

Chapter 22**CHARTBOARD LAMPS****LIST OF CONTENTS**

	<i>Para.</i>		<i>Para.</i>
<i>Introduction</i>	1	<i>Reflector and filter</i>	4
Description		Servicing	5
<i>General</i>	2		

LIST OF APPENDICES

	<i>App.</i>		<i>App.</i>
<i>Chartboard lamp, Type D</i>	1	<i>Chartboard lamp, G.E.C., Type IE/43095A</i>	5
<i>Chartboard lamp, Type E</i>	2	<i>Chartboard lamp, G.E.C., Type IE/42354A</i>	6
<i>Chartboard lamp, Type F</i>	3	<i>Chartboard lamp, Terry anglepoise type</i> ..	7
<i>Chartboard lamp, Type C</i>	4		

LIST OF ILLUSTRATIONS

	<i>Fig.</i>
<i>Chartboard lamp, Type D</i>	1

Introduction

1. Chartboard lamps are intended for use at crew stations to provide supplementary lighting to the cockpit or cabin lighting. They are used in conjunction with dimmer switches to give controlled illumination over small areas, i.e. navigator and crew tables. The lamps are adjustable in height and reach, and by manipulation of the swivel joints and clamping knobs may be set to the desired position. This chapter deals with the basic chartboard lamp, the one described and illustrated being the Type D chartboard lamp; details of individual chartboard lamps may be found in the appendices to this chapter.

