



CYLINDER SLEEVES AND INSTALLATION IN ALUMINUM ENGINE BLOCKS

FOR IMMEDIATE RELEASE

Due to the characteristics of an aluminum block and its relationship with the centrally cast ductile iron sleeves **it is mandatory that the sleeves be pressed down with a torque plate before decking the block.** This ensures that all of the sleeves are seated so that they do not sink during operation. WORLD

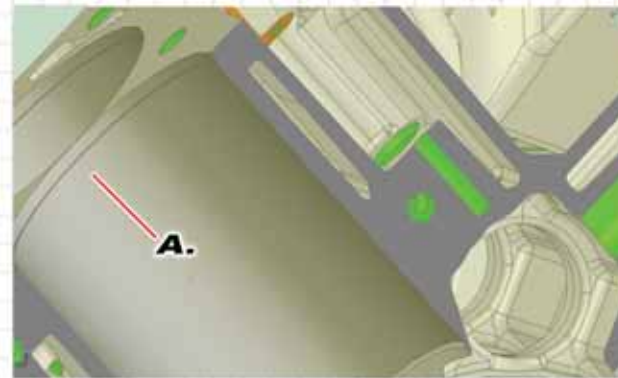
PRODUCTS installs the sleeves in all of their blocks at .0005" to .002" press fit and are intended to be .002" to .004" above the deck when seated. This allows the engine builder to put the sleeves at whatever height is needed to suit his needs.

It is very possible that when a block goes through a hot wash after manufacturing the sleeves will lift during the cooling process. To just assume that the sleeves are all seated and proceed to deck the block would be wrong and could ultimately lead to engine failure. WORLD PRODUCTS **cannot and will not accept this responsibility.** It is the engine builder's responsibility to make these decisions.

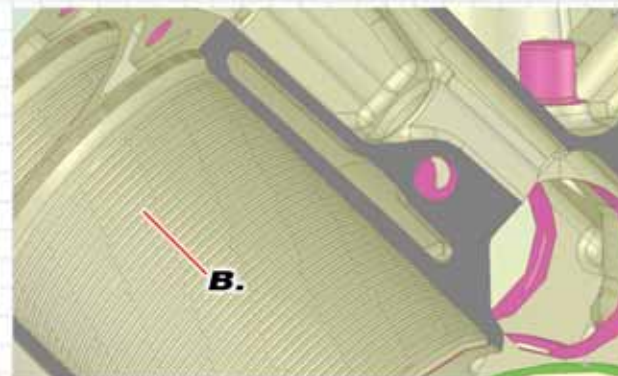
SPECIAL NOTE FOR WARHAWK LS BLOCKS:

The WORLD PRODUCTS WARHAWK LS block is manufactured differently from a OE based LS block. It has many significant improvements over a stock LS block, but keeping to the point at hand, the sleeves in a OE block are cast in place and have grooves on the back side and cannot move after the block is cast. This also makes it a very complicated and expensive repair if replacement is needed.

The WARHAWK block is manufactured much like other aftermarket blocks, whether it be a small block Chevrolet, small block Ford, or Chrysler. The WARHAWK block cannot be machined using the same procedures as the stock OE LS block. The sleeves must be pressed and seated before decking to ensure the sealing of the head gaskets.



Aftermarket aluminum block
World Products Warhawk block has smooth cylinder walls and registers for sleeves (A).



OE LS-series aluminum block
Illustration shows ribbed cylinder walls (B) in OE LS casting left by sleeve after casting.



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ALUMINUM ENGINE BLOCKS