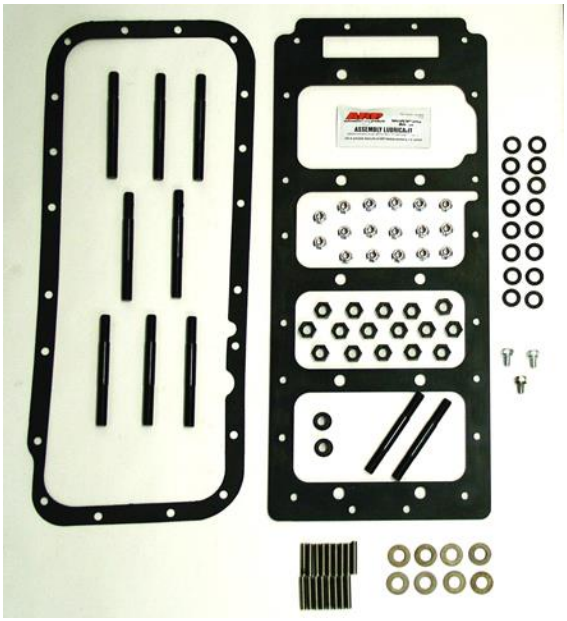
11/27/2019

Big Block Main Bearing Stud Girdle Kit
HUG7380K
For "B" & "RB" Blocks

Contents of Kit

2- 4.40" Main Studs
8- 5.187" Main Studs
1- Girdle Plate
18- ½" ARP black flat washers
8- ½-20 Grade 8 plain hex nuts
8- ½-20 ARP 6 pt. nuts
2- ½-20 ARP Black 12 pt nuts
8- ½" x 1" tan flat washers
14- 5/16"-18 x 1.5" studs
14- 5/16"-18 Flanged NyLock nuts
6- 5/16"-18 x ¾" Flanged cap screws
1- Packet ARP Moly lube
1- HUG3420 Oil Pan Gasket
110- Assorted thickness ½" x ¾" spacers



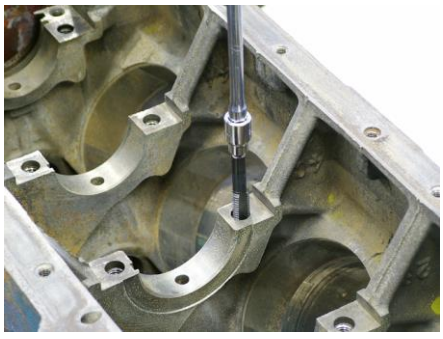
This girdle will work on either RB (413/426W/440) or LB (350/361/383/400) Blocks. It can be installed during a new block build-up or as a retro-fit to an existing engine.

Please read and understand all of the instructions before starting the job.

NOTE: This kit contains main studs and the block must be line hones with the studs in place as switching from bolts to studs will cause the main bores to distort differently. Switching from short studs to our longer studs will not cause a problem.

When switching from existing studs to our longer studs on a completed engine, switch one stud at a time without disturbing the main caps. If you are line honing the block for the first time with studs, be sure to drill out the #3 (thrust) main cap stud holes to 17/32". This allows the cap to shift and align the thrust surface correctly. You do not need to have the girdle installed during the line honing procedure.

Step #1
Clean and chase the main stud holes in the block and the pan bolt holes in the pan rail. If you are working under your car, turn the instructions upside down.



Step #2

Oil the course threads of the main studs and install them in the block. Main caps 1 through 4 will use the longer 5.187" studs while main cap 5 will use the shorter 4.40" studs. The studs should be snugged up into place, just finger tight. Tighten them enough to keep them from backing out when removing the nuts.

The shank of the stud should be against the block as in this photo.

Step #3

Install the main caps and gently tap them into place. Use a drop of oil on the ends of the caps to allow them to slide into the register easier.