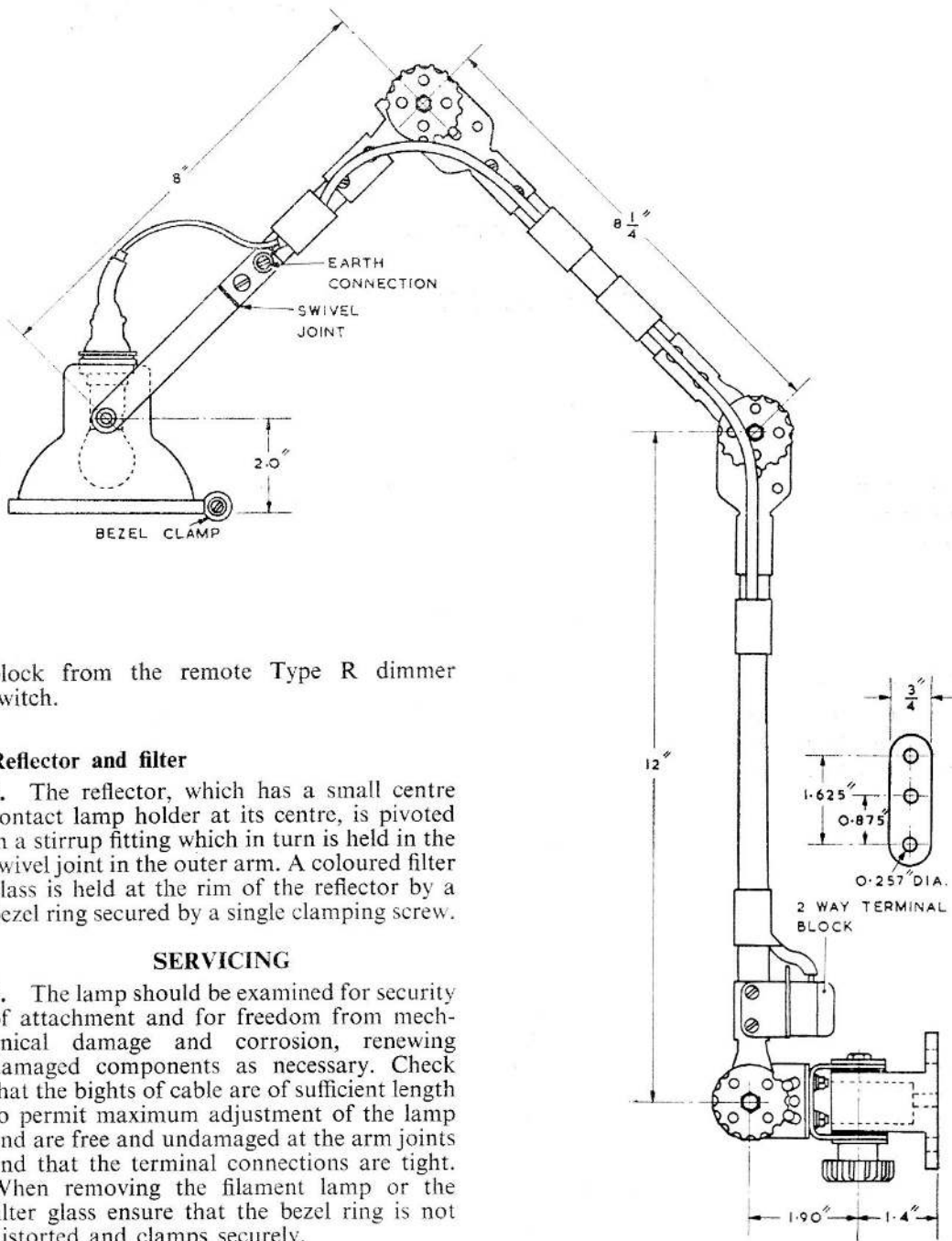
DESCRIPTION**General**

2. The Type D chartboard lamp has three

arms, each with a swivel joint, adjustable to give any required setting. It can be secured to the bulkhead or table by bolts through a three-hole mounting bracket which is also one swivelling centre for the lamp. A two-way terminal block is secured to the saddle on the arm adjacent to the mounting bracket, from which a two-core cable is taken through the arms of the lamp to the lamp holder.

3. One core of this cable connects to terminal E earthed to the lamp frame and its remote end connects to the frame at the swivel joint of the lamp reflector stirrup, so eliminating the possibility of poor contact which may exist if only the frame were used as the earthed return. The other core to the lamp connects the positive supply via the terminal

RESTRICTED



block from the remote Type R dimmer switch.

Reflector and filter

4. The reflector, which has a small centre contact lamp holder at its centre, is pivoted in a stirrup fitting which in turn is held in the swivel joint in the outer arm. A coloured filter glass is held at the rim of the reflector by a bezel ring secured by a single clamping screw.

SERVICING

5. The lamp should be examined for security of attachment and for freedom from mechanical damage and corrosion, renewing damaged components as necessary. Check that the bights of cable are of sufficient length to permit maximum adjustment of the lamp and are free and undamaged at the arm joints and that the terminal connections are tight. When removing the filament lamp or the filter glass ensure that the bezel ring is not distorted and clamps securely.

Fig. 1 Chartboard lamp, Type D

Appendix 1

CHARTBOARD LAMP, TYPE D

LEADING PARTICULARS

<i>Chartboard lamp, Type D</i>	..	..	..	<i>Ref. No. 5CX/4856</i>
<i>Lamp, filament, S.C.C. cap, 28V, 18 watt</i>	..	..	..	<i>Ref. No. 5L/9953273</i>
<i>Filter, amber</i>	..	..	..	<i>Ref. No. 5CX/4858</i>
<i>Filter, red</i>	..	..	..	<i>Ref. No. 5CX/4859</i>
<i>Bezel ring, with clamping screw</i>	..	..	..	<i>Ref. No. 5CX/5012</i>
<i>Weight</i>	..	..	..	1 lb 11 oz

1. This lamp is identical to that described and illustrated in the main chapter and supersedes the Terry type chartboard lamp, details of which are given in Appendix 7.

