

30 November 2008

Where has the time gone? It seems as though I just did an update, yesterday. The old adage is true, "time flies with you are having fun"! I should have the new pans and camshafts back from the foundry, shortly.

Since my last update, I have been extremely busy and concentrating all my time and efforts on machining just the blocks. Picture #1 shows the before (left) and after (right) shots at the rear of the engine, whereas, Picture #3 shows the front of the engine. Keep in mind what may look very simple at first glance, in actuality is quite complicated and takes a long time to setup. Since the block is about 6" long, it is absolutely critical, when mounted in the jig, it must be perfectly straight and vertical. The three oil passages, which are .156" in diameter and located around the camshaft hole, run the entire length of the block and would be impossible to drill from one end. The machining process drills all the oil passages about 3.5" deep from both ends. If you have ever tried to drill a deep hole then you can understand the difficulty.

The camshaft hole is even more critical. A special ground, long reach, end mill is used to make the sure the hole remains very close to center, then a special boring bar is used to clean up the hole and bring it closer to size. Remember, I am doing this from both ends and the connecting point, in the center of the block, must be extremely close. If the block was only off by .005, which is about the thickness of two human hairs, it would mean that the holes could be misaligned by as much as .010 or more. This is not acceptable. After the blocks are completely machined then the main bearing caps will be installed and both the camshaft hole and main bearings will be "line honed" to the exact diameter.

Pictures #2 and #4 shows all the block lined up after the machine process on each end. It is now Sunday morning and I am doing the final CNC programming for the cylinder bores and deck preparation. If you think that oil passages and camshaft hole were critical, just wait until I explain what steps must be taken to insure the machining process is taken to an even higher level. Stay tuned.

For all of my customers in the United States, I hope that you had a great Thanksgiving holiday and for my customers all over the world, I wish you a wonderful holiday season and a happy New Year.

Pic. #1



Pic. #2



Pic. #3



Pic. #4

