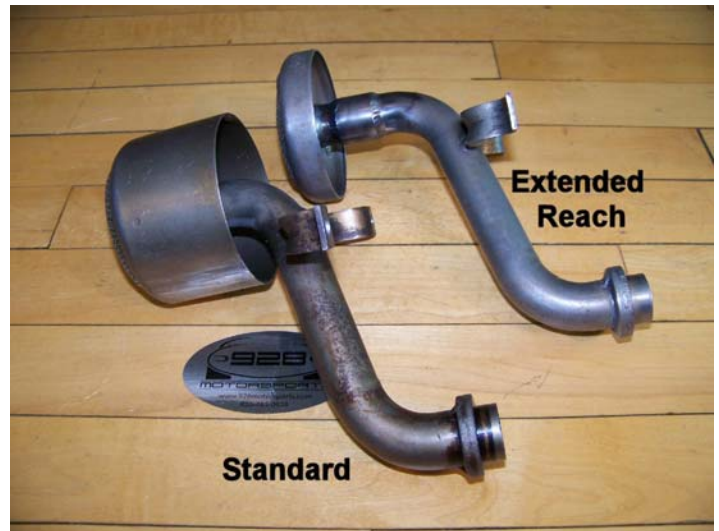




Oil Pan Spacer Kit Installation Instructions

Remove the oil pan and scrape the gasket surface clean. Check the edges of the oil pan with a straight edge and a flashlight for flatness. Straighten if dimpled.

Step 1) Remove the oil pickup tube. It is held in place with two small bolts on the bridge, and one large bolt at the base where it attaches to the motor. When removing it, look for the thick red seal on the end of the pickup tube where it meets the engine. Transfer this seal to the new pickup tube if it is in good condition. If not, replace it. Install the new, longer pickup tube where the old pickup tube was.



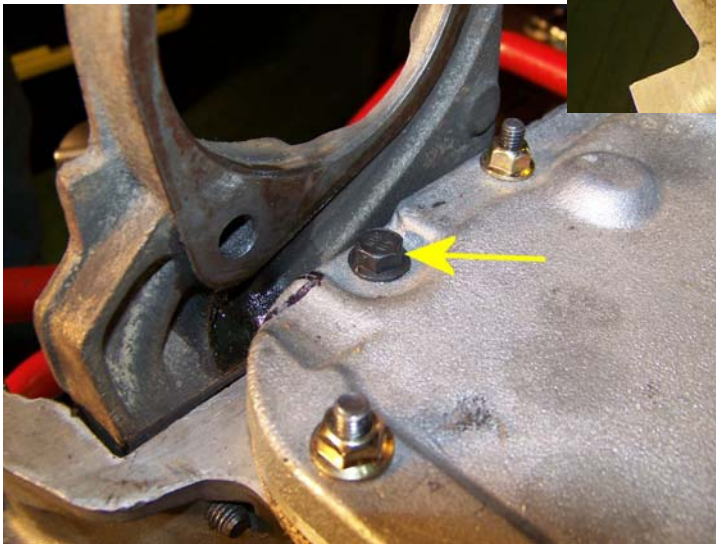
Step 2) (wearing safety glasses) spray up into the threaded hole of each oil pan bolt/stud with brake cleaner. Let dry. Do NOT skip this step. Loctite products will not set up in the presence of oil or anti-seize compounds.



Each stud has a short end, a shoulder, and a long end. The short ends goes into the engine. The nut goes on the long end.

Wash the threaded holes out with Brake Cleaner

Step 3) Apply a drop of Loctite red onto the short end of the stud and spin it into the block. Do not worry about tightening them at this time, when you apply the high-interference nut we supplied, the studs will be tightened in all the way against their shoulder automatically.

