

## Chapter 36

# COCKPIT LAMP, HIGH INTENSITY, ANTI-DAZZLE

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### LEADING PARTICULARS

|                                                       |                        |
|-------------------------------------------------------|------------------------|
| <b>Lamp, Cockpit, High intensity, anti-dazzle</b> ... | Stores Ref. 5CX/5128   |
| <b>Lamp, filament, 28-volt, 12 watt</b> ... ..        | Stores Ref. 5L/X951282 |

#### Introduction

1. Cockpit lamps of high intensity are fitted in aircraft to provide a high level of illumination so that the pilot or aircrew can continue to see essential instruments (i.e., the Artificial Horizon, Air Speed Indicator and Direction Indicator) after he has been dazzled at night by the flash of an explosion. The number of lamps fitted depends upon the number of pilots stations and the mounting positions of the lamps.

#### DESCRIPTION

##### General (fig. 2)

2. The lamp consists of a hollow cylindrical body casting of light alloy, which is closed at one end and is internally threaded at the open end to receive a nut. The body has a circular flange near the open end, and a steel mounting bracket is clamped against this flange by the nut and a shake-proof washer. The brass lamp-holder projects through the cylindrical wall of the body casting and its external, dished flange is

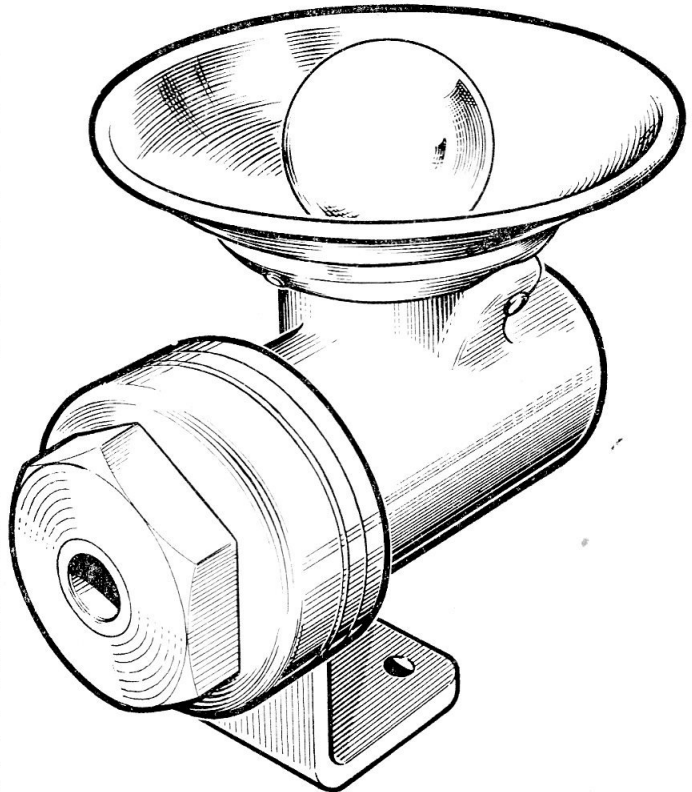
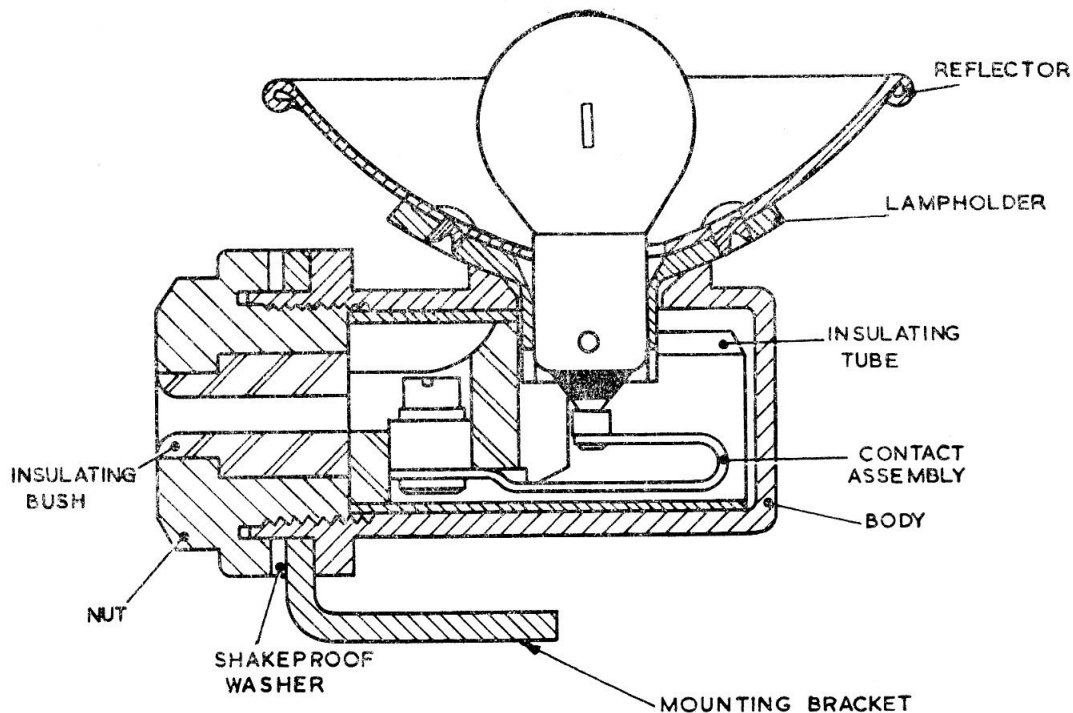


