

GROUP H — LIGHTING

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Introduction

1. The information contained in this group deals with both the internal and external lighting arrangements. The components used are described in the specialist Air Publications listed as follows:—

Equipment	Air Publication
Ultra-violet lamp, Type B2	4343E, Vol. 1, Sect. 7, Chap. 21
Dimmer switch, Type R	4343C, Vol. 1, Sect. 1, Chap. 16
Cabin red lamp, Type C, No. 2	4343E, Vol. 1, Sect. 7, Chap. 17
Inspection lamp, Mk. 1A	4343E, Vol. 1, Sect. 7, Chap. 15
Tail navigation lamp, Type A	4343E, Vol. 1, Sect. 7, Chap. 13
Side navigation lamp, Type B	4343E, Vol. 1, Sect. 7, at a later date
Downward identification lamp, Type C	4343E, Vol. 1, Sect. 7, Chap. 7
Switch, Type D.5501	} 4343C, Vol. 1, Sect. 1, Chap. 28
Switch, Type D.5402	
Landing lamp, Type J	4343E, Vol. 1, Sect. 7, Chap. 3
Rotary switch, Type B	4343C, Vol. 1, Sect. 1, Chap. 2

ULTRA-VIOLET LAMPS

Description

2. Six ultra-violet lamps are mounted two on the cabin port wall and two on the cabin starboard wall to illuminate the main instrument panel, and two on the upper instrument panel coaming to illuminate that panel and the centre of the main instrument panel.

3. As explained in Chap. 2. Gen. Inf., of this Section, the instrument dials and pointers have been fluorized so that, due to the action of the ultra-violet rays emitted by the lamps, the dial markings and pointers can be read in the dark.

4. The degree of brilliancy of the dials and pointers depends upon the strength of ultra-violet radiation produced by the lamps. This strength is controlled by two rheostats, in the form of ON/OFF dimmer switches, which are fitted to the main instrument panel.

5. The six lamps are wired in series-parallel as shown in fig. 2, and are directly controlled by the dimmer switches.

Servicing

6. The dimmer switches and lamps are described in the specialist Air Publication listed in para. 1, servicing being confined to a functional test of the circuit. Special attention should be given to the security of the ultra-violet glass screen in each lamp to ensure that the three clips of the screen securing ring are firmly clamped round the recessed lamp shield.

Removal

7. Removal of the lamps and dimmer switches will be self-evident when viewed on the aircraft. The dimmer switches mounting plate (*Chap. 2, Gen. Inf., fig. 1*) may be removed from the panel complete with the four dimmer switches by removing the three 2 BA screws securing the plate to the panel, lowering the plate and disconnecting the cables from the two T.B.'s on the rear of the mounting plate.

CABIN RED LAMPS

Description

8. Seven cabin red lamps are controlled by two separate dimmer switches fitted to the main instrument panel. The starboard switch controls the red lamps on the cabin

starboard wall, on the upper instrument panel and on the starboard G.G.S. retraction unit. The port switch controls the remaining four red lamps disposed one on each control column and one above and below the throttle box on the cabin port wall.

9. An inspection lamp is fitted to the centre roofing of the cannon bay to facilitate re-arming of the cannons, and is controlled by its own integral push-switch. Fig. 3 shows the circuit routing chart.

Servicing

10. The components used are described in the specialist Air Publications listed in para. 1.

Removal

11. The method of removing the lamps and switches will be readily apparent when viewed on the aircraft. The dimmer switches mounting plate (*Chap. 2, Gen. Inf., fig. 1*) may be removed from the panel complete with the four dimmer switches by removing the three 2 BA screws securing the plate to the panel, lowering the plate and disconnecting the cables from the two T.B.'s on the rear of the mounting plate.

