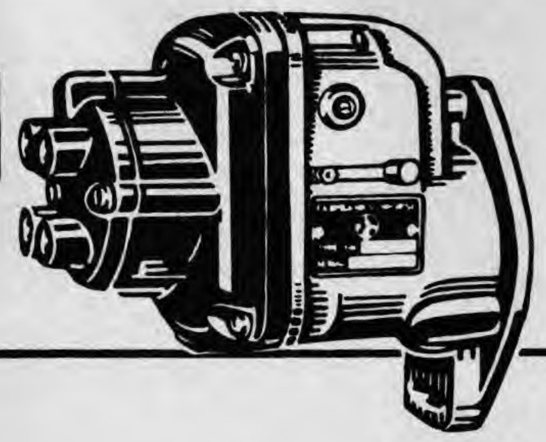
FAIRBANKS-MORSE

MAGNETO DIVISION
BELOIT, WISCONSIN



Bulletin FM 263
Supersedes Bulletin FM 40A-4
MAY,1958

GENERAL SERVICE INFORMATION - TYPES FM, FM-K, AND FM-O, MAGNETOS

SPECIAL BEARING GREASE

FACTORY RECOMMENDATION

Extensive research and field testing of greases suitable for use in the bearings of Fairbanks-Morse magnetos is constantly under way. Definite recommendations to the service organization have been made in accordance with the results obtained.

FMCO9 Magneto Bearing Grease is recommended for "Oilite" and ball bearings in all Fairbanks-Morse magnetos and battery ignition units. It will retain its excellent lubricating characteristics under long and severe operating conditions and need be replaced only at regular overhaul periods. Ball bearings should be thoroughly cleaned in petroleum solvent during magneto overhaul and then repacked with FMCO9 Magneto Bearing Grease. This grease, described in Bulletin FM172, is packed in 4-1/4 oz. collapsible tubes and a single tube is ordered as Part No. 1C4. It is also shipped in cartons containing 12 tubes; a carton of the grease is ordered as Part No. 1C4A. When new "Oilite" sleeve bearings are to be replaced, no additional lubrication is necessary. These bearings are impregnated with grease before leaving the factory.

CAM FELT WICK

No attempt should ever be made to oil or grease the cam felt wick. This wick is impregnated with grease at the factory by a special process, and if examination shows that it has dried or hardened, it should be replaced by a new wick.

CLEANING DISTRIBUTOR DISCS

AND END CAPS

TYPES FM, FM-K, AND FM-O DISTRIBUTOR DISCS

Do not clean distributor discs with sandpaper or emery cloth. These abrasives destroy the fine finish given the surface of this part at the factory and heavy carbon paths are likely to result within a short time. Improper cleaning of distributor discs by servicemen causes dissatisfaction among customers and operators.

Carbon deposits on the surface of the distributor disc can be loosened and removed by wiping the surface with a clean hard cloth moistened in petroleum solvent.

Distributor discs are finished at the factory by use of a fine polishing agent known as "French Polishing Cloth." This polishing cloth is available to service stations in packages containing ten pieces, each approximately the size necessary to refinish one disc. This package may be ordered by Part No. 6C1. A flat plate, preferably of steel or glass, should be provided and the polishing cloth fastened to its surface. The plate should be placed on the bench and the distributor disc moved with a circular motion on the polishing surface.

END CAPS

The interior of the distributor end cap should be wiped out thoroughly with petroleum solvent. Under no circumstance should sandpaper or emery cloth be used to remove deposits since such abrasives scratch the smooth surface and increase the possibility of carbon paths. The formation of carbon paths on the roughened surface permits the leakage of high tension current, causing oxidation to take place and necessitating the replacement of the entire end cap.

The brushes should be removed and examined, and replaced if worn or damaged. The brush holder should be carefully cleaned of all corrosion so that the brushes move freely and are under slight spring pressure when depressed. The brush springs should also be inspected. Those not in good condition should be replaced.

REASSEMBLY AND SEALING

Types FM and FM-K magnetos are completely sealed units. Type FM-O magnetos are either sealed or vented according to the application. Vent screens in such units should be cleaned in petroleum solvent or replaced by new screens.

Before sealing the end cap to the frame, the old gasket material should be completely removed from all joints and a new gasket provided. The gasket surfaces should then be coated with special FMCO2 Gasket Varnish and the gasket laid in place. After the parts have been joined, a thin coat of the varnish should be applied over the outer edge of the joint. FMCO2 Gasket Varnish is furnished by the factory in half-pint cans having built-in brushes. Order by Part No. 2C1.

MOISTURE CONDENSATION

Reports from the field, together with the experiences of field service men, indicate that difficulty due to moisture condensation inside a magneto can nearly always be traced to improper sealing during reassembly.

MOISTURE FROM OXIDATION

Continued arcing inside the sealed magneto housing results in a condition known as oxidation. Green corrosion, together with small particles of brown dust, indicate that oxidation is taking place. Since minute quantities of water are also produced by the electrochemical reactions involved, a moist condition when the housing is opened is sometimes mistaken for condensation or sweating. Oxidation can be eliminated only by locating the arc and removing its cause.

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