

It is always hard to find enough time for the “Weekly update” section. I totally understand the importance to all my current customers, potential customers, and everyone who has sent me some very positive emails. That being said, lets get started.

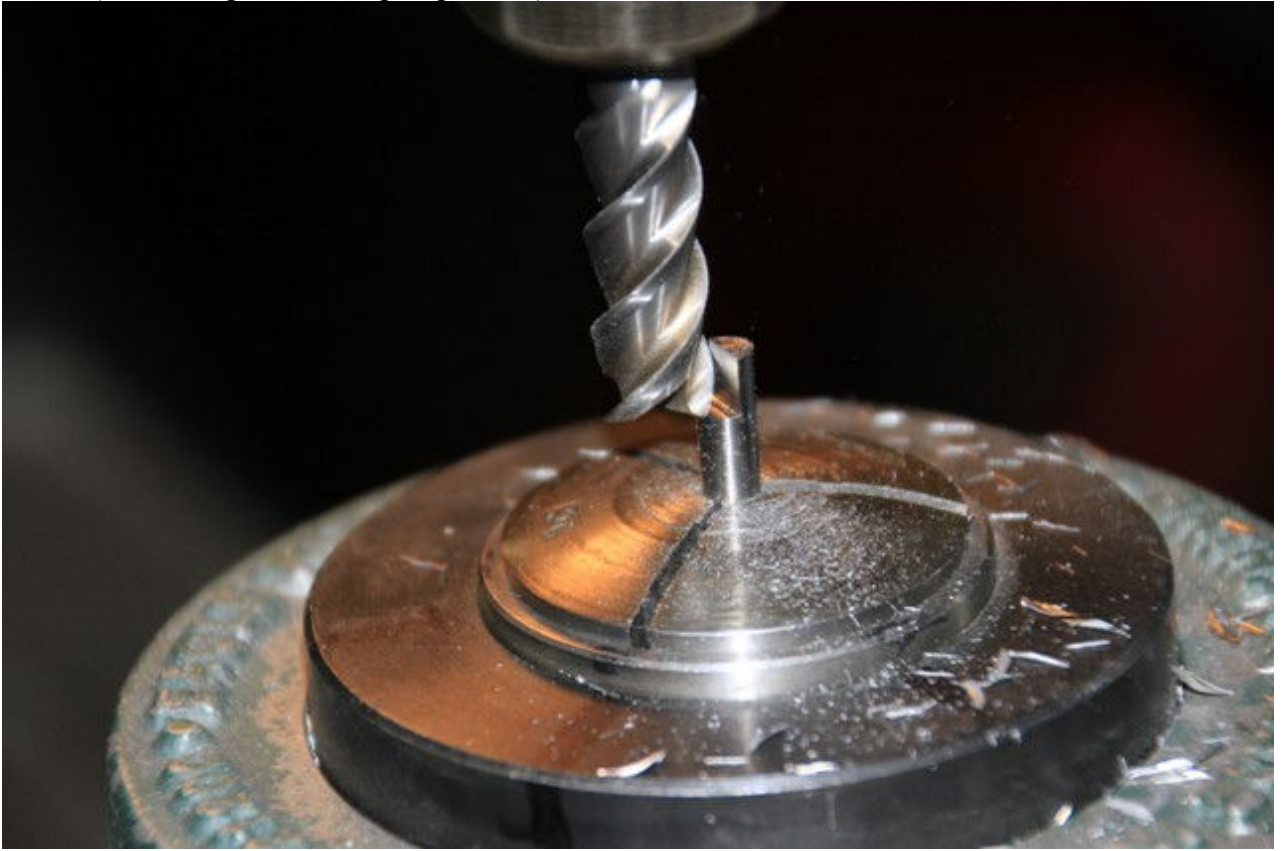
Once the shafts for the oil pump, water pump, distributor, and supercharger impellers have been cut to the exact length, they must then have a variety of different flats and areas machined. Keep in mind, in each oil pump there are three separate shafts, each with a different configuration. When you multiply this by 80 oil pumps, it is easy to understand just how demanding some of these parts and components are! Add to this equation, 5 ball bearings, two seals, 8 bolts, 6 gears (3 of which must be soldered to the machined shafts) one center section with check valve, and one toothed pulley. I am tired just thinking about it. Ha. Ha. Each pump must be carefully assembled which nothing left to chance!!! Picture #8 shows a partially run of completed oil pumps .After assembly, each pump will be thoroughly tested for pressure and flow.

