Instructions No. 2994

FAIRBANKS-MORSE

TYPE FM-W1A93 FLYWHEEL MAGNETOS

For The Hart-Carter Co.

Lauson Division





Field Service and Adjustment Information

GENERAL

Modern ignition systems are carefully designed to provide quick, easy starting and maximum dependability of engine operation without adjustment or service. Through advanced engineering, together with sturdy construction, Fairbanks-Morse magnetos have become field performance leaders. Field adjustments are rarely necessary and although very simple, they should be made only in accordance with the following instructions. Also, it is suggested that the flywheel be removed only when it is certain that the ignition spark produced is unsatisfactory. This condition may be determined by tests which are easily made in the field.

TESTING THE IGNITION SPARK

With a properly adjusted spark plug in good condition, the ignition spark should be strong enough to bridge a short gap in addition to the actual spark plug discharge. This may be determined with the engine running by holding the end of the ignition cable not more than 1/16 in. away from the spark plug terminal, taking the usual precautions against electric shock. The engine should not misfire during this test. If the engine will not run under its own power, hold the end of the ignition cable 1/16 in. from the spark plug terminal, turn the engine over with the starter, and watch closely for a spark between the cable and the spark plug terminal. If a strong spark is observed, the magneto may be eliminated as the source of difficulty.

SERVICE OF BREAKER POINTS

Before examining the breaker points, it is first necessary to remove the flywheel. This is done by first loosening the flywheel retaining nut until it is flush with the end of the crankshaft. If no flywheel puller is available, use a large screwdriver as a pry between the bearing plate and the flywheel. Using a steel hammer, strike the flywheel retaining nut sharply; this will loosen the flywheel from the shaft taper. Finally, after removing the flywheel nut from the crankshaft, the flywheel may be lifted off.

The breaker points should then be inspected for evidence of pitting or pyramiding. They should be clean and should meet squarely. A small tungsten file or fine stone may be used to resurface the points except in the case of badly worn or pitted points, which should be replaced. If it is necessary to resurface or replace the breaker points, it will also be necessary to readjust them to their proper clearance, which is 0.020 in. at full separation. This adjustment is made in the following manner: With the points fully opened, loosen slightly the contact support locking screw and move the contact support until the proper clearance is obtained. This is accomplished by sliding the contact support so as to open the points to about 1/16 in., inserting a 0.020" feeler gage between the points, and then pushing the contact support back so that the gage makes firm contact with both points. Lock the assembly in place by tightening the locking screw, and take a final measurement of the breaker point gap after the locking screw is tightened.

FURTHER FIELD SERVICE NOT RECOMMENDED

The cam felt wick, if dry or hard, should be replaced by a new factory-impregnated wick. Other than this, Fairbanks-Morse magnetos do not require field lubrication. Coil and condenser replacements, while simple, are not recommended unless test equipment is available.

