



## INSTALLATION INSTRUCTIONS: HIGH PERFORMANCE HYDRAULIC LIFTERS PART# 35-4553

### READ ALL INSTRUCTIONS BEFORE BEGINNING INSTALLATION

Congratulations, you have purchased the finest hydraulic lifters available for your motorcycle. Your Vance & Hines hydraulic lifters are designed and crafted for performance and quality. Please follow the instructions below, check hydraulic lifters for missing or damaged parts and if you need any assistance please contact our technical support line (562) 921-7461

#### **FITMENT YEARS:**

- 1999 - Later Harley-Davidson Twin Cam models
- 2000 - Later XL & XR1200 Models
- 2000 - Later Buell Air-Cooled models

#### **KIT CONTENTS**

- QTY. 4 Hydraulic Lifters

#### **NOTES:**

- Pre-soak hydraulic lifters by submerging in engine oil, prior to installation, or use a hand pump to manually pressurize lifters through oil hole on the side of lifter body.
- This kit can be installed on Twin Cam models without rocker box / top end disassembly in combination with Vance & Hines Race Shop Components adjustable pushrods part #35-4552.
- Please refer to your specific year and model motorcycle service manual for instructions to install your hydraulic lifters.

## PREPARING VEHICLE:

1. Disconnect Battery to prevent accidental engine start-up. Battery negative cable first.
2. If needed, remove air cleaner and back plate to gain access to the chrome pushrod keepers. Remove the keepers to gain access to the pushrods.
3. Pull up lower pushrod cover and use a bolt cutter to cut the pushrod for easy removal.  
**NOTE:** Cover lower lifter opening with a rag or cloth to prevent any foreign debris from entering the lifter cavities while cutting the pushrods.
4. Remove cut pushrods and pushrod tubes.
5. Remove lifter cover fasteners, remove lifter covers.
6. Remove anti-rotation pin
7. Using a magnet, remove all 4 lifters.
8. Install new lifters with oil hole facing the cylinders.
9. Install the anti-rotation pin and new lifter cover gasket.
10. Torque fasteners in a crisscross pattern to 90-120 in-lbs. or 10.2-13.6 Nm.
11. Remove spark plugs.
12. Using a scissor lift with rear tire elevated, bike in 5th gear, rotate rear wheel to turn engine over until rear cylinder lifters are on the base circle (lowest point) on the camshaft.
13. Inspect and replace pushrod tube o-rings as necessary.
14. Prepare pushrods for installation by loosening locknut and shortening pushrods to their shortest length.
15. Install the pushrods into the pushrod tubes with tapered ends up and adjusters on the bottom.
16. Starting with the intake pushrod first, adjust the pushrod length to zero lash.  
**NOTE:** Pushrods are labeled IN (intake) or EX (Exhaust)
17. With alignment mark on pushrod facing you, install a 5/16" wrench on adjusting screw and prevent it from turning while using a 1/2" wrench to turn the pushrod tube 2 ½ turns counter clockwise (using alignment mark to count revolutions).
18. Tighten the locknut with a 9/16" wrench while holding the pushrod with a 1/2" wrench.  
**NOTE:** Engine should not be rotated for 10 minutes after the pushrod adjustment was made, this will allow sufficient time for lifters to bleed down and prevent potential engine damage.
19. Adjust exhaust pushrod following steps 16-18.
20. Rotate engine until front cylinder lifters are on the base circle ( lowest point) on the camshaft.
21. Repeat steps 13-19 per instructions above to adjust front cylinder pushrods.

### PREPARING VEHICLE CONTINUED...

21. Reinstall pushrod tube keepers.
22. Reinstall removed spark plugs.
23. Reinstall air cleaner and back plate if removed.
24. Return transmission to neutral.
25. Remove scissor lift.
26. Reconnect battery as defined in the appropriate service manual for your year and model motorcycle.  
**NOTE:** After start up, your Vance & Hines performance hydraulic lifters may be noisy for the first 20 minutes of riding while oil pressure builds inside the lifter. If lifter noise does not reduce in this period, please verify that all lifters are adjusted properly and perform the readjustment procedure if necessary.

All Vance & Hines racing parts are intended for racing use only. In consideration of the extreme demand placed upon components in an engine used in racing conditions, there is no warranty for Vance & Hines racing parts once they have been installed. Vance & Hines disclaims all express and implied warranties including, without limitation, the warranties of merchantability and fitness for a particular purpose. Vance & Hines shall not be responsible for special, incidental or consequential damages, property damage or personal injuries, arising out of the sale or use of Vance & Hines racing parts.

13861 ROSECRANS AVENUE / SANTA FE SPRINGS, CA 90670  
SALES: (562) 921-5388  
TECHNICAL: (562) 926-5291  
FAX: (562) 802-0110

**vanceandhines**  
**.com**