TIMING, ADJUSTING, SYNCHRONIZING
Merc 100-150-200-250 and Mark 28-28A

I. Check and Adjust Reverse Lock Mechanism

Reverse lock must be set so that it is engaged in reverse and neutral only and clears tilt pin when twist grip throttle is turned into forward. Adjustment must be made before testing engine. With engine stopped, turn twist grip throttle to full throttle position (forward), being certain that reverse lock clears tilt pin. Next, turn twist grip throttle to neutral position. Reverse lock lever should be fully engaged over tilt pin.

To adjust, turn elastic stop adjusting nut on upper shift shaft counterclockwise to have reverse lock lever engage earlier. Turn adjusting nut clockwise to engage reverse lock later.

II. Setting and Synchronizing Breaker Points

(See information on Page 13-14 of Ignition Section IV.)

III. Carburetor Adjustment

A. High Speed

Carburetors have fixed high speed jets. The standard jet, installed at the factory, is recommended for operation from sea level to 2500 ft. elevation. If the engine is operated above 2500 ft., select and install correct jets from chart below (note that jet aperature decreases .002" as elevation increases each 2500 ft.):

Engine Model	Jet Sizes for Elevations			
	*Up to 2500'	2500-5000'	5000-7500'	7500-10000'
Merc 250-200	.063"	.061"	.059"	.057"
Merc 150 *(1346448 & Up)*	.051"	.049"	.047"	.045"
Merc 150 *(Below 1346448)*	.057"	.055"	.053"	.051"
Merc 100 *(1349698 & Up)*	.051"	.049"	.047"	.045"
Merc 100 *(Below 1349698)*	.055"	.053"	.051"	
Mark 28-28A	.063"	.061"	.059"	.057"

* *Standard jet -- factory equipped.*

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)

With the motor running at idling speed (approx. 500 RPM) while in forward gear, turn low speed needle slowly counterclockwise until engine starts to "load up" or fire unevenly due to over-rich mixture. Then slowly turn clockwise until cylinders fire evenly and engine picks up speed. Do not lean out the idle more than necessary to obtain smooth idling. When in doubt, it is preferable to leave mixture set slightly rich than too lean. (Figure 1)

When desired idle is obtained, loosen idle stop cap screw and nut, located on top cowl bracket (Figure 2) and move adjustable idle stop to just touch throttle cam assembly.

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.

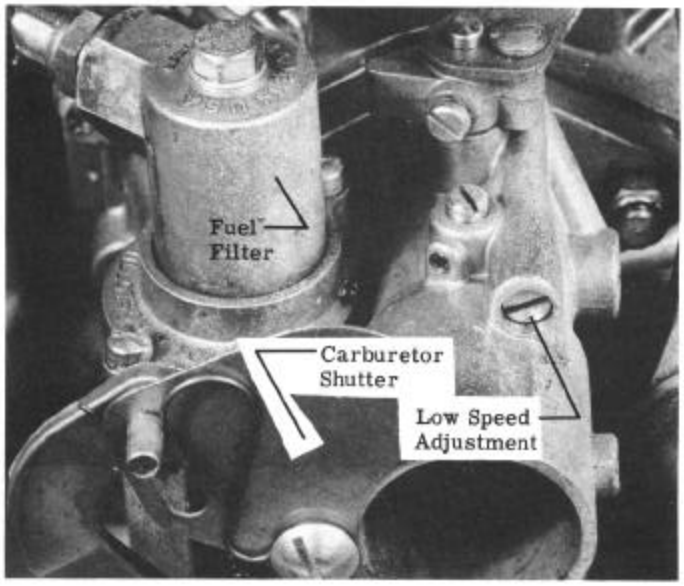

Figure 1. Low Speed (Idle) Adjustment

IV. Adjusting and Timing

A. Pickup Adjustment

With engine running, set troll control lever in "RUN" position and turn twist grip throttle to just engage in forward gear to obtain 1000 RPM. At this point, the throttle pickup cam on the magneto should just touch the carburetor throttle lever on the 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.

B. Neutral RPM

With engine running, turn twist grip throttle handle in "NEUTRAL" position and troll control 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. Turn magneto control rod adjusting link "in" to increase RPM and "out" to decrease RPM in neutral. After obtaining desired RPM, fasten drag link adjusting nut and replace drag link into opening in swivel. Place cotter pin in drag link to complete adjustment.