

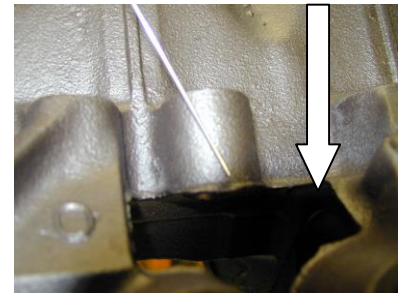
MEGA BRACE

LIFTER BORE REINFORCEMENT SYSTEM

NOTE: THE MEGA BRACE MAY NOW BE INSTALLED WITHOUT GRINDING IN MOST BLOCKS, WITH THE ENGINE ASSEMBLED (cam must be removed)
(the instruction below (#1-3) are for a bare block, to be done before final cleaning- otherwise start with #4)

1. Deburr the casting flash located around the bottom of the lifter bores (see photo 1)

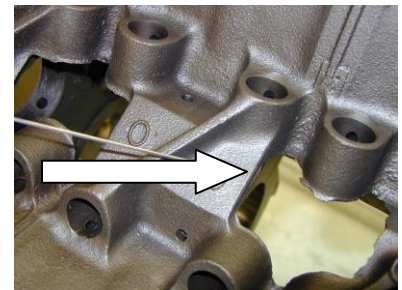
PHOTO 1



2. Temporarily position the rear aluminum brace in place and observe how much metal may need to be ground away from the cast iron center lifter brace in order to permit passage of the clamping bolt. You MAY have to grind a small amount of material from the center of the block (see photo 2) for the MEGA BRACE clamping bolt.

3. Temporarily fit both the aluminum tops and the matching steel bottom plates in place and check for proper clearance. Note that each aluminum block is stamped with the letter "F" identifying front, indicating that the stamped end of the blocks must be installed facing the front of the engine. The aluminum tops should seat fairly even along the lifter bore surfaces. Grind away any interference spots on the aluminum braces or on the block. The braces are not designed to exert direct surface-to-surface pressure until the later application of epoxy. Variations in block castings required the system to be designed with epoxy in order to allow for exact fit. The bottom (steel) anchor braces should seat evenly under both sides of the lifter bores so that they remain unobstructed.

PHOTO 2



4. After all the preliminary grinding and fitting is complete, install both the top and bottom braces front and rear and lightly secure both sets of clamping bolts using flat washers. Visually check to ensure that no portion of the bottom plates or bolts extend below the periphery of the cam tunnel. If so, it will not be possible to install the camshaft. If necessary, use additional washers to raise the bottom level of the bolts(see photo 3).

PHOTO 3



- 5. Carefully and thoroughly clean the outside surfaces of the lifter bores as well as the notches in the aluminum lifter braces with brake parts cleaner, or, a similar product that can remove grease without leaving an oily residue.**

- 6. After prefit and cleaning, thoroughly mix the enclosed epoxy equal portions. Spread the epoxy in a thickness of approximately 1/16" (or more as required) in each lifter bore notch in the aluminum upper plates. Position the upper plates in the lifter valley and slide the mating bottom plates in place. Install the supplied 3/8" grade 8 bolts and washers and torque evenly to no more than 10ft/lbs. Promptly remove excess epoxy squeezed out after tightening and allow to dry for 24 hours.**

- 7. Once the epoxy has cured, remove the bolts one at a time and apply Threadlocker to the bottom of the bolt threads and reinstall only applying light tension to the bolts at this time.**

- 8. Check lifter bore clearance by inserting lifters into each of the bores to be reinforced by the brace. Lifters should move freely with light lubrication. If movement of any of the lifters is restricted, hone the problem bore until free movement is restored. This step allows the builder to later ascertain if the lifter bore restriction is actually caused by the excessive torque applied on the MEGA BRACE clamping bolts.**

- 9. Since actual lifter bore wall thickness varies from one block to another, the final maximum torque value applied to the MEGA BRACE clamping bolts may also vary.**
Begin the tightening sequence by initially applying 20ft/lbs to all clamping bolts.
Check lifter clearances. If all the lifters move freely, apply 5 more ft/lbs to the clamping bolts and then check the lifter clearances again. Continue tightening in 5ft/lb increments until one of the lifter bores distort (which requires loosening 5 ft/lbs), or the maximum recommended torque value of 35-40 ft/lbs is reached.

