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INSTALLATION OF VITON PUSH ROD SEALS

(The article below was reprinted from an old letter I found from George Pomeroy's papers. Franklin owners may find it useful. - Steve Mestler)

This is merely a suggested method of making certain that the engine rebuilder ends up with an oil leak free installation. There are probably other methods that would work just as well, but this one has served us well for ten years.

First, be sure to use a good solvent or paint remover to clean out all caked material or coatings from pockets that the "O" rings rest in, both in the cam-follower holes and the cylinder head holes. Try to avoid any process that might scratch those surfaces.

Second, install a pair of seals on the small end of the tubes and, after lightly coating with oil, test install in the cam-follower holes to insure a snug fit. Then remove the rings and install a set of rings on the top end of the tubes, checking snugness of top end fit in cylinder head holes.

We have always found it necessary to expand the tubes a bit to make the oil-tight seal. We even found this needed with the stock Franklin seals. We expanded the tubes by using a long tapered steel marlinspike (long pointy thing), well greased. We held the tube in one hand, and hit the spike with a hammer. We would never let the other end of the tube rest on anything but our hand, so as to avoid damage to it. We simply hung on tight, and got sore hands, but no damage. You can probably work out something easier, but don't damage the tubes.

Keep expanding and testing the "O" ring interference fit, from time to time, until it suits you. I find that when the "O" rings on the bottom end measure about 1.045 inches, and about 1.010" on the top end, that I have a pretty tight interference fit. You probably don't need this much pressure, but I give you these figures to show what definitely does work.

Installation calls for clean surfaces and oil on everything. **DON'T USE ANY CEMENTS AS THEY HARDEN AND PROMOTE LEAKS.** The whole purpose of the rings is to get a sliding seal that is not affected by the expansion and contraction of the engine. Take particular care that the bottom end rings do not ride up the bulge that holds them in place. You may have to make a screwdriver-like tool to help push them in place.

I hope this information will help ease your oil leak problems.

George (Pomeroy)