

FK.113

# Lumenition

## OPTRONIC<sup>®</sup> IGNITION

INFRA RED SOLID STATE BREAKERLESS IGNITION SYSTEM

90004

A BRITISH INVENTION

**Lumenition**

# FK.113

Lucas 8 cylinder. 35D8 Distributor  
Anti Clockwise rotation  
Twin and Single contacts fitted

### INSTRUCTIONS FOR Lucas 35D8 Distributors

- Disconnect:** Battery Negative Terminal
- Remove:** Distributor Cap (9)  
Rotor (1)  
Contact Breaker & Condenser Assembly (5)
- Check:** Mechanical & Vacuum Advance Operation

#### INSTALLATION OF OPTICAL SWITCH

- 1 Select appropriate screw (26) 5mm taper head or 3.5mm pan head as supplied, fit adaptor plate (6) to original contact breaker mounting hole. Ensure the two projections on the underside of the plate are located correctly, i.e. long pin locates in the hole in the vacuum control arm and short projection fits into base plate.

NOTES: Kits for Triumph Stag (FK 113) will not have long pin for vacuum operation.

On some model distributors the steel pin in adaptor plate (6) is not required and must be removed to ensure correct location.

- 2 Fit optical switch (4) to adaptor plate (6) using 2BA screw and washer (11) provided.
- 3 Route optical switch wires (4) around the distributor and through the exit hole. **DO NOT DAMAGE WIRE INSULATION.**  
Clock rotation distributors with dwell angle adjustment screw (36) only  
Route optical switch wires to pass under the earth strap loop (25) as shown.
- 4 Where two choppers (2) are supplied select one that fits tightly over the cam without lateral movement. The chopper (2) is located over the cam with the lobes located in the recesses in the bore of the chopper. Push down the chopper until lower lugs 'B' are seated on the cam. If the blades of the chopper do not clear the top lensed unit remove the chopper and carve away lower lugs 'B'. Refit the chopper so that upper lugs 'A' seat on top of the cam.
- 5 Slide the grommet (3) over optical switch wires and locate grommet into distributor body ensuring that:
  - (a) There is sufficient wire length between grommet and optical switch to allow distributor plate to move during vacuum advance/retard.
  - (b) The wires are clear of the revolving chopper blades.
  - (c) No damage is caused to wire insulation.

**WARNING:** Pre mid-1972 Rover distributors have a spring loaded pivot pin securing the advance base. It may be necessary to grind a maximum of 2 mm from the hexagon nut and pin to allow the chopper to clear.

- 6 To prevent optical switch wires being damaged by rotating chopper fit cable tie (22) around the wires looping the tie around the dwell retainer spring on Rover distributors or through the threaded hole in the vacuum-operated base plate on other distributors - do not over-tighten cable tie. Allow wires freedom of movement during vacuum operation. Trim end of cable tie to avoid fouling the chopper.
- 7 Check freedom of movement of plate and wires during vacuum operation.
- 8 For fitment of connector (13) refer to fitting instruction supplied with power module/optical switch package.
- 9 Refit rotor (1) and distributor cap (9).
- 10 Dwell adjusting screw (36) if provided, should be screwed in bringing optical switch in towards chopper blade allowing 1mm clearance at the closest point to blade circumference.
- 11 After installation of the Lumenition kit, ignition timing must be set to conform with dynamic (using strobe light) or static timing specification provided by the vehicle manufacturers.  
For static timing:
  - a Set engine on specified timing marks with rotor distributor tip pointing to specified pick-up segment inside distributor cap.
  - b Connect a voltmeter or 12V bulb of not more than 24W between the coil negative (C.B.) terminal and earth.
  - c Remove distributor cap. Slacken distributor clamp bolt and move the distributor in the direction of rotation of the rotor only far enough for the lenses to be clear of the leading edge of the chopper blade. Refit rotor, if removed, and cap.
  - d Switch ignition on, taking care not to crank engine.
  - e Very gently turn distributor *against* the direction of rotation of the rotor to exact point where bulb just lights or voltmeter reads around 12 volts. This will be with the leading edge of the chopper blade covering about  $\frac{2}{3}$  of the lensed unit.
  - f Tighten distributor clamp bolt taking care not to move distributor at all. Remove voltmeter or bulb. Check security of all H.T. connections and vacuum pipes.

Check condition of spark plugs and set gap according to manufacturer's recommendations.

Carburation should be adjusted to specification with the engine at normal running temperature without choke.

