Adjusting Hydraulic Lifters for Proper Preload

Since hydraulic lifters can compensate for thermal expansion of the engine, the adjustments can be made with the engine cold; hot adjustment is not necessary.

In order to adjust the preload the lifter must be properly located on the base circle or “Heel” of the lobe. At this position the valve is closed and there is no lift taking place. You will need to watch the movement of the valves to determine which lifter is properly positioned for adjusting.

1. Remove the valve covers, and pick a cylinder you are going to set the preload on.

2. Hand rotate the engine in its normal direction of rotation and watch the exhaust valve on that particular cylinder. When the exhaust valve begins to open, stop and adjust that cylinder’s intake rocker arm. (Why? Because when the exhaust valve is just beginning to open, the intake lifter will be on the base circle of the lobe, the correct position for adjusting the intake.)

3. Back off the intake rocker arm adjuster and remove any tension from the pushrod. Wait a minute or two for that hydraulic lifter to return to a neutral position. The spring inside the lifter will move the pushrod seat up against the retaining lock if you give it time to do so. (If you are installing brand new lifters they will be in the neutral position when they come in the box.)

4. Now spin the intake pushrod with your fingers while tightening down the rocker arm. When you feel a slight resistance to the turning of the pushrod, you are at “Zero Lash”. Turn the adjusting nut down one half to one full turn from that point. Lock the adjuster into position. The intake is now adjusted properly.

5. Continue to hand turn the engine, watching that same intake. It will go to full open and then begin to close. When it is almost closed, stop and adjust the exhaust rocker arm on that particular cylinder. (Again, when we see the intake almost closed, we are sure that exhaust lifter is on the base circle of the lobe.) Loosen the exhaust rocker arm and follow the same procedure described before in steps 3 and 4 to adjust this rocker arm.

6. Both valves on this cylinder are now adjusted, and you can move on to your next cylinder and follow the same procedure again.

Tech Tip courtesy of Crane Cams