

BHJ Products, Inc.

Parts List & Instructions

Product Name: **Cam Tunnel Alignment Fixture**
BHJ Part#: **CTA-1**

Page 1 of 2

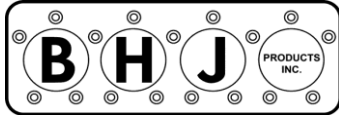
Kit Contents:

1x Top Tie Plate	1x Adjusting Yoke
2x Tie Plate Adjusting Blocks	2x Spherical Washer Sets
2x End Plates (Application-specific)	2x 1/2"-13 Jam Nuts
2x Alignment Bushings	4x 5/16"-18 x 1 3/4" Allen Bolts
1x Dial Indicator Mandrel	6x 3/8"-16 x 1 1/2" Allen Bolts

Cam Tunnel Alignment Fixture Set-Up Instructions

NOTE: Please Read Completely Before Use

1. Mains should be finish line bored or honed prior to boring the cam tunnel.
2. Install 2" Bar with Main Bearing Adapter Rings in #1 and #5 main saddles of block.
3. Install Adjusting Yoke in place of #3 main cap (bolts not supplied). Install one Jam Nut and one set of Spherical Washers on the stud.
4. Slide End Plates onto 2" Bar.
5. Install the two Tie Plate Adjusting Blocks onto Tie Plate using the 5/16-18 x 1 3/4 Allen Bolts. Fit Tie Plate onto End Plate pins; install the 3/8-16 x 1 1/2 Allen Bolts into End Plates and tighten. Install the second set of Spherical Washers and Jam Nut on the Adjusting Yoke stud.
6. Tighten the two adjustment Set-Screws to contact Adjusting Yoke.
7. Liberally oil the End Plate cam bores and the Indicator Mandrel body.
8. Insert the Indicator Mandrel into the front End Plate. Rotate the Mandrel, while adjusting the two set-screws against the yoke, until the Fixture is satisfactorily aligned. Now insert the indicator into the rear End Plate and determine how severely misaligned the cam tunnel is.
9. At this point it may be necessary to re-adjust the Fixture Assembly if the cam tunnel is severely misaligned. The camshaft-to-distributor/oil pump drive gear mesh must be considered.
10. With the Fixture in the final position, tighten the Nut and Spherical Washer on the underside of the Top Tie Plate firmly with your fingers. Now tighten the opposing Nut and Spherical Washer set with a wrench. Do not over tighten as this may distort the fixture.



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Page 2 of 2

11. Once the Fixture is positioned and securely locked in place, load the block and Fixture Assembly into the boring machine.
12. Install your boring bar through the Assembly and supports. Simultaneously slide the supplied Alignment Bushings onto the boring bar, so that they are outboard of the Fixture End Plates on either end of the block. It may be necessary to hone the I.D. of the Alignment Bushings for a close slide fit on your boring bar, due to manufacturer's tolerances.
13. Adjust the assembly position until the alignment bushings will slide into the end plates and rotate smoothly on the Fixture and boring bar. Secure the block in the machine at this point.
14. Remove any parts of the Fixturing necessary, in order to be able to proceed with the boring operation.

Call BHJ at (510) 797-6780 with any questions regarding the part, setup, or operation.