

The work continues on all aspects of the engine. This is the time to be extremely careful to make sure every component is clean and free of any burrs or chips. It would be very upsetting to assemble an engine and then find out that there was a major problem because of a small chip that was overlooked. Not only is there a visual check for any imperfections, but also a tolerance check on each individual component.

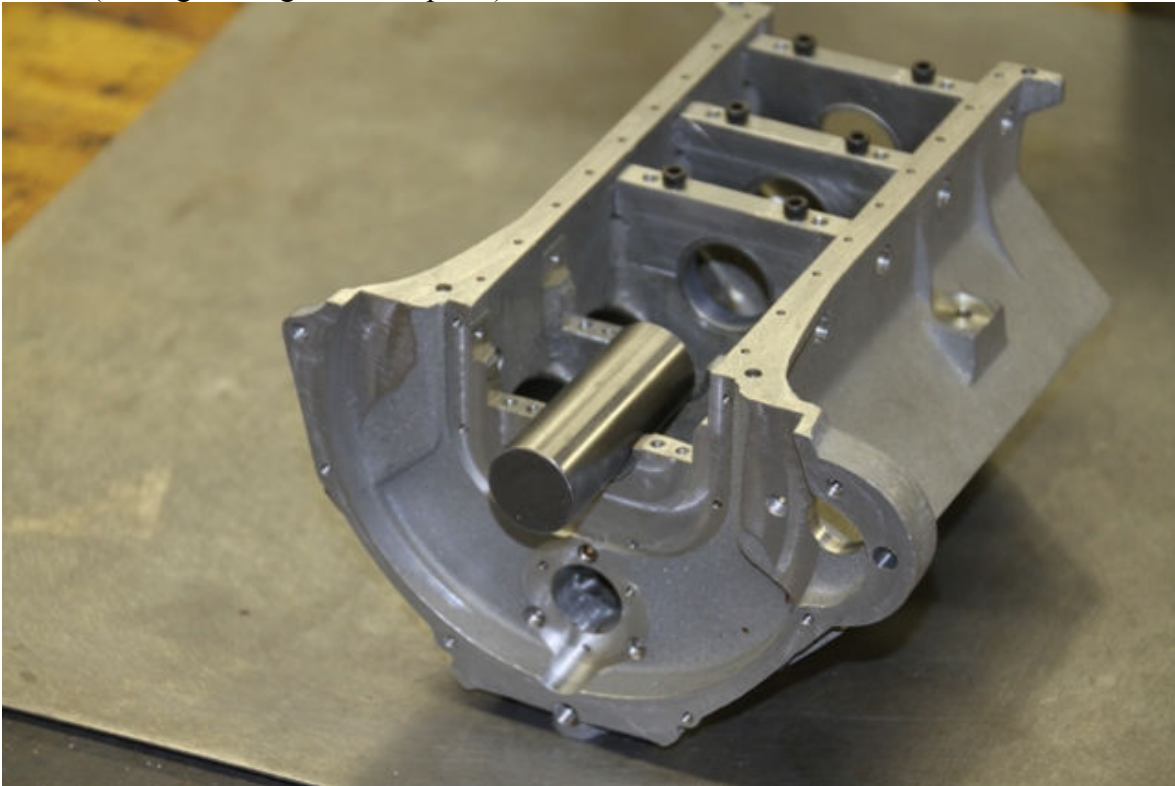
There are a lot of processes and procedures to assembling the block. We first install and triple check each bearing half for proper clearance. When I am satisfied all is correct, the crankshaft is carefully installed, lubricated, and then the main caps are installed. Keep in mind, each main bearing cap has 6 screws to hold everything in place. The cross bolts on the side of the block add extra rigidity and insure the engine is as stable as possible. To this date, I have not had one crankshaft or bearing failure.

Each connecting rod must have the bearing inserts installed and checked for proper clearance. We then make a trial fit before installing the pistons. At this time I should explain that each block has already had the piston ring end gap preset to each cylinder and the rings installed on the piston. If everything is going as planned, the wrist pin and piston is installed on the connecting rod and the entire assembly is placed into the block. This process continues until all 8 piston and rod assemblies have been installed and lubricated.