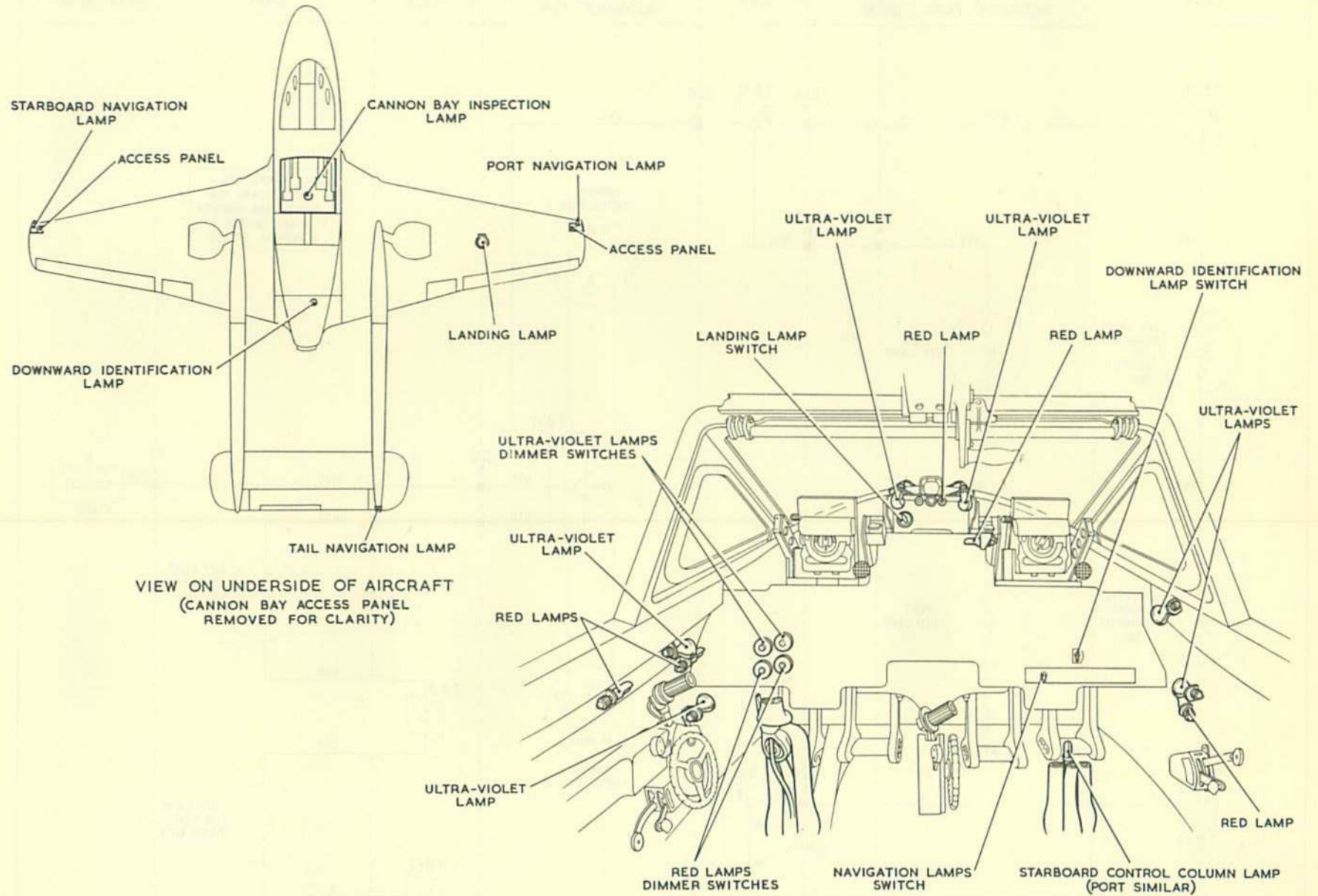


Fig. I. Location and access of components

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(A.L. 51, Aug. 57)

