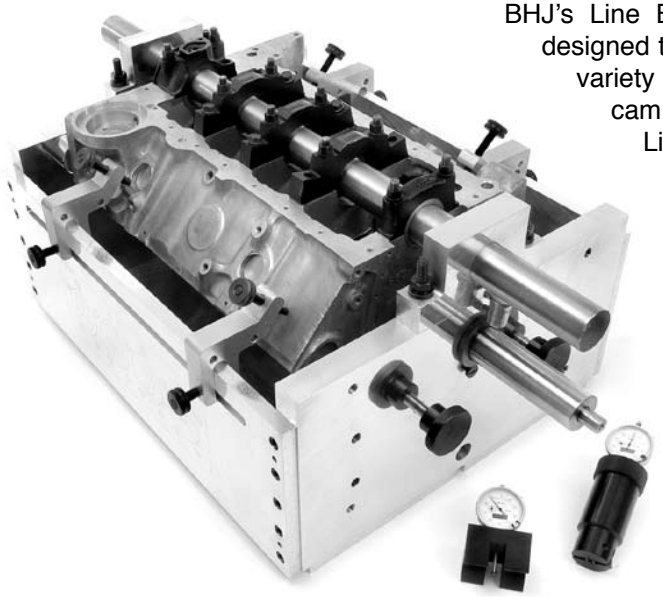
Line Boring Fixture

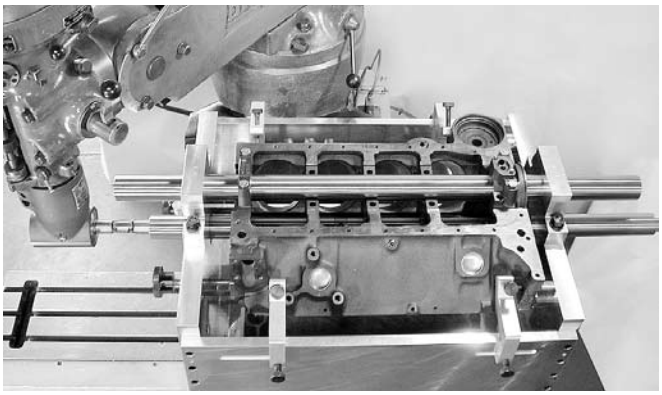


BHJ's Line Boring Fixture is an engine block Blueprinting Device designed to line bore main-bearing or cam-bearing bores in a wide variety of blocks. Whether roughing-in steel main caps or boring cam tunnels to install roller cam bearings, the heavy duty Line Boring Fixture provides the precise, accurate results demanded by high performance engine builders.

When boring cam tunnels for oversize Babbit or roller bearings, the Line Boring Fixture is the only system of its kind on the market that will correct the cam location in all three relationships to the crankshaft, making the cam tunnel absolutely parallel to the mains, straight in line with the mains and on the correct height through the block in relation to the mains. Any skew or twist in the cam tunnel is completely corrected as a result.

The function of machining the cam tunnel parallel to, and at the correct center-to-center distance from the mains is built into the fixture. The ability to index the block into place, using the mains as the reference point, is left to the discretion of the operator. This method of set-up gives the operator the ability to position the block in the fixture for the best possible clean-up, based on the existing cam tunnel location, thus compensating for core shift and inaccurate factory machining. The amount of material to be removed from the deck surfaces will be minimized when the cam tunnel is located in this manner.

The large-diameter Boring Bar is supported by the fixture close to the block faces, thus reducing flex–normally experienced with smaller diameter boring bars on conventional line boring machines–to an absolute minimum. The resulting rigidity allows a greater cutting depth and reduces machining time while increasing accuracy and surface finish quality. The fixture enables the machinist to bore to the finished desired diameter, thus eliminating the need for line honing.



When used in the Main-boring configuration, the fixture is universal and will accommodate any block, up to a maximum length of 25". Cam-boring configurations are application-specific. Once an initial Line Boring Fixture has been purchased, Step-Up Kits provide greater flexibility of the fixture. Step-Up Kits allow Mains-to-Cam expansion, Cam-to-Mains expansion and the addition of engine families within the Cam-boring configuration. Only the minimum number of parts is included in any given Step-Up Kit to avoid duplicating parts supplied in the original Kit.

The Kit contents include all of the necessary Positioning and Clamping Hardware for set-up, one Boring Bar (for cam or mains), set-up Dial Indicators and a 90-degree Drive Head, which mounts to an existing vertical mill. An instructional DVD is included with each initial kit and is also available separately by calling BHJ. Also available is the Small Block Chevy Distributor Alignment Fixture, which indexes the cam tunnel boring location to the blueprint-correct distributor gear "sweet spot".

Use of the Line Boring Fixture requires the 2" Precision Support Bar and Main Bearing Bore Adapter Rings, which are sold separately and shown on page 5.

...Blueprinting Basics

Like the Line Boring Fixture, all of BHJ's Blueprinting Fixtures continue to provide machine shops using commonly-found machinery with the level of accuracy normally associated with much more costly CNC engine machining centers. Review the entire range of BHJ Fixtures in the Introduction To Engine Blueprinting section on page 3.