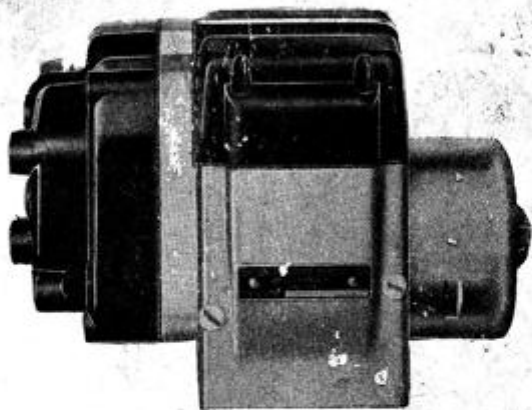


**OWNER'S
MANUAL**



Edison
RM
MAGNETO

BULLETIN N 900

Edison

RM Magneto

The EDISON RM Magneto is an all-enclosed, general purpose machine of the rotary magnet type for practically all types of spark ignition engines. The machine is fixed spark and built for base or flange mounting. It is manufactured in the following types:

RM-1—Single cylinder for small HP one cylinder industrial engines.

RM-2—Two cylinders for tractors, industrial equipment, marine and agricultural machinery.

RMG-2—Two cylinders (same as RM-2) except with gear driven distributor firing at 180 degrees or at 90-270 degrees.

RM-4—Four cylinders for all classes of 4 cylinder engines.

The EDISON RM Magneto is designed and built to the highest standards, and is capable of giving reliable service for a very long period of time. It is fully guaranteed by the Edison-Splittorf Corporation in accordance with the printed statement on Page 11.

INSTALLATION

Rotation. All magnetos are built, or adjusted, to operate in a given direction of rotation. When ordering a magneto, or when installing one, be sure that the direction of rotation is correct. Rotation is right hand (clock-wise), or left hand (counter clock-wise), when viewed from the drive shaft end.

If the owner desires to install the magneto for the first time or make a re-installation thereafter, the following will be useful.

Before attempting to install the magneto, the parts should be checked as follows:

1. See that the direction of rotation, marked on the magneto by an arrow, is correct for the engine.
2. If the magneto is base mounted
 - a. See that the shaft height fits the engine.
 - b. See that the proper adjustable coupling and float member are available to connect the magneto to the magneto driving shaft of the engine.
 - c. In replacing old magnetos having a removable base, that base is usually retained and applied to the new magneto.
3. If the magneto is flange mounted
 - a. See that the magneto flange fits the engine flange.
 - b. See that the magneto drive lugs fit and engage properly without binding when the magneto is bolted fast.
 - c. Inspect the flange gasket.

NOTE: Different engines vary as to the exact form of magneto required and as to the precise details of mounting. Magneto Service Stations cannot always furnish an exact fit without seeing the old magneto being replaced.



Edison RM Magneto with Flange Mounting Base

Timing. To time an RM Magneto to the engine proceed as follows:

1. Crank the engine until number one piston is just passed (5°) top center on the compression stroke. This may be determined by feeling with a wire through the spark plug opening. On some engines the flywheel is marked to show top center position. This is the position of the engine for timing number one cylinder.
2. Connect a short length of ignition cable to number one terminal of the magneto. For clockwise magnetos, this is the lower left hand terminal looking at the front of the magneto. For counter-clockwise magnetos, number one terminal is at the lower right. Bring the free end of this cable close to the metal magneto housing. Turn the impulse starter by hand, one click at a time, until a spark occurs between the cable and the magneto. This shows

that the internal parts of the magneto are now in the approximate position for firing number one cylinder.

3. Timing is completed by attaching the magneto to the engine.

- a. For base mounted magnetos, see that the ring member of the metal coupling is loose and free to turn about the cone. Without turning the magneto shaft or the engine shaft, place the magneto on its pad with the float member loosely in place, line the magneto up, and make fast the holding bolts. The impulse starter and float may now be turned backwards about 90° ($\frac{1}{4}$ circle) which permits a lever inside the instrument to drop into place for a repetition of the same spark observed in the preceding step. Then rotate the parts in the running direction very slowly and carefully noting exactly where the starter makes a sharp click. At exactly that point the cone and ring members of the coupling should be clamped together very tight but with the float having a slight end-wise freedom. This completes the timing but it should be done accurately.

- b. For flange mounted magnetos, pick up magneto with its shaft in the position described in Step 2 above, note the position of the slots in the driving shaft of the engine, tilt the whole magneto enough to permit the lugs on the magneto to enter those slots, and push the magneto back into place. Then rotate the whole body of the magneto in the same direction that the shaft turns for about 90° ($\frac{1}{4}$ circle) to allow a lever inside the instrument to drop into place. Then rotate the whole magneto in the direction opposite that which the shaft turns until the impulse just snaps. That is the position in which the magneto should be made fast.