The initial machining operations have been started on the supercharger impellers. What you are seeing in the next to the last picture is the tapered reaming operation. When finished a tapered pin is hammered into place, using a flat end punch. The excess pin material is removed and then each side is spot faced. Just think about this, there are two impellers per supercharger, four holes which must be drilled – four holes to ream – four tapered pins installed – excess material removed from each tapered pin – 8 spot faced surfaces. I have not even started to describe what must be done to the housing and end plates. More about this on a later update! The last picture shows ten sets of matched impellers. The gears must be matched perfectly and these two impellers must always remain together. There is no chance for error. If I am only off by 1 degree, then the impellers could touch and because of the high rpm of the engine, any abnormality would be noticed instantly. I actually had one customer who ran his engine without the air cleaner and someway a piece of paper was ingested into one of the carburetors and totally destroyed the supercharger. Luckily none of the internal engine components were damaged. It did, however cost him over \$1,800.00 for me to fix the engine. Just something to think about!

While the pumps are being assembled, a lot of other things are happening at the same time. The keyway slot for the lower timing gear is machined into crankshaft. Like most items on this engine, this is an important operation which is very evident when I set the camshaft timing.

Once again, if anyone out there is thinking of going into the multi-cylinder model engine business, as a career, you might want to reconsider!! It is not about 9:30 p.m. and my day started at 5:30 a.m. During this time, parts need to be ordered, machines programmed, jigs set up for employees, inventory checked, engines tested, delivery of ordered parts must be checked, quality control is never ending, pay bills, never ending cash flow, etc. etc. etc. I am not complaining but merely trying to explain some of the demands on a daily basis. This is absolutely not for the squeamish. It is difficult for some individuals to understand, just why it takes so long. In all honesty, there just isn't enough time to try and explain. I am tired and finally going to bed. Tomorrow dance lessons at 6:30a.m., start out my day. This is the only break that I get from my daily work schedule.

Pic #1 (Machining flat on oil pump shafts)



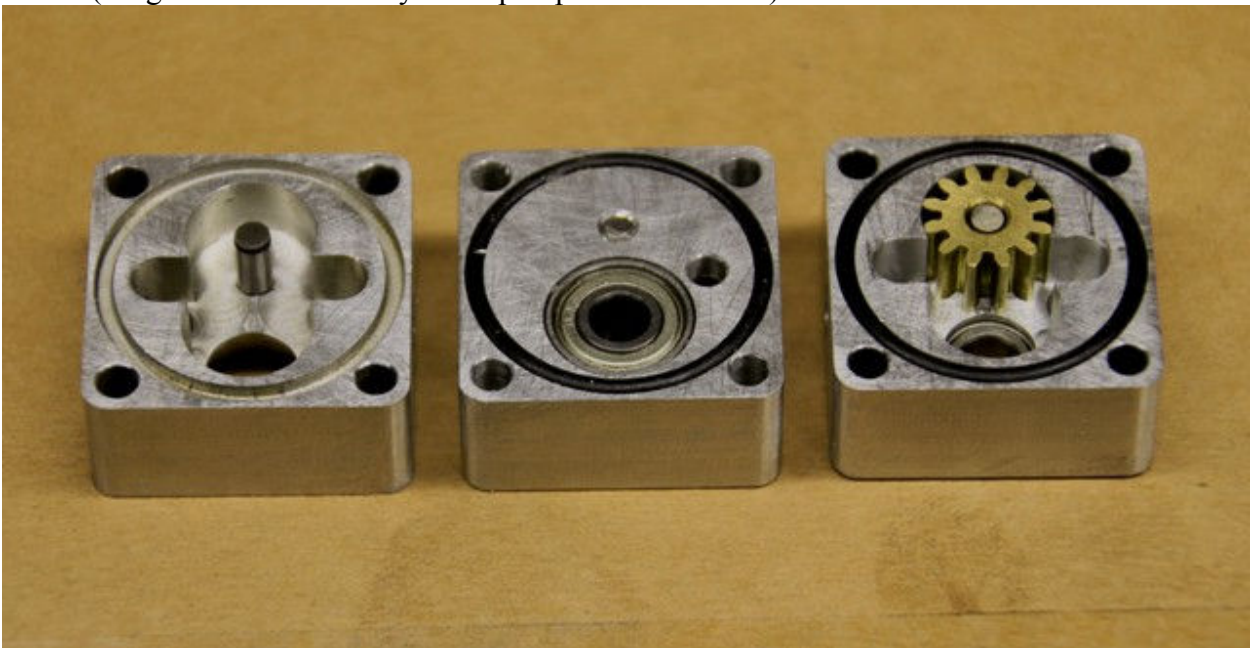
Pic #2 (Completed partial shafts for oil pump)



Pic #3 (Machined sections for oil pump – 3 required for each pump)



Pic #4 (Progression of assembly of oil pump center sections)



Pic #5 (Lot of front, center gear sections, and thrust plates ready to start the assembly process)



