

100 & 110 ASSEMBLY INSTRUCTIONS

~~115 & 125 ASSEMBLY INSTRUCTIONS~~

All hardware assembled with medium thread locker (blue). Unless otherwise noted.
Torque specifications; 1/4" bolts 120in.lbs. 5/16" bolts 20ft.lbs. Unless otherwise noted.

- * Assemble cam shim and thrust washer on the cam.
- Install cam and align timing mark.
- Assemble cam seal into cam cover.
- Install can cover with gasket and check end play. (.005" to .018").
- Assemble lifters and gaskets on the lifter blocks.
- Install oil pressure switch.
- Install lifter block assemblies, rear then front.
- Prime oil system. Watch for oil at lifters and piston oilers.
- Install cylinder dowel pins on the case.
- Install cylinder studs with red locktight.
- Install protectors on the cylinder studs.
- Assemble one wrist pin clip into the pistons.
- Install piston rings, alternating end gaps, avoiding cutout areas on the cylinders.
- Install pistons wrist pins and other clips.
- Assemble cylinder dowels on the cylinders.
- Install dowel pin o-rings on the case and cylinders, also base o-rings.
- Install cylinders. Turn the motor over, and check issues (scratches, binding, ect.).
Leave the engine at TDC front cylinder compression stroke.
- Install heads with anti-seize on the head bolts and torque with H-D pattern to:
15 / 30 / 40 ft. lbs.
- Assemble rubber adapter, flanges, and seals to the intake manifold.
- Install intake manifold.
- Install ignition rotor and ignition.
- Set timing. (Timing mark in view. Connect one battery ground lead to engine and one to red the wire. Positive to white wire. Set ignition clockwise to where the red LED goes out.
- Install ignition cover with gasket.
- Leave the engine near front cylinder TDC.
- Assemble pushrod tubes.
- Loosely install pushrod tubes and pushrods: (Longest to shortest; FE, RE, FI, RI).
- Install rocker box base gaskets, rocker box bases.
- Assemble rocker arms into supports.
- Install front rocker support, tighten evenly.
- Let the front lifters bleed down then turn the engine over to rear cylinder TDC.
- Install rear rocker arm support, tighten evenly.
- Install breathers and o-rings.
- Install pushrod clips.
- Install rocker box o-rings and covers.
- On the carburetor install VOES cap and adjust choke.

- Install the carburetor.
- Assemble the air cleaner and install.
- Test run.
- Install oil filter and mount.
- Clean, inspect, and box the engine with instructions.
 - Your done!