4. Connect one cable from number one terminal to number one spark plug and note the firing order of the engine. Connect cables from cylinders in that order to successive magneto terminals proceeding from number one in the direction the magneto distributor travels. This is opposite from the direction the magneto shaft rotates for all machines which have a moulded front cover extending the full height of the magneto. In those machines which have a smaller square front cap, the distributor rotates with the magneto shaft in the same direction.
5. If the magneto has a grounding terminal, connect it to the stopping switch, the other terminal of which connects to some metal part of the engine.

Final. If the directions have been correctly followed, the magneto is now properly installed and ready to be connected to any spark control linkage that may be used on the equipment. If the machine is new, do not oil it at the start. (See directions for lubricating under "CARE AND MAINTENANCE".) Note that the engine will not start unless the ground switch is in the "on" or open position. Also it is well to crank the engine over once or twice with the ground switch in the "off" or grounded position before starting. This will draw in a charge of gas and will test that the impulse starter (if there is one) is functioning properly as shown by a sharp click. If the starter clicks, the switch may be turned on and the engine started safely. If the impulse starter does not function, take the machine to an Authorized EDISON-Splitdorf Service Station because the cranking handle of the motor may kick back and do injury if the impulse starter is not functioning.

CARE AND MAINTENANCE

The most important factors in the proper care of the magneto are cleanliness and lubrication. Where the magneto has an impulse starter, the starter seldom requires any attention.

Cleaning. The outside of the magneto should be wiped off as required to keep it neat, clean, and dry. Once or twice a year (or more often for heavy service) remove the distributor block for cleaning and inspection. Wipe or brush out the breaker compartment and mechanism, and wipe out the distributor block. Also, pull out the rotating distributor spool and wipe it off, testing that all carbon brushes work freely and have a little spring tension. Whenever the block is removed, it is desirable to check the contact points. (See the section "CONTACT POINTS")

LUBRICATION

Once for each 1,000 hours of actual use, lubricate as follows:

1. 4 to 6 drops of oil at main bearings, through screw cap oilers, one front and one back.
2. Remove the distributor cover and apply 3 to 4 drops of oil to the cam wick and 1 drop to the breaker bar bearing.
3. For magnetos with a distributor shaft, remove the rotating disc, withdraw a screw plug from the center of the shaft and apply 3 or 4 drops of oil.

For extremely severe service this lubrication may be done more frequently but over-lubrication is as objectionable as under-lubrication.

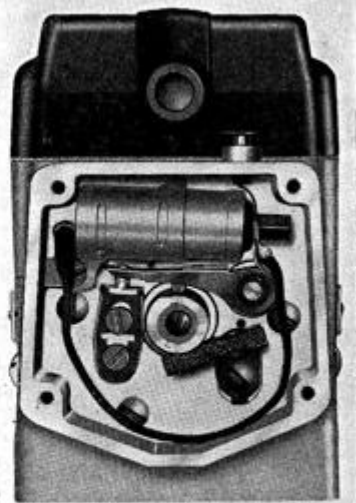
CAUTION: NEVER GET OIL ON THE CONTACTS OR ALLOW IT TO FLOW OVER THE INTERIOR OF THE MAGNETO.

For best results use a good quality of automobile oil of grade SAE 40. This is usually sold as "medium" or "medium heavy".

CONTACT POINTS

Contact points on any magneto may get dirty and worn with use. Even on new magnetos which have been standing out of use for some time, it may be necessary to clean off any film of oxide before starting the magneto into service. It is advisable to inspect contacts occasionally. This may be done by removing the distributor block. Contacts are in perfect condition when the contact surfaces are clean, fairly even, and show a fine grained or frosty appearance. If they are only slightly dirty or pitted, they may be cleaned and resurfaced with crocus cloth or fine sandpaper. In doing this, care must be taken to keep a true surface so that points meet evenly and squarely, and to be sure no shreds or particles of dirt are left between the contact surfaces. Contacts that are badly worn must be replaced.

Contact points must be correctly adjusted. If the maximum opening is less than .014" or more than .016", adjust them to come within those figures.



Circuit Breaker View of Edison RM Magneto

IMPULSE STARTERS

An impulse starter is a spring mechanism at the drive end of the magneto to facilitate starting by turning the magneto shaft much faster than the cranking speed, at the same time automatically retarding the spark.

The starter on RM Magnetos needs no attention in use.

TESTING

If the ignition system is suspected as being the cause of any difficulty in starting or running, it may be checked as follows. Before applying these tests see that there is a supply of fuel and that it flows freely to the carburetor. If the magneto has an impulse starter, see that it operates when the engine is cranked. Be sure that the ignition switch is turned on. If these items are right proceed with these tests.

