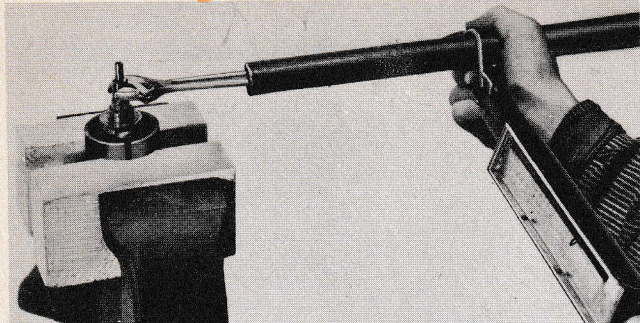


BLUE RIBBON SERVICE



ILLUST. 103--CHECKING TIGHTNESS OF NEW CAM ON ROTOR SHAFT

Remove Old Cam From Rotor:

File an undercut just behind the rotor sufficiently deep to apply a small puller for removal of cam. Hold the rotor (with keeper 57314-D) in a vise, by using wooden blocks (Illust. 103), carved out to fit the assembly. Do not file the shaft diameter where the cam fits since the new cam must be a press fit on the shaft.

Replacement of Cam:

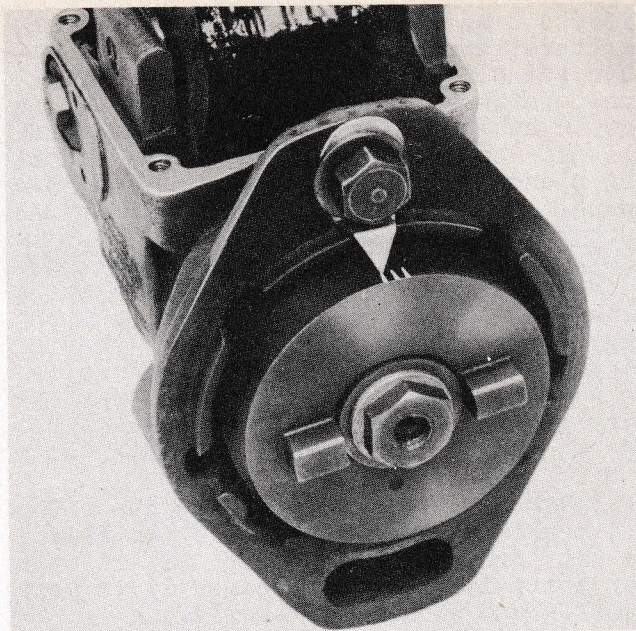
Clockwise Magnetos: "A", "B", "H", "M", "4" and "6" Series carbureted engines.

With key in place on rotor shaft, press new cam 60094-D on the shaft. Reassemble the rotor to the magneto body after it has been cleaned thoroughly and the bearings have been regreased. Then check the timing as listed under that heading.

Counterclockwise Magnetos: "6", "9" and "14" Series Diesel Engine and "9" and "14" Series Carbureted Engines.

Remove the key for cam from shaft, or file the key down to the shaft diameter. Do not file the shaft diameter itself as a new cam must be a press fit at this point. Press fit means the cam, after assembly, must withstand a torque of 11.2 foot pounds without turning on the shaft. This can be checked by holding the rotor in a vise as described above and applying an open end wrench with an extension (Illust. 103). Pull 11.2 lbs. on a spring scale 1 foot from the center of the shaft or 22.4 lbs. at 6" from the center of shaft. If the cam turns with less torque than this amount, it is very likely the cam will turn when magneto is put in use. Be sure it is tight on the shaft.

Press new cam in place with leading flat $28^{\circ} 17'$ from transverse center line as shown in Illust. 102. (See cross section of the cam). Try to set the cam at



ILLUST. 104--CHECKING THE TIMING OF THE NEW BREAKER CAM WITH RESPECT TO IMPULSE COUPLING.

the proper angle before pressing it in place. The angle of the cam on the shaft may be changed to the correct value by applying a wrench to the cam and turning it on the shaft. Thoroughly clean the rotor and magnet, grease the bearings, and assemble the rotor to the body of the magneto. Now check the timing or cam position as listed under that heading.

Checking Magneto Timing (Cam Position): (Both clockwise and counterclockwise magnetos).

1. Mount the magneto in a vise, clamping on the flange.
2. Make a pointer out of thin sheet steel and mount as shown in Illust. 104.
3. Remove coil cover from top of magneto.
4. Turn rotor until the points are open all the way on high point of cam, and adjust the opening very accurately to .013 inches.
5. Turn the rotor until the poles of the magnet bridge the gap or opening between the ends of the pole pieces in the magneto body as shown in Illust. 97. The magnetic pull will hold magnet in this position; look between coil and the front of the body to see the pole of the magnet come into position.
6. Make a mark below pointer on the outside diameter of the impulse coupling drive member at the position set in Operation 5.