

# TYPES OF CARBURETORS - ADJUSTMENT

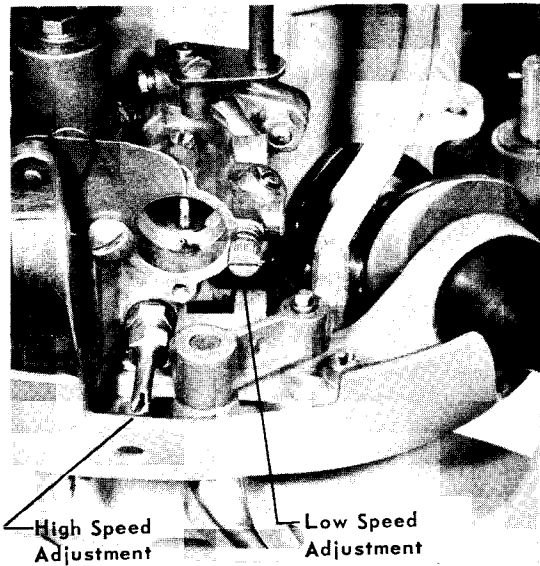


Figure 1. High Speed Adjustment

## A. General Description

Mercury carburetors are of two types, 1) Gravity feed, and 2) Pressure feed. The major difference is that fuel enters at the bottom of the carburetor bowl on the gravity feed carburetor, and it enters the top of the carburetor float bowl cover on the pressure feed type.

## B. Carburetor Adjustments

All high speed and slow (idle) speed valve adjustments are made on all carburetors at the factory. It will, however, require resetting for best operation depending upon the temperature, elevation, fuel characteristics and the gasoline-oil ratio in the fuel mixture. High speed fixed jet is selected for sea level application. Operation above sea level, see chart on Page 21.

## C. Initial Adjustment

Before starting engine, complete the initial adjustment by closing the idle adjustment screw by turning in clockwise until seated. *Do not force.* Then turn back in opposite direction one full turn. Proceed in like manner with high speed adjustment screw, except to open it about  $1\frac{1}{2}$  turns after first being closed. (*Adjustment not required with fixed jet.*) Now choke and start engine in usual manner and run until thoroughly warm.

## D. High Speed Adjustment (not with Fixed Jet)

After motor has warmed up, set throttle in FAST position on all motors and in FORWARD gear on those motors with shifting. Then complete the following high speed adjustment for all Mercury Motors:

1. Slowly turn high speed adjustment screw inward (clockwise) until motor starts to slow down (mixture becoming too lean). (Figure 1)
2. Determine this critical lean point as closely as possible, then back needle out  $\frac{1}{2}$  to  $\frac{3}{4}$  turn.

3. It is better to set mixture slightly rich ( $\frac{3}{4}$  turn), when in doubt, rather than too lean. An excessive lean mixture will cause overheating and loss of power. Sustained full throttle with this setting may cause motor damage and will burn spark plugs rapidly.

*NOTE: If engine can be four-cycled and leaned out at fuel throttle by carburetor adjustment screw, this indicates that carburetor is satisfactory at high speed, and it can be eliminated as a possible cause of trouble at high speed.*

## E. Slow Speed Adjustment

After motor has been warmed up and high speed adjustment completed:

1. Place throttle in SHIFTING RANGE or SLOW position and gear shift, if so equipped, in FORWARD gear. Turn idle adjustment screw inward (clockwise) until motor starts to "load up" or slow down or fire unevenly due to mixture becoming too rich because of lack of air. Idle screw adjusts air volume only. (Figure 2) *NOTE: On 1956 and newer Mark 25 and Mark 55 only, turn screw outward (counterclockwise), adjustment opposite of previous models because of volumetric (air and fuel) control rather than air adjustment only.*

2. Turn adjustment screw out (counterclockwise) until motor picks up speed and fires evenly. Turn in (clockwise) on Mark 25 and 55.

3. Do not adjust leaner than necessary to attain reasonably smooth idling. Again, it is preferable to set mixture a little rich than too lean. When adjusting idle needle, turn approximately  $\frac{1}{8}$  turn at a time; then wait sufficient time for engine to respond to this adjustment.

*Note: It may be necessary to readjust carburetor idle screw on 2-cylinder engines up to  $1\frac{1}{4}$  turn with each change in brand of gasoline to compensate for varying volatility and differences in refining processes.*

*Note: When adjusting idle needle on Mark 20H, set spark lever in  $\frac{3}{4}$  retard position.*

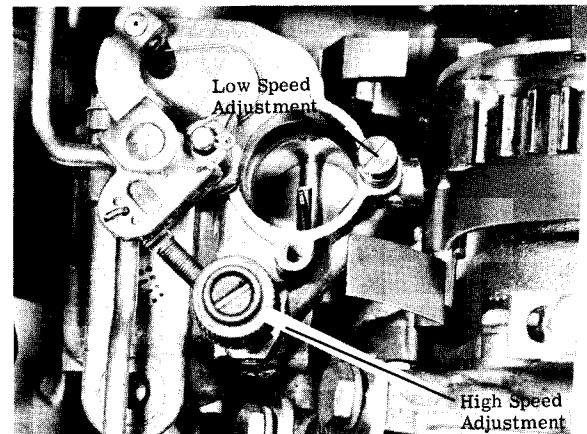


Figure 2. Slow (Idle) Speed Adjustment