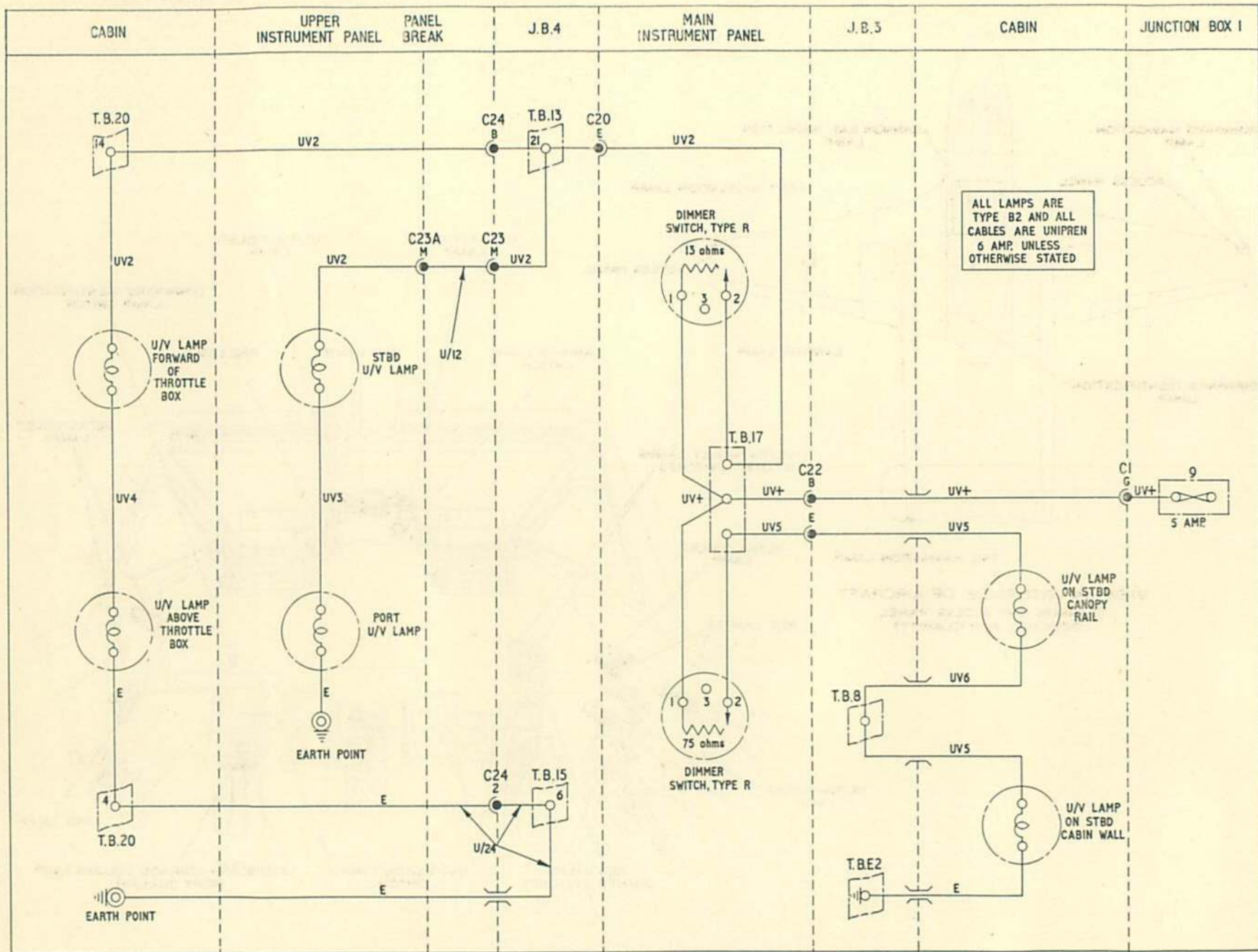


Fig. 2. Ultra-violet lamps - UV

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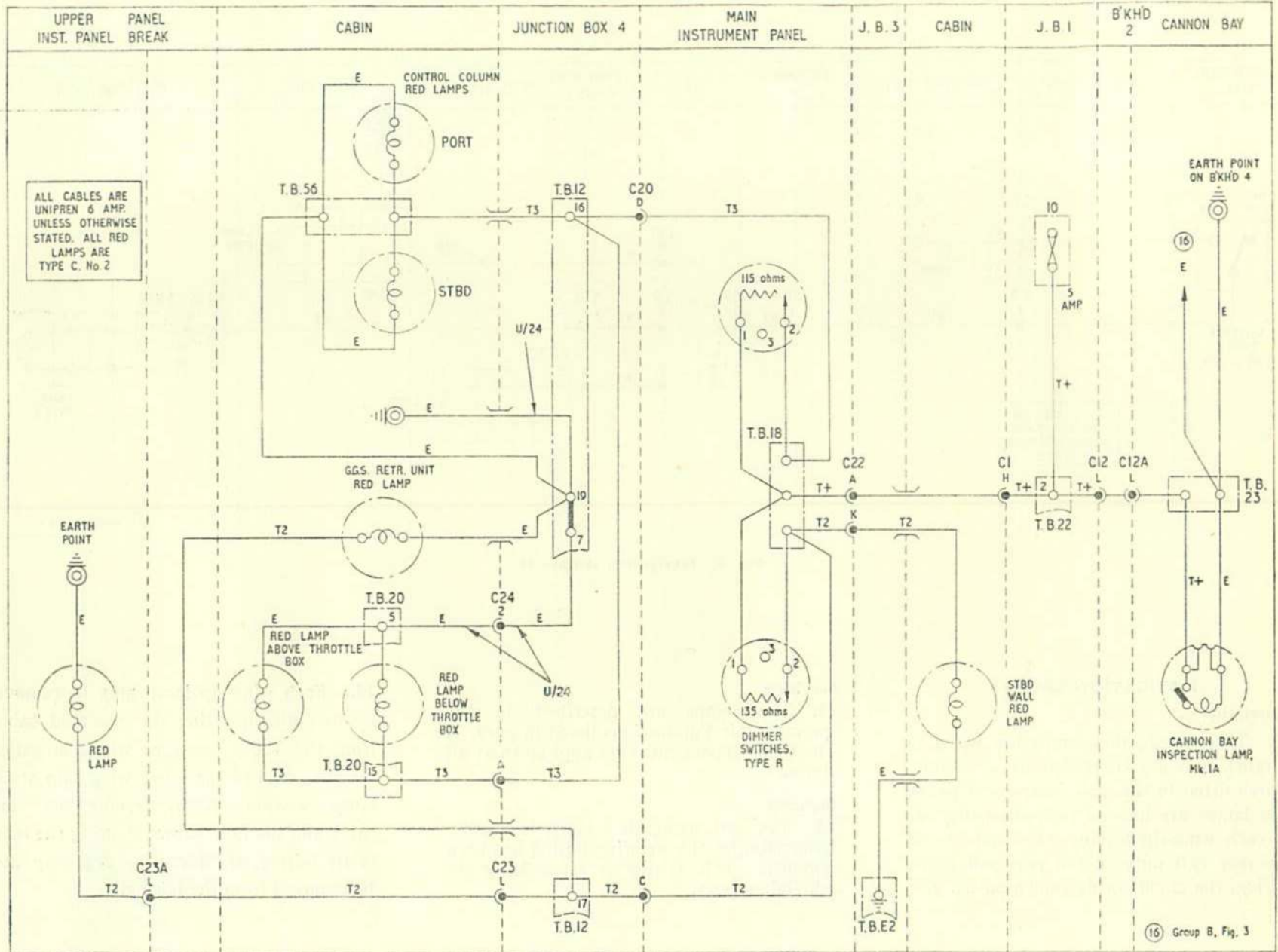