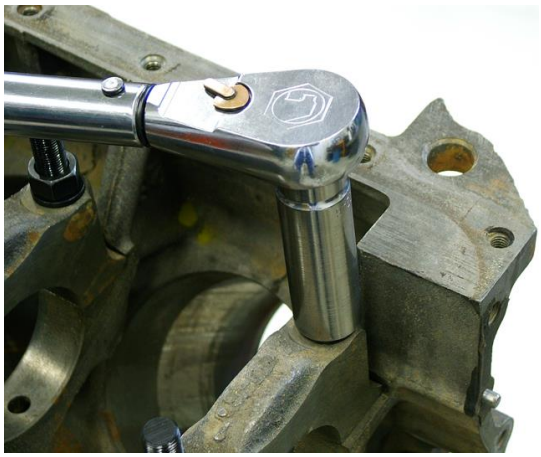
Step #4

Install ten (10) of the ½" ARP black flat washers, eight (8) of the ½"-20 ARP nuts and the two (2) 12 point nuts on the rear cap. Use the ARP Moly lube on the stud threads above the main caps and on both sides of the washer.

Step #5

Torque all of the ARP stud nuts to 90 ft/lb. Torque in 3 steps, 30#-60#-90#. Start in the center and work out like you would on a head gasket.

You are now finished with the rear #5 main cap.

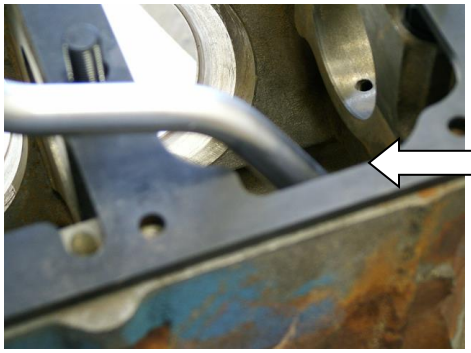


Next, install a ½" ARP black flat washer on top of each of the studs on the front 4 main caps. The sharp edges of the washers should face away from the nut.

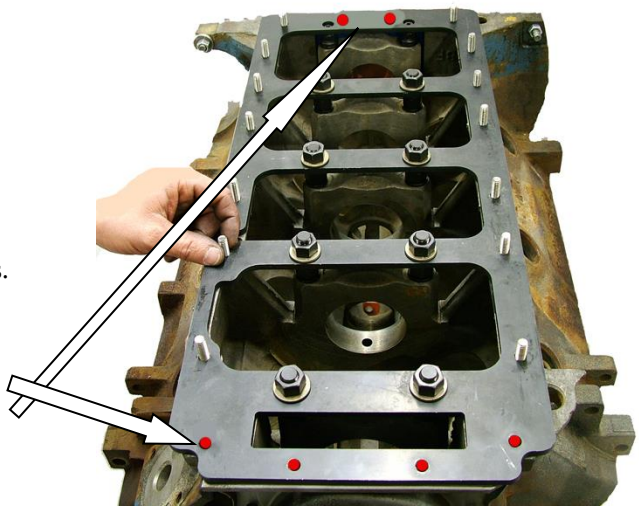
Step #7
Use a broad blade precision straight edge laid across the "clean" pan rails to determine the shim pack required between the spacer and the straight edge. This will be the shim pack to install between the spacer and the girdle. Take time to do this carefully. Shims as thin as .002" are included for very fine adjustment. We suggest you use a micrometer to measure your feeler gauges to get the most accurate shim pack.

It is always best to use 2 thick shims instead of 3 or 4 thinner shims to obtain the proper thickness. If you find that you need additional shims call or e-mail us with a list of what you need.
Keep the ½" ARP black flat washer, stud nut and the shim pack together and return them to the same locations.

Note: We find it is best to keep note of the shim packs required at each location for proper final assembly. They will not all be identical.



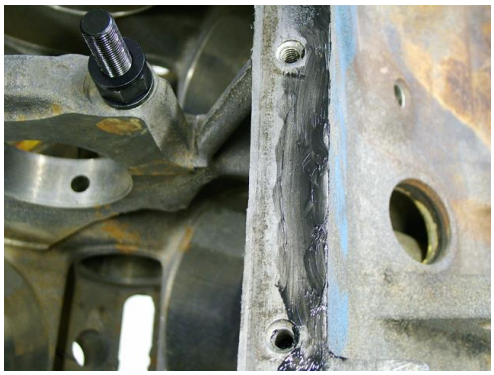
Step #8
Check oil pick–up screen clearance and correct if necessary. It is extremely unlikely that you will encounter any crankshaft interference but, now is the time to check.



