

Head-Tru Kit



The Head-Tru is a Blueprinting Fixture designed for cylinder head porting shops that have experienced the problem of intake-port misalignment from one head to another. Most head porters lay out their ports from a gasket or gauge that lines up from the intake manifold bolt holes.

This can create problems due to misalignment on the cylinder head between dowel holes and intake bolt holes. The result is that an intake manifold can be port matched to only one set of cylinder heads. The Head-Tru acts as a layout plate, which registers from the block dowel holes. Using the

Port Alignment Blades supplied, the correct intake-port running centerline can be scribed onto the head. This gives the correct starting point to zero the layout on every head.

Additionally, the Head-Tru allows for scribing the cylinder bores on the deck surface of the head, for consistent combustion chamber layout. Replaceable Cylinder Bore Adapter Rings are available in custom sizes (specify when ordering) for scribing the head at the correct bore size in the block.



Cylinder Head Fixture

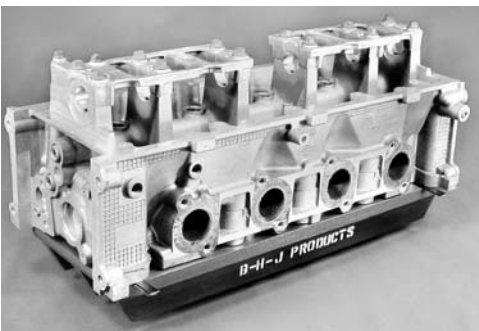


BHJ's Cylinder Head Fixture ensures accurate positioning of any cylinder head from an established reference point, which is necessary to properly perform many cylinder head machining operations. The cylinder head is mounted in the Fixture from the valve cover side for most procedures, which leaves all other surfaces exposed for machining. On most cylinder heads, mounting in this manner leaves the valve guides and spring seats exposed for machining as well. The head can also be mounted from the deck, leaving the top surface fully exposed for additional machining operations.

Precise setup is accomplished by inserting locating dowels into the deck surface, and positioning the head using a pair of supplied adjustable-length Setup Standards. Once the head has been clamped in the Fixture, it can be rolled into position and leveled both across its width as well as end-to-end, using the Height-adjustment Feature located on the Protractor end of the Fixture. Setting-up in this manner ensures that the travel of the cutter head is always parallel to the dowel pin centerline as the head is rolled over in the Fixture. This is critical when correcting the included angle between the deck surface and the intake surface. Use of the large Protractor and Vernier Pointer allows this angle to be held within twelve minutes of one degree.

The Fixture utilizes massive Cast Iron End Supports, which are keyed for accurate alignment on a machine table. Supports are machined to accommodate the T-slot spacing of all common surfacing and milling machines. The infinite pivot point provides 360-degree rolover capability and accepts 4 cylinder, V-6 and V-8 heads up to 23-1/2" in length. Straight-6, V-10 and V-12 heads can be accommodated with the addition of the "XL" Step-Up Kit. Custom-length Bars are also available on a special-order basis.

Cylinder Head Straightening Plates



Cylinder head rebuilders know the value of straightening aluminum cylinder heads prior to surfacing. With the sparse availability of several common heads in today's core market, straightening capabilities are a must and the only salvation for these heads.

When using BHJ's Head Straightening Plates, the process involves bolting the head to the solid Base Plate and forcing a reverse bow. The assembly is then oven heated to relax the cylinder head so that after cooling, the head is straight enough that the cam bearing bores do not require align boring and the deck surface is flat enough to require only a minimum amount of material removal.

Plates are manufactured from the highest quality stress-relieved cast iron, which retains its flatness after repeated use. These Castings are surface-ground both top and bottom to precision, commercial tolerances. Central Clamping Studs are mounted in Eccentrics, which allow adjustment to the head bolt center distance to accommodate any head. This eliminates the need for having multiple holes drilled and tapped in the plate with the possibility of the threads stripping from constant use. Stainless steel Studs, Nuts and Washers are supplied for their superior heat resistance.



Cylinder Head Intake Drilling Fixtures



BHJ's Vortec and Magnum Cylinder Head Intake Drilling Fixtures allow quick and accurate drilling and tapping of Chevrolet Vortec and Mopar Magnum heads. Finished heads allow installation of a standard S.B. Chevrolet intake manifold onto Vortec heads, or the

"LA" Mopar intake manifold to be installed onto Magnum heads. The

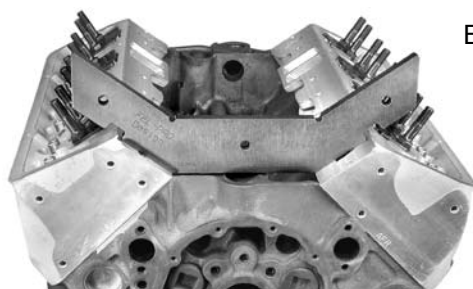
operation can be done on a bench top in 30 minutes or less using a hand-held drill.

Both Drilling Fixtures include one precision-manufactured Fixture Plate with interchangeable Drill and Tap Guide Bushings, a 5/16" Drill, a 3/8"-16 Tap and necessary Mounting Hardware. Only a 3/8" hand drill and a tap handle are necessary to complete the job.



Heads

Intake Angle Gauges



BHJ's Intake Angle Gauges help identify and resolve issues resulting from incorrectly machined engine components. Cylinder heads, blocks and intake manifolds, or any combination thereof, if not properly machined, can lead to intake leaks. These Gauges expose errors in these critical areas before further machining or assembly is conducted.

The precision-machined Gauges are designed to rest on an assembled block and heads (left), or the underside of an intake manifold (below). Checking for an air-gap either visually or

with a feeler gauge verifies the correct angles, leading to a proper seal.

Manufactured from aluminum alloy and hard anodized for durability, these Gauges are available individually or in Kit form for four different head/block applications: 80 degrees for 23-degree S.B. Chevy and B.B. Mopar, 85 degrees for 18-degree S.B. Chevy, 87 degrees for 48-degree S.B. Mopar and 90 degrees for B.B. Chevy and S.B. Ford.



Angle Milling Set-Up Blocks

BHJ's Angle Milling Set-Up Blocks will increase productivity for any machinist who uses a level to set up cylinder heads for angle milling. The four Blocks can be used with a dial indicator or precision level (not included) to simplify and improve accuracy in the set-up process.



The Kit includes four precision-machined, aluminum Set-Up Blocks. Each Block is numbered 1, 2, 3 and 4 to correspond with a stock removal value, which is designated in the Instruction Sheet supplied with the Kit. The Blocks can be used separately or stacked together, giving the ability to rapidly and accurately set-up any cylinder head for practically any desired cutting angle.