

Small Block Main Bearing Stud Girdle Kit

Method #1 Installation Instructions

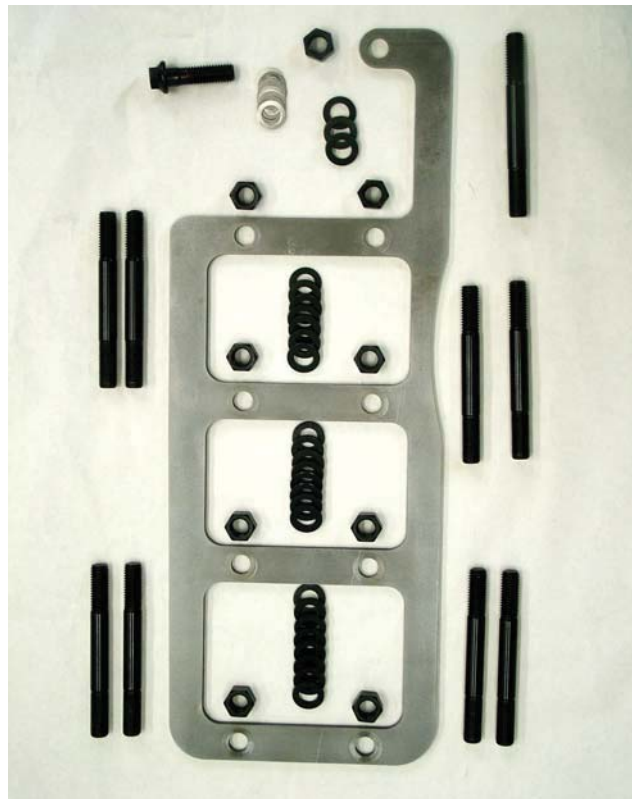
HUG7384K All 318 & 340 Blocks

HUG7382K All 360 Blocks

These main bearing stud girdles are designed to fit small block MOPAR 318, 340 (small main journal) and 360 (large main journal) blocks, both "LA" and Magnum.

Items included with this kit include:

- 1- Main stud girdle
- 1- Main Bolt
- 9- Main Studs 4.625"
- 9- 1/2-20 Hex nut
- 27- 1/2" ID washer/ no chamfer
- 1- ARP moly lube
- 90- Assorted shims
- 2- Hughes Racing decals
- 1- Illustrated instructions



Current girdle design may differ from photo

This method of installing the kit does not require any millwork on the main caps.

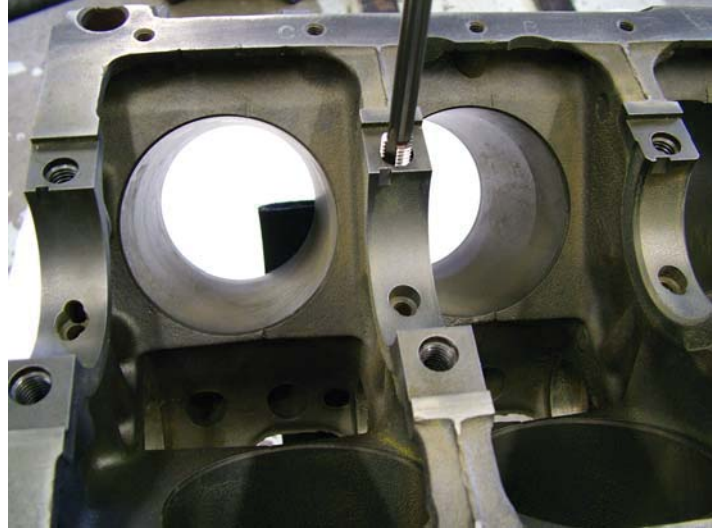
Although all MOPAR® small blocks appear similar there are a few differences that are important and will be pointed out in the following instructions.

These kits contain main cap studs and the block must be line honed when changing from main bolts to main studs. If the block has been line honed previously with main studs it will not need to be re-line honed, and it is not necessary to have the girdle installed during the line honing when using method #1.

It is very important that you shim the girdle properly to keep the alignment of the lower end correct after line honing.

Ready? Here we go.

1. Start by cleaning and chasing the $\frac{1}{2}$ -13 threads in the block for the main studs. Be sure to use a bottoming tap.



2. Use a tiny amount of mild Loc-Tite® on the studs and thread them in far enough so that when finally assembled the nut will be flush with the top of the stud.

NOTE: We recommend that all main caps be drilled with a $\frac{17}{32}$ " drill bit to allow proper main cap alignment.

NOTE: If the block has not previously been line honed with studs, it must be done now.

