L & M engines

Hardcore Parts
Machine Shop
Race Engines

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2015-2017 Cam Timing

Before disassembly.
Have the crank with keyway at 12 o'clock, with the proper exhaust cam sprocket timing marks above valve cover gasket surface.

L&M Engines Assembly Method ---

We HIGHLY recommend bleeding ALL THE OIL from the hydraulic lifters to avoid an open valve when it should be closed.
This also allows you to check dry lash if one has non-OEM valves and hardware.
Have the crank with keyway at 12 o'clock.
Hang the secondary chains/phasers with correct timing on the cams in this approximate position of the photo, (Photo attached, cam key positions are relative to deck surface with table top simulating decks) - To rephrase - Install Int & Exhaust phasers with the chain attached and timed, wiggle cams slightly to engage dowels.
The cams are as viewed from the front bumper.
IT IS IMPORTANT TO have the dowel pins engaged fully, and then snug phaser-cam bolts.

Install the primary chain with correct cam and crank marks
One can also move the camshaft to hang the chain at the correct timing mark.
DO NOT turn the crankshaft from the 12 o'clock position..

With the crank at 12 o'clock all pistons are down and one will not have valve to piston contact.

With all components installed and tensioner pins pulled allowing chain tension - TIGHTEN CAM-PHASER bolts

After full complete assembly, DO NOT TURN THE CRANKSHAFT More than a few degrees, until one makes a thorough double check of the chains and timing marks.
This can be done without turning the engine more than 10-20 degrees.

With the crank key at 12 o'clock all pistons are 45 degrees down from TDC, so no valve-piston contact.

After one is satisfied, turn the crankshaft 2 revolutions to observe all is correct.
This is mandatory inour shop for all types of engines.

The Ford instructions are a mess having one move the crank around - bad idea for the novice.
The graphics are wrong in Ford stuff, but the idea of the method was so the cams would not 'snap' out of position.

Michael