

Everything is going great for this next run of engines. Finally! As always, I need more time but because of the CNC programs, jigs and fixtures from the previous run, things are doing much better. There is always the small “tweak” of a programs or slight modification of the holding fixtures, but this is to be expected, as I try to get all the pieces finished for sub-assemblies.

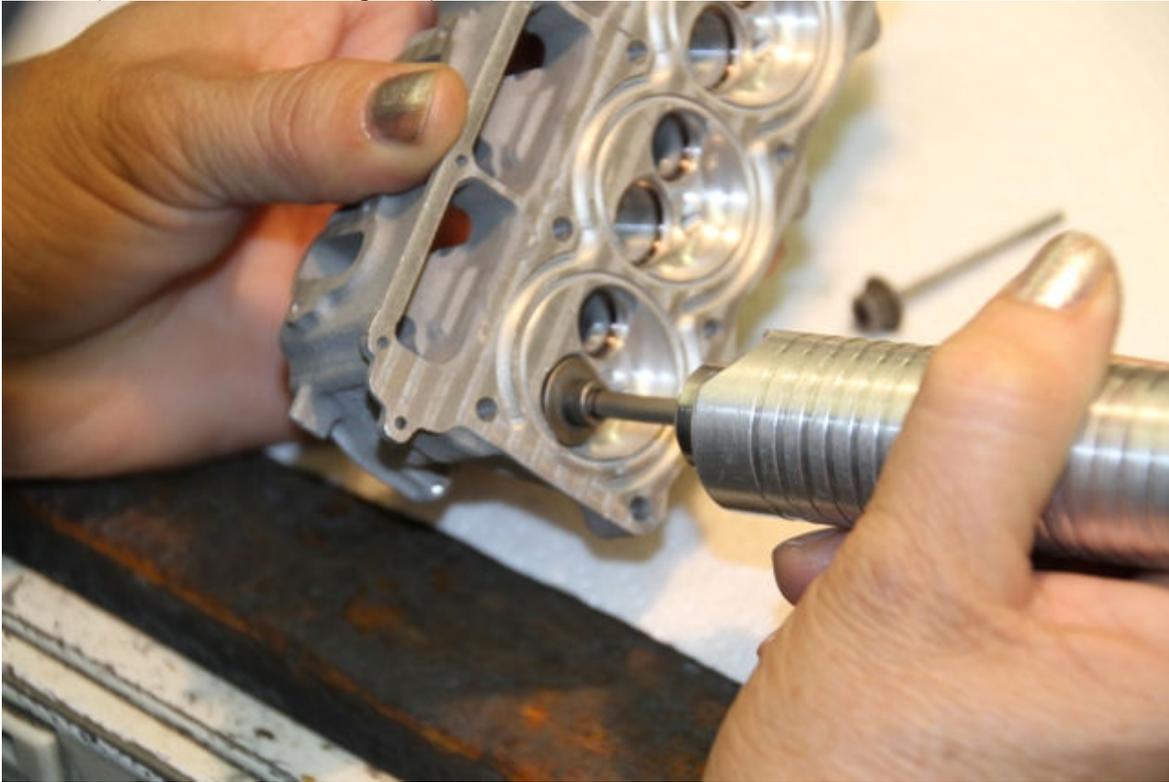
On my last update I explained, the valve seats had been installed – and all went as planned. The valve guides have been pressed into place and then a special tool is used to cut the seat, so that it is perfectly concentric with the valve guide. This is an absolutely critical step, which cannot be rushed. I then use a valve which has been coated in diamond to slightly grind the already tapered valve seat. Once I am confident the taper on the seats is correct, and then comes the laborious task of lapping each valve. This takes a considerable amount of time, because if there are any leaks, then compression is compromised, which results is less power from the engine. Only, one head at a time is lapped. Each valve is place in a numbered holder, then the head is thoroughly cleaned and each valve seat is rechecked. After the head and valves are perfect, then each valve stem is oiled and placed in its respective location, after which, the “high hat” which holds the “O” ring seal, is installed. Next comes the valve spring, followed by the new valve spring retainer and finally the “split keepers” are installed. Keep in mind there are over 160 head and each has 8 valves, which must be perfect! Once again, it is easy to see why it takes so long to do a production run of engines.

While all this is going on, the initial machining operations have started on the timing cover. When I say “initial” this simply means there are 8 other operations to follow. I will keep you updated as to the progress.

Pic #1 (Cutting valve seat with diamond coated tool)



Pic #2 (Diamond tool cutting seat)



Pic #3 (Finished "High hats" which hold "O" ring for sealing valve stem)



Pic #4 (Second machining operation for timing cover)



Pic #4 (First operation finished for timing covers)



