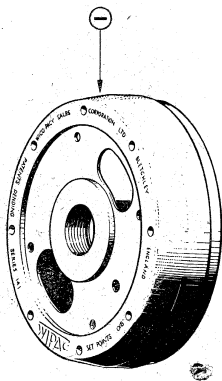
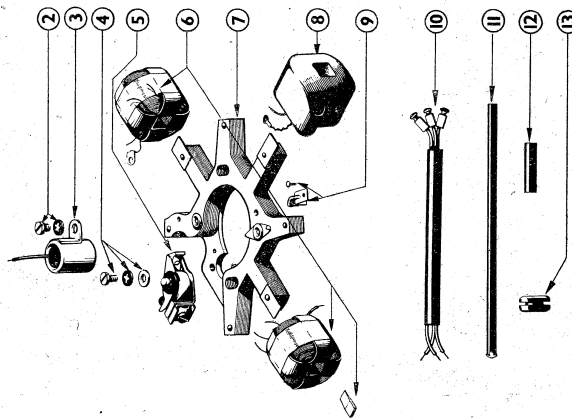


Flywheel Magneto Ignition



- 1 Flywheel and cam unit.
- 2 Fixing set (condenser).
- 3 Condenser.
- 4 Fixing set (contact breaker).
- 5 Contact breaker.
- 6 Low tension coil.
- 7 Core and plate assembly.
- 8 High tension coil.
- 9 Grease pad.
- 10 Low tension lead.
- 11 High tension lead.
- 12 Sleeve.
- 13 Grommet.



The purpose of the high tension magneto is to produce a hot spark across the points of the sparking plug. A magneto consists principally of permanent magnets, a high tension coil, a contact breaker and a condenser. In this magneto the magnets are secured to the rotating flywheel, and the high tension coil, contact breaker and condenser are stationary.

The flywheel magneto provides current for both ignition and lighting. The same magneto is used for both DIRECT and RECTIFIER-BATTERY lighting sets although wiring connections differ and references should be made to the wiring diagrams.

If it is necessary to remove the flywheel magneto, begin by removing gearbox outer casing, unscrew centre nut and washer. Withdraw flywheel (1) by means of extractor. Disconnect generator wires at snap connections, and H.T. at plug. Remove the two screws from stator, thus facilitating its withdrawal from locating spigot. Whilst holding the stator, undo the adaptor screw, thus permitting the generator shroud to be removed from crankcase. This leaves the stator and electrical harness in situ ready for re-assembly.

The armature plate which carries the ignition coil, lighting coils and contact breaker assembly is secured to the crankcase by six screws. The high tension lead from ignition coil to sparking plug is detachable by unscrewing from armature plate, and when refitting it is important to make sure that the brass pad carried by the spring and secured to the terminal makes contact with the soldered disc on the outside of the ignition coil.

ADJUSTING CONTACT BREAKER POINTS. Turn engine over until points are fully open.

Test with feeler gauge between points. If the points require adjustment slacken the fixing screw and carefully move the fixed contact plate by means of a screwdriver until the correct gap is obtained. Tighten screw.

The breaker point setting should only be adjusted in the manner described and at no time should the breaker arm be bent to provide adjustment.

If the contact points need replacing both the fixed and movable points must be replaced at the same time.

NOTE : After every 5,000 miles it is necessary to relubricate the cam grease pad. This is done by removing the pad and squeezing and working into it a Summer grade of motor transmission grease. **Do not use ordinary grease.**

REPLACEMENT OF IGNITION AND LIGHTING COILS. First bend back coil retainer strip then release coil lead from contact breaker fixing post, then unsolder earth leads from lead clamp. Considerable force may be necessary to remove coil from core as a fibre wedge is used to ensure a tight fit and a varnish adherent is also used to secure the lighting coils.

IGNITION FAILURE. Serious trouble in the form of condenser breakdown is very rare and any ignition failure will generally be due to the condition of the sparking plug or the contact breaker points, or faulty insulation of the H.T. lead or other connections. The first step in dealing with ignition trouble should be to remove plug from engine and examine the points to see whether they are oily and the gap correctly set at .020". If the insulator is fouled with oil and carbon there may be sufficient leakage to prevent correct sparking and cleaning will be necessary. Fitting a new plug will readily show whether the failure is due to plug or not. The plug lead should then be examined for cracks or other faults. The contact breaker can then be examined to see whether the points are opening correctly. When the points are fully open there should be a gap of .018". The surfaces must also be clean and free from oil and severe pitting. A piece of stiff paper will usually remove oil or grease. If the points are burned or pitted they should be cleaned with a fine carborundum stone if available, otherwise fine emery cloth can be used, wiping off any traces of metal or emery dust with petrol-soaked rag. As a result of wear on the heel of the rocker arm bearing on the cam, the point gap will be reduced. This wear should be negligible if the felt oiling pad is kept moist with a suitable lubricant.

A weak or faulty condenser can be detected by badly burnt and pitted contacts or a continuous intense blue spark across the contacts when running. A very small white spark across the points when running is normal.

The condenser can be removed by undoing the screw securing it and releasing the lead from the terminal post.