

## HEADLAMP MODELS 2FR AND 2FRP

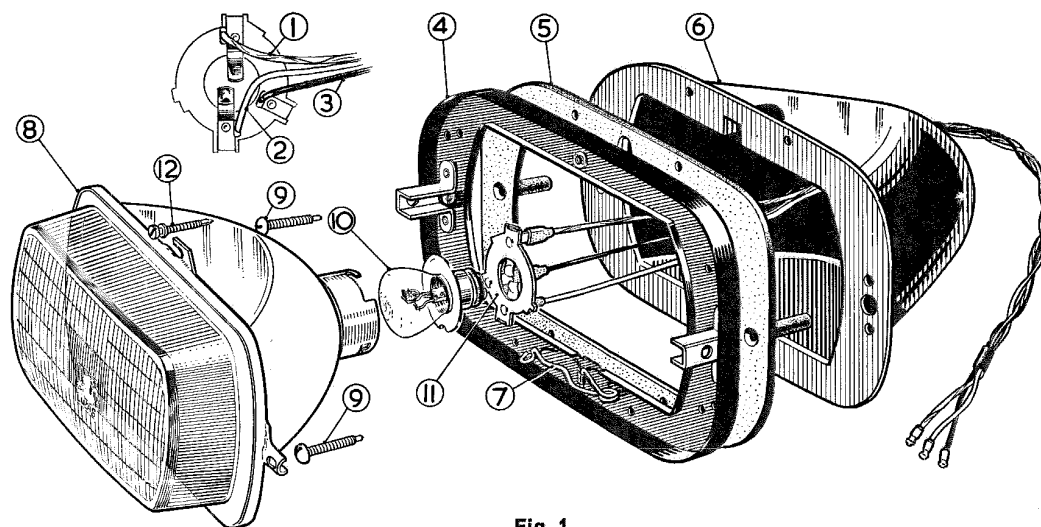


Fig. 1

- 1 Blue-with-Red: to dip beam filament
- 2 Blue-with-White: to main beam filament
- 3 Black: to earth

- 4 Mounting plate
- 5 Body gasket
- 6 Body
- 7 Spring, retaining
- 8 Light unit

- 9 Screws, trimmer (horizontal)
- 10 Bulb
- 11 Contact plate assembly
- 12 Screw, trimmer (vertical)

## 1. DESCRIPTION

This rectangular-shaped headlamp incorporates a glass-and-metal light unit and a replaceable pre-focused bulb. Model 2FRP is fitted also with a replaceable pilot bulb. The light unit is carried on a mounting plate providing the reference surface from which the light unit can be adjusted horizontally and vertically.

The 2FR lamp is shown dismantled in Fig. 1. It illustrates the type of main bulb\* used in early production units fitted to right-hand drive vehicles. Fig. 2 illustrates the type of bulb† fitted to all 2FR and 2FRP lamps for left-hand drive vehicles, and also to lamps for right-hand drive vehicles since early 1967. Beamsetting procedure varies according to which of these bulbs is fitted (see "Beam Adjustment").

**WARNING:** Do not attempt to clean the aluminised internal surface of the reflector.

\* Lucas No. 451 (80/60 watt) or 452 (60/60 watt).

† Lucas No. 410 (45/40 watt, clear) or 411 (45/40 watt, cadmium yellow).

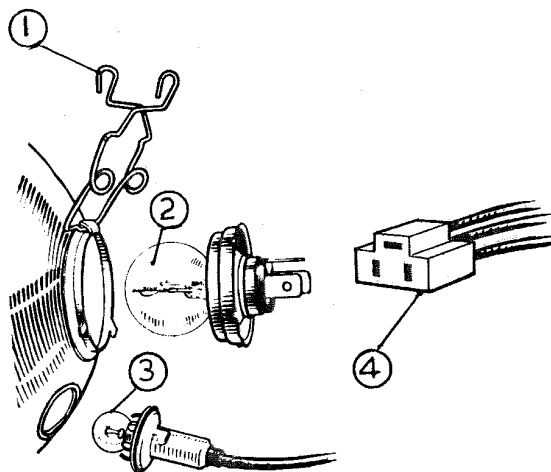


Fig. 2

- 1 Bulb retaining clip
- 2 Main bulb

- 3 Pilot bulb
- 4 Adaptor

## Headlamp Models 2FR and 2FRP

**2. LIGHT UNIT OR BULB REPLACEMENT****(a) Light Unit**

Remove the radiator grille, lamp rim and dust-excluding rubber as applicable. Disengage the retaining spring (Fig. 1) from the lower edge of the light unit. Draw the unit forward until it clears the horizontal trimmer-screw guards and then turn the light unit sufficiently clockwise to clear the vertical trimmer screw.

**(i) Light units fitted with bulb No. 451 or 452**

Leaving the cable connections to the contact plate assembly undisturbed, carefully press in and turn anti-clockwise the contact plate which can then be withdrawn from the light unit followed by the bulb.

**(ii) Light units fitted with bulb No. 410 or 411**

Detach the adaptor from the bulb terminals, release the bulb-retaining spring clips and withdraw the bulb.

