Instruction Sheet For Part #2411

Super "Powerglide™" Kit (Shovelhead)

- ✔ Shovel "Powerglide™" Tappet Block Kits are capable of the highest rpm a Harley® can safely turn, at a valve lift of .700" and with the right valve springs, valves, cam, oil, etc.
- ✔ Shovel motors can have all the hydraulic benefits of the late EVO style hydraulic system by installing JIMS® Shovel "Powerglide™" Hydraulic Tappets.
- ✔ These kits will eliminate the total oil loss of the stock hydraulic units, No. 17920-53A.
- ✔ Billet Shovel Tappet Blocks with "Powerglide™" Hydraulic Tappets.
- ✔ Comes complete with instructions.
- ✔ Tappet block gaskets included.

These tappet blocks supersede lifter block No.'s 18603-80A, 18610-76A and tappet No.'s 18522-53A. Fits Shovel Big Twins 1953 through 1984. Use 1/4"-20 screws, JIMS® No.1205, from late 1976 through 1984. Use 1/4"-24 screws, JIMS® No.2406, from 1953 through early 1976. These blocks are designed to accommodate a gross valve lift of .550" at the valves, leaving a clearance of .035" roller to block freeplay (Please note, if using a cam with a higher lift, a simple modification is all that is needed).

All JIMS® Billet Polished Tappet Blocks are made from 7075-T651 aluminum with a tensile strength of 83,000 psi, which is double the amount of 6061-T6 aluminum and almost triple the amount of cast aluminum tappet blocks. These tappet blocks are machined to the center line of the cam and hold to ±.002". Also, the bores are held perpendicular to the mounting flange to ±.0002".

At last JIMS® has designed and engineered a completely new block kit for shovel motors, stock or performance application. This new kit has an upgraded pushrod seat at a 3/8" diameter and a 5/8" lower seat. Lowering the pushrod seat will help reduce the severe tappet pushrod angle, making JIMS® new kit as close to an EVO tappet as possible. Kit comes with four Big Axle Tappets with new pushrod seat, one 1029-53F front 7075-T651 tappet block polished, one 1029-53R rear 7075-T651 tappet block polished, pushrods, two tappet block gaskets and complete instruction sheet.

Please read all instructions before starting this job.

1. Refer to H.D.® Service Manual for specifications and to remove tappets and tappet blocks.
2. Remove all old gasket material and keep all foreign material out of tappet block holes.
3. Wash pushrod covers and install new seals.
4. 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.
6. Apply JIMS® Assembly Lube, No. 1226, to tappets and rollers. Slip tappets into blocks and install blocks.
7. With both blocks in place on case, install JIMS® Tool #33443-84. (If your case has 1/4-20 mounting holes, lube tool and screw into the tappet 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.
8. This is a good time to clean the tappet screen.
9. Locate the front pushrod and covers first. Apply JIMS® Assembly Lube, No. 1226, to top and bottom ends and threads of pushrods. (Note: Front and rear exhaust pushrods are the longest.) 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)
10. Extend pushrod adjuster 9 wrench flats or 1 1/2 turns. To do this hold 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 locknut to pushrod with two open end 1/2" wrench.

IMPORTANT NOTE: This adjustment will make the pushrod tight, which will bleed the hydraulic lifter. It will take 10-15 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.

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.

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Instruction Sheet For Part No.1046

SHOVELHEAD VALVE TRAIN KIT

Shovel head owners, "clean up your act," with JIMS® new valve train kit. This totally engineered valve train kit will enable you to oil your Shovelhead top end like an EVO.. You can remove your top end oilers 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 only Big Twin 1966-84. (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 ect.

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.

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Instruction Sheet For Part NO.1046

Instructions continued from page 1

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 crank shaft. 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 tappet 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: Front and rear exhaust pushrods are the longest.) 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 1.2 turns. To do this hold 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" wrench.

IMPORTANT NOTE: This adjustment will make the pushrod tight, which will bleed the hydraulic lifter. It will take 10-15 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.

Instruction Sheet For #1732 Rocker Arms

JIMS Shovelhead Roller Rockers Ratio of 1.50

Stock Ratios: (1.43) stock ratio from 1966 to about 1980
(1.50) stock ratio from about 1980-1984.

SHOVELHEAD ROLLER ROCKERS RATIO 1.50

By popular demand, JIMS® introduces roller rocker arms for Shovelheads. Designed to reduce friction in the valve train, providing more horsepower and less heat in the top end. Cast from 4340 chrome moly steel and heat treated. JIMS® Roller Rocker's feature a 660 bronze bushing fit to .0007" - .0012" for the best wear resistance and oil control, along with a roller tip made from bearing grade material to reduce valve guide wear and valve tip galling. Other features include a segmented parabolic pushrod cup which reduces friction at pushrod end and also puts the load on the outer perimeter of pushrod ends, with full oil pressure at pushrod tip. Designed to work in conjunction with other JIMS® valve train components. Use JIMS® No. 17611-66B Rocker Arm Shafts, or equivalent. These rocker arms replace H.D.® No's 17630-66A & 17375-66A.

1. Remove heads and rocker boxes from engine as per H-D®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 ect.
4. Install JIMS® rocker arms with spacer. Use JIMS® assembly lube # 1264 (supplied with kit) on rocker shaft. Install shaft and tighten acorn nut. Use a new washer.
5. Check rocker end play. See H-D® Service Manual specs, adjust if necessary.
6. Check rocker arm to rocker box clearance.

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 tools.See JIMS® Catalog for hundreds of other top quality professional products and tools for use on Harley-Davidsons®.