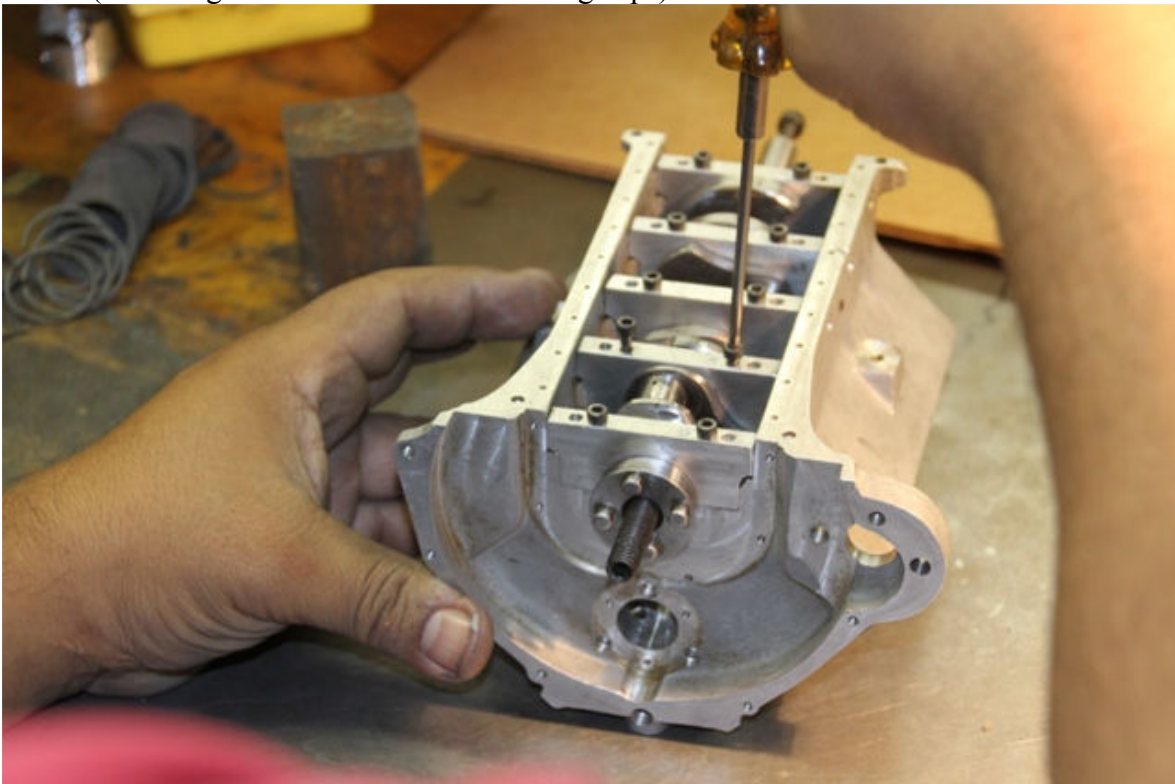
The next step is to install the camshaft, lifters, heads, pushrods, etc. I will show some extensive pictures as this unfolds. Stay tuned!

While all this is going on I have started to machine the alternator halves. What might seem quite simple is actually quite involved. Remember, these are castings with no straight sides or places to hold while machining. We first must place a hole exactly in the center of each half. This is done using a 3 jaw chuck and grabbing each piece from the inside. After the hole has been drilled the part is then turned around and the interior and mating surfaces are then machined. When completed, both halves must have all the holes drilled and tapped. Next the bearing surface is machined after which, the two halves are screwed together, the exact profile is machined on the outside. As you can easily see, it takes a lot of time, for just one component.

Pic #1 (Setting bearing halves in place)



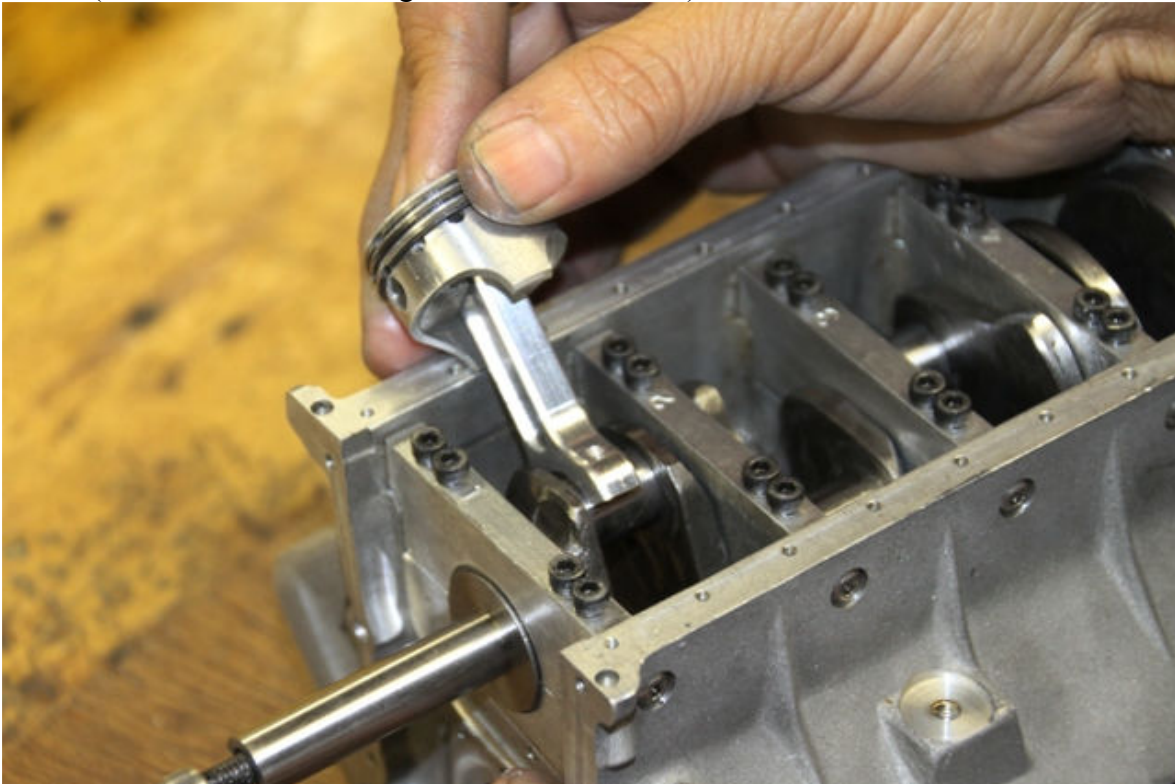
Pic #2 (Installing crankshaft and main bearing caps)



