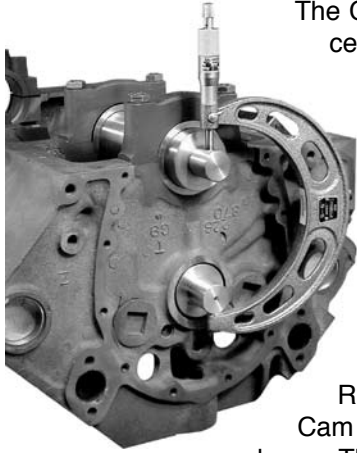


## Cam-Crank Center Distance Gauge



The Cam-Crank Center Distance Gauge provides an accurate method for measuring the center-to-center distance of the cam and crankshaft. This process is imperative with the availability of custom-length timing sets from various manufacturers. The Gauge Kit is available to fit all popular engines.

The initial Kit includes one Crankshaft Bore Mandrel, one pair of Main Bearing Bore Adapter Rings and one Cam Tunnel Mandrel. Step-up Kits are also available and are supplied with one Cam Tunnel Mandrel and one pair of Main Bearing Bore Adapter Rings.

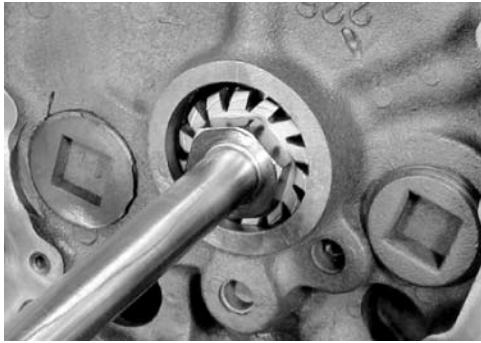


The Crankshaft Bore Mandrel is universal to all applications, using the Main Bearing Bore Adapter Rings to center it in the mains of any given block. The Cam Tunnel Mandrel is machined to fit the two front cam-bearing bores. The Measuring Pin on both the Cam and Crank Mandrels is 1" diameter. A

simple micrometer measurement across the two Measuring Pins, with the subtraction of 1" gives a precise center-to-center distance measurement.

Micrometers of the appropriate size for all applications are available on page 29. The Timing Set Length Gauge is also available for quick and accurate measurement of timing sets and is shown on page 22.

## Oil Groove Cutter



BHJ's Oil Groove Cutters provide quick and accurate groove cutting in cam tunnels and main bearing saddles. As engine horsepower continues to climb, engine builders are finding it necessary to improve bearing oiling. The Oil Groove Cutter makes a seemingly impossible task fast and repeatable.

After the cylinder block is mounted in a line-boring machine, the Oil Groove Cutter is installed in the cam tunnel or mains. The drive yoke for the honing mandrel is then attached to the Oil Groove Cutter. All five grooves in a cam tunnel (OGC-1) or main saddles (OGC-2) can typically be enlarged in 30 to 40 minutes. The modified groove will be deepened

to full factory depth (or to specification) and widened to give a minimum 25% increase in cross-sectional area over a full-size factory-cut groove. This operation is typically necessary after line boring the cam tunnel.

The Oil Groove Cutter is available in a variety of sizes to meet different engine requirements. Setups are available for small block Chevrolets with stock cam bearings, oversize stock bearings, big block bearings, and various roller bearings, as well as numerous other applications. Different size cam tunnels can be accommodated simply by adding Cutter Step-Up Kits, which include only the necessary hardware to adapt a current Kit to a new size application. The OGC-2 model Cutter, sized specifically for main saddles is available for all engines.



## Cam Bearing Installer



The Cam Bearing Installer smoothly draws both Babbit and roller bearings into position using a heavy duty sealed-bearing Drive Hub. Precise-fitting Guide Plugs supplied in 23 common sizes (up to 55mm roller), hold the bearing square to the housing bore, ensuring straight installation.