RESTRICTED

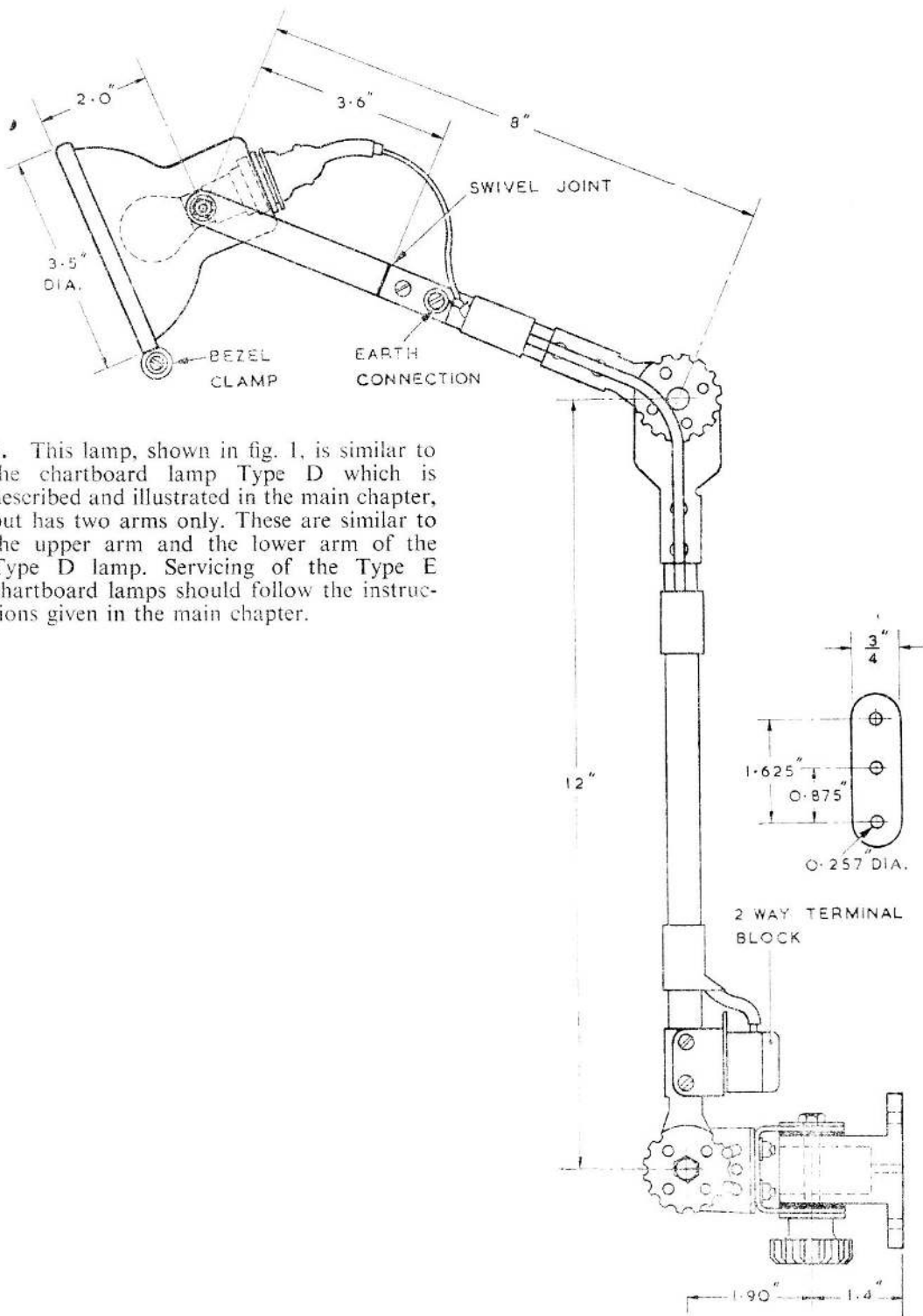
Appendix 2

CHARTBOARD LAMP, TYPE E

LEADING PARTICULARS

<i>Chartboard lamp, Type E</i>	..	..	..	..	..	<i>Ref. No. 5CX/4857</i>
<i>Lamp filament, S.C. cap, 28V, 18 watt</i>	..	..	..	..	..	<i>Ref. No. 5L/9953273</i>
<i>Filter, amber</i>	..	..	..	..	..	<i>Ref. No. 5CX/4858</i>
<i>Filter, red</i>	..	..	..	..	..	<i>Ref. No. 5CX/4859</i>
<i>Bezel ring, with clamping screw</i>	..	..	..	..	..	<i>Ref. No. 5CX/5012</i>
<i>Weight</i>	..	..	..	..	..	<i>1 lb 5 oz</i>

