

Chapter 76

CRASH LAMP, TYPE 80/10/1505

LIST OF CONTENTS

	Para.		Para.
<i>Introduction</i>	1	<i>Servicing</i>	7
Description	2		

LIST OF ILLUSTRATIONS

	Fig.		Fig.
<i>External view</i>	1	<i>Inertia switch 'G' settings</i>	3
<i>Internal view with batteries removed</i>	2		

LEADING PARTICULARS

Crash lamp, Type 80/10/1505	Ref. No. 5CX/5533
<i>Batteries</i> 1½V leakproof	<i>Exide, Type T21</i>
<i>Weight</i>	21 oz.

Introduction

1. The crash lamp, Type 80/10/1505 is designed to give emergency lighting in the event of a crash to illuminate the aircraft cabins sufficiently to allow easy exit of the passengers and crew. The lamp is automatically illuminated, or may be operated by hand.



Fig. 1. External view

DESCRIPTION

2. A general view is given in fig. 1, and a view with the rear cover and batteries removed is given in fig. 2. Made mainly from aluminium alloy, it consists of a lamp and reflector housing which incorporates a plastic focussing lens, two 1½V leakproof dry batteries, a test switch, a reset switch, and an inertia switch.

3. All the internal components are mounted on the front face which is attached to the rear cover by means of eight Phillips screws. Sandwiched between the front face and rear cover is a neoprene gasket to prevent ingress of moisture or vapour. An earth stud is incorporated on the rear cover for bonding the item to the airframe.

4. Two 1½V batteries are mounted side by side above the lamp and reflector assembly, and are held in position by two battery clips. Cable connection to the batteries is by means of two screws attached to two links which connect to the batteries. The batteries are connected in series, the centre connection being made removable to facilitate easy access to the filament lamp.

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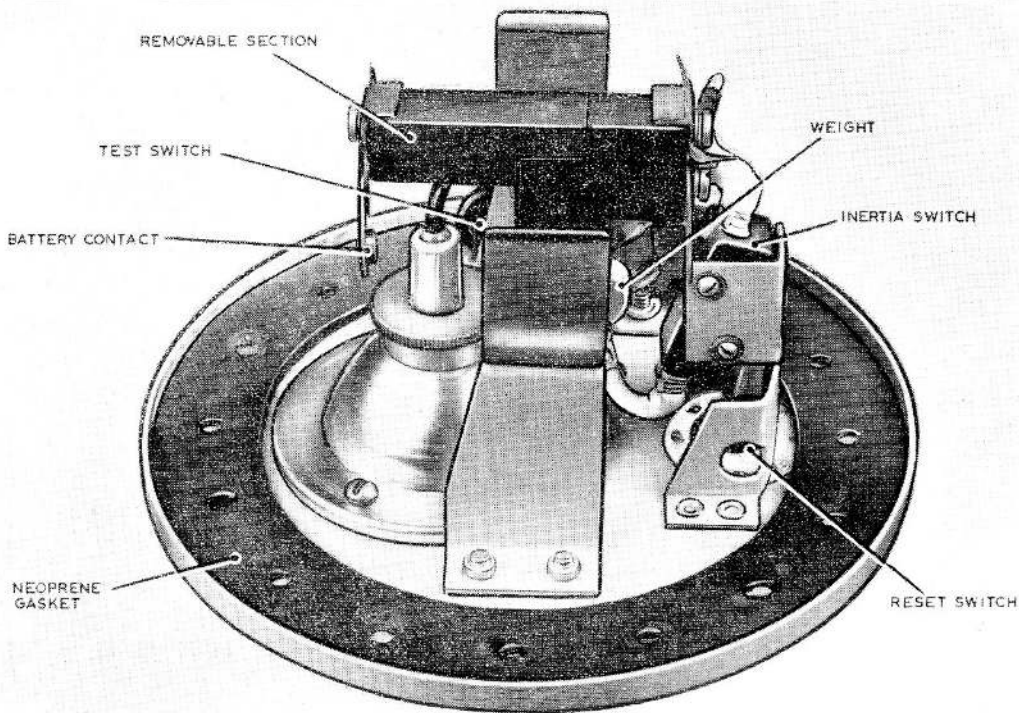


Fig. 2. Internal view with batteries removed

5. The test switch is a single pole toggle switch and is connected in parallel with the inertia switch. The inertia switch consists of a bob-weight suspended on a lever arm actuating on a microswitch. The position of the bob-weight on the lever arm is adjustable (fig. 3) and may be varied to operate the microswitch at 'G' values of from $2\frac{1}{2}$ to 5 'G'.

6. A spring loaded reset lever is incorpora-

ted to reset the inertia switch once it has tripped. The lever is brought out through the front face of the lamp unit, and both the test switch and reset lever are covered with a neoprene diaphragm to prevent moisture or vapour ingress. The front face of the lamp unit is engraved with the letters 'FWD' and an arrow, which, when the unit is mounted in an aircraft, should point towards the nose.

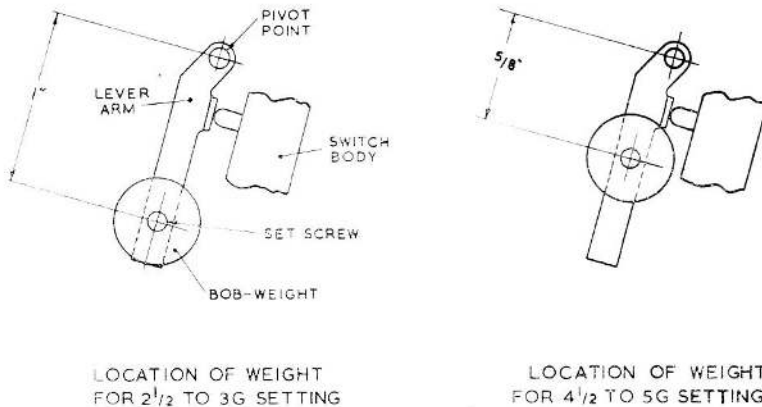


Fig. 3. Inertia switch 'G' settings

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SERVICING

7. Remove the eight front cover retaining screws and withdraw the lamp assembly from the rear cover. Remove the batteries and using a suitable multimeter check the open circuit voltage. Examine the battery contacts for corrosion or damage ensuring they make good contact with the battery.

8. Examine the inertia switch for security of mounting, and the cables for security of attachment and damaged insulation. Ensure that the bob-weight is secure on the lever arm. Should the bob-weight be found to be

loose, it may be reset to the dimensions given in fig. 3 using a pair of dividers setting one point at the centre of the pivot point and the other at the centre of the bob-weight screw. Ensure that the lever arm moves freely on its pivot.

9. Replace the batteries and operate the microswitch by pressing on the lever arm. Ensure that the microswitch operates smoothly and that the lamp illuminates. Operate the reset lever on the front face to extinguish the lamp. Examine the whole item for deterioration or damage. Replace the front cover and eight retaining screws.

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