

## Semi-Scale Merlin Motor

### Tools needed

Sandpaper, Xacto knife, drill bits, CA Gap filling glue, Spackling compound, paint

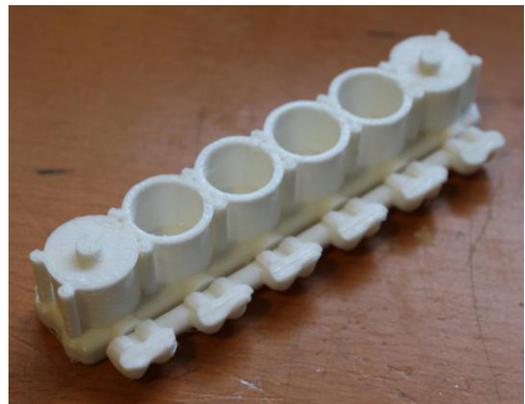
1) Check all of the part for burrs and seams from the 3d printing process. They can be cleaned up with the Xacto blade and/or sanding. Rough areas can be filled a bit with spackling compound and sanded. This is really important on the head covers which you want to make as smooth as possible.

2) At this point it is probably a good idea to paint the various parts. The pictures to the right provide one concept for a color scheme. I used Perfect Match paints from the auto supply on the prototypes.

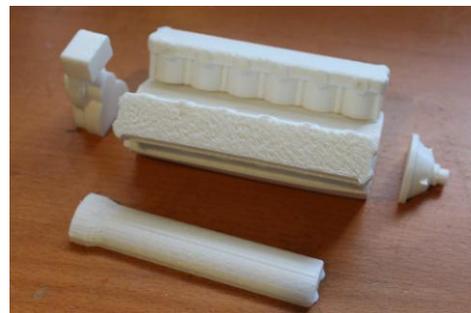


3) Assembly the cylinder heads and the main block. There are holes in the cylinder heads for the intake header which fits like the picture to the right. You may have to drill them out slightly to fit. Note that the header points down.

I would put the intake header into the cylinder heads as the last step. Eventually the long tube will connect the headers to the intake stack, and you may need to wiggle things around a bit to get a nice fit.



4) Note in the assembly of the block and cylinder heads that the mounting holes for the intake are on the inside, and the slot for the exhaust header is on the outside of the motor. The fat end of the head covers is in the direction of the "supercharger", somewhat like the image to the right. The "drive shaft" end cap for the block is on the opposite side from the fat end of the head covers.



5) There are a couple pieces for the supercharger, as shown in the image to the right. The intake stack up to the has a inset which fits with the boss on the outside of the supercharger. Once the supercharger and intake stack are assembled, along with the intake headers, you can slide in the tube that connects the headers to the supercharger.

