

When the rear seal is installed correctly, the sealing edges must line up correctly to prevent leaks at that point. Lining up the edges straight as shown in Photo #1 is difficult because you can't see what you are doing.

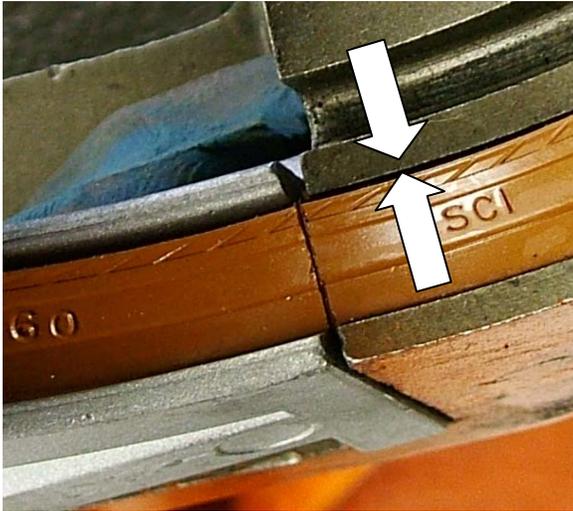


Photo #1

Not only that, but the seal holder can slop back and forth .060" or sit cocked to one side or twisted when clamping it down – 3 chances to fail.

The actual sealing lip is .025". However, there is an additional wiping surface behind the lip that directs oil back toward the crankcase. This directional wipe area is about .040" wide which gives a total potential wiping width of about .065" ±. When installed with the shaft in place, the effective wipe area of the seal lips is .040" wide.

Also see photo #1: The thrust bearing must be in place to perform these procedures:

If your crankshaft has an angled knurl pattern (some do, some don't), the angle must be in the direction shown in photo. This direct oil is to be pushed back into the engine.



Photo #2

Wipe assembly lube over the seal area and rotate the crankshaft. This will leave a wiped area indicating where the upper (block) seal is wiping as in photo.

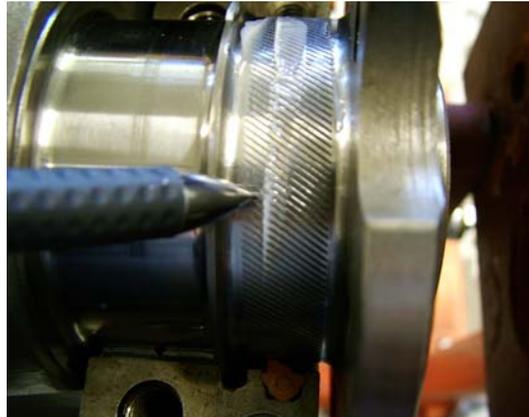


Photo #3

Measure the distance between the front of the wiped area and the front of the crankshaft flywheel flange. This is dimension "A", (Example .498")

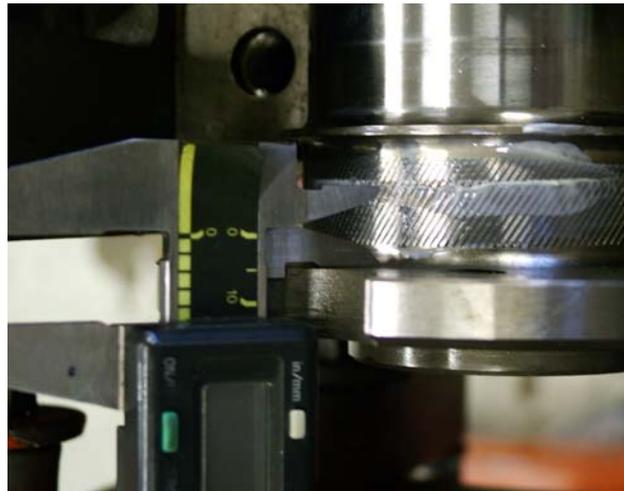


Photo #4

Next, measure the distance (see photo #5) between rear of the seal holder and the front (not compressed) tip of the seal – example .375". This is the non-preloaded measurement and the seal will extend out about .015" further when installed. Add this pre-load length to the seal/holder length (example: $.375" + .015" = .390"$).

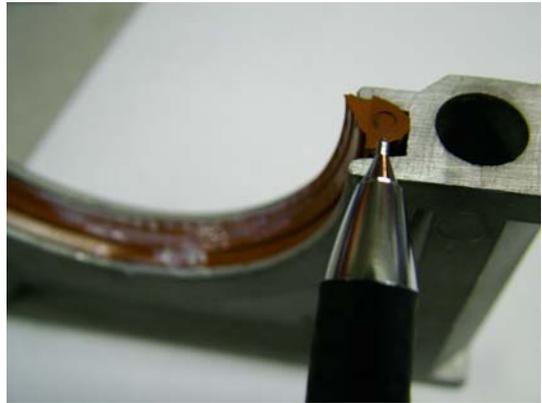
Photo #5





Subtract this total from the wipe length area – example: $.498'' - .390'' = .108''$ gap. This gap is the distance the rear of the seal hold should be from the front of the flywheel flange when installed. Use feel gauges to set & hold the gap between the flange and the seal holder during final assembly.

Use a very thin (not heavy) sealer such as Loc-tite® #518 on the ends of the seal to glue them together. Do not use silicone seal.



On the bottom ends of the seal hold use a very (very) thin wipe of silicone seal. *More is not better – it can cause leaks!*

Install the seal in both the block and hold so one end protrudes 1/16" (offset); *more than 1/16" can cause leaks.*



The "rubber" side seals in our kits should be oiled prior to installation to help them slide into place. Install the seals along with the seal hold.



The side seals are the correct lengths – so if you have some sticking up after assembly, do not cut it off – **DO IT OVER!**



Phone: (309)745-9558

Fax : (309) 296-9990

E-mail: information@hughesengines.com

www.hughesengines.com