



TClinic

ENGINE – TUNE-UP – VALVE ADJUSTMENT

Proper settling of the tappet clearances is one of the most important adjustments made during the tune-up. They should be adjusted as accurately as possible as they contribute heavily towards optimum performance. The adjustment can be done when ignition or carburetion is out of adjustment, however, the valves must be properly set before it is possible to satisfactorily adjust the ignition or the carburetors.

The tappet clearance is adjusted on a valve when it is in the lowest position on the back of its cam lobe. At this point the corresponding valve paired with it in the following table will be in its fully open position (pushed into the cylinder head) which can be visually observed.

Bring the engine to operating temperature.

| | | | | |
|---|---|---|---|---|
| Adjust No. 1 valve with No. 8 fully open. | | | | |
| " | 3 | " | 6 | " |
| " | 5 | " | 4 | " |
| " | 2 | " | 7 | " |
| " | 8 | " | 1 | " |
| " | 6 | " | 3 | " |
| " | 4 | " | 5 | " |
| " | 7 | " | 2 | " |

Procedure

- 1) Remove valve cover — if the gasket is old or broken, replace when assembling.
- 2) Insert hand crank and turn engine over until valve No. 8 is fully depressed — valve No. 1 (front of engine) can now be adjusted.
- 3) Place thin blade screwdriver into slot of ball pin, a wrench over the locking nut and holding pressure on the screwdriver, loosen, the nut.
- 4) Insert proper feeler gauge and adjust ball pin with the screwdriver until gauge will pass between the rocker arm and the valve stem with a slight drag. When satisfied with the clearance, hold the screwdriver in place and tighten the locknut.

- 5) Keep the slack out of the valve train by pushing down on the ball pin and recheck the gap. If too close or loose, repeat the procedure.
- 6) Continue this operation for each valve. When all valves are adjusted, start with No. 1 and double check the clearances.

The faces of the rocker arm can become worn due to constant hammering against the valve stem tip. If you experience difficulty in adjusting the clearances, it may be from this cause. If this happens, either replace the rocker arm or have it reground. Examination of the rocker arm face should always be done during an overhaul or a valve job.

First printed by TCMG in June 1971

2002 Update

This information is still as correct as it was in 1971