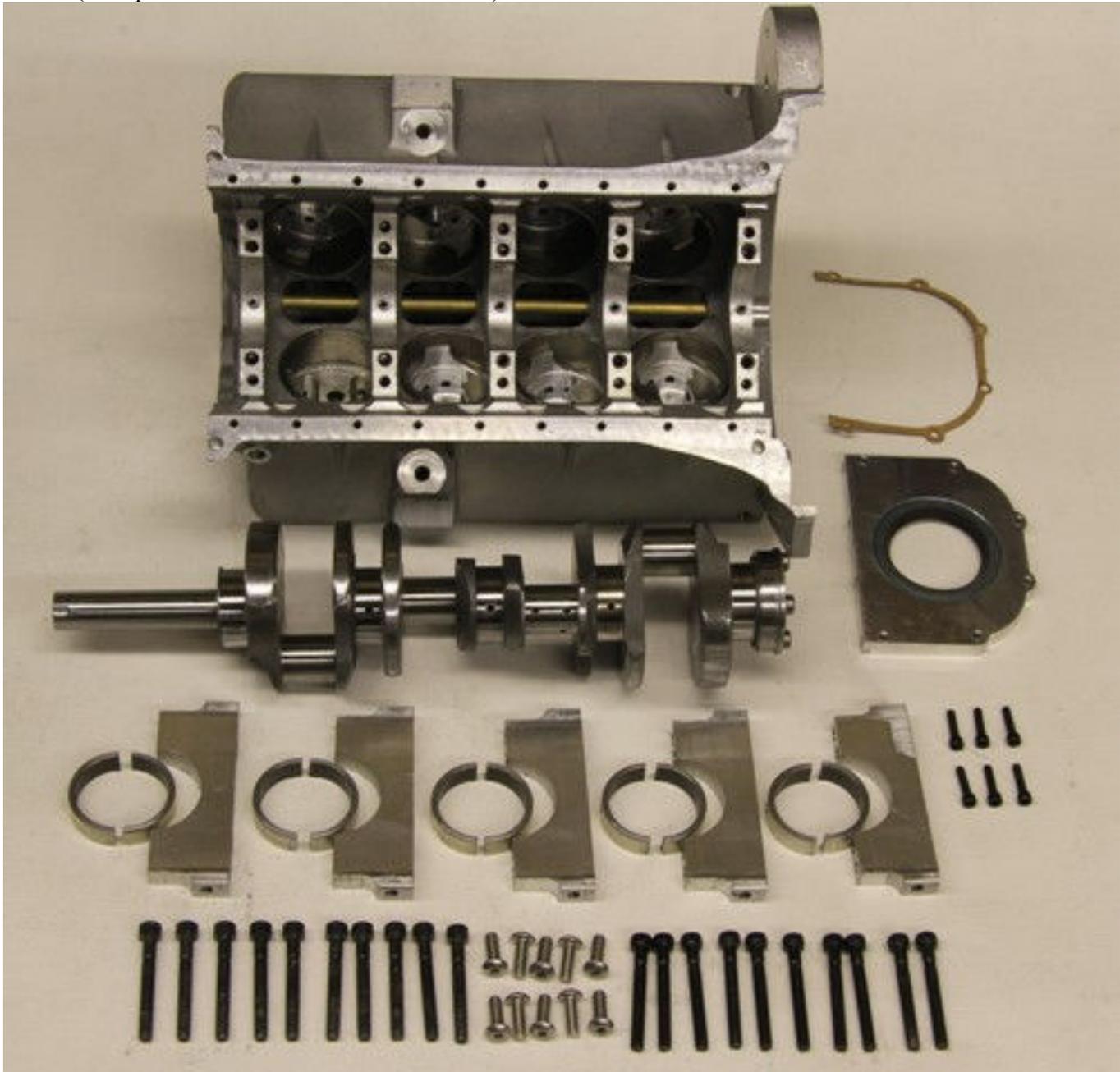


It has been about 2 weeks since my last update and once again, how has the time managed to slip by so fast? Before I get started, on several occasions' customers and interested individuals have asked, "Do you have any idea of how many pieces are in each engine"? The thought of knowing was a little unsettling. Anyway, last weekend I made a somewhat thorough count – and although I probably have missed a couple, the total so far, is 1,036. If you multiply this by 40 engines, it is easy to see the monumental task of building model engines on a production basis. Keep in mind a lot of the individual pieces were not just for the first run of engines but increased for additional engines. Anytime you have 50,000+ parts - that is a lot of inventory and money sitting on a shelf. I hope this little amount of trivia, if only in a small way, helps to explain why this engine has taken so long to finish.

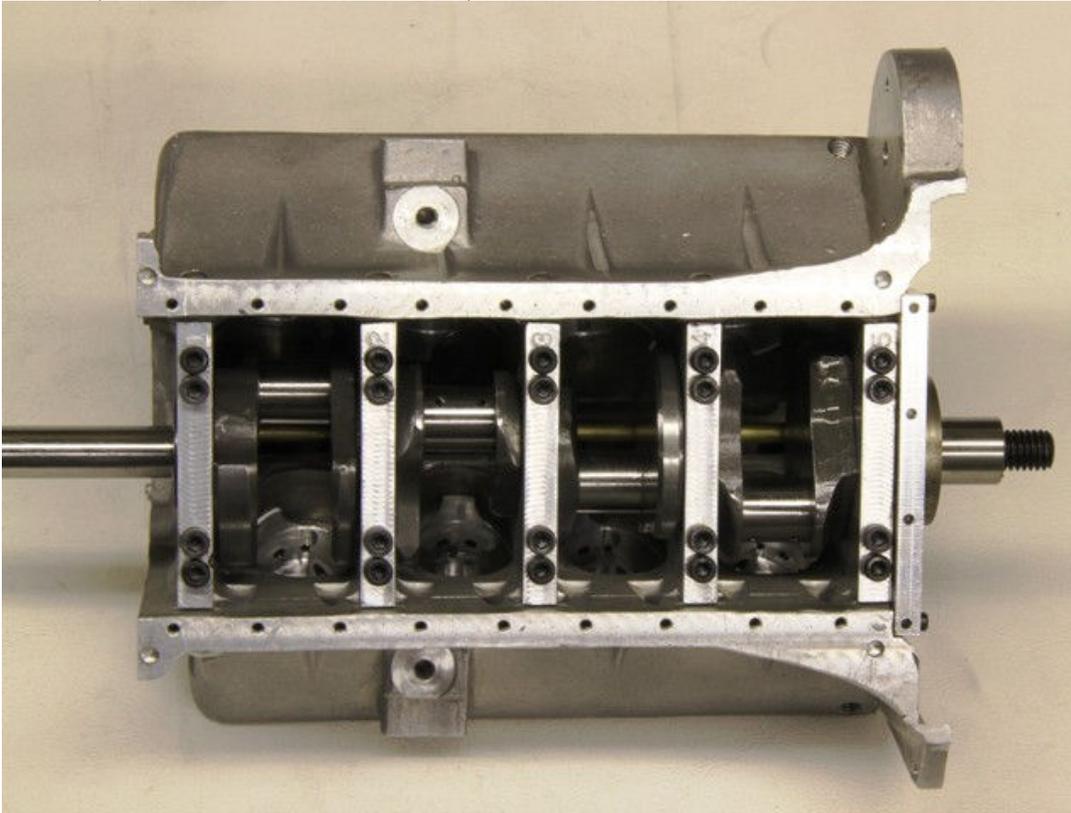
I started to do the basic installation of the crankshaft in the block and discovered the tolerance between the main bearing surface and the bearing caps was too tight. This was discovered with I tightened down all of the screws that hold the main caps in place. When I took the initial measurements and calculated the tolerance which was required, it was done with only two main cap screws holding the cap and bearing inserts in place. I assumed this to be tight enough and we all know what happens when you assume! To make a long story short, I had to go back and regrind the outside diameter on all the crankshafts main bearings. Although this was relatively a simple procedure, it nevertheless was a mental challenge. The crankshaft had been ground to .7485 and should have been .747. Removal on only .0015 is about half the thickness of a human hair. This means .00075 must be removed from both sides. When I say, it had to be "dusted" I mean exactly that! After several very nervous days, I was truly glad when that job was finished. The crankshaft dropped into place as it was intended to do. Before I continued to install all the crankshafts, I thought it would be a good idea to install the connecting rods and pistons to make sure everything was going as planned. Once again, a problem arose which was impossible to check for during the design process. As the piston goes down and nears bottom dead center, the counterbalance on the front and rear of the crankshaft comes very close to the bottom of the piston. As I rotated the engine by hand the counterbalance actually made contact with the bottom of the piston. Although this was not a major problem to fix it did necessitate placing each crankshaft between centers on the lathe and removing .012 from the diameter. This is only .006 from each side. Once again, everyone, this is about the thickness to two hairs. Once installed, everything is now fitting as planned. Anytime a component has to be modified or altered it takes time and in most cases there is no way to plan for these minor setbacks. This engine has had some major learning curves whereas; the next run of engine will go together a lot smoother.

