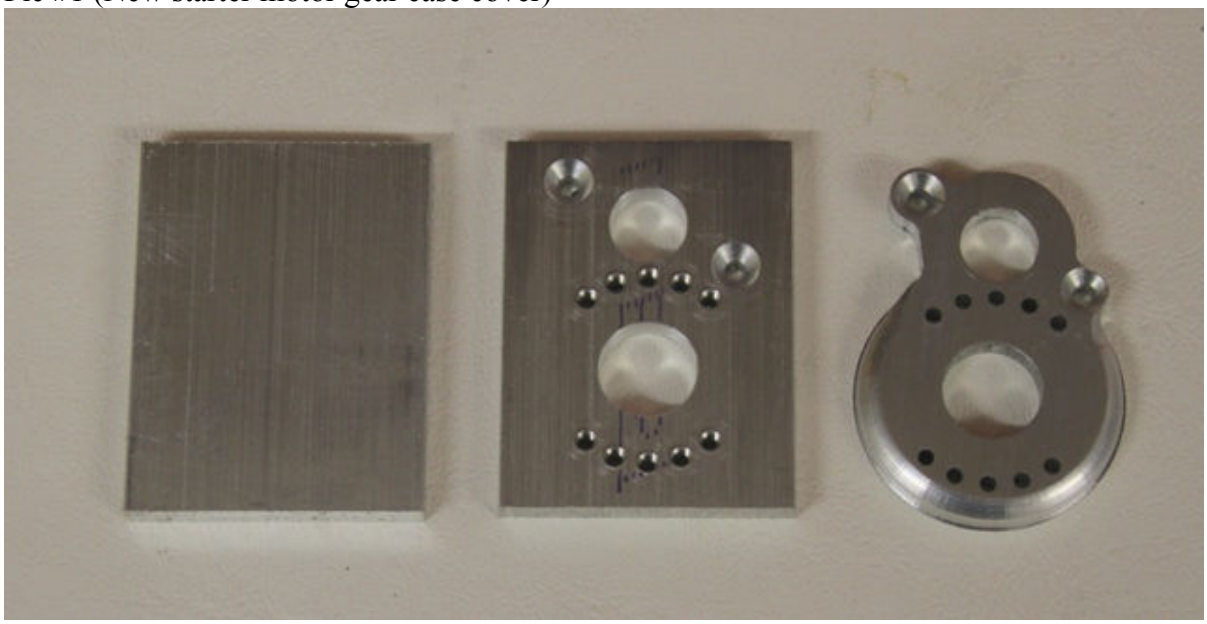
Holms Hobbies, we found a perfect motor for my application. Not only did it need to fit the current run of Stinger V-8 engines but also must retro-fit my first run of engines. This proved to be a very daunting task. After several prototypes and a lot of machine programming (and a lot of choice expletives) I have tested the new system and it works perfectly. It also gives me the ability to adjust the angle of the motor, for different model installations. This time I checked, double checked, and even triple check to make sure I can always get a replacement motor. When you look at the pictures, you can easily see the work needed for each half of the starter motor gear case. It isn't just the machining - the material must be purchased and cut to the proper dimensions. A CNC program must be written and proofed. If that did not consume enough of my limited time, I also needed to have special gears made and then machine a custom insert to hold the intermediate shaft and gear assembly in place.

It is now 7:37 a.m. on July 5th and after a busy day on the 4th it is business as usual. Ha. Ha. I forgot to mention, that I took a much needed vacation and this year it was to Prague, Slovakia, Budapest in the Czech Republic. In my absence everything continued as normal and it was refreshing to come back to a shop that had a lot of finished parts.

If redesigning the starter system did not consume enough of my limited time, I must still continue to machine a lot of parts and all that is required of trying to run a business. Anyway, as you can see the supercharger housings are finished. I still need to machine the end plates, then assemble and test each one.

The backplates for the rear crankshaft seal are also completed.

Pic #1 (New starter motor gear case cover)

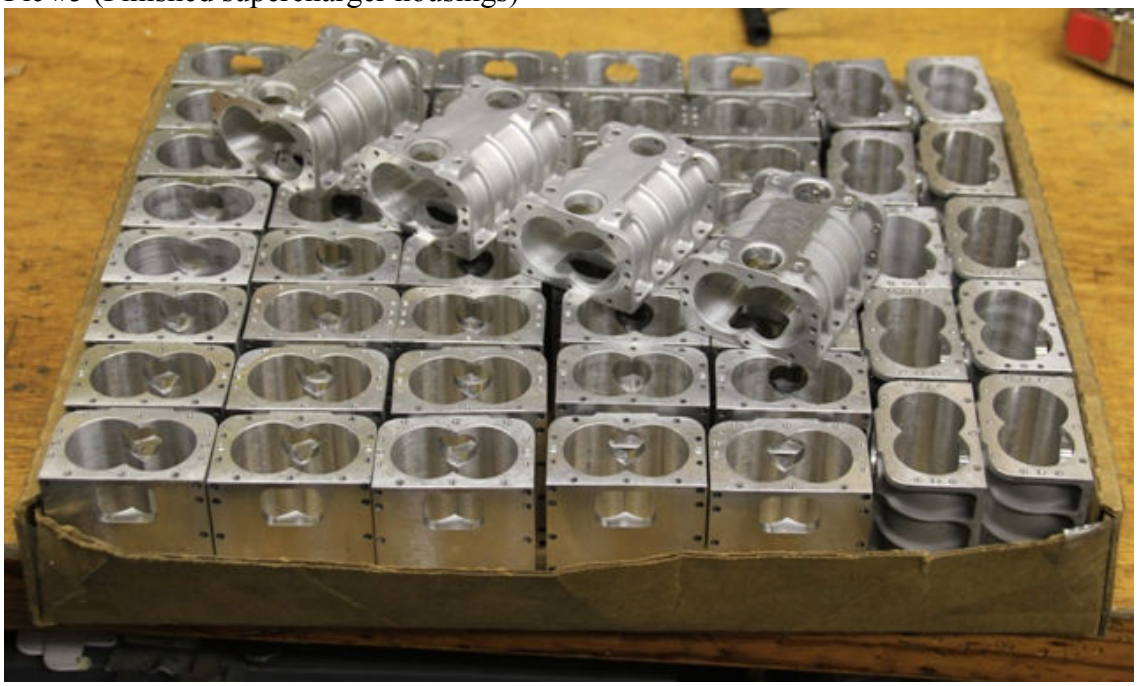


Pic #2 (New starter motor gear case)

Pic #3 (Completed gear case housings)

Pic #4 (Finished assembly)

Pic #5 (Finished supercharger housings)



Pic #6 (Crankshaft rear oil seal plate)