RESTRICTED



1. This lamp, shown in fig. 1, is similar to the chartboard lamp Type D which is described and illustrated in the main chapter, but has two arms only. These are similar to the upper arm and the lower arm of the Type D lamp. Servicing of the Type E chartboard lamps should follow the instructions given in the main chapter.

Fig. 1 Chartboard lamp, Type E

RESTRICTED

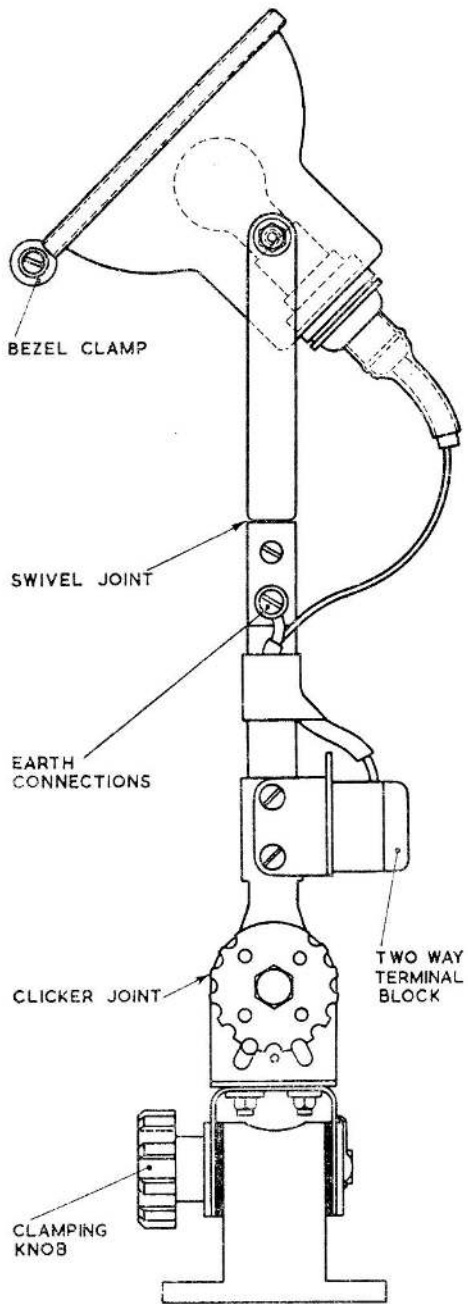
Appendix 3

CHARTBOARD LAMP, TYPE F

LEADING PARTICULARS

<i>Chartboard lamp, Type F</i>	..	..	..	<i>Ref. No. 5CX/5411</i>
<i>Lamp filament, S.C.C. cap, 28V, 18 watt</i>	..	..	..	<i>Ref. No. 5L/9953273</i>
<i>Filter, amber</i>	..	..	..	<i>Ref. No. 5CX/4858</i>
<i>Filter, red</i>	..	..	..	<i>Ref. No. 5CX/4859</i>
<i>Bezel ring, with clamping screw</i>	..	..	..	<i>Ref. No. 5CX/5012</i>
<i>Weight</i>	..	..	..	<i>12.5 oz (approx.)</i>

RESTRICTED



1. The chartboard lamp, Type F, shown in fig. 1, is a short-reach lamp and consists of the upper arm and reflector assembly, and the mounting block of the Type D lamp, which is described and illustrated in the main chapter. Servicing of the lamp should follow the instructions given in the main chapter.