MAGNETO SERVICE FACILITIES

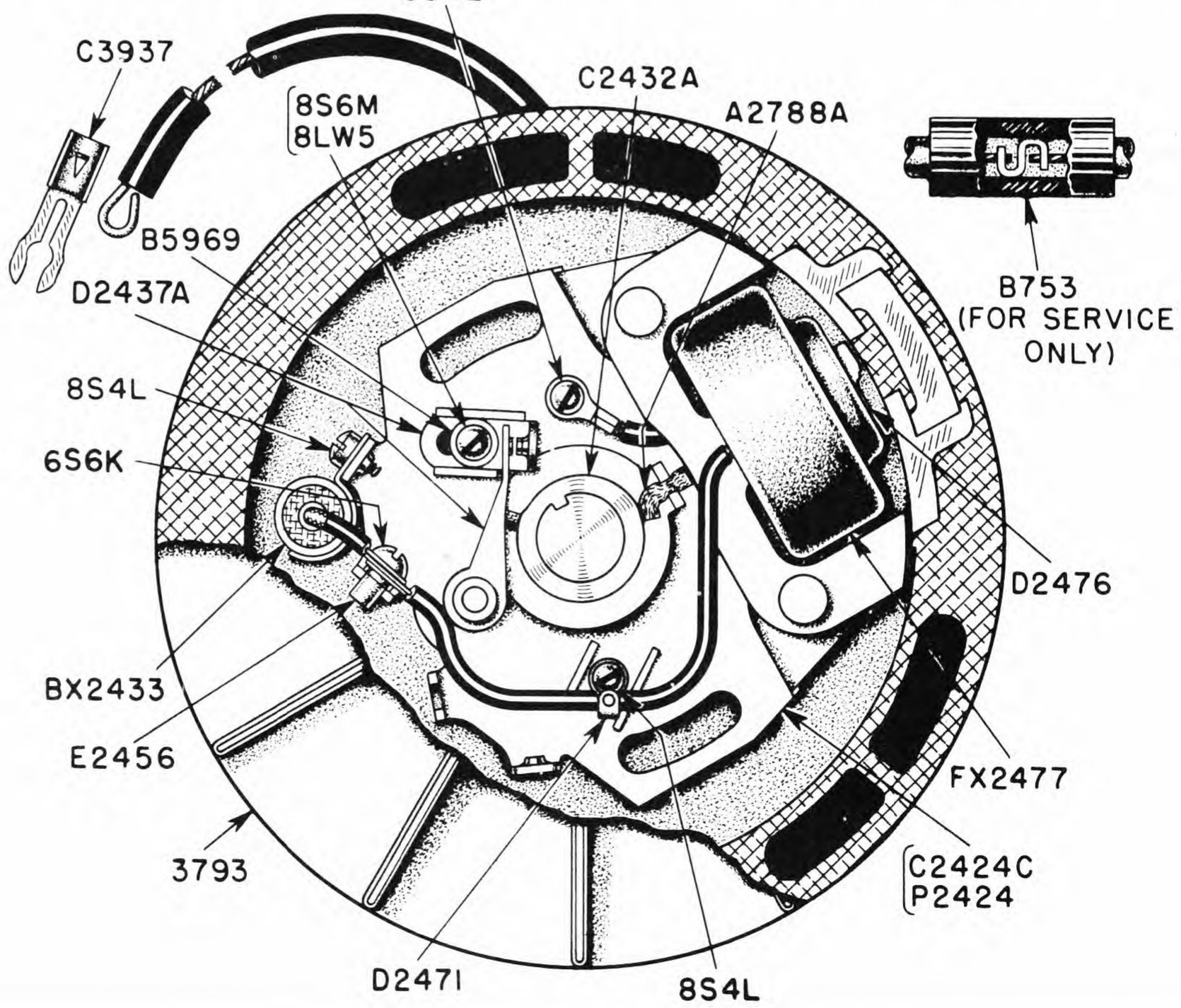
Authorized Fairbanks-Morse Magneto Service Stations, located throughout the United States and foreign

Instructions No. 2994
Reprinted March 10, 1954

countries, have been carefully selected by Fairbanks, Morse & Co. to insure highly efficient and complete repair service to owners of Fairbanks-Morse magnetos. These service stations, which are specially equipped for magneto repair and manned by highly trained personnel, maintain close contact with the factory service and engineering departments. The station most convenient may be located by use of the latest edition of Bulletin FM18D, which is available upon request.

Genuine Fairbanks-Morse magneto replacement parts, which may be obtained from all Authorized Service Stations, should always be insisted upon for repairs. The use of spurious parts usually proves less satisfactory and economical, in addition to voiding the manufacturer's guaranty.

REPAIR CHART, TYPE FM-W1A93 FLYWHEEL MAGNETO



Order by Part No.	Name of Part	No. Used	Order by Part No.	Name of Part	No. Used
B753	High Tension Lead Wire Connection . . . . . (For Service only. Inc. C3937)	1	8LW5	Contact Support Locking Screw Lockwasher .	1
			E2456	Terminal Insulating Bushing	1
C2424C	Mounting Plate Assembly . . . . . (C2424C inc. P2424, BX2433, 8S4L, D2437A, 6S6K, 8S6M, 8LW5, E2456, D2471, D2476, FX2477, A2788A, B5969)	1	D2471	Cable Clamp.	1
			8S4L	Cable Clamp Screw . . . . . (#8-32x$\frac{1}{4}$")	1
			D2476	Coil Spring Clip	1
			FX2477	Coil Assembly	1
P2424	Stator Plate Assembly	1	6S4L	Coil Ground Terminal Screw . . . (#6-32x$\frac{1}{4}$")	1
C2432A	Cam	1	A2788A	Cam Felt Wick	1
BX2433	Condenser	1	M3793	Flywheel (FM-W1A93 Magneto)	1
8S4L	Condenser Mounting Screw . . . . (#8-32x$\frac{1}{4}$")	1	N3793	Flywheel with Steel Hub (FM-W1A93H Magneto)	1
D2437A	Breaker Arm, Support Bracket and Points . .	1	C3937	Cable Terminal (For Service only)	1
6S6K	Breaker Arm Terminal Screw . (#6-32x$\frac{3}{8}$")	1	B5969	Contact Support Locking Screw Washer . . .	1
8S6M	Contact Support Locking Screw . . (#8-32x$\frac{3}{8}$")	1			

FAIRBANKS, MORSE & CO.
Manufacturers

Executive Offices
Chicago, Illinois
321374-035408M-BDN

Magneto Sales & Factory
Beloit, Wisconsin
Printed in U.S.A.