

TIMING - ADJUSTING - TESTING

MARK 78-78A-75-75A MODELS

I. TIMING AND LINKAGE ADJUSTMENT

A. Flywheel and Distributor Pulley Timing

Rotate flywheel until "N" or timing mark (arrow) stamped on rim is on line between crankshaft and distributor pulley center. (No. 1 piston then is 20° after top dead center in forward direction.) Arrow on distributor pulley should be pointed toward "N" or timing mark (arrow) on flywheel. (Figure 1) If it is not, remove timing belt and turn pulley to correct position.

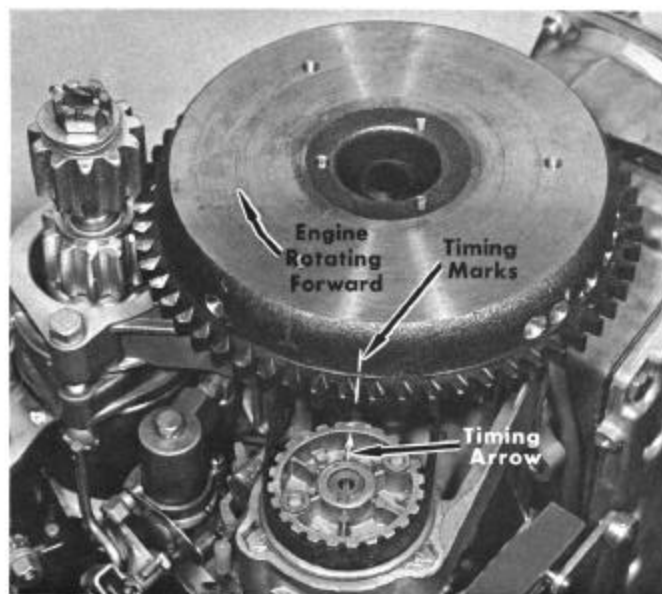


Figure 1

B. Distributor Drive Coupling

When distributor is reassembled to engine, flywheel and distributor pulley should be aligned as above. The 2 punch marks or a small circle "O" on tongue of distributor shaft should point forward (direction engine will travel when distributor is bolted in place). (Figure 2) Secure distributor adaptor with 4 hex head cap screws.



Later distributor shafts have an off-set face tang at the drive end. (See drawing at left.) The off-set face of the tang is considered the timing side, the same as if it were marked with the "O" or two small punch marks (:) as previous distributor cam shafts were marked.

C. Lever Cluster to Carburetor Shaft.

With carburetor throttle shutter closed, adjust lever cluster so that foot of No. 2 lever is 3/32" from

No. 1 nylon pickup pin. (Figure 3) Insert 3/32" drill between lever and pin to get proper clearance and tighten set screw against butterfly shaft. (Mark 78 has a self-aligning set screw which automatically positions the lever cluster at 1/32" and is not adjustable.)

D. Maximum Spark Advance -- Forward

Position distributor with side high tension lead facing approximately forward. Place No. 1 piston (or No. 2) at .235" BTDC (before top dead center) by rotating flywheel in a clockwise (forward) direction from BDC (bottom dead center). Thread Timing Gauge 91-26916A1 into the No. 1 spark plug hole. Turn flywheel until No. 1 piston strikes the Timing Gauge. While turning the flywheel, thread the Timing Gauge in or out so that the piston can "rock" over the center shaft of the gauge, indicating that the Timing Gauge is set at the top dead center position. Rotate flywheel clockwise 1/4 turn. Depress the center shaft of the Timing Gauge and rotate 1/4 turn to seat on tool body shoulder (.235" BTDC position). Be careful that tool body does not move or above procedure will have to be repeated. Rotate the flywheel clockwise by hand until No. 1 piston strikes the Timing Gauge center shaft. This is .235" BTDC.

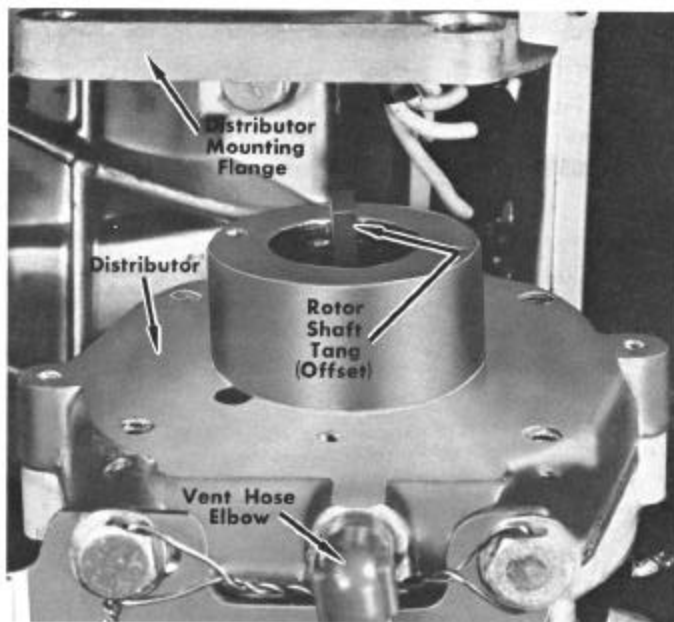


Figure 2

With one test lead of Timing Meter 91-22966 or Magneto Analyzer 91-25213 (scale No. 2) connected to either terminal of No. 1 resistor (or resistor No. 2 if using No. 2 piston), with second lead attached to distributor frame and with distributor stop bracket loose, slowly advance distributor until points break, as indicated by meter used. Hold distributor at this position and set distributor stop bracket to contact crankcase at this point. (Figure 4)