



A Division of Thiessen Products, Inc.

# INSTRUCTION SHEET FOR PART #1800, #1800-2, & #1800-5



### **BIG TWIN HYDROSOLID TAPPET**

This tappet replaces and surpasses H-D® No.18523-86 and S&S® No.33-5341.

**No.1800** - Use on Big Twin 1984-99, Sportster 1986-90 and Buell® 1987-90. Standard O.D. .8425.

**No.1800-2** - Oversize +.002"

**No.1800-5** - Oversize +.005"

**NOTE: FOR USE ON ADJUSTABLE PUSH RODS ONLY**

Safely add more horsepower to your higher RPM levels with a simple installation of Hydrosolids. Use on any cam, be it a solid or hydraulic cam, and receive 3 to 6 more usable horsepower after about 5600 RPM. Use at the safest RPM level possible for your valve train. Hydrosolids have a built in anti pump-up device. So at the time your springs start to surge and go into a harmonized distortion causing the tappet rollers to start lofting off the back side of your cam, the Hydrosolids will not pump-up to allow your valves to hit each other.

NOTE: Hydrosolids will be adjusted as a solid lifter in a cold motor only. If you are unfamiliar with solid lifter adjustment, seek professional help. Otherwise serious valve train motor damage will result.

### **READ ALL INSTRUCTIONS BEFORE STARTING JOB**

CAUTION: Disconnect the ground cable at the battery.

1. Refer to H-D® Service Manual for tappet installation. If installing a cam and tappet blocks at the same time follow those manufacturers' instructions.

Note: As you are preparing the engine for the installation of the new Hydrosolid, place all 4 tappets in a clean container (plastic bag) filled with clean H-D® 20W50 oil to cover tappets, let them set for 20 minutes.

2. Place the front piston at TDC compression position.
3. With all four Hydrosolid Tappets installed, start with the front intake pushrod making sure tappet is at the lowest point on the cam.
4. Extend the pushrod adjuster screw to zero lash. You will be making the pushrod longer (no up and down movement, removing all free play without pushing the hydraulic unit down). See pushrod adjustment chart for your particular pushrod.

Example: If your pushrods have 24 threads per inch extend pushrod 5 hex wrench flats.

| <b>PUSHROD ADJUSTMENTS FOR HYDROSOLIDS - A STARTING POINT ONLY</b> |                  |                       |                   |                  |
|--|------------------|-----------------------|-------------------|------------------|
| Threads per inch   | Hex Wrench Flats | Total Travel Distance | Distance Per Turn | Per One Hex Flat |
| 24   | 5                | .0345"                | .0414"            | .0069"           |
| 28   | 6                | .0354"                | .0354"            | .0059"           |
| 32   | 7                | .0364"                | .0312"            | .0052"           |
| 36   | 8                | .0360"                | .0270"            | .0045"           |
| 40   | 8                | .0336"                | .0252"            | .0042"           |
| 52   | 11               | .0352"                | .0192"            | .0032"           |

| <b>POPULAR PUSHRODS</b> |    |                 |
|-------------------------|----|-----------------|
| JIMS® Pro-lite          | 24 | No.s 2380, 2400 |
| Slim Jims               | 32 | No.s 2404, 2369 |
| Andrews                 | 28 |                 |
| Andrews                 | 32 |                 |
| Crane                   | 28 | New Time Savers |
| Crane                   | 24 | Old Time Savers |
| Crane                   | 32 |                 |
| H.D.                    | 32 |                 |
| S & S                   | 32 |                 |
| Screamin Egl.           | 32 |                 |
| Rivera                  | 40 | Taper Lite      |
| Rev Tech                | 36 |                 |

**CAUTION: WEAR SAFETY GLASSES. EXCESSIVE FORCE MAY DAMAGE PARTS!**  
**SEE JIMS® CATALOG FOR HUNDREDS OF TOP QUALITY PROFESSIONAL TOOLS.**  
**THE LAST TOOLS YOU WILL EVER NEED TO BUY.**

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NOTE: This will move the adjusting screw down, pushing the hydraulic unit down its bore .0345". This will put the hydraulic unit about .014" from the floor of tappet. What we are looking for is the hydraulic unit resting on the floor of the tappet.

(This is just a starting point, the adjuster screw may need to be extended or shortened if the adjusting screw was either adjusted too far or not enough.)

This adjustment will bleed the Hydrosolid Tappet, which may take 5-15 minutes or longer to bleed off oil pressure. What we're looking for is a pushrod that just barely turns with your fingers. If after 15 minutes, if the pushrod still turns easily, (with your thumb and forefinger) extend the pushrod until you can just barely turn pushrod with your fingers. If you can barely turn the pushrods with your fingers and the Hydrosolids are at the lowest point on the cam, then they have been adjusted properly.

CAUTION: If you cannot turn pushrod with your fingers DO NOT rotate engine.

**Note A** - You can double check (this will also be a good check to make sure you have made your adjustment at the lowest point on your cam) your adjustment for all 4 tappets by performing the following: With the rear wheel safely off the ground (bike tied down), remove spark plugs, shift bike into the highest gear, have a helper rotate the rear tire forward just enough to see the front intake tappet start its move up in its bore (only allow the tappet to move up its bore .100", almost the thickness of a nickel). Stop the rotation of rear tire and have helper rotate the rear tire backward just enough to see the front intake tappet start the movement back down and then back up its bore no more than .100". As the tappet is moving up and down in its bore (from the rear tire being rotated back and forth) you will be trying to turn that pushrod with your thumb and forefinger. If you find any free movement (turning) of the pushrod, take up this freeplay (by making the pushrod longer with the adjusting screw) until you can barely turn the pushrod with your fingers.

Torque all pushrod lock nuts to 240 in-lbs of torque with your crow's foot.

Do the above Note for the other 3 tappets.

5. Repeat exact procedure for the next three pushrods, making sure to be on the lowest position of cam for the tappet you're adjusting.

### ***MAINTENANCE FOR HYDROSOLIDS IS AS FOLLOWS:***

1. New engines, after the first 50 miles (at time of first oil change), check adjustment of pushrods. You should still be able to turn them with your fingers, if not, you will need to loosen the pushrod until you can barely turn the pushrod with your fingers.

**Note:** To help save time repeat "Note A" from above, only this time you can rotate the rear wheel to make complete engine rotations, checking for any free turning or tight pushrods, adjust as necessary.

On new engines the valves normally will become tighter from valves, valve seats and other parts seating in.

2. After 200 miles, readjust as needed until all your motor parts are seated.

3. Recheck as you would for solid tappets, at about 2,000 mile intervals.

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