Anyway the assembly of the "short blocks" is proceeding as planned. The pictures should be self-explanatory. In the upcoming days and weeks, the engines will be undergoing major transformations – from bare blocks to finished products. In picture #6 the trays on the left are of blocks waiting for crankshafts to be installed. The center tray are blocks waiting for connecting rods to be installed whereas the tray on the right are completed "short blocks" waiting for heads, timing covers, oil pumps, intakes, etc. etc. to be installed.

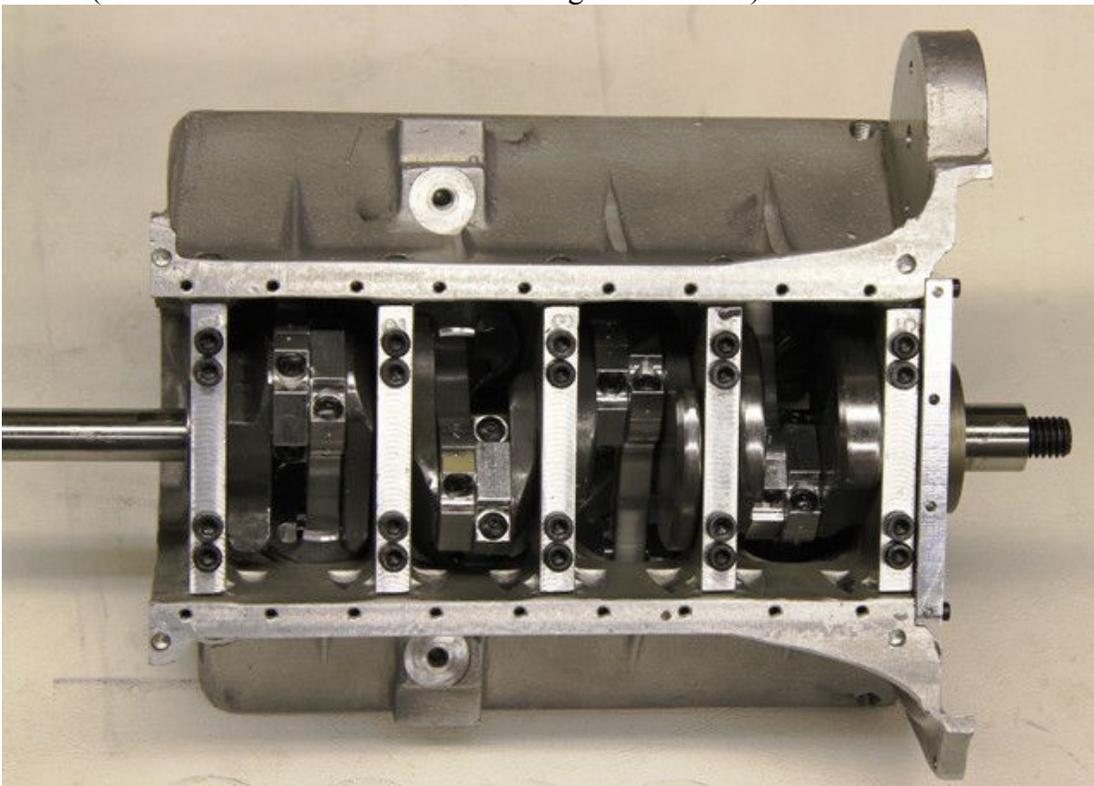
Pic #1 (Components for crankshaft installation)



