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MODIFYING THE CHRYSLER REAR MAIN FOR THE 312 FORD Y BLOCK

For those of you interested in using the Chrysler rear main seal, Fel-Pro # BS-40245 in your 312; here is the procedure. You should have an ECZ seal retainer block available for evaluating the fit of the molded Fel-Pro # BS 40245 seal.

First take the seal half which has the catfish whisker like protrusions from its' sides and carefully carve them off so as this half resembles the other half as much as possible with a sharp knife.

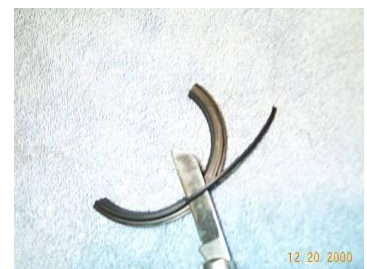
Next observe that the fly-wheel side of the seal halves have numbers cast onto them. The numbered side is the side you will reduce in width so it will fit the seal block. Do not nick or damage the unnumbered side in any way as this side seals to the crankcase and the rotating crankshaft. The molded seal is about .340" wide and the crankcase and the seal block groove is only about .275" wide.

As you can do the math about .065" must be relieved from the fly-wheel side so it will fit the groove. Carefully take your knife and carve the most rear protrusion from both sides down to the plane it protrudes from. You will find this protrusion is about .065" wide.

Now that the fly-wheel sides have been reduced note that the width is about correct to fit the into the seal block but it sticks out too much. The outer diameter of the seal groove is about 3.250" and the outer diameter of the seal is about 3.295". As you can do the math about .0225" must be removed from the outside radius of both halves.

Next note that the seal halves have a steel skeleton which helps maintain their form. This skeleton wire can be observed by viewing the tips of the seals where they mate. Next take your sharp knife and carve the outside diameters down to the steel wire. Carefully carve down until the shiny wire surface is becoming exposed. Some rubber may still show, don't dress it down as it may already be almost too small. Don't worry, they seal on the front side, not the back rib. Any discrepancy in the math may be what allows this seal to work as opposed to what some might think. This seal is now ready to install. Yes, it will roll into place when working under the car just like a 289, 302, 351, or 390 molded seal.

You are on your own for the side seals as this kit doesn't have them. Trust me, you can use your old ones or you can buy any y-block seal kit and use the side seals from it. Most y-blockers have them laying around. For



installation use only the ultra grade RTV {room temperature vulcanizing} sealer. The ultra grade contains no acidic acid and is much more oil proof than the stinky kind. This is as in Ultrablue, Ultragray, Ultrablack Permatex silicon RTV sealer. Remember, a dab of RTV must be applied to the face of the seal block where it contacts the block, a little bit will do, as this is the only seal you get for this surface. It must not leak here either.

Many engine builders don't use side seals but instead inject RTV into the sides of the seal block where the side seals go. You must have a long injection needle so you can fill from the block surface outward. With the injection method the job should cure for a couple of days before any oil contact. I always remove the lock washers from the bolts retaining the seal block and apply RTV on the shoulders of the bolts in order to seal them with the block. Remember, if any oil reaches the bolt cavity it can leak out around the bolt heads. The pan gasket doesn't cover them.

NOTE: Edited for clarity 2018