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As you can from the top two photos, the castings for valve covers and exhaust manifolds are in stock. There are several trays of the same parts. Once all of the casting have arrived, they will be sent out to be heat treated. The molds for the exhaust manifolds were very difficult to make because of the parting line that is needed. For those of you who are not familiar with a "parting line", it is a line around each part which allows the wax pattern to be able to be removed without breaking. The exhaust manifold is a complicated part, with no straight lines. The core has the same problems. Oh, one more thing, wax and metal shrink and different rates and the size each master parts must be made to allow for this shrinkage. If everything is not calculated correctly, then parts do not align. So much for the castings, the third picture from the top shows the new oil pump bracket. The one on the left is the prototype, the one on the right, being the finished item. What looks like a simple item, is in fact, quite complicated. The valve body (far right), not only allows oil into the filter, but includes an adjustable pressure relief. This

is extremely important, because of the high pressure the new pump is capable of producing. The fourth picture is the finished shows a close-up of the entire unit. Once again, many hours when into the development and testing. Because of the accuracies that are needed for this part, the CNC programs had to be triple checked. The bottom two pictures show the new oil filter bracket installed on the engine. You will also notice a "new look" for the front of the engine. At first glance you may not see the difference, but if you look at my home page, you will see the changes. The modifications were made after several of my customers had made a comment about the aluminum piece that supported the lower idler, looked out of place. After about three weeks of work, I feel that the change was justified. There is an old saying that goes " you cannot see the forest because all the trees are in the way". Until it was brought to my attention, I really did not see the obstacle. What may look like a simple change, took a tremendous amount of time and CNC programming. If you look closely the two idle pulleys were changed and incorporate a flanged on either side to make sure the belt stays in the center. Not only these changes, but any changes must be made before a lot of parts are cast, machined, and in placed in stock. This could be a very expensive proposition. This is why I try to explain that sometimes things take longer than anticipated and no matter how much you plan, it is sometimes difficult to schedule the amount of time that is needed for a particular project. This is especially true on a new engine.