

BHJ Products, Inc.

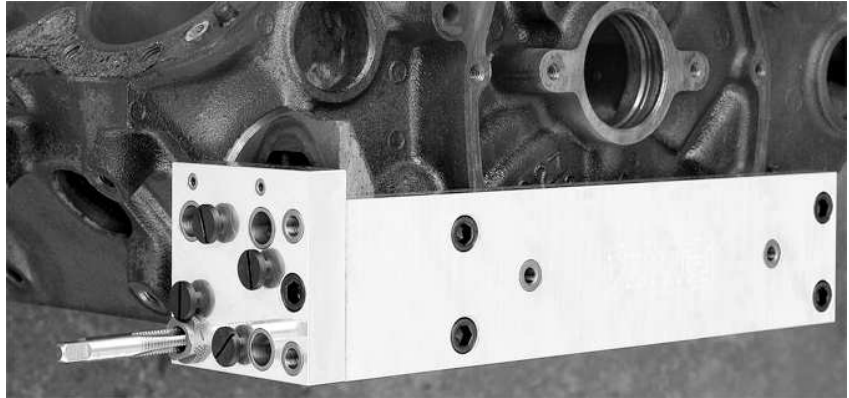
Parts List & Instructions

Product Name: **Small Block Chevrolet Fuel Pump Pushrod Fixture**
BHJ Part#: **FPPR-CHS**

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Description

BHJ's Fuel Pump Pushrod Fixture is designed to accurately locate and machine all mechanical fuel pump bolt holes, as well as push rod and oil drain-back holes in late model, fuel injected, small block Chevrolet engines that have an unfinished mechanical fuel pump boss. These blocks must be modified accordingly to run a mechanical pump.



The Kit is installed via a locating plate (see photos), which precisely aligns from the timing cover locating dowels and securely bolts to the front of the block. Three Fixture Blocks are then attached in sequence 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.

Kit Contents:

1x Locating Plate

1x Bolt Hole Block

1x Drain Hole Block

1x Push Rod Hole Block

1x #7 Slip-In Drill Bushing

1x 1/4" Slip-In Drill Bushing

1x 5/16" Slip-In Drill Bushing

1x 3/8" Slip-In Drill Bushing

1x 7/16" Slip-In Drill Bushing

1x 31/64" Slip-In Drill Bushing

1x 3/4" Slip-In Drill Bushing

1x 1/8" Drill Bit

1x #7 Drill Bit

1x 5/16" Drill Bit

1x 3/8" Drill Bit

1x 31/64" Drill Bit

1x 3/4" Drill Bit

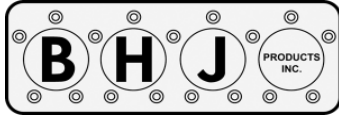
1x 1/2" Reamer

1x 1/4"-20 Tap

1x 3/8"-16 Tap

2x 1/4"-20 x 3/4" Socket Head Bolts

5x 3/8"-16 x 1" Socket Head Bolts



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Fixture Installation & Machining Procedure

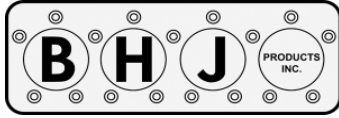
Block Preparation and General Guidelines

1. Be sure block is clean and has passed magnaflux testing
2. File and de-bur timing cover area and front motor mount bolt holes
3. Install two timing cover dowels, if not already in block
4. Do not over-tighten fixture installation bolts
5. Drain Hole Block has flat face, while Push Rod Block has angled face
6. Use cutting oil for all drilling, tapping and reaming procedures
7. Blow out all holes, clean and de-bur when finished with each operation
8. Some engine blocks may require minor adjustments to some hole depths

Machining

1. Bolt and Dowel Holes

- A. Align and install Locating Plate onto dowels on timing cover surface and secure using four 3/8" Allen head bolts.
- B. Position Bolt Hole Block over fuel pump boss and attach to end of the Locating Plate, using one 3/8" Allen head bolt.
- C. Mark 1/8" drill bit with tape or a drill stop for a .375" depth hole. Following the top two 1/8" drill bushings in the Bolt Hole Block, drill two 1/8" dowel pin alignment holes. Keep drill as straight as possible, to avoid breaking.
- D. If bolt holes are not already machined in block, leave the Bolt Hole Block in place for drilling and tapping bolt holes. Install #7 slip-in drill bushing into one of the two bottom holes in the Bolt Hole Block (holes closest to the oil pan rail). Mark #7 drill bit with tape or a drill stop for an approximate .950" depth hole. Insert the bit into the drill bushing and drill first bolt pilot hole. Repeat in second bottom hole.
- E. Install 1/4" slip-in drill bushing into one of the two bottom holes in Bolt Hole Block (with new #7 holes) and tap bolt hole threads, using the 1/4"-20 tap. Repeat in second bottom hole.
- F. Install 5/16" slip-in drill bushing into one of the two top holes in Bolt Hole Block (holes closest to the deck surface). Mark 5/16" drill bit with tape or a drill stop for an approximate .950" depth hole and drill bolt holes. Repeat in second top hole. Tap both top bolthole threads, using the 3/8" slip-in drill bushing and 3/8"-16 tap.
- G. Remove Bolt Hole Block and Locating Plate. File, de-bur and clean newly machined areas in preparation for drain-back hole machining procedure.



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Machining (continued)

2. Drain-Back Hole

- H. Position Drain Hole Block and fasten to fuel pump boss using two 1/4" and two 3/8" Allen bolts. Drain Hole Block has 1/8" locating dowels on back surface, for precise alignment.
- I. Insert 3/8" drill bit and drill drain-back hole.
- J. Remove Drain Hole Block and prepare for push rod hole machining procedure.

3. Push Rod Hole

- K. Position Push Rod Hole Block and fasten to fuel pump boss using two 1/4" and two 3/8" Allen bolts. Push Rod Hole Block has 1/8" locating dowels on back surface, for precise alignment.
- L. Install 31/64" slip-in drill bushing into Push Rod Hole Block. Insert 31/64" bit into drill bushing and drill push rod pilot hole. It is recommended to clean material out of the hole two or three times using a telescoping magnet (without removing Push Rod Hole Block) during this operation.
- M. Install 3/4" slip-in drill bushing into Push Rod Hole Block. Mark 3/4" drill bit with tape or a drill stop for an approximate 1.770" depth hole. Insert bit into bushing and drill pushrod counterbore. It is recommended to clean material out of the hole two or three times using a telescoping magnet (without removing Push Rod Hole Block) during this operation.
- N. Install shank end of 1/2" reamer into 7/16" slip-in drill bushing, then, install bushing and reamer into Push Rod Hole Block.
- O. Finish ream the 1/2" push rod hole. Use plenty of cutting oil.
- P. Remove Push Rod Hole Block. Machining process is now complete. Clean-up surfaces, de-bur and blow-out material as necessary.

Call BHJ at (510) 797-7680 with any questions regarding this fixture, its setup, or operation.