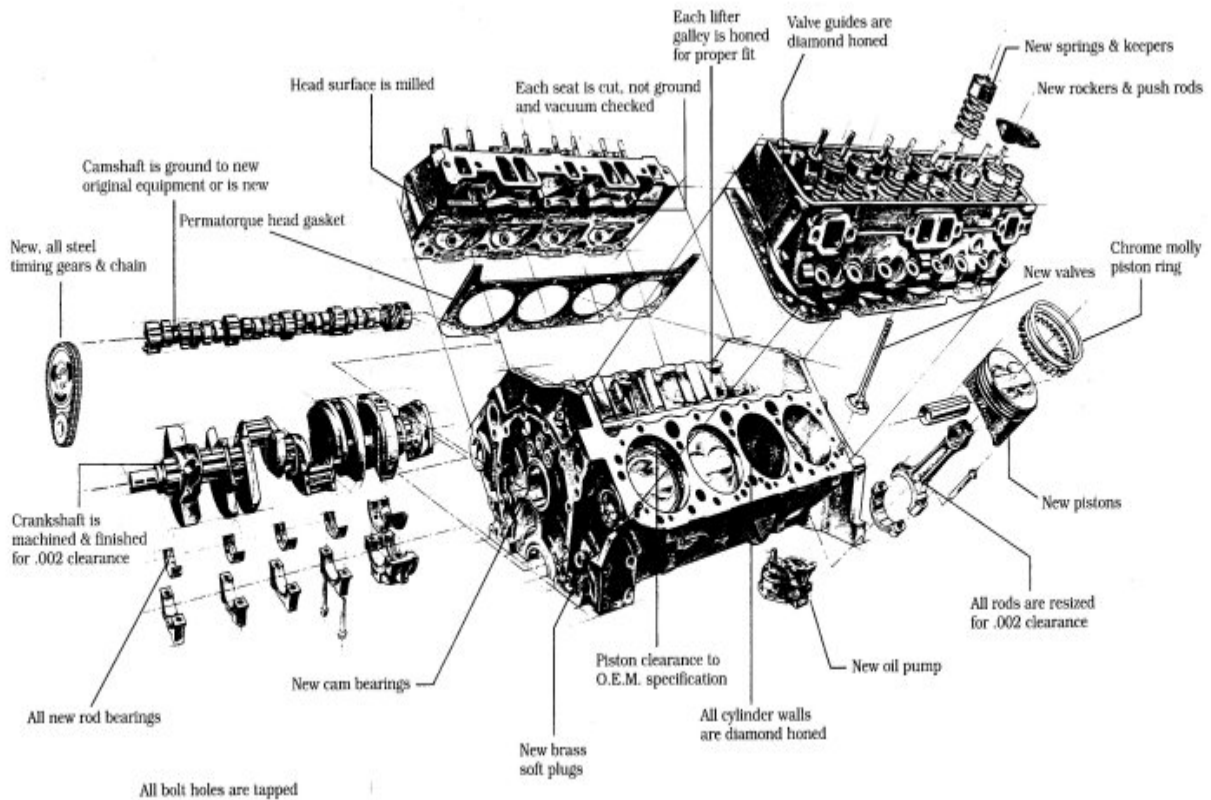


Most rebuilt engines are just that, rebuilt. **Our remanufacturing process builds to IMPROVE not just REPLACE! All parts in our high quality engines (long blocks, short blocks, big blocks & small blocks) meet or exceed all original manufactures specifications, and most of the time parts are purchased from the same suppliers who supply the original manufacture!**



Make sure when purchasing an engine it meets the requirements of a remanufactured engine. Our remanufactured long block meets or exceeds the original equipment manufactures (OEM) specifications. This means no used or rebuilt pistons, camshafts, camshafts, oil pumps, timing chains, timing gears, lifters, etc.

You can buy with confidence from us, knowing that you have the best quality engine with the best warranty protection - 7 YEAR / 70,000 MILE WARRANTY.

Our rebuilding process includes:

- Each engine casting is cleaned in a steel abradar. The steel abradar blasts steel shot at the casting, cleaning it, while at the same time strengthening the integrity of the castings.
- After cleaning each casting, cylinder blocks, cylinder heads and crankshafts they are checked for cracks, using an electro magnet and fluxing powder. All cylinder blocks, cylinder heads and crankshafts have all bolt holes cleaned and taped.
- The cylinder blocks are precision bored to the exact same size as the new pistons being installed.

The cylinder blocks are then precision honed with a diamond honing machine. This process is very important to the longevity of an engine. The honing process gives .0015 to .004 of an inch clearance (depending on the application) between the cylinder wall and the piston. It also machines the cylinder walls with a fine cross hatch finish for proper piston ring seating. Today's engines require a much finer finish than they did in the 80's and only the newest diamond honing technique (not stones) can accomplish this finish.

The crankshafts are cleaned again with fine wire brushes through each individual oil galley, ground on the latest model crank grinder and polished to a mirror like finish. The oil galleys are cleaned again with a white cleaning rag. **NOTE:** 80% of all engine manufactures warranty claims are cylinder head related. Consequently, we take great care to make sure our cylinder head machining and replacement parts are as good as possible.

The cylinder heads are machined to accept new hardened valve seats and valve guides. After rough machining is accomplished on the guides each individual guide is diamond honed to fit the new valve stem. This process is very expensive and time consuming; however, this is the only way to accomplish the critical finish today's engine required between the valve stem and the valve guide. The valve seats are precision ground using a three angle cutting machine. All three angles are automatically cut for a three angle seat pattern for the individual application. The cylinder head is then taken to a broach machine. This machine mills the cylinder head surface (not grinds) to insure a smooth RA surface and proper sealing. After the machining is finished the cylinder heads are once again cleaned and assembled with valves, valve springs, valve keepers and high temp seals. The cylinder heads are then put on a vacuum tester, this tester assures all valve seats are sealing and checks the casting integrity for cracks a second time.

The connecting rods, which have been cleaned and shot peened, are resized to conform to the rod bearings being used. Pistons are hung and piston rings installed.

The completed bare machined cylinder block, crankshaft, connecting rods, and assembled cylinder heads are now ready to be assembled into a long block.

The cylinder block is now in the prepping area; here all the freeze plugs, oil galley plugs, and cam bearings are installed. High pressure air is then blown through all the oil galleys and water jackets once again to be certain all contaminants are removed. The cylinder walls are then wiped down with clean white towels.

The cylinder block is then moved to the assembler, here the main bearings are installed, a special pre-lube called AL22 (cost \$155.00 a gallon) is used to coat the bearings. This lubricant is a Teflon coating substance that reduces the danger of a dry engine start (no oil). The crank is then assembled into the block. The pistons are then coated with AL22 and slid into the correct cylinders and attached to the crankshaft with the bearing and more AL22. A new camshaft and timing components are installed. The cylinder heads are now installed on the short block. The rocker arms, hold down bolts, push rods and lifters are then installed to complete the long block.