

### A. High Speed Adjustment (Figure 6)

Warm up engine thoroughly, then operate at wide open throttle, slowly turning high speed mixture adjusting needle counterclockwise until engine starts to "four-cycle" and begins to slow down. Then turn high speed mixture adjusting needle clockwise through range where cylinders fire normally to the point where motor again slows down, indicating that mixture is becoming too lean. Determine this critical "leaning out" point as accurately as possible and back adjusting needle out one-half turn from that point. When in doubt, it is better to set mixture slightly rich rather than too lean, because an excessively lean mixture will cause overheating and loss of power. Sustained full throttle operation with an excessively-lean mixture may cause severe engine damage.

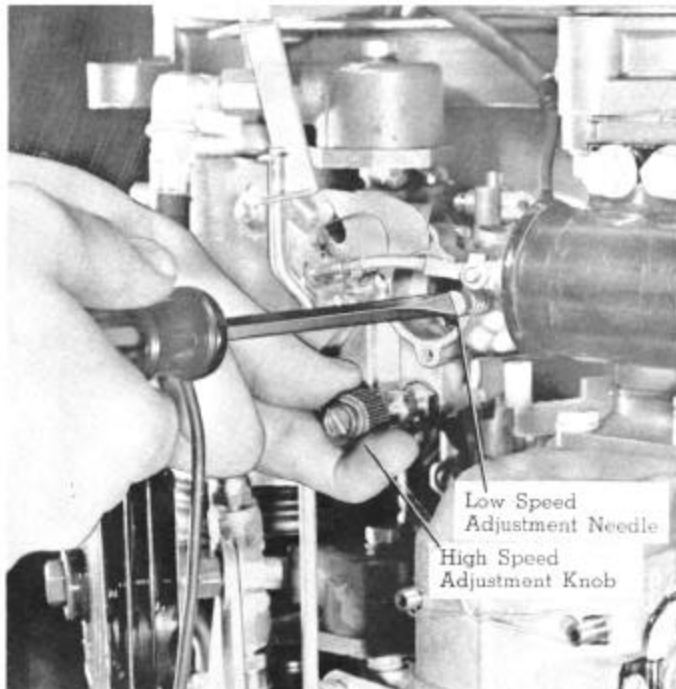


Figure 6. Carburetor Adjustments

### B. Idle Adjustment (Figure 6)

Make idle adjustment after completing high speed adjustment. Start with all idle needles 7/8ths turn open and adjust for maximum RPM with magneto retarded to give about 600 RPM. With the motor running at idling speed while in forward gear, turn the low speed mixture adjusting needle counterclockwise until affected cylinders start to "load up" or fire unevenly due to over-rich mixture. Then slowly turn the needle clockwise until cylinders fire evenly and motor picks up speed. Do not adjust leaner than necessary to attain reasonably smooth idling. When in doubt, it is preferable to have the mixture set slightly rich rather than too lean.

## IV. LINKAGE ADJUSTMENTS

### A. Idle Stop Setting

Readjust carburetor to get proper idle at 600 RPM. Allow magneto to travel back far enough by adjusting set

screws on right side of bottom cowl on early Mark 30 models. Rear adjusting set screw turns "in" for less retard and "out" for more retard. On later models, adjust idle set screw on magneto adaptor. (*IMPORTANT: Engine must idle for 3 minutes at 600 RPM or lower without mis-firing.*) Engine is stopped with shorting switch.

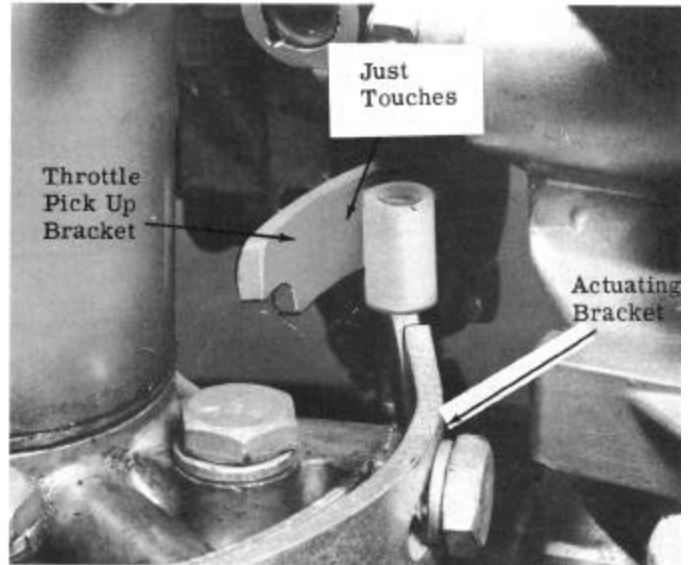


Figure 7. Pickup Adjustment

### B. Pickup and Synchronization Adjustment (Figure 7)

With engine running in forward gear, loosen 3 hex head cap screws holding carburetor actuating bracket on magneto. Advance magneto throttle to obtain 1000 to 1100 RPM. Rotate carburetor actuating bracket to just touch back of throttle pickup bracket. At this RPM,

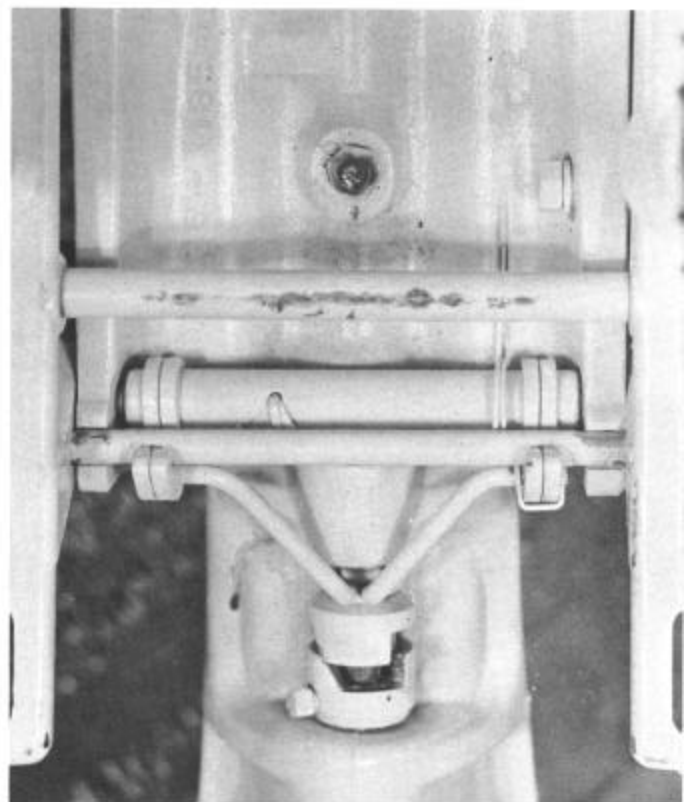


Figure 8 Engaging Reverse Lock Lever