Fig. 1 Chartboard lamp, type F

Appendix 4

CHARTBOARD LAMP, TYPE C

LEADING PARTICULARS

<i>Chartboard lamp, Type C, 12 volt</i>	.. ..	<i>Ref. No. 5CX/1550</i>
<i>Chartboard lamp, Type C, 24 volt</i>	.. ..	<i>Ref. No. 5CX/1551</i>
<i>Screen, clear</i>	.. ..	<i>Ref. No. 5CX/679</i>
<i>Screen, orange</i>	.. ..	<i>Ref. No. 5CX/680</i>
<i>Plug, Type A</i>	.. ..	<i>Ref. No. 5CY/959</i>

1. The chartboard lamp, Type C, shown in fig. 1, is a single-arm portable chartboard lamp mounted on a strong spring clip, which is used to hold the lamp to the edge of the navigator's table or a suitable airframe member. The clip has felt-padded jaws and carries the mounting bracket for the lamp

lamp is supplied for 12 volt and 24 volt use complete with the appropriate dimmer switch, a 6 watt or 10 watt filament lamp of the correct voltage may be used as required; the 10 watt filament is normally used with the amber screen.

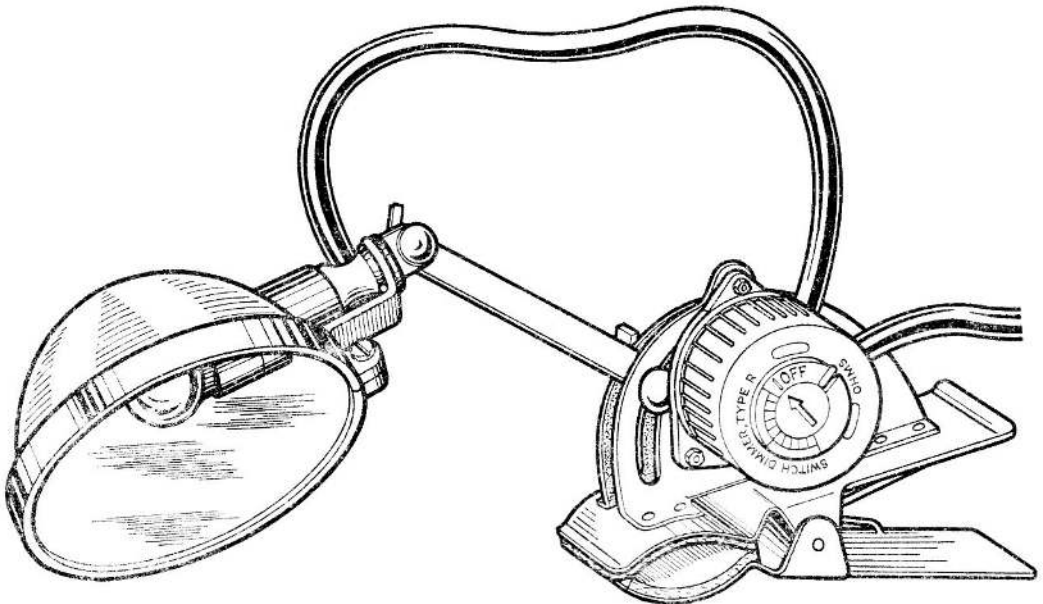


Fig. 1 Chartboard lamp, type C

arm and the dimmer switch. The lamp arm is retained in the bracket by a pivot stud, tension on which may be adjusted by a wing nut. The reflector and lampholder assembly is secured to the lamp arm by a similar pivot stud and wing nut.

2. The cable to the lampholder is a free loop of sufficient length to allow maximum adjustment of the lamp. The Type C chartboard

3. Servicing should follow the instructions given in the main chapter, and in addition the dimmer switch should be inspected for freedom from damage and freedom of movement and the spring clip for tension, which should be sufficient to hold the lamp on an upright airframe member. Should access to the switch connections be required, the switch must first be removed from the mounting bracket.