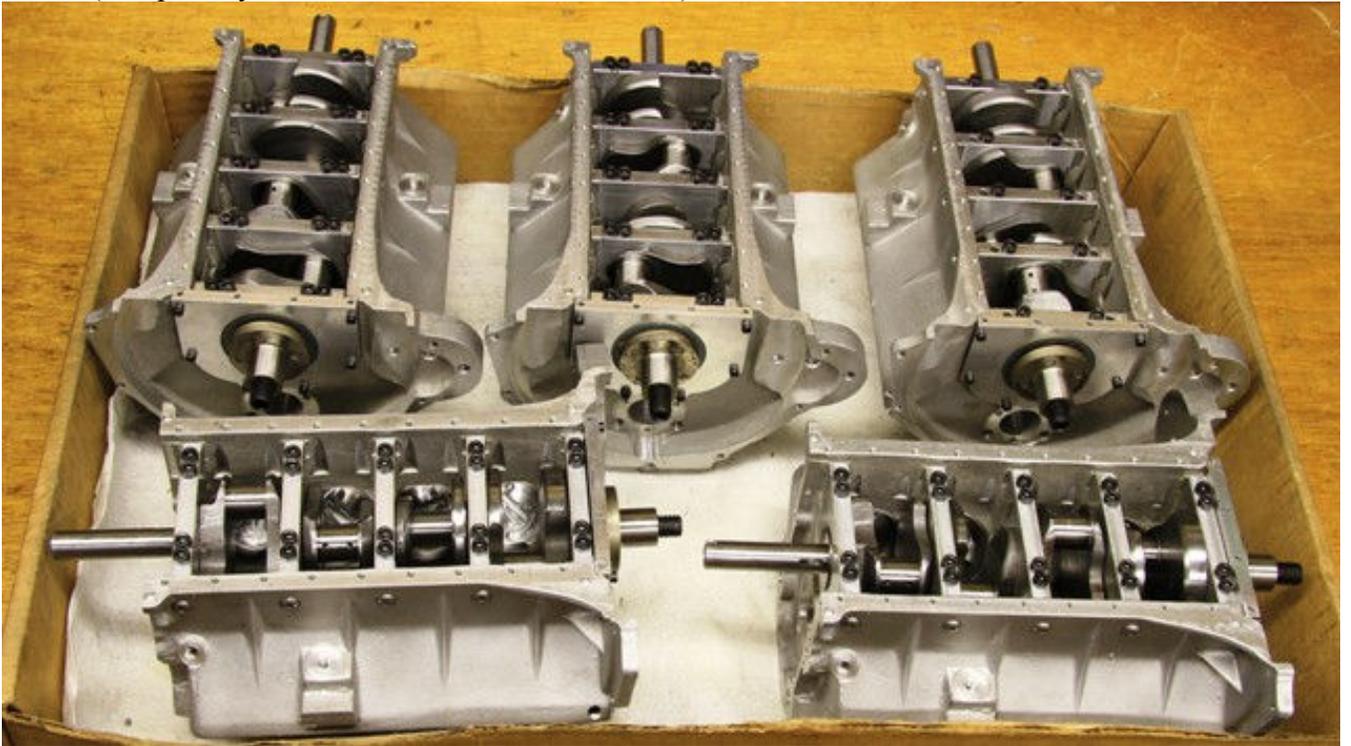
Pic #2 (Crankshaft installed in block)



