



# INSTRUCTIONS

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REV. 3-1-95

Kit Number 17901-86

## ADJUSTABLE PUSH ROD KIT

### General

This kit is designed for use on all Sportsters® equipped with Evolution style engines.

This kit contains four adjustable aluminum push rods.

#### NOTE

Installation of this kit will void the Harley-Davidson Limited Warranty.

### Installation

#### GENERAL

To install these push rods the production (stock) push rods must be removed; therefore, a copy of the Service Manual covering the V2™ Evolution Sportster® engine is needed. A Service Manual covering your motorcycle and the V2™ Evolution Sportster® engine is available from your Harley-Davidson dealer.

These push rods may be used with hydraulic tappets and must be used with tappets that have been converted to solid tappets.

1. Remove production push rods following the procedure given in the Engine Section of the Service Manual under CYLINDER HEAD.
2. Rotate engine so both front cylinder tappets are at their lowest point.
3. Check condition of O-rings in push rod covers and replace if required.
4. Insert the push rod cover for the front cylinder exhaust valve into the hole in the cylinder head. The cover may be held in position with a rubber band and a paper clip hooked into the bottom of the lower push rod cover. Collapse (retract) cover.
5. See Figure 1. Loosen locknut on one of the long push rods and turn adjuster clockwise to shorten push rod.
6. Insert push rod, with adjuster end down, through push rod covers, hole in head and lower rocker box at the front cylinder exhaust valve.
7. Insert ball end of adjuster into tappet socket.
8. Place rocker arm socket on ball end of push rod and insert rocker arm shaft.
9. If hydraulic tappets are in engine, adjust push rods following procedure A; with solid tappets follow procedure B.

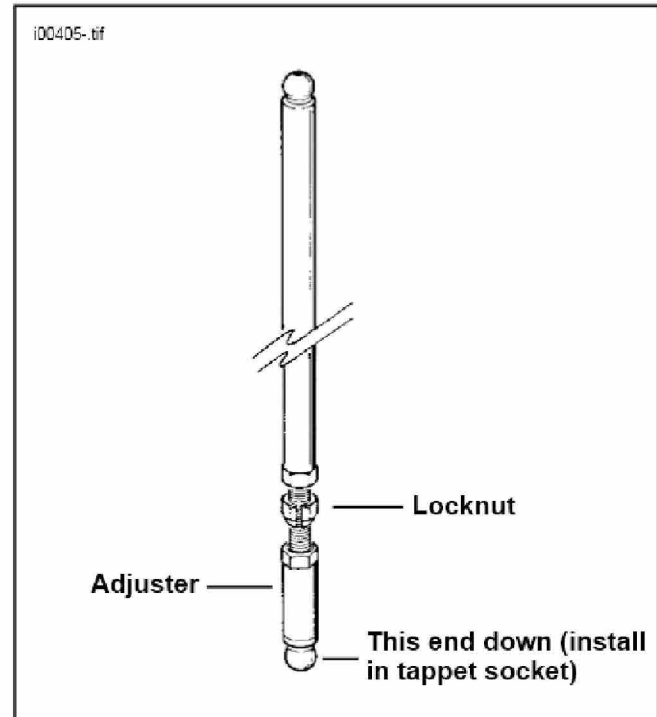


Figure 1. Adjustable Push Rod

#### NOTE

Push rod adjustment must be made with engine cold.

#### PROCEDURE A (Hydraulic Tappets)

- 1A. Adjust push rod length to zero clearance.
- 2A. Slowly turn adjuster 3 complete turns counter clockwise (lengthening the push rod) as viewed from bottom. (You may wish to mark adjuster to aid counting turns.)
- 3A. Hold adjuster with a 7/16 in. open-end wrench and tighten locknut down against adjuster. If push rod turns with locknut, use three open-end wrenches; that is, one wrench to hold push rod, one to turn locknut, and one to hold adjuster.
- 4A. Install push rod and cover for front intake valve and repeat steps 1A thru 4A.

**▲ CAUTION**

Wait ten minutes before turning engine after adjusting front or rear cylinder push rods. This wait allows tappets to bleed down and prevents bending push rods or valves. Push rods should turn free and valves must be on their seats (closed) before turning engine.

- 5A. After ten minutes, turn engine until both rear cylinder tappets are at lowest position.
- 6A. Install push rods in rear cylinder and repeat steps 1A thru 4A.
- 7A. Install push rod spring cap retainers on push rod covers.
- 8A. Replace upper and middle rocker covers following the procedure in the Service Manual.

**PROCEDURE B (Solid Tappets)**

Install push rods and covers following the procedure given for hydraulic tappets; but, adjust as follows:

**NOTE**

*Engine must be cold before adjusting push rods.*

- 1B. Turn adjuster on push rod until zero clearance exists in valve train. Push rod should turn with no drag and no up-down "shake."
- 2B. Hold adjuster with a 7/16 in. open-end wrench and tighten locknut down against adjuster. If push rod turns with locknut, use three open-end wrenches; that is, one wrench to hold push rod, one to turn locknut and one to hold adjuster.
- 3B. Repeat steps 1B and 2B for the remaining push rods.
- 4B. Install push rod spring cap retainers on push rod covers.
- 5B. Replace upper and middle rocker covers following the procedure in the Service Manual.