Fig. 1. General arrangement of lamp

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(A.L. 86, Aug. 56)



**Fig. 2. Section view of lamp**

held by rivets to two arms, which are part of the body casting. The reflector fits into the dished lampholder to which it is held by four rivets.

3. The inside of the body casting is lined with an insulating tube which is slotted to align with the rear of the lampholder. The contact assembly moulding, which has a metal insert for the terminal screw, is also shaped to locate round the rear of the lampholder. The insulating tube and the contact moulding are held in position by the nut, when assembled.

4. Cable entry is through the centre of the nut which has an insulating bush drilled to accept unipren 4 cable. A phosphor bronze spring contact having a brass contact pad, fits into a slot in the contact moulding assembly where it is secured by the 6 B.A. cable connection screw. The contact pad aligns with the centre contact of the filament lamp.

#### **Installation**

5. Each lamp is supplied complete with its mounting bracket, which can be moved round the lamp casting through an arc of 220 degrees, and held locked by the rear nut. The bracket has two clearance holes for 4 B.A. fixing screws. Since the bracket forms the "earthed" connection of the lamp the mounting surface must make a metal to metal contact on installation.

6. Lamps must be mounted in the aircraft to point accurately at the Artificial Horizon, and are preferably fitted under the cockpit coaming where the distance between lamp and instrument does not exceed 20 inches. When mounted against the cockpit roof two lamps per set of instruments may be required, in which case the distance between the lamp and the instruments should not exceed 40 inches. In every case the line joining the lamp and the centre of the instrument dial must be as near normal to the dial as possible.

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7. The lamps should be controlled through a three position switch (*Stores Ref. 5CW/5515*) having "Bright," "Off" and "Dim" positions. It is essential that this switch be located so that it is readily available to both pilots.

**Servicing**

8. Check the filament lamp by switching on for a brief period. If the reflector is dusty it

may be cleaned with a soft rag or, if dirty with soapy water; in no case must polish or abrasive be used. Check the lamp for security of mounting and alignment with the Artificial Horizon; this is best achieved during the hours of darkness. If the filament fails to illuminate this may be due to a faulty filament lamp or to a poor "earth" connection through the lamp mounting, which should be removed and cleaned.

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