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BILLET STEEL MAIN CAPS INSTALLATION

COMPONENTS	QTY
BILLET STEEL MAIN CAPS	1 SET

INSTALLATION:

Step 1
Lubricate the main cap bolts with clean motor oil.

Step 2
Use a bottoming tap and clean up all main bolt holes in the block. Each hole should also be checked to ensure against the possibility of the bolt bottoming out. An incorrect torque reading will result if a bolt has this problem.

Step 3
Remove all deposits, burrs, and imperfections from both the block and PRW main caps.

Step 4
Put the main caps into place on the block.

Step 5
Install and hand tighten all bolts. Then begin to torque the inside bolts only, working from the center of the block towards the ends. Next, torque the outside bolts, working from the center towards the ends.

Step 6
Now, the block is ready to be “align bored”. On the first pass, align bore the block with a rough cut to 0.010” under the finished size. On the second pass bore to size. Align honing may not be needed if the boring can get close enough to size. This will be determined after your boring is done.

Step 7
De-bur and clean up.

Installation Instructions for Angled and Stepped Main Caps

Step 1

Lubricate the main cap bolts with clean motor oil.

Step 2

Measure the #2, #3, & #4 registers on the block. If the registers are not square, they must be squared by milling. Take the largest of the six readings and mill the other five registers to that meet that measurement.

Step 3

Now measure the register depths from the block to get the register depth for the main caps. The register depths of the caps should have between 0.001" and 0.003" more depth than the block. This clearance is critical, as this small gap gives the main caps their bite, and stops them from walking during operation. If the clearance is any larger than 0.003", this gap could lead to distortion of the main bearing bores. Take the register depth from the block and add 0.001" to 0.003" to determine the required side bolt pad clearance. Now, mill the caps to the proper depth. If the clearance is too large, mill the main cap register on the bolt hole pad. If the dimension is too small, mill the outer most pad. Take great care to not cut down the vertical register.

Step 4

Use a bottoming tap to clean up all main bolt holes in the block. Each hole should also be checked to ensure against the possibility of the bolt bottoming out. An incorrect torque reading will result if a bolt has this problem.

Step 5

Remove all deposits, burrs, and imperfections from both the block and PRW main caps.

Step 6

Put the main caps into place on the block.

Step 7

Now install and begin to tighten down the center bolts of the caps. Do not torque them at this time.

Step 8

Insert the drill busing into the side hole of the main cap. For 3/8" bolts drill the block with a 5/16" drill bit and for 7/16" bolts drill the block with a 3/8" bit. Be sure to drill only the bolt length plus 1/8". Drilling to deep will put you into the water jacket.

Step 9

After drilling, remove the drill bushing and use the cap as a guide to tap the holes. For 3/8" tap 16 threads and for 7/16" tap 14 threads.

Step 10

Install the outside bolts to finger tight. Now, torque all inside bolts, working from the center of the block toward the ends. Finally, torque the outside bolts working from the center towards the ends.

Step 11
Now the block is ready to be align bored. On the first pass, align bore the block with a rough cut to 0.010” under the finished size. On the second pass bore to size. Align honing may not be needed if the boring can get close enough to size. This will be determined after your boring is done.

Step 12
De-bur and clean up.