RESTRICTED

Appendix 5

CHARTBOARD LAMP, G.E.C., TYPE IE/43095A

LEADING PARTICULARS

<i>Chartboard lamp, G.E.C., Type IE/43095A</i>	..	..	..	..	..	..	..	..	..	Ref. No. 5CX/5256
<i>Lamp filament, S.B.C., 24V, 6 watt</i>	..	..	..	..	..	..	..	..	..	Ref. No. 5L/9952254
<i>Overall reach</i>	..	..	..	..	..	..	..	..	..	28 in
<i>Weight</i>	..	..	..	..	..	..	..	..	..	15 oz

1. The chartboard lamp, Type IE/43095A shown in fig. 1, has two arms, the upper arm of $\frac{3}{8}$ in. square tubing carries the lamp holder on an adjustable bracket and is pivoted to the lower arm. The lower arm is a framework of two $\frac{3}{8}$ x $\frac{1}{16}$ in. and one $\frac{3}{8}$ x $\frac{1}{8}$ in. tubular section arms which are pivoted on a screw through the bottom bracket. The bottom bracket swivels on the mounting block and is secured by a clamping nut. Tension on the bottom bracket and lower arm pivots is adjustable by means of large knurled knobs. Connection to the bayonet cap lampholder is made by cable routed through the hollow centre of the upper arm and between the two $\frac{3}{8}$ x $\frac{1}{16}$ in. lower arms, where it terminates in a terminal block which is housed in a terminal box between the arms.

2. This lamp supersedes the G.E.C. Type 42354A chartboard lamp, details of which are given in appendix 6. Servicing of the lamp

should follow the instructions given in the main chapter.

