



BHJ Products, Inc.

Parts List & Instructions

Product Name: **Cylinder Head Straightening Plate**
BHJ Part#: **HSP-4, HSP-6**

Page 1 of 1

Kit Contents:

1x Head Straightening Plate

2x Adjustable Eccentrics

1x 7/16 & 3/8 Stainless Steel Hardware Set

Description

The BHJ Cylinder Head Straightening Plates are stress relieved so they remain straight after repeated use, then surface ground to precision commercial tolerances. Central clamping studs are mounted in eccentrics, which allow adjustment of the bolt center distance to fit 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. Plates are available in 19" (HSP-4) and 30" (HSP-6) lengths.

Head Straightening Procedure

NOTE: The following guidelines are intended as a baseline for good results. Some adjustments will be necessary depending on the particular cylinder head being straightened and the type of oven being used.

The studs, nuts and washers supplied with this unit are stainless steel for maximum durability at elevated temperatures. We highly recommend the use of an anti-seize compound on the threads and also on the eccentrics in the plate.

1. Check the deck surface of the head with a straightedge to determine the amount of warpage. On overhead cam heads, it is advised to check the warpage in the cam bore(s) and correct for the cam bore inaccuracy, as most heads can be surfaced, once the cam bore is true.
2. Adjust the eccentrics to align with the selected bolt holes and set the head on the plate. Install shims under each end of the head equal to one half the measured warpage. The maximum allowable "pull-down" in the center of a warped head should not exceed .125". If necessary, the head must be cycled repeatedly to get it straight.
3. Bolt the head deck-side down to the plate so that the center is touching the plate. Some sources recommend that aluminum heads not be allowed to contact the straightening plate itself, but rest only on the shims, to avoid heat transfer and embrittling the aluminum where contact is made.
4. Place the assembly in an oven at approximately 500°F for a minimum of four hours for a cast iron head. Aluminum heads should be heated in the 400°F range, for between 2 and 4 hours, based on the thickness of the head. Do not remove the assembly from the oven, but turn the oven off and allow the assembly to cool slowly in the oven.

With practice and patience you should be able to straighten any head to within the manufacturers' specification for the maximum allowable resurfacing cut.