I just want everyone to know that instead of sitting down, relaxing, and watching the Academy Awards, I am in my office doing a "weekly update". The sacrifices that I have to make should not be endured by the average man. Ha-Ha. The past two weeks have been spent making a multiple jig for machining the supercharger end plates and gear housings, working on heads, and as always continuing to make more and more parts. I sometimes wonder if the stacks will every get smaller. In all actuality, the "mountain" of parts that are now needed is more like a "hill". If that were not enough the ongoing task of making new waxes for the next run of blocks and heads, continues. Since the first run has taken so long I thought that it prudent to make a significantly larger second run the second time around. For those of you who have been waiting for such a long time, the end is in sight, but because it has taken so long, the second run of engines is also behind schedule. Although nowhere nearly as demanding, the bright side is that when I am currently making parts, all of the jigs, fixtures, and CNC programs are written and proofed. This may not sound like a lot, but trust me, extensive hours have been spent on making sure everything is as perfect as possible. This has been an exhausting process but will be much easier and faster the second time around – case in point, the multiple jig for the supercharger end plates and gear box too about two days to make, but the program took almost a week to write and proof. This one program took 4353 bytes of information to complete. The next time I need to make these parts, it is only necessary to cut the metal and set each individual tool, then push the button and wait for the machine to do its business. FINALLY!!!!

While the milling machine is making parts, I am also running the CNC lathe. As the pictures show a lot of "round" parts need to be completed. Picture #1 is what I call the "high hat", which is actually the piece which sits over the valve stem and holds the oil seal and keeps the valve spring in alignment. The small collet in picture #2 slides over the end of the valve spring, then an "E" clip is installed. The pressure of the valve spring holds the collet in position, which insures the "E" clip is locked in place and cannot come off.

Although, pictures #3 & #4 make look similar to earlier pictures, I assure you that are totally different. If you remember the update that showed all the parts of the water pump, there was a small spacer that went between the two ball bearings. At first look it may seam relatively simple, but in fact the thickness must be kept extremely close to make sure the water pump shaft and impeller does not move in and out, which could destroy the pump. The alternator has a similar situation in which a special spacer must be machined to go inside each unit. This spacer insures the shaft stays in position, which in turn keeps the serpentine belt tracking in the center of each pulley. See what I mean when I say that things get a little complicated. This may not seam like a big problem, but if the serpentine belt comes off, there is no water pump, or supercharger operation. Not good! Speaking of alternator, pictures #5 & #6 shows the finished halves ready for bearing installation and spacer. Remember when I spoke about the difficulty of holding rough castings, this is a good example. For those of you who have contemplated building model engines for a living, you may want to rethink that decision!

And finally picture #7 is a sneak peak of the new supercharger front cover. The next update will show the additional supercharger parts.

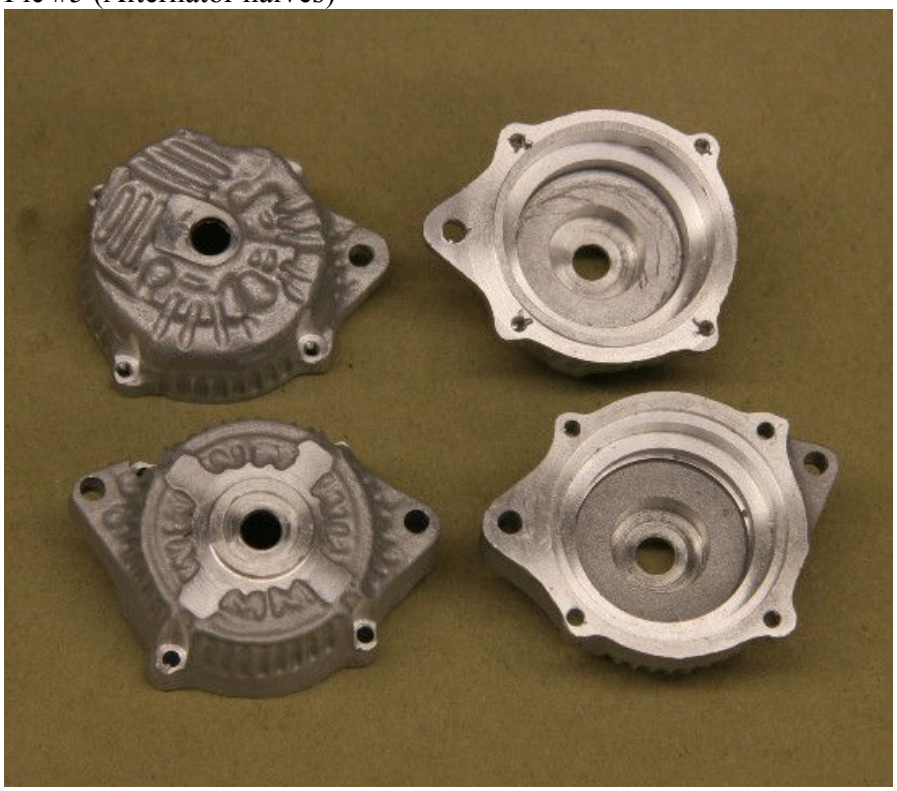
Pic #1 (Valve stem High Hat)

Pic #2 (Valve collet)

Pic #3 (Water pump spacer)

Pic #4

Pic #5 (Alternator halves)



Pic #6

Pic #7 (New supercharger front cover)