

I have had a couple of phone calls saying “they truly look forward to my updates and that they check everyday, but wish I could do them more often”. Honestly, I would love to, but once again, the time issue is always against me – especially now that I am getting closer to delivery. No matter how much planning can be done or how accurate the prints are, just about the time that I am ready to assemble a component I discover that a screw hole was not deep enough, or a part has to be de-burred a little more, or a machined “flat” on a shaft for a set screw to tighten against was not done, or as in the case with the oil pumps, the gears were .002 to thick, etc. I will tell everyone who is waiting for their engine that all the components are going together just great.

As you can see from picture #1 all of the camshafts are finished and ready for installation. If you remember for a previous update, all the camshafts had the lobes ground, but now the bearing surface is finish ground. This is a relatively simple operation but each bearing surface had to be checked during the grinding operation so that there was less than .0005 difference from end to end. Since the camshaft runs directly in the honed aluminum block, you can readily see how important this operation is. Not only were the bearing surfaces ground but one end must be ground to receive the timing gear.

For those of you who are going with a stock exhaust, the optional polished “Zoomie” style headers are finished. Pretty neat, Huh. Notice the spreader and machined exhaust flange.

Picture #4 & #5 shows the finished distributor shafts. In a previous update, I showed you a basic distributor shaft, but now the rotor end is finished and the grooves which hold the shaft in position are also finished. It is critical that the shaft not move up or down so the exact spacing between the rotor and distributor cap will be maintained. Imagine how much damage would happen if the rotor came in contact with the cap. Not a pleasant thought.

When I was getting ready to duplicate the “T” bracket which supports the 3 stage oil pump, it became obvious that a faster way be devised to install the pump. In the past the “T” bracket was made in one piece and then installed on the timing cover – then each section of the pump was put in place with four continuous rods and small hex nuts held everything together. Although this worked, it was very time consuming to install or remove, if necessary. Picture #5 show the new valve block on the left side along with the new mounting block. Initially this took a little longer to produce, the end result is the pump can be totally assembled on the work bench and then installed on the engine. Not only with this be faster but easier to service if needed. Another key issue is that if the engine is going to be installed in an R/C car there is a high probability the remote oil tank would be higher than the engine. If this happened and no precautions were taken, all of the oil would drain into the pan. When you consider the pan only holds about 6 ounces and the remote oil tank holds at least 16 ounces, the oil must go somewhere. You guessed it, all over everything. This would not be good, especially when you tried to start the engine, so installed a check valve which would stop the oil from siphoning. Once again, this takes a little more time that originally planned.

Remember when I said that parts needed to be de-burred, such is the case with all the oil pump components. Each item has to be individual check and cleaned as necessary. During the final assembly of the oil pump, each item will be check again and then rechecked. Each pump with then be thoroughly tested for flow and pressure before installation.

Pic #1 (Finished and ready to install Camshafts)



Pic #2 (Finished Camshaft)



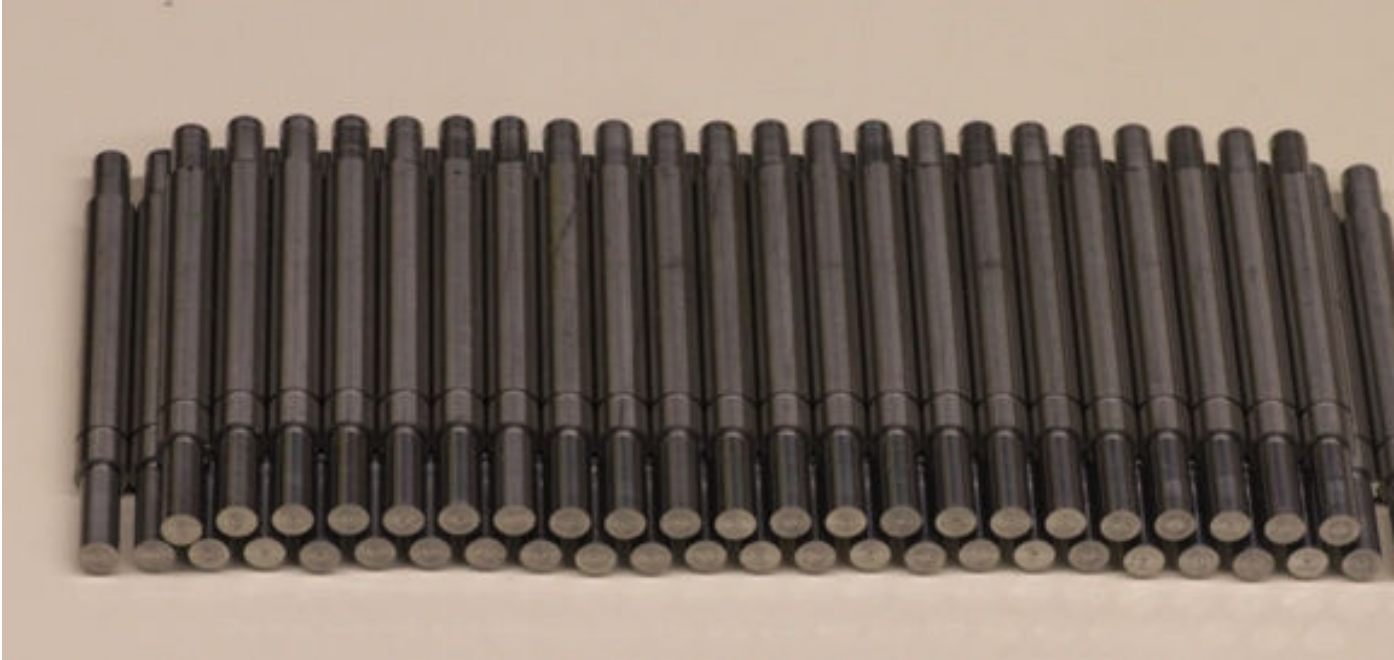
Pic #3 (Polished "Zoomie" headers)



