

TIMING, ADJUSTING, TESTING --- MARK 25

(Also Applies to Mark 20, Mark 15 and KH-7)

I. Linkage Adjustment - Timing

A. Check and Adjust Reverse Lock Mechanism

Reverse lock lever must fully engage tilt pin in neutral and reverse gear. To adjust, bend actuating fork on reverse lock lever assembly to engage when shifted in neutral or reverse. (Figure 1)

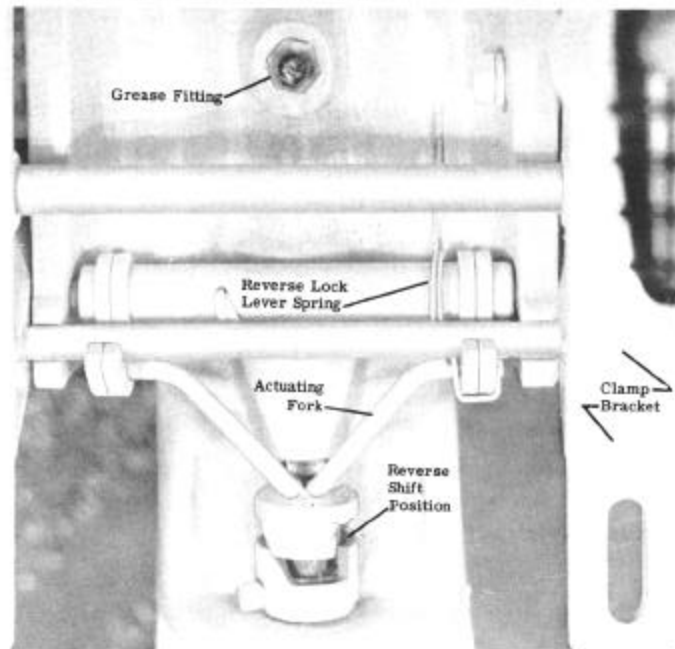


Figure 1.

B. Sector Gear (Figure 2)

A correct relative position of drive sector gear with magneto sector gear is necessary to assure full range of advance-retard movement. To check, turn magneto stator plate to full retard position and note relation of drive gear to driven gear. When properly engaged, last tooth on driven gear registers between last 2 full teeth on drive gear so that last (partial) tooth on drive gear acts as a stop. If necessary to reset, merely loosen vertical shaft bracket screws so that drive gear can be pulled out of engagement with driven gear. After correct relative position has been attained, retighten screws securely.

Sufficient gear lash must be allowed between drive gear and driven gear. Lash can be adjusted by means of .005" or .010" shims fitted between vertical shaft bracket and crankcase. Lash should not be more than is necessary to prevent binding or interference between gear teeth, but it must be sufficient to be noticeable. Vertical shaft and lever assembly must have sufficient end play in bracket to operate freely, but end play must be held to a minimum. If necessary, fit shims between lower face of bracket and vertical shaft lever. (These shims are available in thicknesses of .005" and .010".)

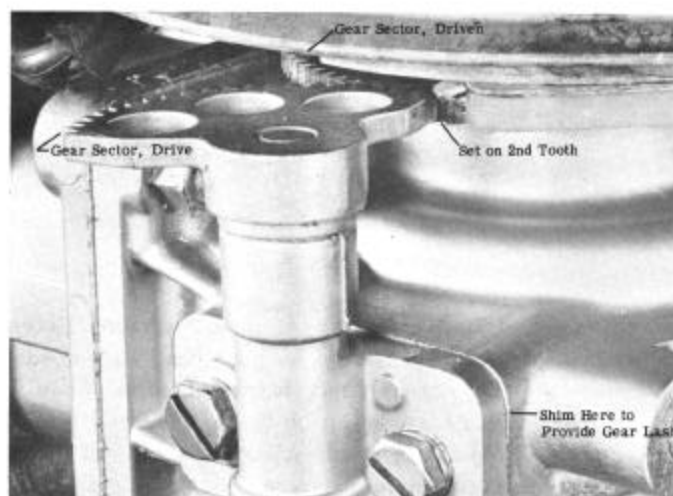


Figure 2.

C. Throttle Control Linkage Setting (Figure 3)

The throttle control linkage rod on later Mark 25 models is non-adjustable. On earlier models with the adjustable swivel and linkage rod, set the throttle control linkage rod to measure 2 9/16" from centerline to centerline of rod.

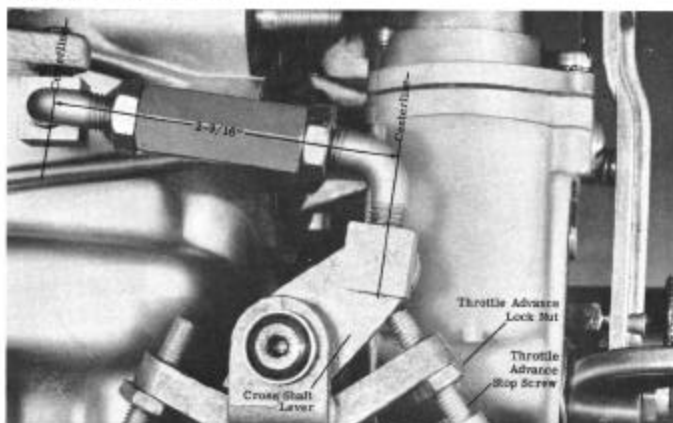


Figure 3.

D. Spark Advance (Figure 3)

Turn twist grip throttle so throttle arm of carburetor is approximately 3/4" from end of magneto cam travel. Adjust set screw in throttle and shift lock bracket to just touch control lever at this point. (Figure 4.) To retard spark, turn forward adjusting set screw in throttle and shift lock bracket inward to desired setting. This will retard magneto travel. To increase magneto travel for more spark advance, turn adjusting set screw outward.

II. Carburetor Adjustment

A. High Speed Adjustment

Warm up engine thoroughly. Operate engine at full throttle in forward gear. Slowly turn high speed adjusting needle counterclockwise. Engine will "four-cycle". Turn high speed needles clockwise to a point where