

TIMING, ADJUSTING, TESTING --- MARK 55-55E

I. Timing and Adjusting

A. Upper Shift Shaft Adjustment (Figure 1)

When shift control lever is in forward gear, detent spring should be in the first notch of the shift control lever. If it is not, adjust upper shift shaft in the following manner:

1. Remove cotter pin from link rod.
2. Turn link rod to allow detent spring to catch in first notch.
3. Tighten lock nut on link rod. (Figure 1)
4. Replace cotter pin.



Figure 1. Upper Shift Shaft Adjustment
B. Flywheel and Magneto Pulley Timing

Rotate flywheel until timing mark (stamped on rim) is in a straight line with center of crankshaft and distributor pulley center. Position arrow on pulley to point at timing mark and replace timing belt, plate, cap screws and washers. (Figure 1A)

NOTE: Flywheel has 2 markings. One is a straight line which times the motor to top dead center (TDC) when positioned with arrow on magneto driven pulley. Second is a straight line with an "O" stamped over it. (Figure 1A) This is .235 BTDC (before top dead center). When this marking is in a direct line with center line of crankshaft and centerline of magneto shaft, the key way of magneto shaft should be on centerline of starter mounting hole bushing.

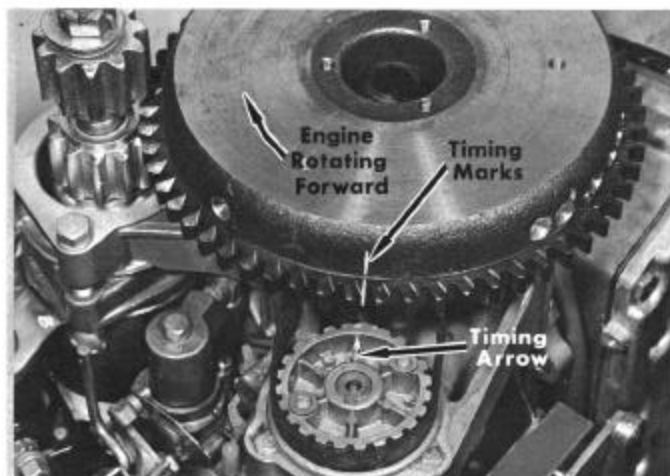


Figure 1A. Flywheel and Magneto Pulley Timing

C. Magneto Drive Coupling

With flywheel and pulley in above position, install magneto on engine. Magneto rotor shaft and shaft extension are splined with one blanked spline on each shaft for easy installation. (Figure 2) Rotate timing pulley until shaft sets in place. A $1/16$ " groove is located at end of shaft coupling in centerline of blanked shaft to locate for easy installation. Secure to magneto adaptor with 4 cap screws.

Attach grounding wire to magneto frame with self-tapping screw and nylon clamp and terminal of grounding wire to primary ground terminal of magneto with $3/8$ " nut. Secure ground strap to crankcase bolt which was removed and replace magneto air ventilation hoses.

II. Carburetor Adjustment

When adjusting carburetor high speed needles, it is recommended that the propeller be removed and the Test Wheel (48-26976) be installed. Engine will then turn about 5200-5300 RPM at full throttle in the test tank or 5000 RPM on the back of a boat. This will permit the accurate adjustment of carburetors for maximum engine RPM. (Use Tachometer 91-28014.)

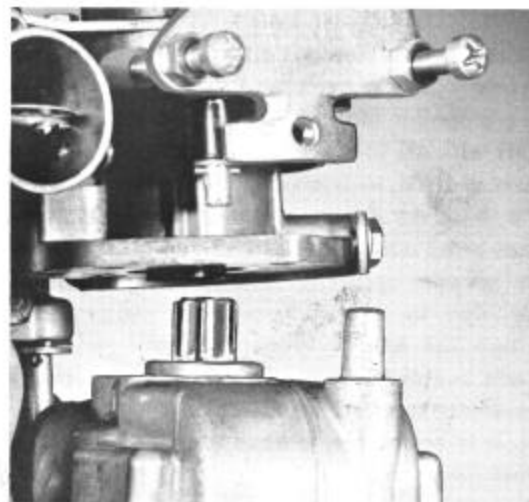


Figure 2. Installing Magneto on Engine

A. High Speed Adjustment

First warm up engine thoroughly. Operate engine at wide open throttle and slowly turn high speed mixture adjusting needle counterclockwise until engine starts to "four cycle", and motor begins to slow down. Then turn high speed mixture adjusting needle clockwise through range where cylinders fire normally to the point where engine 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. (Figure 3) When in doubt, it is better to set mixture slightly rich rather than too lean, because an excessively lean