Distortion-free installation, elimination of incorrect positioning of the bearings and easy oil-hole positioning make BHJ's Cam Bearing Installer superior to any other method of bearing installation. Bearings may also be removed from the block in the same manner.

Conventional cam bearing installation tools use an expanding rubber-covered mandrel and a large hammer. This method allows the bearing to shift and potentially be driven in crooked. This can cause the camshaft to bind, leading to instant bearing failure. When installing needle type roller bearings, this method is absolutely prohibited by the bearing manufacturer, as it causes sidewall distortion, which locks the needles to the cage and prevents proper rotation.



The Cam Bearing Installation Tool is supplied in a sturdy, foam padded plastic case for storage and includes an application size chart for easy Guide Plug selection. For projects using only one size cam bearing, the Cam Bearing Installation Tool is also available in a one-size-only Kit, which is supplied with one Guide Plug (specify when ordering). Replacement and larger-size Guide Plugs (including 60mm roller) are also available.

## S.B. Chevrolet Fuel Pump Pushrod Fixture

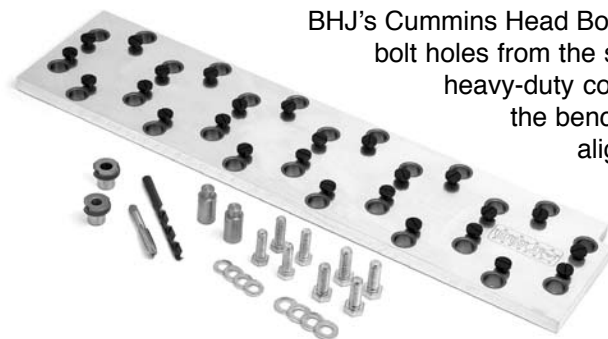
BHJ's Fuel Pump Pushrod Fixture Kit is designed to accurately locate and install a finished fuel-pump boss in late-model, fuel-injected small block Chevrolet engines. These blocks typically do not have a completed boss and must be modified to allow use of a mechanical fuel pump. The ability to conduct this process becomes more and more valuable as older cores become less available for performance applications requiring a mechanical fuel pump.



The Kit is installed via a Registration Plate, which precisely aligns from the timing cover locating dowels using hardened bushings, and bolts securely into place. Three Fixture Blocks are attached to the unfinished boss to execute each part of the three-stage process. The Kit includes all the necessary Fixture Blocks, Fixture-mounting Hardware, Drill Bushing Guides, Drills, Taps and Reamers to do a clean, precise job every time.

## Cummins 14mm Head Bolt Fixture

BHJ's Cummins Head Bolt Fixture allows precise up-sizing of Cummins 6B diesel head-bolt holes from the stock 12mm configuration, to 14mm. The precision design and heavy-duty construction allows for countless accurate installations either on the bench top or with the engine in the chassis. The Registration Plate aligns from the stock dowel holes and bolts to the deck surface using the supplied 12mm Bolts. Switching to the 14mm Bolts, also included in the Kit, allows the remaining holes to be drilled and tapped, once the initial holes have been machined to 14mm, thus completing the process.



The Head Bolt Fixture Registration Plate is constructed of aluminum tooling plate and includes all Drills, Taps, Drill Bushing Guides and Mounting Hardware necessary to complete the process.

An optional Dowel Hole cutter and Oversize Dowels are also available which together provide a larger O.D. Dowel, thus providing adequate wall thickness. Machining the block for 14mm bolt-holes and re-installing the stock O.D. dowels significantly reduces the dowel wall thickness, as the I.D. of the dowel is machined to accept the 14mm bolt. Up-sizing the dowels in this manner ensures adequate strength for heavy duty applications.



## ...More Diesel Products

BHJ also manufactures Honing Plates and O-Ring Groove Cutters specifically tailored to Cummins, Ford, General Motors, International and many other Diesel applications. Virtually all BHJ Tooling and Fixtures can be used in one form or another for building high performance Diesel engines. Email [sales@bhjproducts.com](mailto:sales@bhjproducts.com) or call for more information on BHJ Diesel applications.