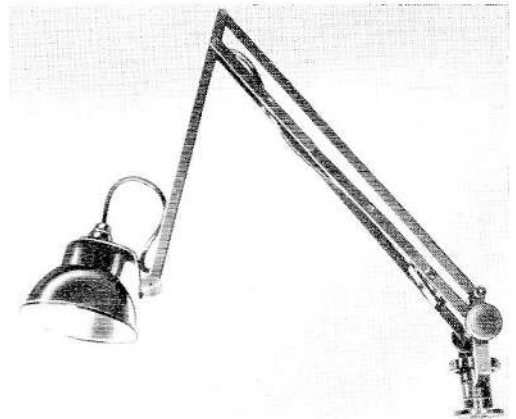


Fig. 1 Chartboard lamp, G.E.C. type IE/43095A

Appendix 6

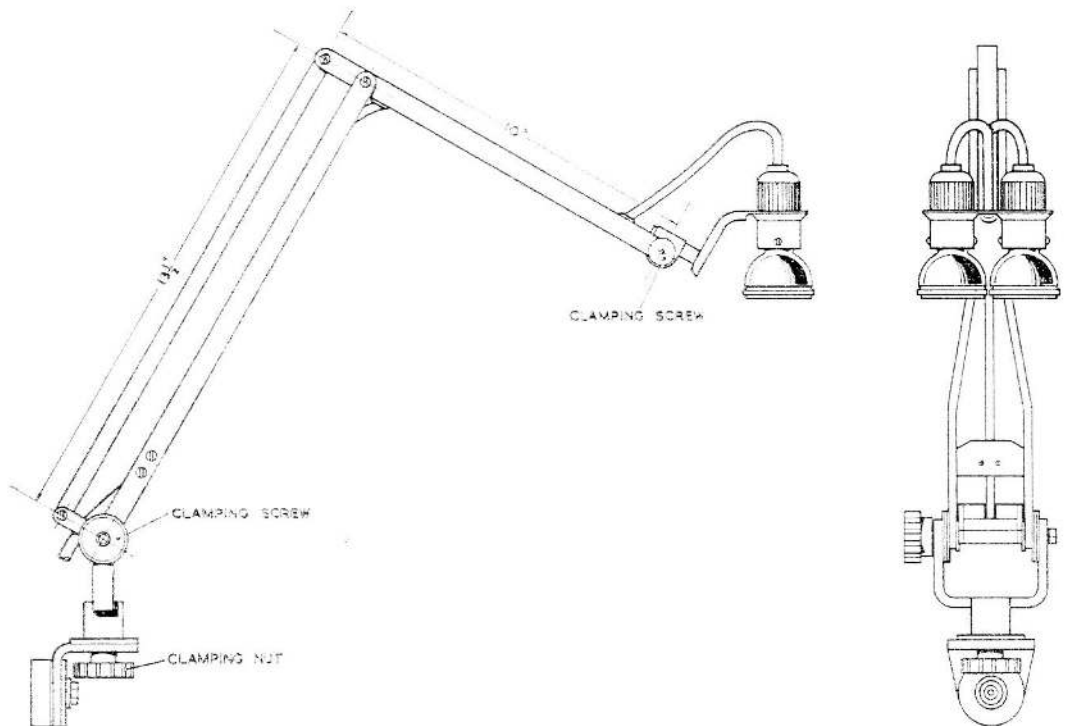
CHARTBOARD LAMP, G.E.C., TYPE IE/42354A

LEADING PARTICULARS

<i>Chartboard lamp, G.E.C., Type IE/42354A</i>	..	<i>Ref. No. 5CX/5256</i>
<i>Lamp filament, S.B.C., 24V, 6 watt</i>	.. ..	<i>Ref. No. 5L/9952254</i>
<i>Screen, opal</i>	.. .. .	<i>Ref. No. 5CX/5166</i>
<i>Screen, red</i>	.. .. .	<i>Ref. No. 5CX/5165</i>

1. The chartboard lamp, Type IE/42354A shown in fig. 1, has two adjustable arms and is used in conjunction with the red and white cabin lighting as an engineer's or navigator's lamp. The upper arm is of $\frac{1}{2}$ in. square tubing and carries the lamp holders for the red and white lamps on a swivel bracket, and is attached to the lower arm assembly on which it pivots. The lower arm assembly consists of

three $\frac{3}{16}$ in. strips which form a framework pivoting on a screw through the bottom bracket. The bottom bracket pivots on the lamp mounting block and is secured by a clamping nut. The position of the lamp may be adjusted and set by manipulation of the clamping screws and the mounting block clamping nut; earlier lamps may not have the mounting block clamping nut incorporated.



Chartboard lamp, G.E.C. Type IE/42354A

RESTRICTED

2. The two lamps carried on the lamp bracket are modified Type B ultra-violet cockpit lamps, which have the ultra-violet screens replaced by a red screen in one case and an opal screen in the other. The illumination desired is obtained by adjusting the two Type R dimmer switches which control the individual lamps, the brilliance and the tone of the light may be selected by suitable switch

settings. Connection to the lamp holders is made by suitable cable direct to the lamp holders from the dimmer switches, which is routed through cable clamps in the lower arm framework and through the centre of the tubular upper arm. The servicing of the lamp should follow the instructions given in the main chapter.

RESTRICTED

Appendix 7

CHARTBOARD LAMP, TERRY ANGLEPOISE TYPE

LEADING PARTICULARS

<i>Chartboard lamp, Terry anglepoise, type</i>	..	<i>Ref. No. 5CX/1079</i>
<i>Springs, large</i>	.. .. .	<i>Ref. No. 5CX/2695</i>
<i>Springs, small</i>	.. .. .	<i>Ref. No. 5CX/2696</i>

1. The Terry type chartboard lamp shown in fig. 1 is a triple-arm lamp, constructed of light alloy square tubular arms and incorporates a Type R dimmer switch. The single upper arm, which carries the lamp holder and reflector on pivots in a swivel bracket, is pivoted to the centre arm assembly. The three centre arms form a framework which is in

turn pivoted to the lower arm, this pivot is controlled by two large helical springs and one small helical spring, attached as shown in fig. 1. Also attached to the lower arm is the dimmer switch. The lower arm swivels on the mounting block and is secured by a knurled nut by which tension of the swivel bearing may be adjusted.