Pic #3 (Connecting rods with bearing installed on right parts tray)

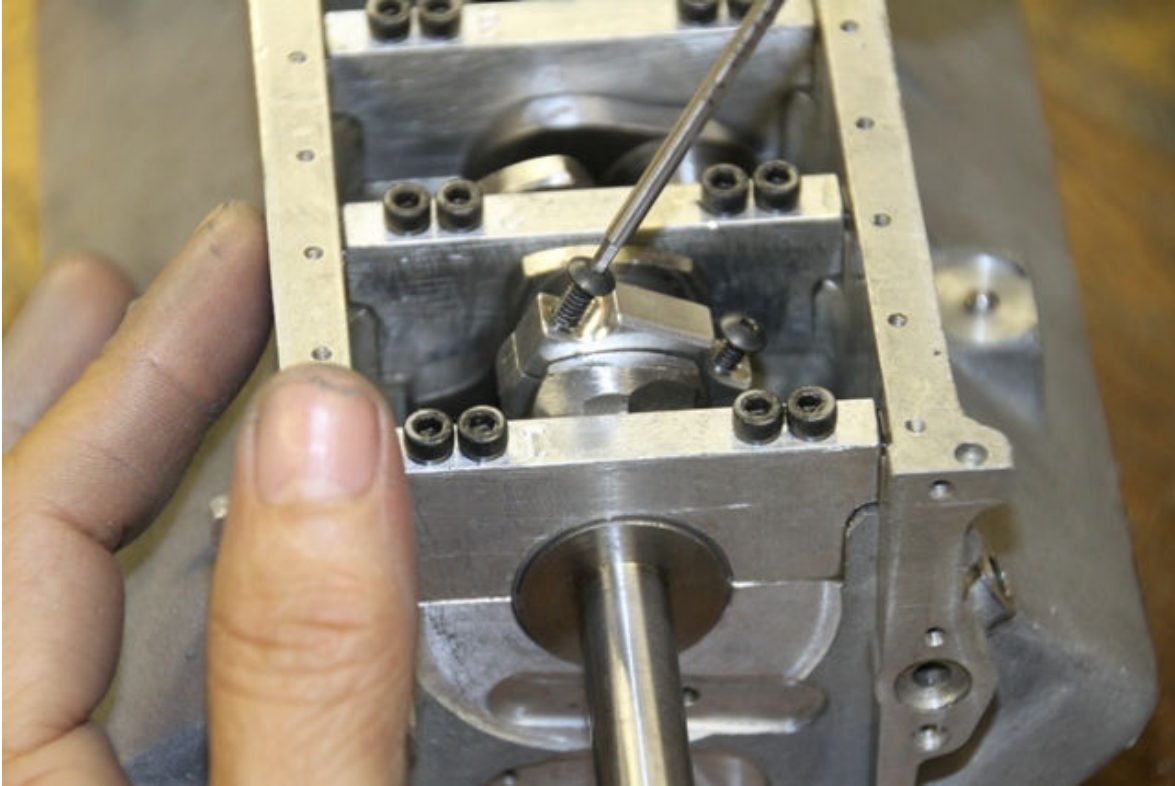


Pic #4 (Trial fit each connecting rod to the crankshaft)





Pic #5 (Installing connecting rod and piston assembly onto crankshaft)



Pic #6 (Holding alternator half in 3 jaw chuck)



Pic #7 (Drilling first hole in alternator half)

