

Hercules Engine News

Including Economy, Arco,
Jaeger & Thermoil

by Glenn Karch
20601 Old State Road
Haubstadt, Indiana 47639

Once the cam gear and exhaust valve adjustments have been properly set, the third step, timing the ignition, can be made. Although there are several different ignition systems used on Hercules built engines, in this article the Webster system using the M, K and L magnetos will be discussed. The instructions given here are for engines to be run at or near rated speeds and that are intended to pull a load. It should be noted that if parts are badly worn or other repairs poorly made, the necessary adjustments may be hard to make and maintain. Further, these adjustment instructions can be used on other brands of engines once a timing reference point has been determined.

Some engine instruction manuals give the timing recommendations in terms of degree of spark advance ahead of inner dead center. Jumbo literature mentions eight degrees of advance for each 100 RPM; i.e. 40 degrees for 500 RPM and 28 degrees for 350 RPM. Racine-Sattley literature lists 35 degrees for the 1½ HP graduated down to 15 degrees for the 15 HP. These recommended advances appear to be greater than those obtained when properly setting the advance for Hercules built engines. The degree of timing advance depends on a number of factors, includ-

ing RPM, stroke length, flywheel weight and flywheel diameter.

In the next article the discussion will

cover timing and other adjustments for slow running show engines.



HOW TO SET THE SPARK WHEN MAGNETO IS USED FOR IGNITION.

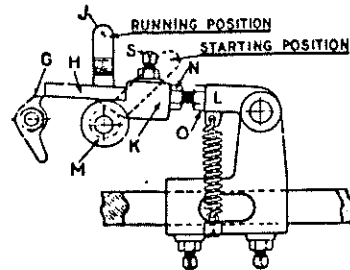


Figure 16.

compression stroke, then continue to turn them slowly until the word **Spark** on the rim of the flywheel is opposite the top of the cam rod (Figure 18). This is the point at which the spark should be made.

Third. Place the tripping lever "A" (Figure 11, page 28) on the magneto and cock the springs as shown.

Fourth. See that the screws (Figure 16) which fasten the clamp to the push rod are tight and that the one nearest the cylinder head is in the hole in the bottom of the cam rod, then adjust the length of push rod "H" (Figure 16) until the end of the rod touches the push finger "G." Tighten locknut "O".

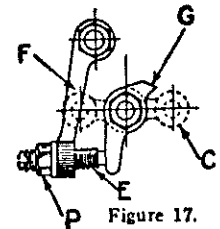


Figure 17.

Fifth. Loosen set screw "S," move wedge "K" on the push rod toward the magneto until the lower edge of the end of the rod "H" is just even with the upper edge of the magneto push finger "G" as shown, tighten set screw "S," then the locknut "N."

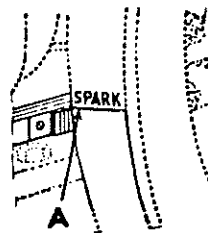


Figure 18.

Sixth. Take off the tripping lever, be sure the magneto wire is fastened to the terminal (Figure 15, page 30). Turn the flywheels to the right to see if the magneto trips off when the word **Spark** is opposite the top of the cam rod. If not, adjust the wedge "K" (Figure 16) carefully until it does. To make engine fire earlier, move wedge "K" toward magneto. To fire later, move wedge "K" away from magneto.