

- WARRANTY INFORMATION     SERVICE INFORMATION  
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Sterndrive No. 2002-06

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## Hydraulic Valve Lifter Adjustment for Mercury Racing Engines

### Models

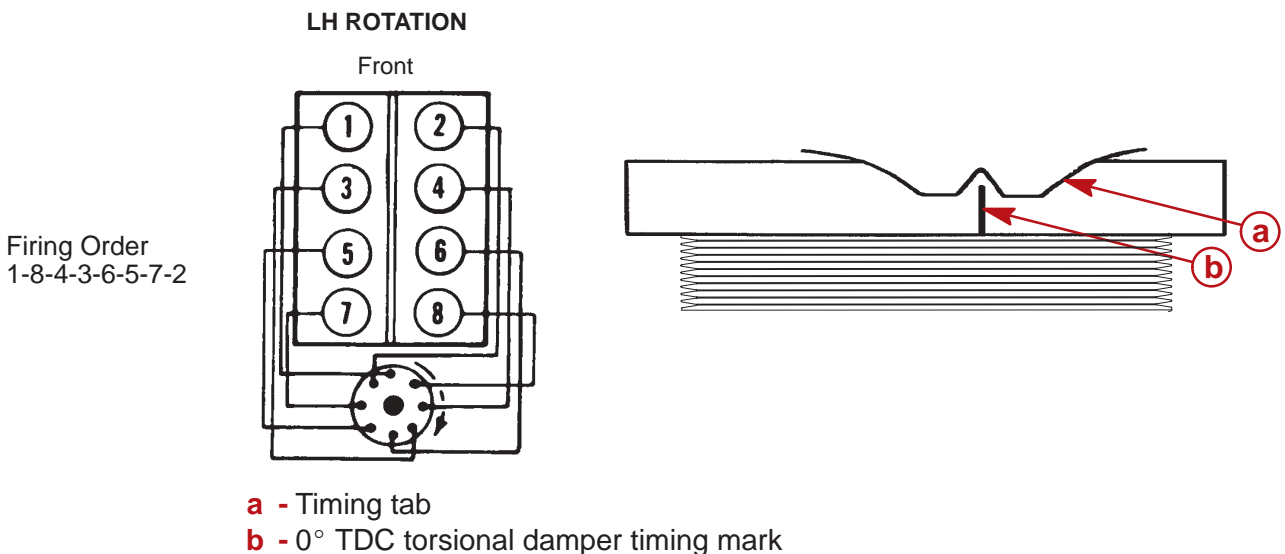
All Mercury Racing Sterndrive engines with hydraulic lifters and roller rocker arms.

### Situation

Some Customers have requested clarification of the adjustment procedure for hydraulic lifter assemblies with roller rocker arms. It was also noted that the 500 EFI service manual (90-840283), has an incorrect adjustment procedure as written on page 3A-23.

### Correct Valve Adjustment Procedure

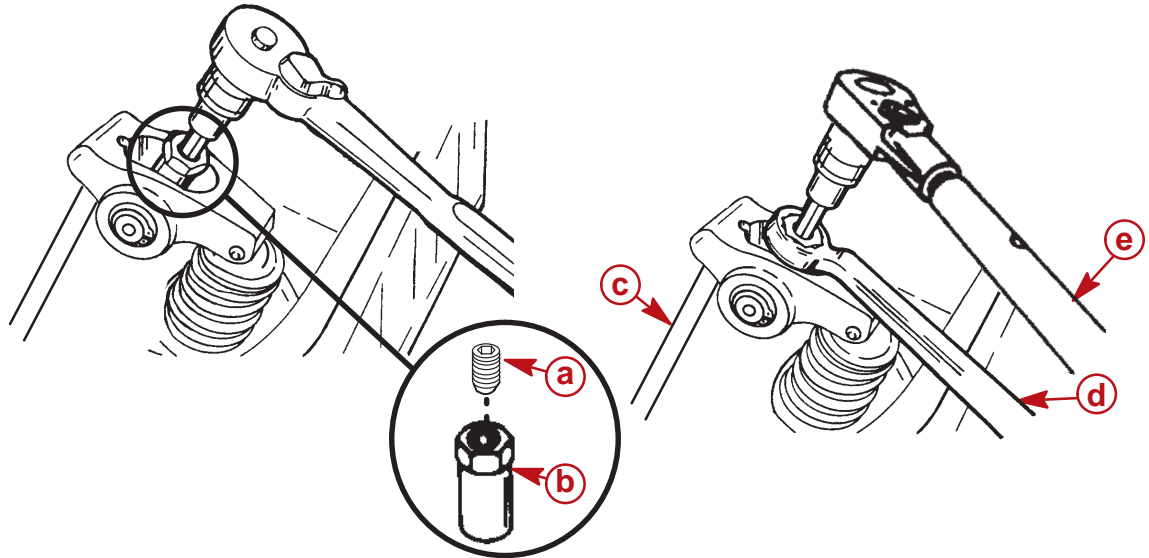
1. Valve adjustment should be done with the engine cold. Remove spark plugs. Using a wrench on the crankshaft pulley center bolt, turn the engine over in the normal direction of rotation while placing a finger over the number 1 cylinder spark plug opening. There should be compression felt at the spark plug opening as 0° TDC is approached. If not, the engine is in number 6 firing position and should be turned over one more time, 360°, to reach number 1 position 0° TDC.



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2. When the engine is at number 1 TDC, adjust the following valves: **Exhaust - 1-3-4-8, Intake - 1-2-5-7.**
3. Loosen Allen head set screw.
4. Loosen the adjusting nut until lash is felt at the push rod, and then tighten the adjusting nut until all lash is removed. Lash can be checked by rotating the push rod while hand tightening adjusting nut until all play is removed.

**IMPORTANT:** If the lifter has not been pumped up with oil, the push rod could be rotated while the plunger in the lifter is being collapsed. Any resistance felt while rotating the push rod should be considered no lash. This can be checked by making sure there is no up and down movement of the push rod or zero clearance between the rocker arm and valve stem.



- a - Allen head set screw
- b - Adjusting nut
- c - Push rod
- d - Box end wrench
- e - Torque wrench

5. Rotate adjustment nut an additional, three quarter turn (270°) for roller camshafts or five eighths turn (225°) for flat tappet camshafts.
6. While holding adjusting nut in position, torque Allen head set screw to 34 Nm (25 lb-ft).
7. Using a wrench on the crankshaft pulley center bolt, turn the engine over in the normal direction of rotation while placing a finger over the number 6 cyl. spark plug opening. There should be compression felt at the spark plug opening for number 6 cylinder as 0° TDC is approached. If not, the engine is in the number 1 firing position and should be turned over one more time, 360°, to reach number 6 position 0° TDC.
8. When the engines is at number 6 TDC, adjust the following valves: **Exhaust - 2-5-6-7, Intake - 3-4-6-8.**

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