# TIMING, ADJUSTING & SYNCHRONIZING
# MARK 10-10A-15A

## I. CARBURETOR ADJUSTMENTS

### A. High Speed Adjustment

1. Engines Not Having High Speed Fixed Jet for Mark 10-10A-15A§ (Figure 1)

Warm up engine thoroughly. Operate engine at full throttle in forward gear. Slowly turn high speed adjusting needle counterclockwise. Engine will "four-cycle". Turn high speed needles clockwise to a point where engine slows down, indicating too lean a mixture. Determine this point as accurately as possible. Turn needle counterclockwise one-half turn from that point. When in doubt, set mixture slightly rich rather than too lean. A lean mixture will cause overheating and a loss of power or could cause severe engine damage.

§ *Early Mark 15A Engines*

2. Engines With High Speed Fixed Jet (Mark 15A)

The standard jet, installed at the factory, is recommended for operation from sea level to 2500 ft. altitude. If the engine is operated above 2500 ft., select and install correct jets from chart below.

| Motor Model | Start with Serial No. | Fixed Jet Part No. | Jet Size | Elevation |
|---|---|---|---|---|
| Mark 15A | 1238590 | 1399-1457 | .057* | Sea Level - 2500 |
| Mark 15A | 1238590 | 1399-1455 | .055 | 2500 - 5000 |
| Mark 15A | 1238590 | 1399-1453 | .053 | 5000 - 10000 |

* *Standard Jet Equipped on New Engines*

Jet size recommendations are intended as a guide (like a propeller chart). Try size larger or smaller if in doubt.

*No change in spark advance is recommended for elevation operation. Propellers of lower pitch should be used at high elevations to allow proper engine RPM.*

Troll lever should be toward "Troll" position (indicated on instruction plate).

### B. Low Speed (Idle) Adjustment

With engine running in forward gear and troll lever in troll position, turn low speed adjusting needle clockwise until engine slows down from this point. Turn low speed needle counterclockwise about one-half turn. Do not adjust leaner than necessary to attain reasonably smooth idling. When in doubt, set mixture slightly rich rather than too lean. Engine should idle at about 500 RPM.

NOTE: Idle cannot be adjusted while in "Neutral" or engine will sputter and stop when shifted to "Forward" because of "no load" condition while adjusting.

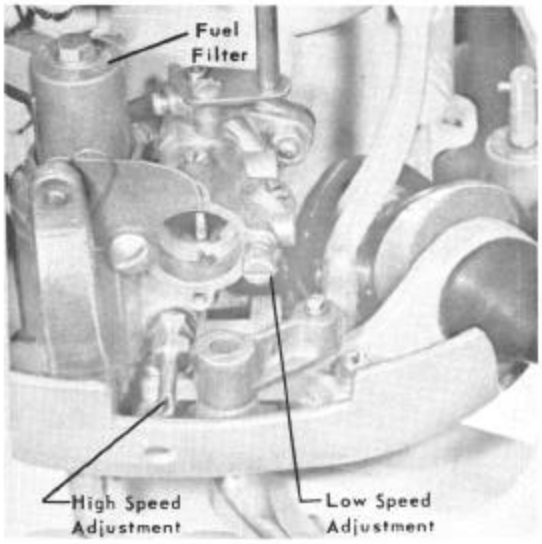


Figure 1, Carburetor Adjustments

## II. ADJUSTING AND TIMING

### A. Pickup Adjustment

With engine running, set troll lever in "RUN" position and turn twist grip throttle to just engage in forward gear to obtain 1000 RPM. At this point, the throttle pick-up cam on magneto should just touch the carburetor throttle lever on carburetor. If recommended RPM is not obtained, loosen the long hex-head screw (Figure 2) which secures the throttle control cam assembly to the magneto stator plate and move cam portion "in" (away from carburetor throttle lever) to decrease pickup RPM and "out" (toward carburetor throttle lever) to increase pickup RPM. After obtaining the desired 1000 RPM, tighten screw to secure cam.

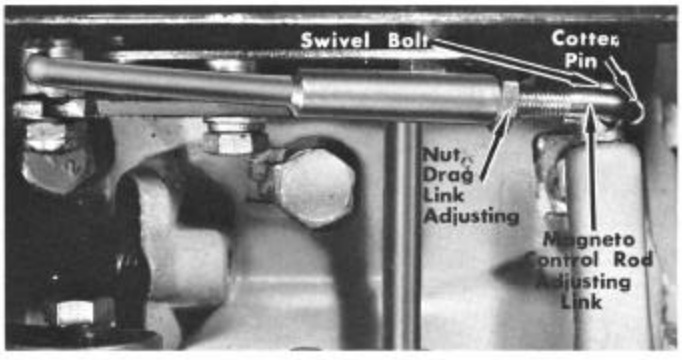


Figure 2. Pickup Adjustment

### B. Neutral RPM

With engine running, turn twist grip throttle handle in "NEUTRAL" position and troll lever in "START" position. Engine should operate at 2200 to 2400 RPM. To adjust RPM, remove cotter pin from drag link and swivel of vertical shaft (Figure 3) and loosen drag link adjusting nut, turning drag link "out" to increase RPM