

Chapter 13

NAVIGATION LAMP, TAIL, TYPE A

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LEADING PARTICULARS

|                                        |                        |
|----------------------------------------|------------------------|
| Tail navigation lamp, Type A ... ..    | Stores Ref. 5CX/498    |
| Screen cap ... ..                      | Stores Ref. 5CX/2161   |
| Glass, clear ... ..                    | Stores Ref. 5CX/500    |
| Filament lamp, 24-volt, 10-watt ... .. | Stores Ref. 5L/X952276 |
| Weight (lamp and base) ... ..          | 4½ oz.                 |
| Overall length ... ..                  | 3 in.                  |

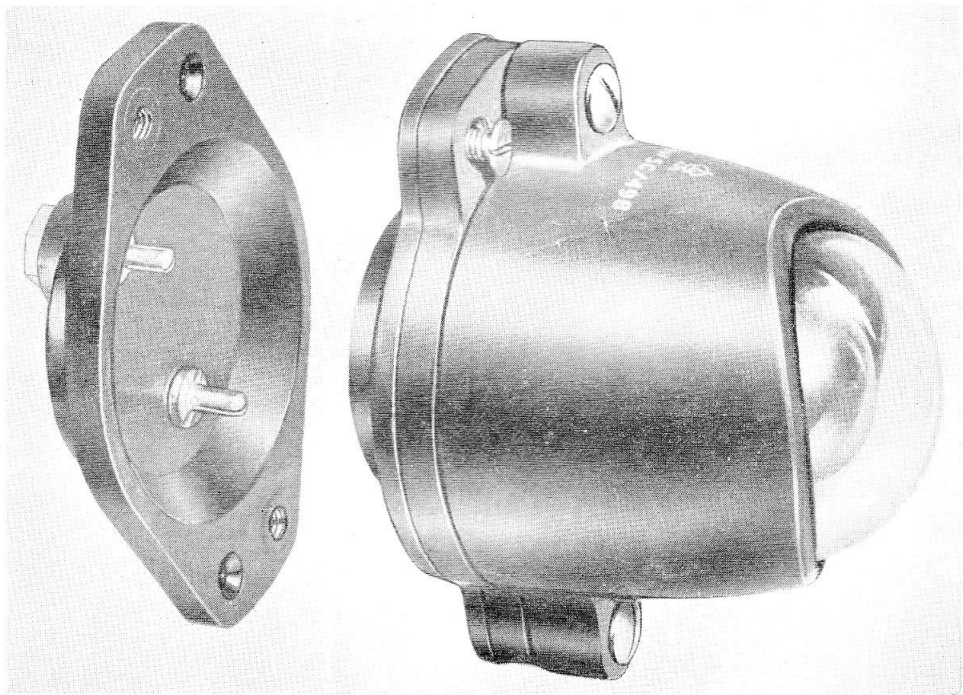
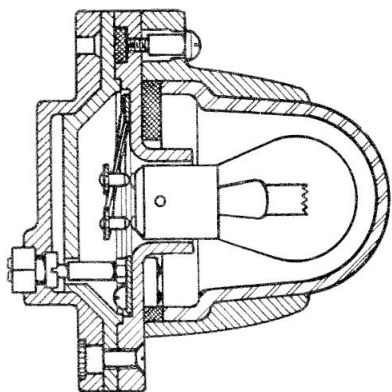


Fig. 1. Tail navigation lamp, Type A

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(A.L. 77, Sep. 55)



**Fig. 2. Sectional drawing of lamp**

#### **Introduction**

1. Aircraft flying at night must be equipped with lights to indicate their presence and position, and as far as possible the direction in which they are heading. The current is derived from the aircraft supply, and the lamps are controlled by suitable switches in the cockpit. A general chapter on the use of these lights will be found in A.P.4343, Vol. 1, Sect. 21, to which reference should be made if required.

#### **DESCRIPTION**

2. The tail lamp, Type A, is made of synthetic resin compound, and consists of two parts, the lamp proper and a base which is fixed to the airframe. Two csk/hd. screws are used to secure the lamp to the base, and electrical connection is made by means of plug pins and socket inserts. The pins are in the base, and the socket inserts on the lamp (*fig. 1*).

3. The socket for the filament lamp (*fig. 2*) is formed in a base plate, with the contacts supported on flat leaf springs behind it. These springs are C-shaped and each is fixed at one end by a screw and a socket insert. The socket insert has a threaded foot which screws into the base, and a hexagonal collar. The socket inserts project through an inner cover, which is fixed behind the contact springs and secured to the base plate by two csk/hd. screws not shown in the illustration.

4. The screen is secured to the base plate by two screwdriver-operated nuts screwing on to

studs fixed in the base plate. The cap is cut away between two vertical planes 70 deg. on each side of the aft direction, the total angle thus being 140 deg. The glass, which is clear, is a complete dome, and is held in position by the screen cap, a waterproof joint being made by means of a rubber jointing washer (Stores Ref. 5CX/502).

5. The plug base (Stores Ref. 5CX/501) is moulded and is shaped to fit the base of the lamp. The two plug pins are mounted loosely in it so that they can adapt themselves to the socket inserts. The ends of the pins are shaped to form shrouds round the terminal screws.

6. The light is provided by a 24-volt, 10-watt filament lamp. This has a small bayonet cap, and the filament is a small straight coil, arranged vertically when it is fitted in the lamp so as to give a sharp cut-off at the edges of the screen.

#### **INSTALLATION**

7. The lamp is mounted on the trailing edge of the tail, the socket being fixed by two 4 B.A. csk/hd. screws to a vertical mounting plate forming part of the airframe. The supply leads are connected directly to the terminals of the sockets. The terminals are shrouded and consist of a screw with a washer held in position under the head. The wire is to be cleaned, the strands twisted together, and turned round the screw in a clockwise direction and tightened up.

#### **SERVICING**

8. Check the operation of the lamp by switching on and off and seeing that it lights. Clean the glass inside and out, and clean the filament lamp. The lamp should be removed from the socket and the pins and inserts cleaned and the pins opened out, if necessary, to ensure a good fit in the socket. The jointing washer should be examined and must be renewed if it is perished or damaged.

9. The cap is secured by two screwdriver-operated nuts. When these are undone the cap can be taken off together with the glass, and the filament lamp can then be taken out of its socket.

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