Fig. 3. Cabin red lamps—T

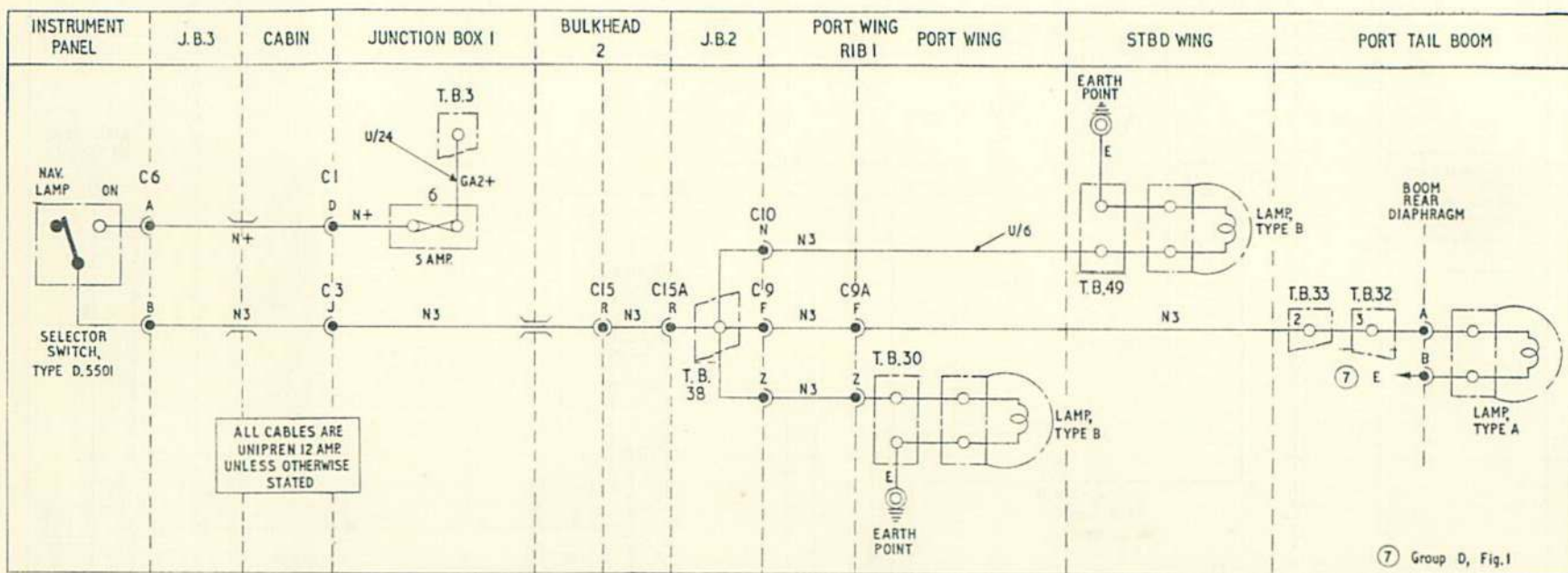


Fig. 4. Navigation lamps—N

NAVIGATION LAMPS

Description

12. Three navigation lamps are wired in parallel, and are controlled by a tumbler switch fitted to the main instrument panel. The lamps are located conventionally one at each wing-tip leading edge and one at the rear extremity of the port tail bullet fairing, the circuit being shown on fig. 4.