Step #9
At this time install the 5/16" studs in the side pan rails, 7 in each side. Also install all of the main stud tan washers and nuts. If any of the pan studs do not thread in easily by hand you may need to file the opening in the girdle slightly.
NOTE: The 4 forward positions at the front (2 in the block, 2 in the timing cover) are through holes where you will use the 5/16"-18 X ¾" flanged cap screws. Use the same flanged cap screws are used in the rear main seal cap holder.(RED LOCATIONS)

Step #10
Once you are sure everything fits, the girdle can be installed, finally!

Step #11
The girdle should be bolted directly to the block and sealed with a *very thin* coating of RTV sealer (black or red). Remember bubba, *VERY THIN!* Small lengths of RTV about 1/8" in diameter and spaced as shown will spread and seal very well without squeezing into the crankcase and eventually into the oil passages. Keep the RTV on the outer edges of the pan rail.



Step #12
Check to make sure the shim packs and spacers are properly located. If you are working under the car stick the shim packs in place with grease.

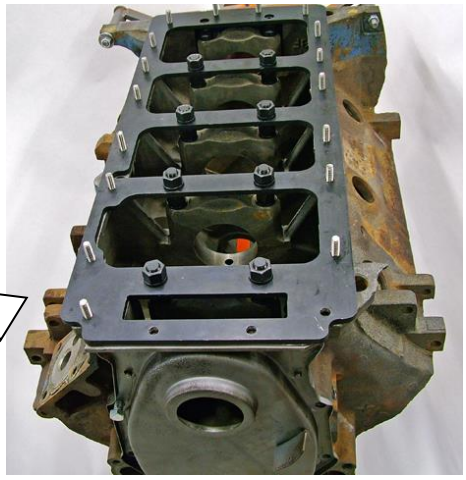
Step #13
Reinstall the girdle for the final time. Install the tan flat washers and plain ½"-20 nuts with the ARP lube on the threads and both sides of the washer. Torque the nuts in place. Torque these 8 nuts to 70 ft/lbs in 3 equal steps of 25 ft/lbs. Start at the center and work out like you would on a head gasket. The pan studs and cap screws should remain in place while these nuts are torqued.

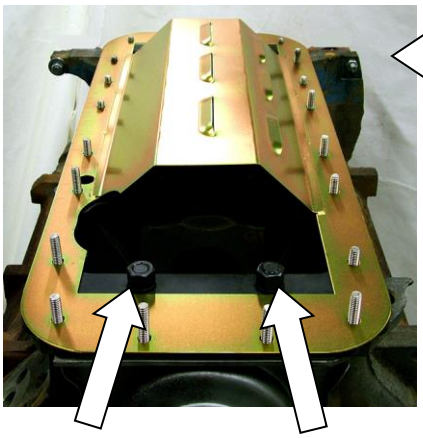
Again, use the moly lube on the stud threads and both sides of the washers.

Step #14
Install the 17, 5/16” stainless steel pan studs. They should thread 3/8” into the block. We suggest you use mild (Blue) Loc-Tite® to hold them in place. Also install the oil pick up screen if it is not already in place.

NOTE: The studs should stand out of the block a minimum of 11/16” – ¾”.

Ain’t that purty! It’s strong too!





Step #15
At this point if you are installing a windage tray use RTV between it and the girdle like you did between the girdle and the block. Do this outboard of the studs.
Be sure to check the stud-to-hole fit before you put the sealer on. Sometimes they don’t all line up.

The front edge of some windage trays may interfere with the 2 large flat washers between the girdle & stud nuts. Grind a flat spot on the washers to allow the tray to set flat.

Step #16
Before installing the pan, check the screen to pan clearance. 5/16”- 3/8” is correct. Install the pan gasket and pan. Install & tighten the 5/16” flanged Nylock nuts. Again, check stud & hole fit first so you won’t have to beat the pan on with a rubber hammer.
Fill it up with oil and go fast!

Front and rear view of oil pan. Note the location of the bolts in the front of the pan.

NOTE: Some timing covers bottom edge will extend past the bottom of the block and interfere with the girdle. DO NOT DRILL OUT THE LOCATING DOWEL HOLES TO MAKE IT FIT! Grind off the bottom of the timing cover for clearance as required.

If you have any questions, contact us!
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