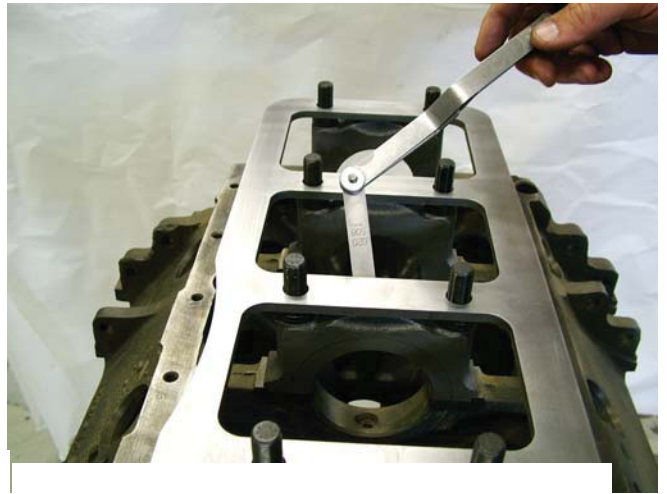
3. Install the main caps in their proper position and install spacers as listed below to start the shimming process.

Install 1,2 or 3 spacers as required with your main Cap to allow minimum amount of shimming.

The caps must be properly bottomed in their register.



4. Next, check to see if the girdle is touching any caps.



Sometimes the raised cast-in numbers on the caps need to be ground off to clear the girdle. You should have about .008-.010" clearance when the installation is complete.

NOTE: When the number of spacers is equal on of the front 4 caps proceed to measure for shim stock. Leave the rear main cap until last.

5. To determine the shim pack required. Start with the girdle resting on the spacers, check for gaps between the spacers and the caps. The girdle will set on some of the spacers but not all of them. Any position where the girdle is not resting on the spacer will require shimming. Use a feeler gauge as shown to check the gap.



6. To determine the shim requirements you need to lightly hold the stud and girdle as shown here and then use a feeler gauge to determine the thickest blade that can be inserted without moving the girdle. Shims are provided in .002", .005", .008", .010", .015" and .020" thicknesses.

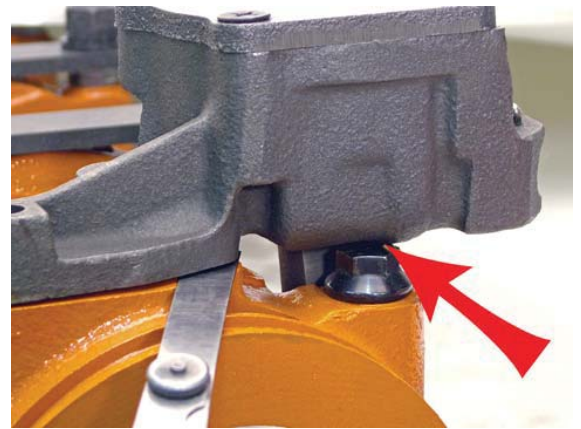


7. Shim each position as required to remove clearance. Double check all positions after shimming. When shimmed properly you will not be able to move or rock the girdle when applying medium finger pressure outboard of the studs.

8. The large journal rear main cap stud will require more spacers, or shims, than the other positions as that main cap is spot faced deeper. This is not true on small journal engines, in which case the rear cap is equal to all of the other caps. Determine the amount of shims in the same manner as in steps 6 & 7.

NOTE: When installing the girdle on Magnum engines the pan must be installed before proceeding beyond this point.

9. The main bolt included with the girdle kit is installed on the rear main cap *without* a washer. Also check that the bolt head is not contacting the oil pump body at the area indicated by the red arrow in the photo to the right. If there is contact grind off the head of the bolt slightly so the oil pump will bolt down **flat** against the main cap. The feeler gauge in the photo demonstrates a possible gap. Do not use a gasket at this point. Check both the cap and the pump for flatness.



10. Some Magnum oil pans have more draw, angle on their sides, than the “LA” oil pans do. This can cause them to contact the edge of the girdle before seating completely against the block. It may be necessary to slightly grind some material off of the upper outside corner of the girdle plate as shown here. This will not effect the operation of the girdle in any way.



11 Once the proper shim packs and clearances have been determined, rotate the crank and rod assembly by hand and check for proper clearances. The girdles were designed around the 4.00” stroke crankshafts with “H” beam rods. **BUT**, you must check to be sure everything clears! If necessary you can grind off some of the edges; see step 9, clearance, .040” is adequate.



After all the clearances and adjustments are correct, the girdle installation can now be completed. Install a flat washer between the girdle and the nut. Use the provided ARP moly lube on the stud threads and on both sides of the washers. Torque the assembly to 90 ft/lbs. The girdle fits tight enough around the crankshaft to act as a scraper, decreasing windage and increasing power.

Here it is installed on a block, a thing of strength & beauty!



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