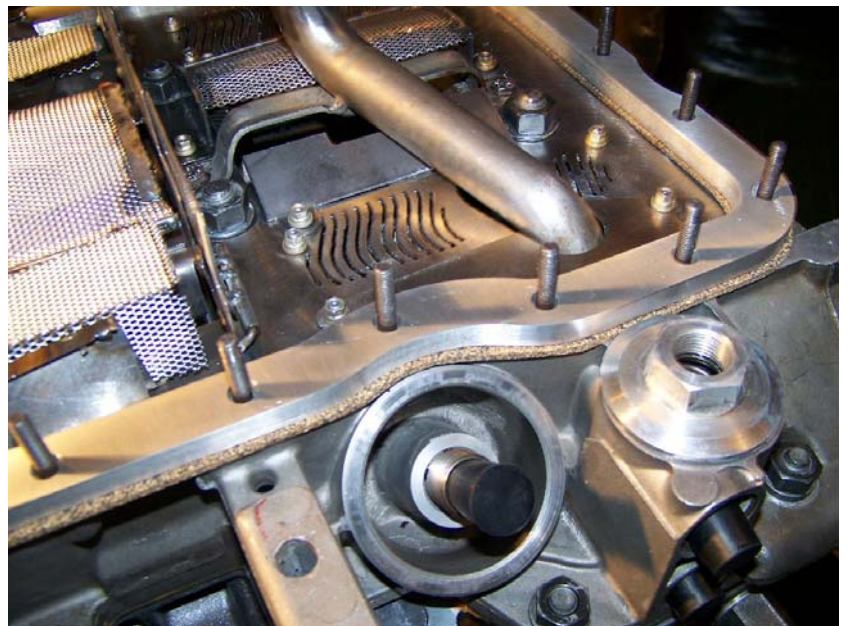


Install a stud in every hole EXCEPT the one immediately in front of the starter.

Leave that open for the special flanged bolt provided.

Step 4) Cleaning.. Clean your oil pan thoroughly, and the gasket flange areas of both the pan and the block.

Wipe down the gasket flange AND both sides of the new oil pan spacer AND the engine gasket flange with Acetone or Carb Cleaner.



Step 5) Putting the pan spacer in place.

Make an oil pan “sandwich” on your workbench by stacking a gasket on the pan, then the spacer, then a gasket atop the spacer. If you want to use gasket sealants in addition to the gaskets, use something like Permatex Aviation Form-a-Gasket.

However, if using gasket sealants, do not put any on the top layer between the gasket and the block. That way the gasket will come down with the oil pan next time you remove the pan.

In this photo we have employed an old mechanics trick of tying the oil pan gaskets to the oil pan with dental floss. This keeps the gasket in place while installing on the engine.

The dental floss stays in the gasket flange. There is no need to remove it. Cut the strings shorter if you like.

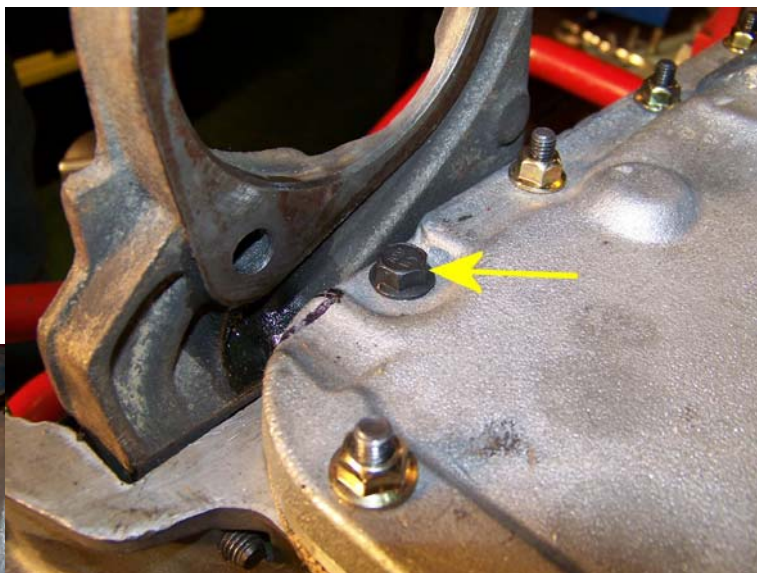


TORQUING THE FASTENERS: Push the pan-and-spacer assembly up into place and add the flange nuts. Torque to 7 ft/lb or 84 inch pounds. You will not be able to get a torque wrench into all the fasteners, so torque the ones you can, then put a wrench on them and “learn” what that feels like and transfer that torque to the other fasteners. The actual torque is not as important as that they all are the same. You will need to go all around the oil pan 2 or 3 times before all the gasket is compressed equally in all sections.

Step 6) Starter Installation

In your kit locate the single flanged M6 bolt and place that in lieu of a stud directly under the starter location, and torque to the same standard.

The mini-starter (required) can be installed rotated inboard or outboard. Outboard is shown in these photographs.



Use the special socket headed bolts provided to mount the starter.

CHECK FOR CLEARANCE between the starter wiring connection posts and the oil pan! A section of thin rubber is not a bad idea glued to the bottom of the oil pan before the starter goes up to help prevent the positive terminal from grounding on the oil pan.



Step 7) Dip Stick Modification

Decide whether you want to use the new lower sump to carry more oil, or whether you want to use it to reduce windage and entrained air within the oil in the crankcase.

If you want to use the lower sump to carry more oil, leave the current dipstick alone, and fill to the mark as you have been.

If you want to reduce windage, then clamp your dipstick in a vise, take a hand file and file a notch into the dipstick 3/8" down from your favorite previous oil level. Fill to this mark.

Finished Installation

Your finished installation should look something like this:

