



Priming Remanufactured Engines

Production Engine Remanufacturers have historically had a very small percentage of engine failures related to oil pumps and related parts, but over the past year, the percentage of these failures seems to be increasing. There also seems to be three common denominators associated with these failures. The engines were shipped over 200 miles to the installer, the engine sat in a warehouse for at least a month (before and/or after shipping) and the engine was hard to prime.

The vibrations during shipping have a tendency to shake all of the oil back to the pan or at least out of the critical areas of the engine. Sitting in a warehouse does the same thing, but minus the vibration. The oil simply drains out and the bearings tend to dry up. With these two conditions, priming the oil system prior to start up becomes more critical.

Priming in the past was not difficult. The installer merely spun the oil pump with a drive rod and drih before installing the distributor. But we now have engines that are distributorless and others that drive the oil pumps off other accessories. Some of these applications are:

- Four cylinder GM's such as the Olds Quad 4 use an oil pump that is driven by a gear on the crankshaft.
- Some imports like the Mitsubishi 2.6L use a chain to drive the oil pump.
- Some manufacturers use a gerotor style oil pump that slides over the nose of the crankshaft and is directly driven by the crankshaft.

In all of these cases, priming the oil system by turning the oil pump is very difficult if not impossible. To properly prime the system to avoid dry start problems, the installer must attach a pressure primer to the oil galley to pump oil through the engine. In the future, adequate training at the installer level is going to become more critical.