

Hello to All,

21 May 2020

Updates

In case someone gets this Email without seeing the article on the new Model A engine, the article can be found at <http://www.modelaengine.com>

If anyone has a question, concern, comment, or suggestion, please let me know at model.a.engine@hotmail.com and I'll do my best to resolve the issue.

New Engine

This project started in 2007 and stalled in 2015 because of sky-rocketing cost and the lack of quality control at foundries in California.

Previous updates, pictures, and videos can be found at www.modelaengine.com

FordBarn, (<https://www.fordbarn.com/forum/showthread.php?t=265782>) is an internet social group for Model A Ford hobbyists and there are a lot of interesting questions and comments regarding this project.

I use the term "new engine" loosely because the only new parts are the cylinder block, crankshaft, and connecting rods. All interfaces for mating parts are identical to original and have been documented from original Ford drawings.

In the 2 July 2019 update, I was happy to state that the project was resurrected and I would be working with others (John, Leonard, and Bill) to have the "new engine" manufactured in China.

A lot has happened since the last update on 26 March 2020.

Cylinder Block and Main Caps

Due to Covid19, John was unable to travel to China and present the exterior model of the cylinder block that was completed by CAM logic from a laser scan. This was resolved by sending the data over the internet.

The foundry tooling (patterns and core boxes) have been delivered to the casting and machining factory.

3 cylinder blocks have been cast. The first had a miss-run problem but was useful to confirm feature location and wall thickness. The second and third cylinder block castings appear good and are shown in the figures.

For quality control purposes, every cylinder block that passes final inspection will have a unique hidden serial number in the location shown in the attachments.

John is in contact with the factories in China about 2 times every week, and I talk with or Email John every few days.

Crankshaft

Crankshafts for engineering evaluation have been cast, rough machined, and they are having their journals hardened in preparation for grinding.

The attachments show the rough machining prior to heat treat.

Rolled fillets, balancing, hardening, bearing inserts, and the rear main seal was discussed in a previous update (26 Nov 2019).

Connecting Rods

In the attachments, there is a picture of big end forgings.

Design Verification

We have been in contact with an engine rebuilder and parts supplier that has agreed to help verify the design by assembling a short block with parts that we supply, and then assemble a complete engine with mostly used parts that he supplies.

We are planning to have the new engine parts air-shipped from China to an airport near his business and we are excited to see what arrives. This will be our first opportunity to visually see the new engine parts.

The new engine parts will be cosmetically compared to original parts, and dimensionally measured to confirm that all interfaces are a match to Ford drawings for attaching parts. Any discrepancies found will be documented so they can be corrected before the production run.

After assembly of the new engine, it will be run on a test stand at a high RPM for a length of time, and then installed in a car that will be driven in hill climbs at WOT (Wide Open Throttle). Next, the engine will be plumbed to utilize an oil filter and again run on the test stand. After all testing, the engine will be disassembled and all moving parts will be inspected for wear. If we agree that the design is valid, we will authorize production.

Next Update and Other Comments

There have been no changes that will have an effect on pricing. The pricing goal is to provide these parts at a price that is competitive with the cost of machine work for the rebuild of a stock Model A engine.

We expect to have engineering evaluation parts delivered by July 5, 2020.

Terry Burtz, Campbell, Calif.

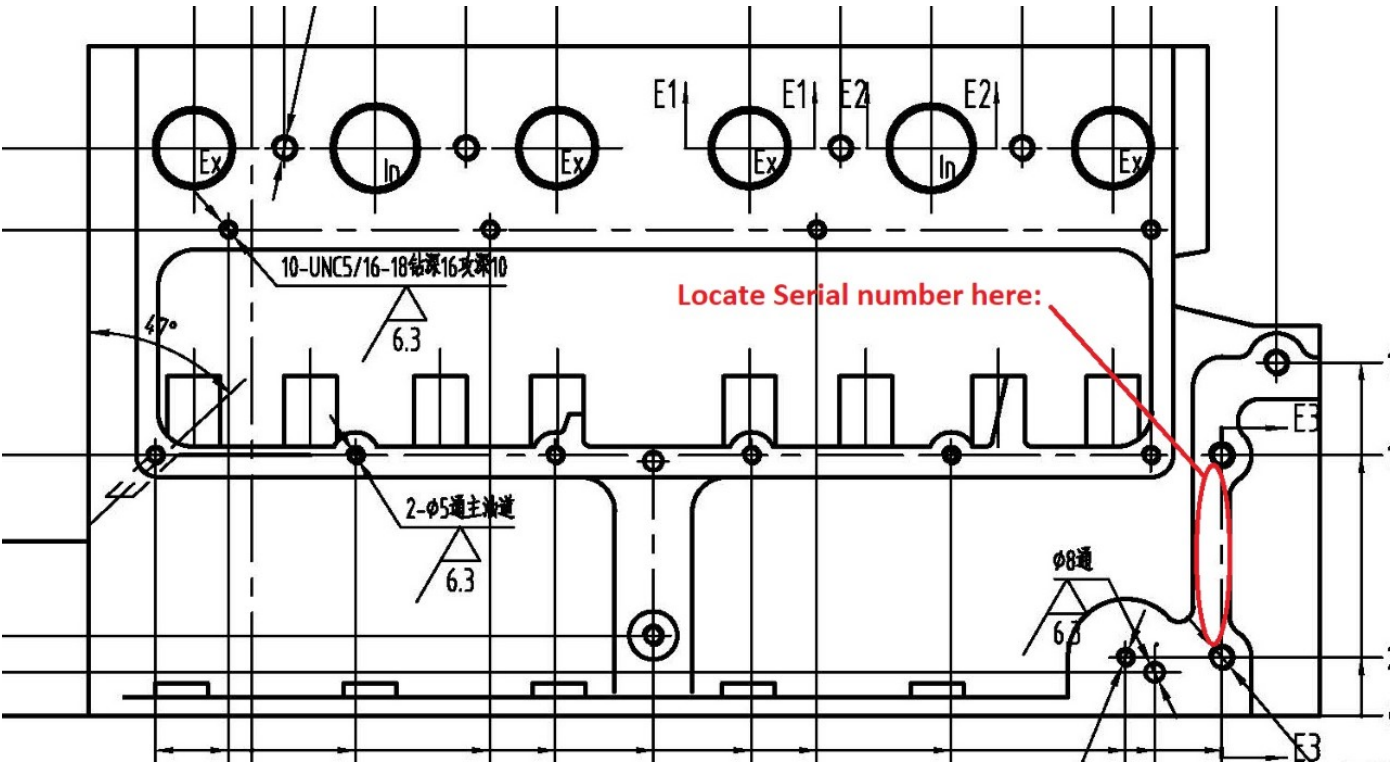
Illustrations on next page



May Blocks 1



New Forged Rods 1



Location of Hidden Serial Number 1



May Blocks 2 1