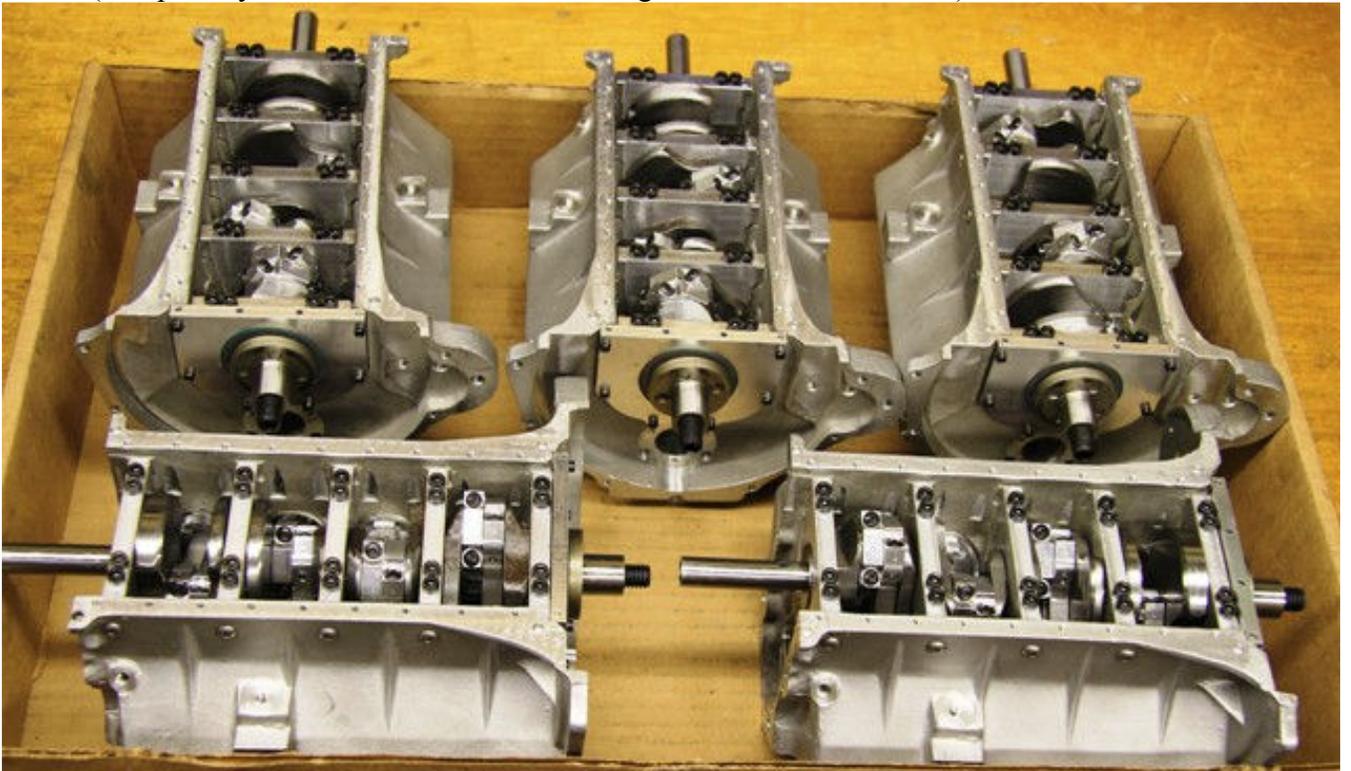
Pic #3 (Block with crankshaft and connecting rod installed)



Pic #4 (Sample tray of crankshafts installed in blocks)



Pic #5 (Sample tray of crankshafts with connecting rods installed in blocks)



Pic #6 (Trays of blocks in various stages of completion)