**(b) Bulb**

In some applications the bulb is accessible with the lamp in situ. In others, when a lamp body is fitted, bulb replacement necessitates removal of the light unit and bulb as described in 2 (a).

The pilot bulbholder of 2FRP lamps is a push fit into an aperture in the rear of the reflector.

When fitting the new bulb ensure that the projection on the replacement bulb flange locates correctly with the light unit.

**3. BEAM ADJUSTMENT**

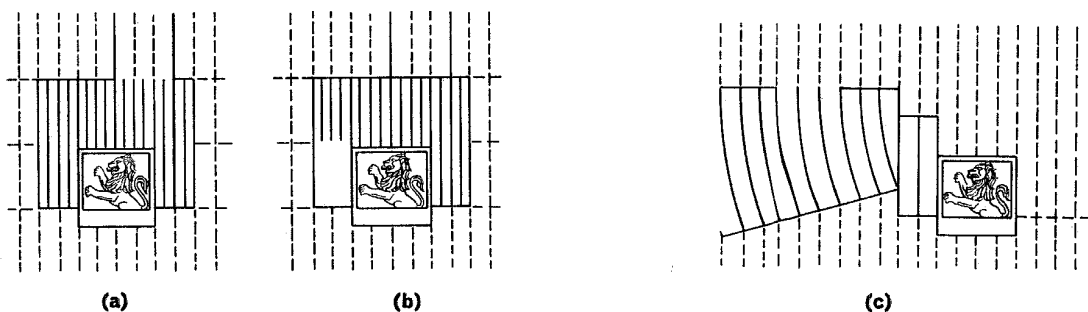
Three trimmer screws are provided for beam adjustment. Access to these screws—from lamp front or rear—varies according to vehicle design and the car manufacturer's instruction should be sought where the approach is not obvious.

**(a) Left-hand drive vehicles**

Lamps fitted to left-hand drive vehicles will be set on the dipped (meeting) beam in the normal manner.

**(b) Right-hand drive vehicles**

Lamps fitted to right-hand drive vehicles will be set according to the type of bulb. This can be quickly ascertained by reference to Fig. 3 where (a) shows the lens pattern at the centre of light units fitted with bulbs numbered 451 or 452, and (b) and (c) show the equivalent portion of the two types of lens pattern associated with number 410 or 411 bulbs.

**Fig. 3**

- (a) Centre of lens pattern of 2FR right-hand drive light unit employing No. 451 or 452 bulb  
 (b) Centre of lens pattern of early production 2FR right-hand drive light unit employing No. 410 or 411 bulb

- (c) Centre of lens pattern of later type of 2FR right-hand drive light unit employing No. 410 or 411 bulb

# Headlamp Models 2FR and 2FRP

PART

**F**

SECTION

**2**

- (i) Lamps incorporating bulb No. 451 or 452 should be set on main beam using a beamsetter with its cam set  $\frac{1}{2}^\circ$  down.
- (ii) Lamps fitted with bulb No. 410 or 411 must be set on the dipped beam. The procedure requires the addition of an opaque perspex screen, dimensioned and marked as shown in Fig. 4(a) and (b) and positioned in front of the light-sensitive cell

in the beamsetter by means of the centrally-fixed stud. The dipped beam pattern of the lamp with the 410 or 411 bulb will correspond closely with the marking on the perspex screen and the lamp will be correctly set when, with the beamsetter cam set  $\frac{1}{2}^\circ$  down, the beam pattern and screen marking coincide.

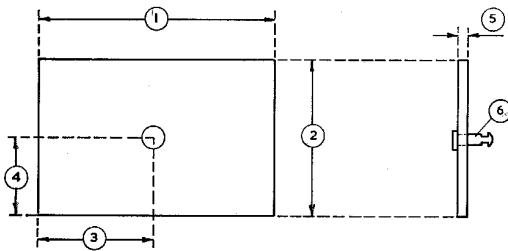


Fig. 4 (a)

- 1 9" (228.6 mm)
- 2 5" (127.0 mm)
- 3 4 $\frac{1}{2}$ " (114.3 mm)
- 4 2 $\frac{1}{2}$ " (63.5 mm)
- 5  $\frac{1}{2}$ " (3.2 mm)
- 6  $\frac{1}{4}$ " (6.3 mm) dia. x  $\frac{1}{2}$ " (12.6 mm) long stud grooved  $\frac{1}{16}$ " (1.5 mm) wide and deep,  $\frac{1}{16}$ " from end. Stud drive fit in screen

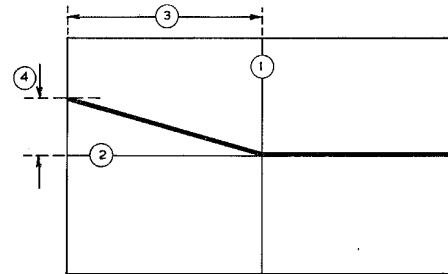


Fig. 4 (b)

- 1 Headlamp centre-line (vertical)
- 2 Headlamp centre-line (horizontal)
- 3 4 $\frac{1}{2}$ " (114.3 mm)
- 4 1 $\frac{1}{4}$ " (31.7 mm)