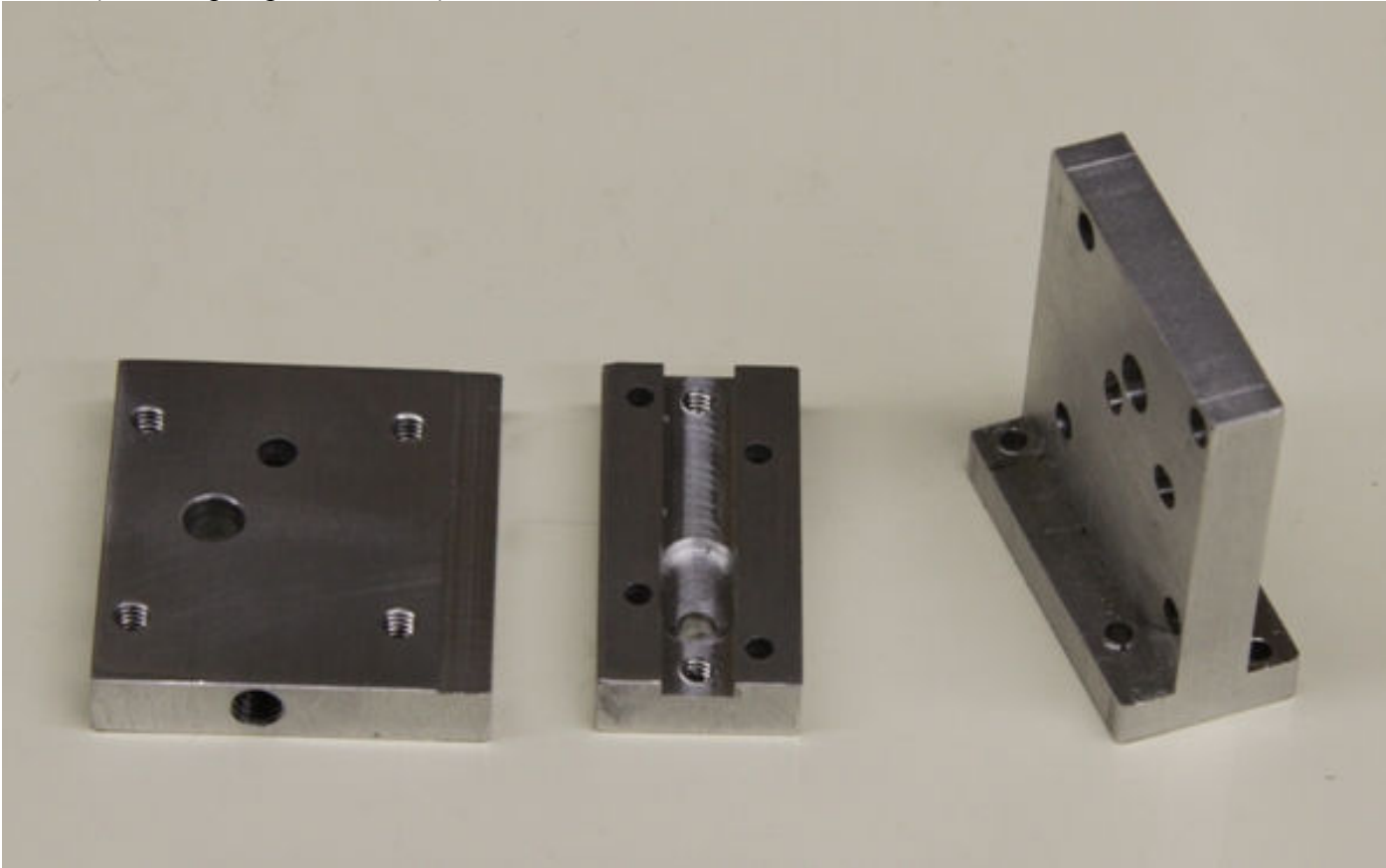
Pic #4 (Before and after distributor shafts)



Pic #5 (Finished distributor shafts)



Pic #6 (New oil pump valve block)



Pic #7



Pic #8 (De-burring oil pump housing)

