

# TIMING, ADJUSTING, TESTING . . MERC 110-75-60-40-39

## I. IGNITION DATA

Description	Merc 39-40	Merc 60-75	Merc 110
Firing Sequence	Single Cylinder	Alternate Firing	Alternate Firing
Spark Plug Standard Installation	J8J (1964-66) L9J or AC-M45FF (1967 & Newer)	J7J (1960-66) L7J or AC-M43FF (1967 & Newer)	J7J (1961-66) L4J or AC-M42FF (1967 & Newer)
Spark Plug Gap	J8J - .025(.635mm) L9J - .030(.762mm)	J7J - .025 L7J - .030	J7J - .025 L4J - .030
Timing	Not Adjustable	Not Adjustable	Not Adjustable
Breaker Setting	.020" (.508mm)	*.020"	*.020"
Recomm. RPM Range	5000-5400	5000-5400	5000-5400

\*Point setting is .018" (.457mm) on Merc 110 and 60 equipped with early style Phelon magneto.

## II. ADJUSTING AND SYNCHRONIZING POINTS (See information on Page 13, Ignition Section IV.)

### III. CARBURETOR ADJUSTMENTS

#### A. High Speed Adjustment

1. Carburetors have fixed high speed jets. The standard jet, installed at the factory, is recommended for operation from sea level to 2500 ft. elevation.
2. If engine is operated above 2500 ft., select and install correct jets from chart below (aperature decreases .002" as elevation increases each 2500 ft.).
3. Before changing jets, check engine out, unless previous tests indicate exact jet size.

Merc Model	Jet Size *Up to 2500'	Jet Size 2500'-5000'	Jet Size 5000'-Above
110	.049" (1.24mm)	.047" (1.19mm)	.045" (1.14mm)
75	.039" (0.99mm)	.037" (0.94mm)	.035" (0.89mm)
60	.045" (1.14mm)	.043" (1.09mm)	.041" (1.04mm)
40	.036" (0.91mm)	.034" (0.86mm)	.032" (0.81mm)
39(KB7A)	.043" (1.09mm)	.041" (1.04mm)	.039" (0.99mm)
39(KB7B)	.036" (0.91mm)	.034" (0.86mm)	.032" (0.81mm)

\* Standard Jet - Factory Equipped

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

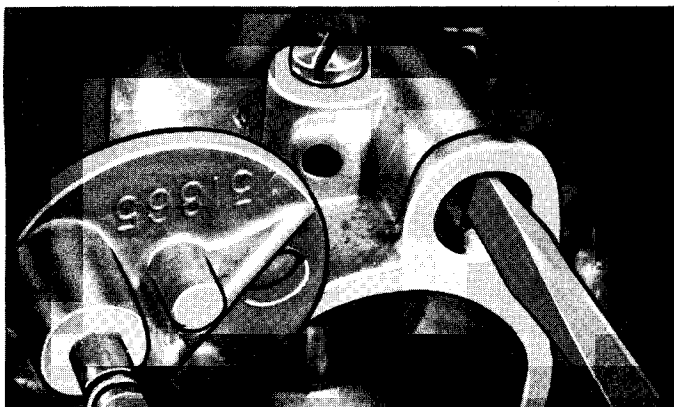


Figure 1. Adjusting Idle Mixture

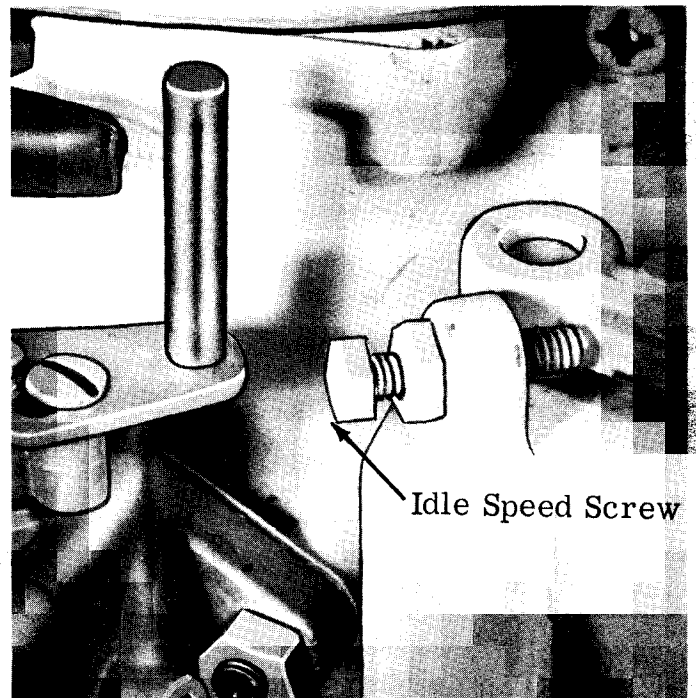


Figure 2. Adjusting Idle Speed

4. Propellers of lower pitch should be used at high elevations to allow proper engine RPM.
5. Engine can be tested in a test tank with propeller.

#### B. Idle Adjustment

1. Idle adjustment also has been adjusted at factory.
2. If readjustment is necessary, it can be done with a regular propeller in test tank or on boat.
3. Start with idle needle one turn open and adjust for maximum RPM with magneto retarded to give about 600-700 RPM.
4. Warm engine before attempting adjustment.
5. With engine running at idling speed while in forward gear, turn low speed mixture adjusting needle clockwise (counterclockwise on 1969 models) until affected cylinders start to "load up" or fire unevenly due to over-rich mixture. (Figure 1)
6. Slowly turn needle counterclockwise (clockwise on 1969 models) until cylinders fire evenly and engine picks up speed.
7. Continue turning counterclockwise (clockwise on 1969 models) until too-lean a mixture is obtained and engine slows down and misfires.
8. Set adjustment screw half way between rich and lean (approx. one turn). Do not adjust leaner than necessary to attain reasonable smooth idling. When in doubt, it is preferable to have mixture set slightly rich rather than too lean.

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.

#### C. Idle Speed Adjustment

1. Start engine and run until warm.
2. Idle engine and adjust "idle speed" screw on stop bracket (Figure 2) so that engine idles at approximately 500 RPM in forward gear.