

## RUNNING MAINTENANCE

The ignition generator requires very little maintenance and if the following notes are observed the life of the machine should prove trouble-free.

Check and if necessary re-adjust the contacts once every 5,000 miles.

Occasionally clean the contacts by inserting a dry smooth piece of paper between them and withdrawing while the contacts are in the closed position. Do not allow the engine to run with oil or petrol on the contacts or they will start to burn and blacken, and if they do, lightly polish with a piece of smooth emery cloth.

After every 5,000 miles it is necessary to re-lubricate the cam grease pad. This is done by removing the pad and squeezing and working into it a Summer grade of motor transmission grease which will very closely resemble that used at the factory. **Do not use ordinary grease.**

## SERVICING

### Checking ignition for spark

If the engine fails to start and there is indication that the ignition is at fault:—

- (A) Disconnect H.T. lead from the spark plug and hold it about  $\frac{3}{16}$ " away from some unpainted portion of the frame or engine. Kick-start the engine in the usual way and a spark should jump this gap.
- (B) If no spark is visible:—
  1. Make sure H.T. lead is screwed right home into Coil box.
  2. Check H.T. lead for continuity.
  3. Check contact breaker points for correct gap setting and see that they are clean.  
Check breaker point adjustment screws for tightness.
  4. By removing the flywheel examine the internal leads for breaks and see they are all properly secured. Make sure covered leads are not chafed and earthing.
  5. Make sure there are no metallic particles inside the unit.

### Condenser

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.

### Contact breaker points

**Adjustment.** 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.

### Replacement of ignition and lighting coils

**Removal.** First release ignition coil primary leads, then with a gentle pull the coil can be withdrawn from the core. Considerable force may be necessary to remove L.T. coils 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.

THIS IGNITION GENERATOR IS  
FITTED AS STANDARD EQUIPMENT  
TO THE

**JAMES 150c.c. FLYING CADET**

AND

**FRANCIS-BARNETT 150c.c.**

**PLOVER 86**

### MAIN DETAILS

|                        |                                              |
|------------------------|----------------------------------------------|
| Wipac Type             | Series 141                                   |
| Engine cylinder        | Single                                       |
| Rotation               | Clockwise                                    |
| Flywheel weight        | 3 lbs. 13 ozs.                               |
| Flywheel diameter      | 5½"                                          |
| Ignition               | Direct from magneto                          |
| Lighting               | 6 volt A.C.<br>28.8 watts at<br>2,800 r.p.m. |
| H.T. lead              | 21" (5 mm.)                                  |
| Breaker point setting  | .018"                                        |
| Flywheel extractor     | S0073                                        |
| Recommended spark plug | P60L                                         |

### Flywheel

This flywheel is robustly constructed with the cam integral with the flywheel boss and it is unlikely to develop any faults in normal use. **A KEEPER RING IS NOT NECESSARY WHEN WITHDRAWING IT FROM THE STATOR PLATE.**

**Removal.** Remove the nut securing the flywheel to the shaft. If an extractor is not available and the flywheel cannot be easily withdrawn, grasp the flywheel firmly and while attempting to pull it off, tap the end of the crankshaft with a mallet or lead hammer, being careful during this operation not to damage the crankshaft. When replacing the flywheel make sure metallized dust or small steel items have not been attracted onto the magnets.

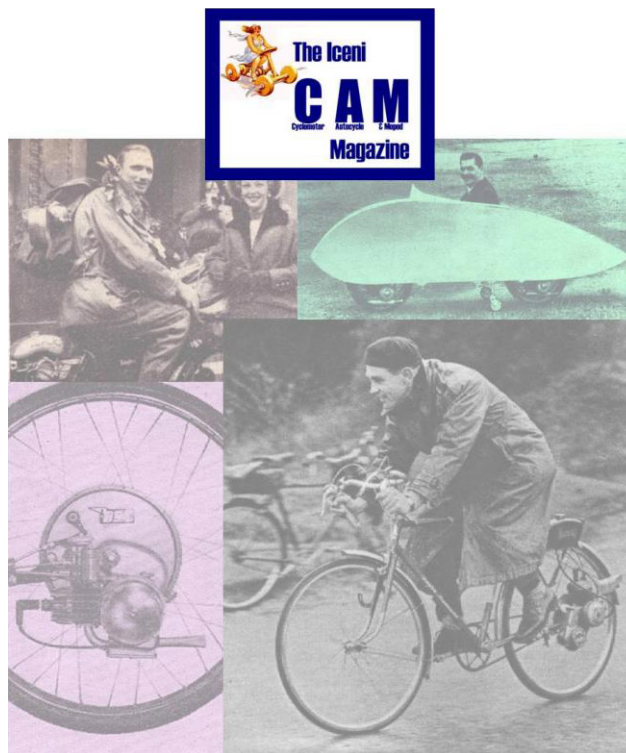




| PARTS IN EXPLODED VIEW | COMPONENTS                                              | SETS                                       | UNITS                             |
|------------------------|---------------------------------------------------------|--------------------------------------------|-----------------------------------|
|                        |                                                         |                                            | S1032<br>Flywheel and<br>Cam Unit |
|                        | S0052<br>Condenser<br>Fixing Set                        | S1051<br>Condenser Set<br>(includes S0052) |                                   |
|                        | S0054<br>Breaker Point<br>Fixing Set                    | S0577<br>Breaker Point Set                 |                                   |
|                        | S1053<br>L.T. Coil Set                                  |                                            |                                   |
|                        | S0057<br>Core and Plate<br>Assembly<br>(includes S0055) |                                            | S1052<br>Stator Unit              |
|                        | S1046<br>H.T. Coil Set                                  | S1055<br>H.T., L.T. Coils and<br>Core Unit |                                   |
|                        | S0055<br>Grease Pad Set                                 |                                            |                                   |
|                        | S1054<br>L.T. Lead Set                                  |                                            |                                   |
|                        |                                                         | S0716<br>H.T. Lead Wire Group<br>(21")     |                                   |
|                        |                                                         |                                            | 00440<br>Sleeve                   |
|                        |                                                         |                                            | 2179<br>Grommet                   |

BRITISH BUILT BY THE WIPAC GROUP

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