



## INSTRUCTION SHEET FOR PART NO.1046

### SHOVELHEAD VALVE TRAIN KIT



Shovelhead owners, "clean up your act," with JIMS® new valve train kit. This totally re-engineered valve train kit will enable you to oil your Shovelhead top end like an EVO. You can remove your top end oil lines because oil is fed through JIMS® proven Powerglide tappets, then up through work saver pushrods into JIMS® Roller Rocker Arms. Tappets maintain oil pressure better, and they improve the lubrication because oil is now pressurized through the points of contact. Oil pressure to the top end is controlled just like the proven EVO oil system. This kit comes with super special Powerglide™ tappets with an EVO style pushrod seat, special worksaver pushrods, chrome tappet blocks, two tappet block gaskets, and an easy to follow instruction sheet.

Use on single cam shovelhead Big Twin 1966-84 only. (Note: Includes Aftermarket motors) ( Use quad seals for the best possible oil sealant.)

#### Please read all instructions before starting this job.

1. Remove heads and rocker boxes from engine as per H-D® or Clymer Service Manual.
2. Remove rocker shafts from rocker covers by first removing rocker arm shaft screw and o-ring from one side, then remove acorn nut and washer from other side.
3. Tap rocker arm shaft from cover being careful not to damage threads. Inspect shafts for wear and burrs, replace with JIMS® # 17611-66B if needed. Remove rocker arm and spacer. Remove old gaskets. Check for excessive wear at the valve stem tip and pushrod tips. Replace any valve train parts that are worn, bent, broken, pitted or discolored. Keep in mind that excessively worn parts at the pushrod ends and valve stem tips are an indication of wear at the valves and seats. This might be a good time for a valve job, and / or new valve springs, etc.
4. Install JIMS® rocker arms with spacer. Use assembly lube on rocker shaft. Install shaft and tighten acorn nut. Use a new washer.
5. Check rocker end play. See H-D® or Clymer Service Manual specs, adjust if necessary.  
Instructions continued on page 2

**NOTE: When installing a performance cam with high lift, you should always check for rocker arm to rocker box clearance. This can be done with clay or machinist dye. Keep in mind all rocker boxes are different due to casting differences. Minimum clearance .060". Remove material from the rocker boxes only. Also, if you are using a valve spring with a large diameter top collar, check for clearance between underside of rocker arm to the edge of the top collar. Also check valve to valve at overlap (should have at least .035" to .040"). Then check valve to piston to have at least .060". All this must be performed with your valve train set with zero valve lash. If you have hydraulic tappets, adjust them to be solids for the above check. Readjust tappets after check per tappet instructions.**

**CAUTION: WEAR SAFETY GLASSES. EXCESSIVE FORCE MAY DAMAGE PARTS AND TOOL. SEE JIMS® CATALOG FOR OVER 100 OTHER TOP QUALITY PROFESSIONAL TOOLS. THE LAST TOOLS YOU WILL EVER NEED TO BUY.**

**"From The Track... To The Street!"**

555 DAWSON DRIVE, CAMARILLO, CA 93012 • PHONE 805-482-6913 • FAX 805-482-9224 • WWW.JIMSUSA.COM



## INSTRUCTION SHEET FOR PART NO. 1046

6. Check rocker arm to rocker box clearance.
7. Remove the overhead oil line fitting (H-D® #63526-57) from the front and rear rocker covers and crankcase. Install the four plugs provided in this kit. Use sealant on threads.
8. Refer to H-D® or Clymer Service Manual for specifications and to remove tappets and tappet blocks.
9. Remove all old gasket material and keep all foreign material out of tappet block holes.
10. Wash pushrod covers and install new seals.
11. JIMS® "Powerglide™" Tappets are assembled with a small amount of oil to ease in the adjustment. This way you will not have to bleed down the tappet at the time of final adjustment.
12. Apply Assembly Lube to tappets and rollers. Slip tappets into blocks and install blocks.
13. With both blocks in place on case, install JIMS® Tool No.33443-84. (If your case has 1/4-20 mounting holes. Lube tool and screw into the inner center tappet block screw hole to center block into case.) Tighten to 30 in/lb. Install the other block the same way. Remove tool and install last lubed screw and finish torquing to 120 in/lb in a criss-cross pattern at 30 in/lb increments.
14. This is a good time to clean the tappet screen. Use JIMS tool No.2233 to remove screen plug.
15. Locate the front pushrod and covers first. Apply Assembly Lube, to top and bottom ends and threads of pushrods. (Note: All four pushrods are the same length.) With the front exhaust cam at the lowest point, adjust pushrod with thumb and finger just until you eliminate all up-and-down free movement. (NOTE: Do not take up more than the free play of pushrods)
16. Extend pushrod adjuster 7 wrench flats or 1 and 1/6 turns. To do this, hold adjuster screw with a 1/4" open end wrench, while turning pushrod with a 1/2" open end wrench until you have completed the adjustment. Tighten lock nut to pushrod with two open end 1/2" wrenches.

