

Condenser not shown

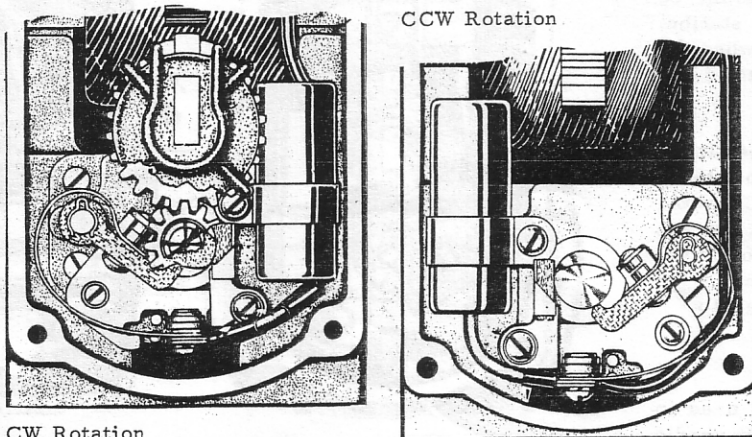
Fig. 6. Two Types of Bearing Supports, CW Rotation

-2433 Condenser is 0.28-0.36 mfd. The capacity of the L-V-2433 condenser is 0.37-0.43 mfd. The capacity of feed-thru condensers is as follows: HX2433 0.28-0.36 mfd, JX2433 0.17-0.23 mfd, KX2433 0.28-0.36 mfd and MX2433 0.28-0.35mfd. Test the condenser at 440v dc for breakdown voltage.

Bearing Support Assembly

Before removing the bearing support assembly, Fig. 6, be sure the breaker arm terminal screw has been removed. On types FM-X4, FM-XE4, FM-XF, FM-XFE, and FM-XZE, the magnetic rotor gear must be removed before the bearing support assembly can be taken out of the housing. Remove the magnetic rotor gear snap ring and draw off the gear using the pinion gear puller OMT76. The magnetic rotor gear pin can then be taken out. On later model magnetos the new style magnetic rotor gear Q5952 can be easily removed after taking off the rotor gear snap ring. Then take the bearing support out of the magneto housing.

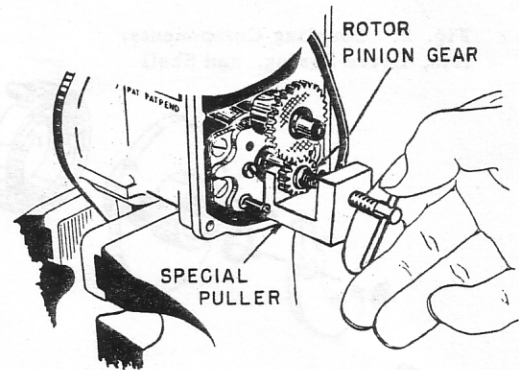
On types FM-E, FM-XR and FM-XOR magnetos, if the bearing support is hard to get out, remove the impulse coupling on flange mounting magnetos, and lift out the oil slinger baffle disc, replace the impulse coupling nut on the rotor shaft, and strike the shaft a sharp blow. This will loosen the bearing support so it can be lifted out of the housing. The outer race of the rotor cam end bearing will remain in the bearing support.



CW Rotation

CCW Rotation

Fig. 7. Bearing Support with and without Distributor Gear

Fig. 6a. Use of
OMT76 Magnetic Rotor Gear Puller

Coil - All FM-X Magnetos

The removal of the coil in all magnetos will be easier if the magnetic rotor is turned to place the magnets in a vertical position or until the flux lock is broken.

The coil in magnetos which have no reduction gear, Fig. 7, between the magnetic rotor and the distributor rotor, can be easily removed for testing. Take out the breaker arm terminal screw, remove the coil lead wire and the condenser. Loosen the coil bridge setscrews located on top of the housing at each side, then slide the coil out of the housing.

The coil in a magneto which has the distributor rotor geared to the magnetic rotor can be removed only after the bearing support assembly has been taken out of the housing. Refer to paragraph Bearing Support Assembly.

Clean the coil lead wire with a dry cloth; do not damage the lead wire. Inspect the coil visually for cracks or exposed windings which would be cause for discarding the coil. Test the coil on a reliable tester.

Impulse Coupling

Although much service work can be performed on the magneto without taking the impulse coupling off the rotor shaft, the removal of the magnetic rotor will necessitate complete removal of the coupling. We recommend that the coupling be removed for cleaning and lubrication whenever major service work is done on the magneto.

An impulse coupling is a mechanical device installed on the magnetic rotor shaft between the magneto and engine drive. Its prime purpose is to intensify the ignition spark at low rotative speed, and to automatically retard the ignition spark during the engine starting to eliminate backfire.

The impulse coupling assembly, Fig. 8, consists of a shell, flat or coiled drive spring and coupling hub assembly with or without pawl springs, which is keyed to the magnetic rotor shaft. The drive spring has one end engaged in the longer slot in the coupling hub while the other end has a loop formed which fits into the coupling shell. The coupling shell is fitted into the drive member on the engine drive shaft.