



MAIN CAPS INSTRUCTION MANUAL

Please read instructions thoroughly before attempting installation of the Neil and Parks 350 Chev journal aluminum Main Caps for Dart Iron Eagle Blocks.

Tools Needed

- Milling Machine with vise, and preferably a digital readout
- 1/2" to 1" end mill that cuts 1" or more deep
- 1/8" wide woodruff key cutter (optional)
- Bore Gauge for 2.5-2.642" diameter
- Offset boring head to cut from 2.5-2.642" one inch deep
- Indicator to set up mill on centerline of crank on cap
- 12" calipers to measure cap width
- Flat file
- Align bore (optional)
- Align Hone
- Torque Wrench and required sockets for main bolts/studs

Instructions

1. Fitting the caps for width. Start with the center three caps. Then, if you screw one up, you can use that one on the front cap. Measure width of cap register on block. Cut cap approximately .005" bigger than the block. Make sure you are centered on the cap so the bolt holes will line up and the bearing bore and notch will be where they are supposed to be. Bevel edges slightly with file to facilitate installation.
2. Trial fit on block. If fit is satisfactory, good. If not, shave some more off. They should fit very snugly to prevent walking.
3. Repeat for other caps. The front cap is simply just one of the caps with more cut off the sides. We recommend using a woodruff key cutter to cut a little notch on each end to slip a screwdriver in to pry the cap off.
4. If using an Align bore, skip to step 9
5. With cap bolted on and torqued, measure how far off from center the existing bore in the cap is from the bore in the block.



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6. Clamp cap in vise and align up on the bore where the crank should be, which may, or may not be lined up on the existing bore in the cap. Take a big enough cut to cut all the way around the cap.
 7. Repeat step 5. If reading is "0", the cap bore is on the same center as the block bore, then repeat step 6 and cut to 2.639" diameter.
 8. Repeat steps 5-7 for the remaining caps.
 9. If using the align bore method now is the time. Cut to 2.639". You are now ready to Align Hone to size. Finished bore size should be between 2.6406 and 2.6416". We also recommend .0035 vertical clearance for main bearings, and .008 end play for most normally aspirated engines.