Caution: Disconnect battery ground cable at battery terminal.

Read entire instruction sheet before you begin. If you are not comfortable with any of the procedures dealing with solid tappet adjustment or cam positioning, take your bike to a qualified motorcycle service shop. Take any and all safety precautions possible. Wear safety glasses or a full face shield. Tie down motorcycle on lift so that it cannot and will not fall over.

SUGGESTED TOOLS AND SUPPLIES:

- JIMS No. 33443-84 tappet block alignment tool (late 1976-1984 models with ¼-20 screws)
- JIMS No. 917 pushrod tube clip R&I tool
- JIMS No. 904 center jack
- New tappet block gaskets
- New pushrod tube seals
- 1/2” and 7/16” open end wrenches
- Blue Loctite
- Assembly lube

Note: If you do not have a kickstarter, you must lift rear wheel, place transmission in high gear, and rotate wheel to spin engine.

INSTRUCTIONS

1. Remove spark plugs. Remove old pushrods, tubes, tappets, and tappet blocks. Clean and prepare the pushrod tube assemblies with new O-rings or seals. Clean tappet blocks thoroughly after scraping old gasket material from base. Scrape and clean gasket material from tappet block gasket surface of case.

2. Thread locknuts onto tappet adjusters with taper pointing toward tappet body. Lubricate threads and thread tappet adjuster screws with locknuts into each tappet body.

3. Make sure that camshaft is new or in servicable condition. (No pitting or abnormal wear on lobes) Lubricate cam lobes and tappet rollers with assembly lube and install new tappets into tappet blocks, then install onto engine case with new gaskets. No gasket sealant is recommended. Clean case and tappet block surfaces with rubbing alcohol and install gaskets dry.

4. On Late 1976-1984 models, use JIMS No. 33443-84 tappet guide alignment tool. Insert tool into screw hole closest to oil port. (The holes closest to cylinders and closest to each other). Install 3 screws with blue Loctite and torque to spec. Remove alignment tool, and install remaining screw. Torque to service manual specifications.

Caution: Pushrod lengths are location specific. Make sure that pushrods are installed in their proper positions.

5. Observe pushrod lengths. There are two pushrods that are the same length. These two are the shortest of four and are front and rear intake pushrods No. 5525-1. The longest pushrod No. 5525-2 is front cylinder exhaust pushrod. The medium length pushrod No. 5525-3 is rear cylinder exhaust pushrod. Slip pushrods through pushrod tube assemblies and into position. Lubricate pushrod ends with assembly lube prior to installation.

6. Begin adjusting front cylinder first. Rotate engine so front cylinder is at top dead center. Be sure cam is positioned so both front cylinder tappets are on base circle of camshaft. Extend each tappet adjuster with fingers or using ½” wrench if necessary until pushrod has no up and down play, but is not so tight that pushrod does not rotate with some resistance when twisting with oily fingers. When adjustment is correct, hold tappet adjuster with a ½” wrench and tighten locknut with 7/16” wrench.

7. Rotate engine so rear cylinder is at top dead center and both rear cylinder tappets are on base circle of camshaft. Adjust each tappet adjuster and tighten lock nuts as done on front cylinder.

Note: Engine must be cold when adjusting tappets.

When adjustments are done, close up pushrod tubes and install clips with JIMS No. 917 Pushrod Cover Clip Install and Removal Tool. Install spark plugs, boots, and connect battery ground cable.

Check tappet adjustment every 5,000 miles unless excessive tappet noise is heard.

Performance Parts For Harley-Davidson Motorcycles

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