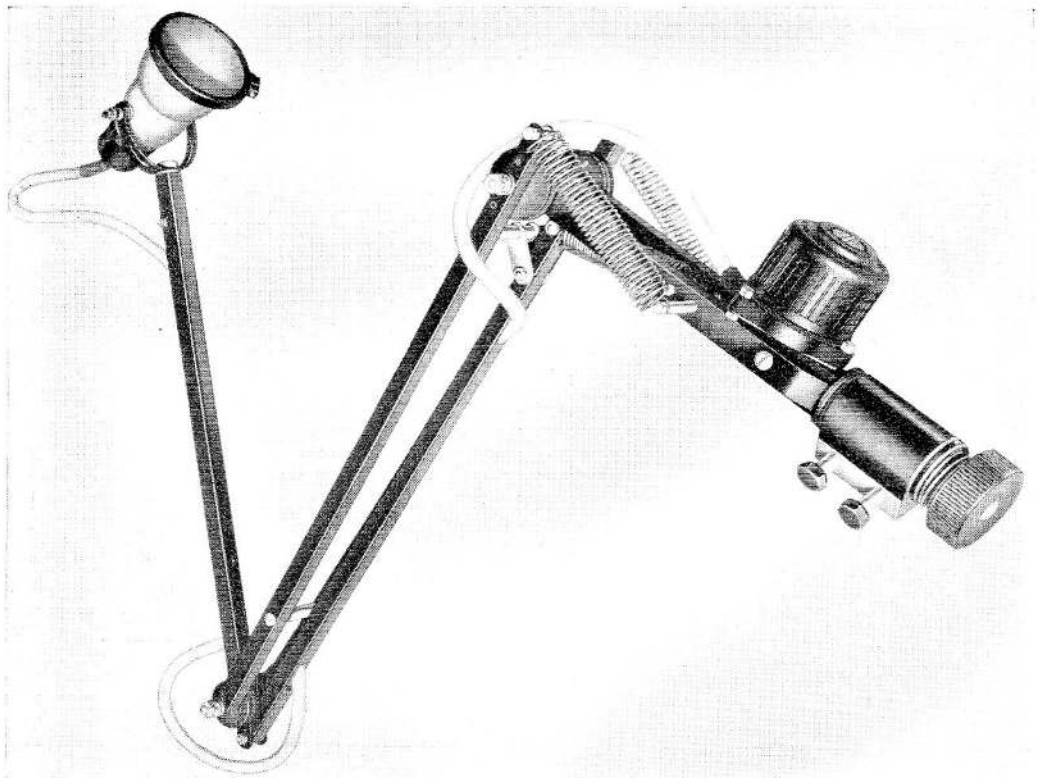


Fig. 1 Chartboard lamp, Terry anglepoise type

RESTRICTED

2. The connection to the lamp holder is made using suitable cable which is routed through the centre of the upper arm and through the centre of the rear arm of the centre arm framework to the dimmer switch. The cable between the dimmer switch and the lamp holder, and between the dimmer switch and the aircraft supply, must allow sufficient free cable to permit maximum adjustment of the lamp position. The chart-board lamp may be used on 12 or 24 volt supply by the use of suitable filament lamps and dimmer switches; the filament lamps may be 6 watt or 10 watt of the correct

voltage to suit particular aircraft requirements.

3. Servicing of the lamp should follow the instructions given in the main chapter; in addition the springs should be checked for distortion and the connections at the dimmer switch for security of attachment and freedom from corrosion. Should the dimmer switch require renewing or inspection of the connections be desired, the switch may be removed from the mounting by removing the three 4 B.A. securing screws.

RESTRICTED

This file was downloaded
from the RTFM Library.
Link: www.scottbouch.com/rtfm

Please see site for usage terms,
and more aircraft documents.