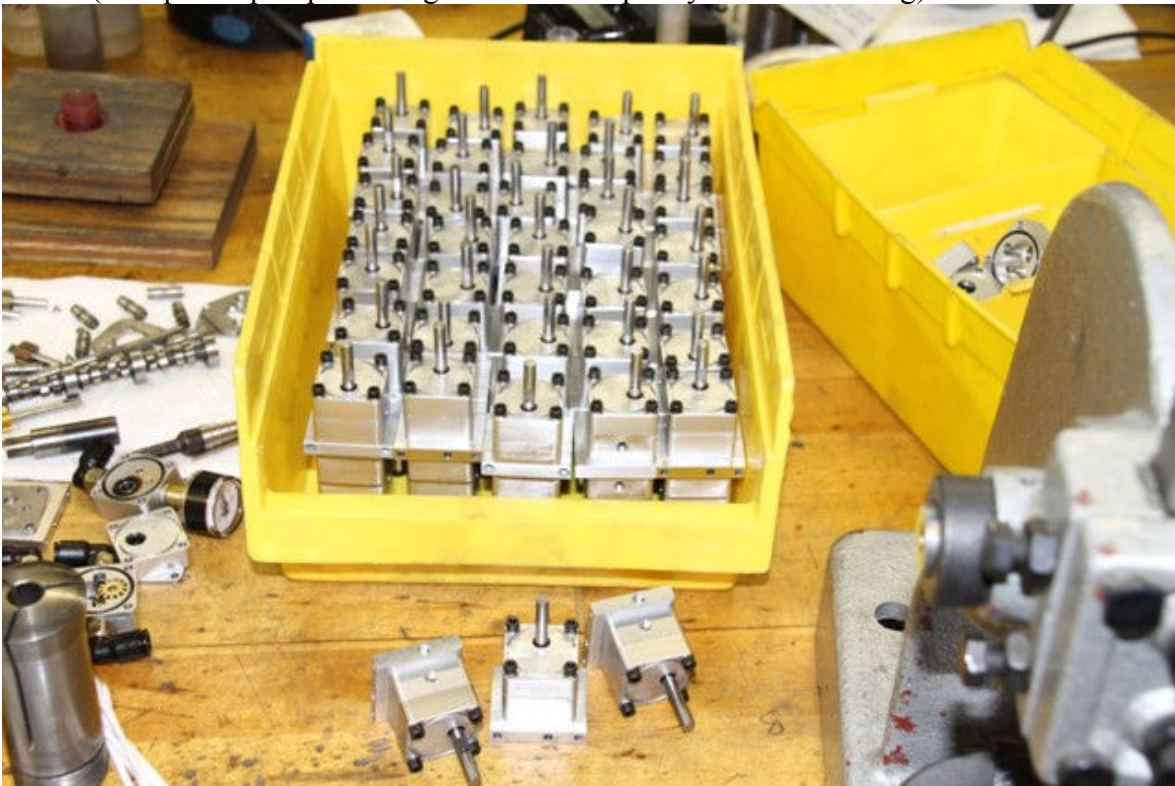
Pic #6 (Completed gear sections ready for assembly)



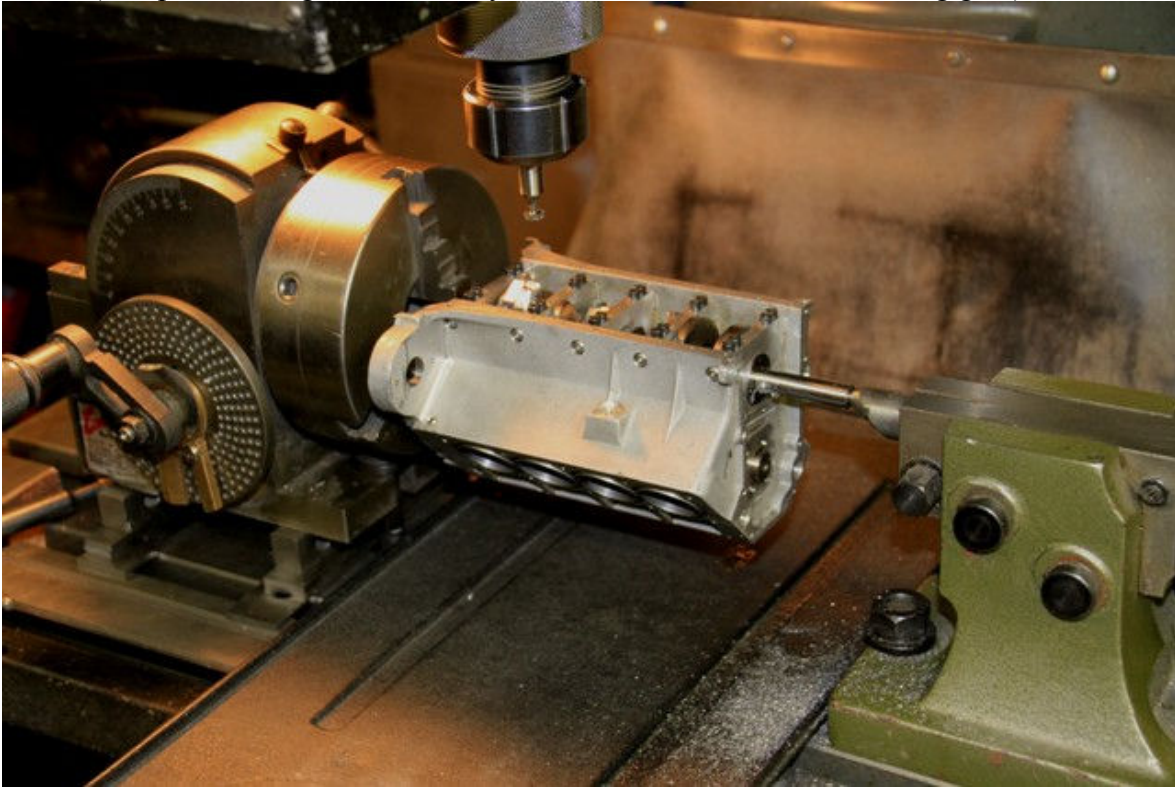
Pic #7 (Assembly area for oil pumps)



