

BHJ Products, Inc.

Parts List & Instructions

Product Name: **Cummins 14mm Head Bolt Fixture**

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BHJ Part#: **HBF-CMN-14**

Kit Contents:

- | | |
|---------------------------------------|--|
| 1x Registration Plate | 1x 14.25mm Slip-Fit Drill Bushing |
| 2x Plate Alignment Spuds | 4x M12-1.75 x 40mm Bolts |
| 1x M12 Drill Bit | 4x M12 Flat Washers |
| 1x M14-20 Thread Tap | 4x M14-2.0 x 40 Bolts |
| 1x 12mm Slip-Fit Drill Bushing | 4x M14 Flat Washers |

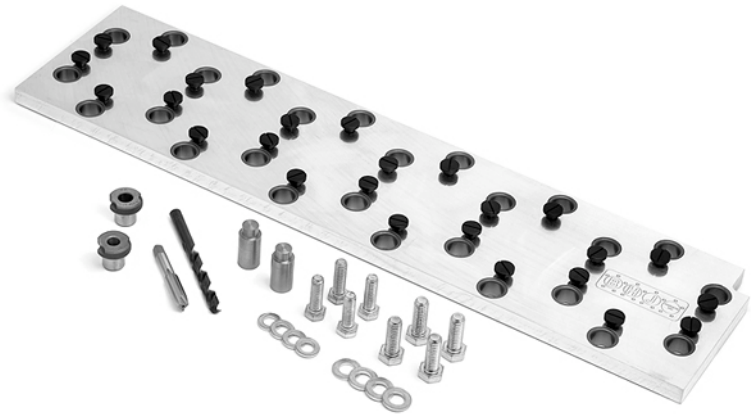
Available Option:

Upsize Dowel Hole Cutter Kit, BHJ Part# HBF-CMN-CB

(Includes: **1x** Cutter; **1x** Slip-Fit Drill Bushing; **6x** Oversize Dowels)

Description

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.



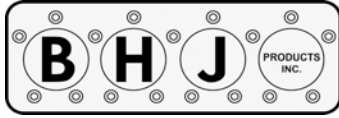
The Registration Plate aligns from the stock dowel holes and bolts to the deck surface, using the four supplied 12mm bolts. Once the initial holes have been machined to 14mm, switching to the four supplied 14mm bolts, allows the remaining holes to be drilled and tapped, thus completing the process.

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An optional Dowel Hole Cutter Kit, [Part# HBF-CMN-CB] and Oversize Dowels, [Part# HBF-CMN-DWL] (shown left) are also available separately, which together provide a larger O.D. Dowel, to maintain an adequate dowel 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. The Dowel Hole Cutter kit includes six oversize dowels.

Installation & Bolt Hole Machining Procedure (next page)



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Installation & Bolt Hole Machining Procedure

1. Align the Registration Plate on the block deck surface and install four 12mm Bolts and Washers loosely.
2. Slide both Alignment Spuds into the Register Plate and into the dowel holes of the block. Tighten the four 12mm Retaining Bolts to secure the Plate in position.
NOTE: Do not tighten the fasteners to head bolt type torque rating when installing the Registration Plate, as this can cause the Plate to warp. The Spuds securely locate the Plate and the bolts should only be tightened to the point where the Plate is secured. It is also strongly recommended that the deck surface of the block deck be checked for straightness and surfaced if necessary, before installing the Registration Plate.
3. Install the 12mm Slip-Fit Drill Bushing into each of the open bolt holes and drill each hole using the 12mm Drill Bit to prepare for the tapping procedure. Remove the Alignment Spuds to drill and tap the corresponding bolt holes. It is not necessary to replace the Spuds, once these bolt holes are finished.
4. Install the 14.25mm Slip-Fit Drill Bushing into each open bolt hole and tap each hole, using the 14mm-20 Tap and an adequate cutting solution.
5. Thoroughly blow-out the tapped 14mm holes with compressed air. Install the four 14mm Bolts and Washers into four of the newly tapped holes to keep the Plate secure and remove the four 12mm Retaining Bolts and Washers.
6. Repeat steps 3 and 4 in the final four bolt holes to complete the process.

Dowel Hole Machining Procedure

- A. With the Registration Plate installed using the 14mm bolts as described above, install the 23/32" Slip-Fit Drill Bushing into the first dowel hole location to be enlarged.
- B. Install the Counterbore Cutter into a hand-held power drill and insert into the Slip-Fit Drill Bushing. Machine to a depth equal to that of the original dowel hole, using adequate cutting solution.
- C. Remove the Cutter and Bushing and repeat steps A and B for the second dowel hole.

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