**IMPORTANT NOTE:** *This adjustment will make the pushrod tight, which will bleed the hydraulic lifter. It will take 5-15 minutes or longer to bleed off. It is important that the engine is not rotated while pushrods are tight. The pushrod will spin with your fingers after it has bled off properly. Tighten lock nut. Recheck, close cover and install clips. Repeat exact procedure on other pushrods. Turn motor over several times to pump oil into the "Powerglide(tm)" Tappet until the oil light goes out, or until oil is returning to the oil tank.*

**Note:** Refer to "Powerglide Tappet Information" in the JIMS® catalog for trouble shooting issues, or see web for more details.

### WARRANTY

All JIMS® parts are guaranteed to the original purchaser to be free of manufacturing defects in materials and workmanship for a period of six (6) months from the date of purchase. Merchandise that fails to conform to these conditions will be repaired or replaced at JIMS option if the parts are returned to us by the dealer (purchaser) within the six (6) month warranty period or within ten (10) days thereafter. In the event warranty service is required, the original purchaser must call or write JIMS immediately with the problem. Some problems can be rectified by a telephone call and need no further course of action. A part suspected of being defective must not be replaced by a dealer without prior authorization from JIMS. If it is deemed necessary for JIMS to make an evaluation to determine whether the part is defective, it must be packaged properly to prevent further damage and be returned prepaid to JIMS with a copy of the original invoice of purchase and a detailed letter outlining the nature of the problem, how the part was used and the circumstances at the time of failure. If after an evaluation has been made by JIMS and the part was found to be defective, repair, replacement or credit will be granted.

#### ADDITIONAL WARRANTY PROVISIONS

- 1.) JIMS shall have no obligation in the event a JIMS part is modified by any other person or organization.
- 2.) JIMS shall have no obligation if a JIMS part becomes defective in whole or in part as a result of improper installation, improper maintenance, improper use, abnormal operation, or any other misuse or mistreatment of the part.
- 3.) JIMS shall not be liable for any consequential or incidental damages resulting from the failure of a JIMS part, the breach of any warranties, the failure to deliver, delay in delivery, delivery in nonconforming condition, or for any other breach of contract or duty between JIMS and a customer.
- 4.) JIMS parts are designed exclusively for use in Harley-Davidson® Motorcycles. JIMS shall have no warranty or liability obligation if a JIMS part is used in any other application.
- 5) If it has been determined that one or more of the tappets needs to be returned to JIMS for inspection the following must be carried out before returning.
  - A) As each tappet (one at a time) is removed from the engine it must be cleaned so it can be marked with grease pencil or a similar marker that will not come off during shipping.
 

**Caution:** Do not use a scribe, electric pencil or any other type of marking that will damage the tappet's surfaces, all warranties will be void if any permanent marking is used.
  - B) Mark each tappet for its location i.e. front or rear, intake or exhaust; all marked for the side that was facing the cylinders.

**Example:** Rear Intake with a "C" on the side of tappet that had faced the cylinders, R/I/C

**Note:** If tappets have been revised and marked as above they will be repaired or replaced as required. If repaired and returned they must be installed in the same location they were removed from. If any are replaced they will be marked for there location.

**Example:** F/I, for front intake.

**"From The Track... To The Street!"**