



Dart Aluminum Big "M" Sleeve Installation and Removal Procedure

- 1.) Check cylinder bore concentricity and deburr bottom of sleeve for removal.
- 2.) Install short length bolts with washers in 1 or 2 bolt hole locations around each sleeve that will not be removed. This will prevent the sleeves from falling out when the block is flipped over.
- 3.) Heat the block in an oven at 300°F for approximately 30 - 45 min. **(STOP! When removing block from oven use caution! The block will be extremely hot and could burn you!)**
- 4.) Push / Drive out damaged sleeve(s) with sleeve driver from bottom side up towards the deck surface. (Note: If the cylinder measured out of round in (Step 1) and will not drive out the sleeve will have to be bored out due to distortion.)
- 5.) When the block cools check sleeve bore concentricity and I.D measurement. The standard sleeve O.D should measure 4.740" O.D making the block sleeve bore 4.7385" I.D to maintain the required .0015" press fit for the entire sleeve surface area. If this interference fit is not possible due to damage or the bore being out of round you will need to overbore the block and install a + .010, +.020 or +.030 O/S sleeve depending on how far the block needs to go for clean up. When installing an oversized sleeve the press fit specification will stay the same as above at .0015" total interference.
- 6.) When the block has been sized for the required sleeve re-heat block as specified in step # 3 and push the sleeve in from the deck side down. Make sure the sleeve is clocked correct so that the interlocking flats on the sleeve will line up with the adjacent sleeves on either side.
- 7.) Remove all small retaining bolts that were used to hold in the non removed sleeves and use a torque plate to seat all sleeve(s) in the sleeve bores.
- 8.) Measure sleeve to deck height and mill according to your engine building specs. Most engine builders run the sleeve height anywhere from .000" - .002 above the deck for proper gasket sealing.

If you have any questions please contact our technical department at 1-248-362-1188 and we can assist you with the R&R procedure if needed.

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