1. Remove all spark plugs with wires attached and lay them on their sides on the engine, having the firing points well clear of any nearby metal part. Then check that each plug has a gap setting of .025 inch.
2. Crank the engine (smartly if there is no impulse starter). Turn the engine until the impulse has clicked as many times as there are cylinders (or until magneto has fired once around) noting whether any plugs do not fire.
3. Where no spark occurred at the plug, remove the wire, hold it $\frac{1}{8}$ inch from the cylinder and re-crank the engine until this cylinder is passed. If a good spark occurs between the wire and the engine, the plug of that cylinder is faulty and should be cleaned or replaced.
4. If no spark occurs in Test No. 3, remove that cable from the magneto and fasten another short wire to that magneto terminal, bringing the free end within $\frac{1}{8}$ inch of the magneto frame or engine. Re-crank the engine until this cylinder is passed. If a good spark occurs, the cable is faulty and should be replaced.

5. If no spark occurs in Test No. 4, remove the magneto distributor block and examine the contact points as described on page 7, "CONTACT POINTS". Also pull out the distributor spool, clean it, and inspect the brushes for smooth action.
6. Replace distributor spool and block and repeat Test No. 4.
7. If a good spark is now produced, the magneto may be assumed to be in good condition. If more than one faulty plug or cable was present, each may be detected by the above tests.
8. If tests up to and including No. 7 do not produce a good spark, the magneto should be taken to an Authorized EDISON-Splitdorf Service Station for further examination.

If the ignition system is found to be in good condition by these tests and trouble still persists, it is apparent that the search should be directed to other parts of the equipment or to the accuracy of timing.

PARTS AND SERVICE

Every Authorized EDISON-Splitdorf Service Station is equipped to render prompt and expert service, and to make any repairs or adjustments that may be needed incidental to continued use of the machine.

EDISON-Splitdorf Service Stations are appointed with the greatest discretion, and only after a thorough investigation as to their fitness to properly represent the EDISON-Splitdorf Service organization and to reflect its high standards. They will be found to possess proper equipment for the repair of EDISON-Splitdorf Magnetos, and a personnel trained through long experience in the handling and servicing of magnetos.

The market is flooded with imitation magneto parts, usually offered at attractively low prices to snare the unsuspecting. A precision machine like the EDISON RM Magneto cannot perform its expected functions when handicapped with the burden of spurious repair parts. It is just as important that replacement parts should be EDISON-Splitdorf-made as that the original parts were genuine. Patronize Authorized EDISON-Splitdorf Service Stations as a protection to yourself.

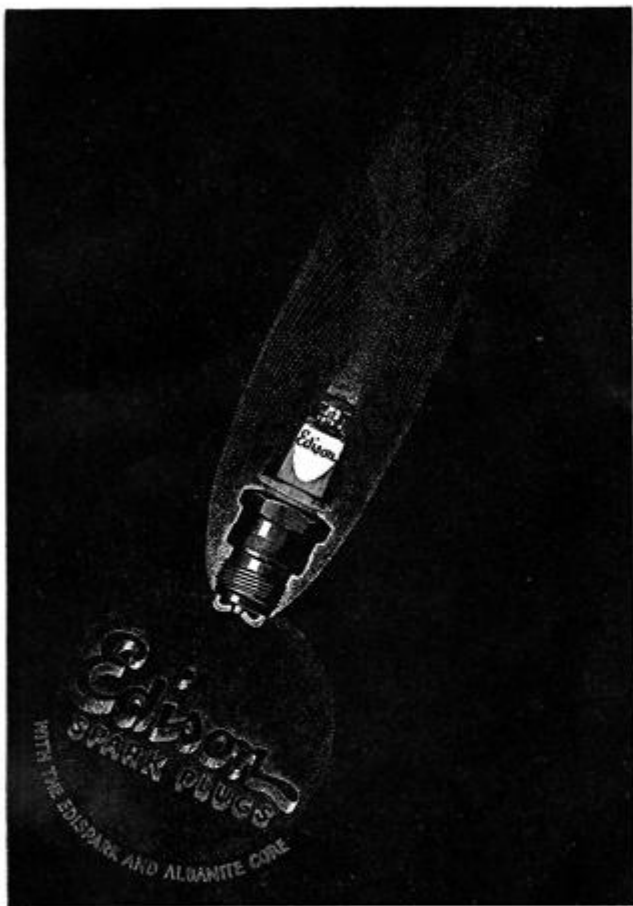
The use of spurious parts automatically abrogates the EDISON-Splitdorf Warranty.

WARRANTY

EDISON - Splitdorf Magnetos and Parts are guaranteed to be free from defects of material or workmanship, under normal use and service, for a period of 90 days from the date of sale to the first actual user.

EDISON - Splitdorf Corporation will repair or replace, without any charge whatsoever, any such material of its manufacture, which when presented for examination to an Authorized EDISON-Splitdorf Service Station, or to the factory, is found to be defective.

EDISON-SPLITDORF CORPORATION



SPARK PLUGS play an important part in the performance of your engine. It is poor economy to use anything but the best and most efficient. Edison Spark Plugs are correctly designed to give exacting service in all types of engines. They are built to the highest standards, and may be selected with assurance of excellent results and value.

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