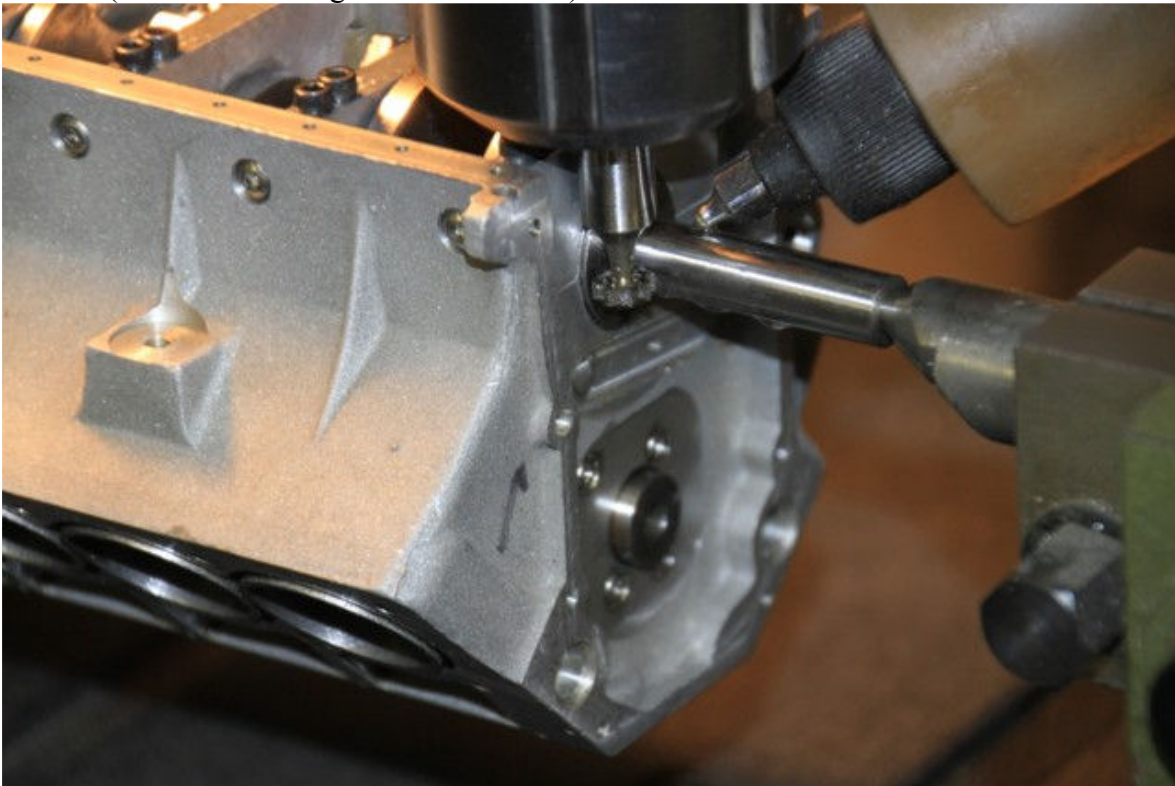
Pic #8 (Completed pumps waiting for tooth belt pulley and final testing)



Pic #9 (Setup for cutting Woodruff key slot in crankshaft for lower timing gear)



Pic #10 (Actual machining of Woodruff slot)



Pic #11 (Reaming tapered hole for supercharger impellers)



Pic #12 (10 sets of matched supercharger impellers ready for initial assembly)