Servicing

13. The lamps are described in the specialist Air Publications listed in para. 1. The lamp glasses must be kept clean at all times.

Removal

14. The tail navigation lamp is readily removed after the covering fairing has been removed. This fairing is secured by six csk./hd. screws.

15. Each wing-tip lamp may be removed by first disconnecting the electrical cables from the T.B., access to which is gained via the panel in the lower wing skin at the lamp location. Next, remove the lamp cover and the four screws securing the lamp to its fairing, the lamp housing may then be removed from the fairing.

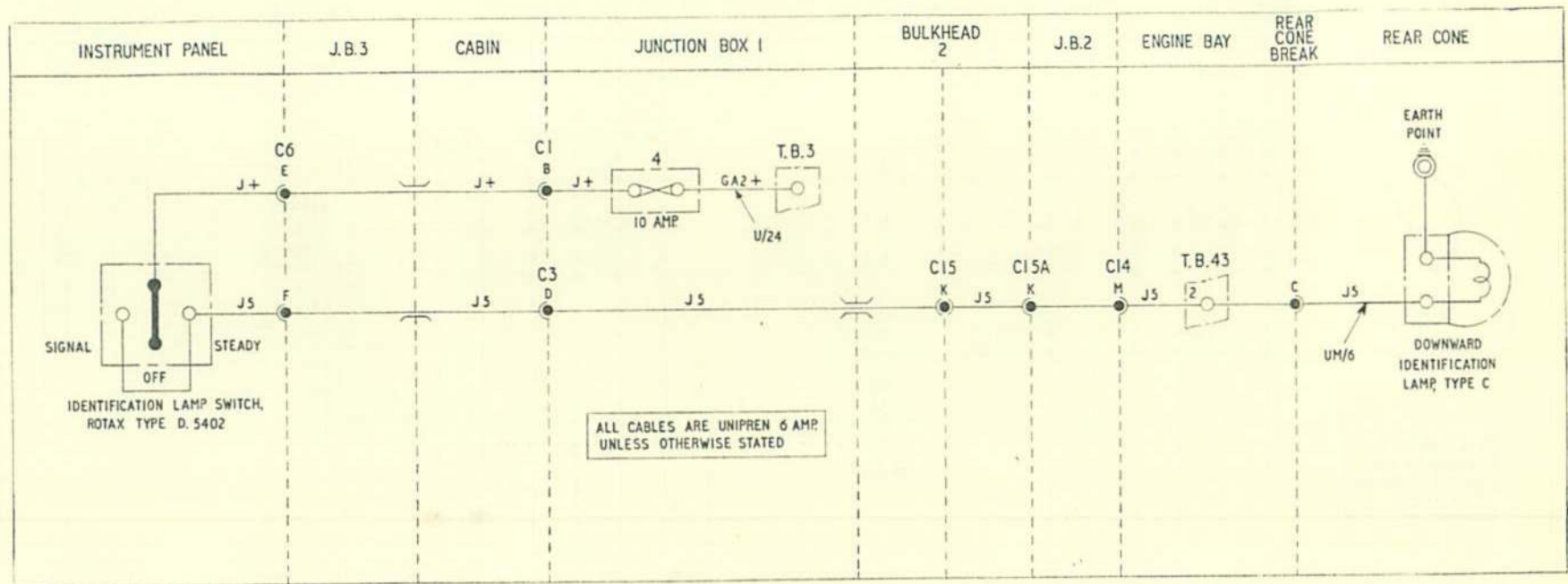


Fig. 5. Downward identification lamp—J

DOWNWARD IDENTIFICATION LAMP**Description**

16. A downward identification lamp is installed in the lower surface of the engine rear cone, having a clear glass cover. The routing chart is shown in fig. 5.

17. The lamp is controlled by a three-position tumbler switch having a centre OFF position. Operation of the switch toggle upwards renders the lamp perman-

ently ON, whilst the downwards position of the toggle is spring-loaded back to the OFF position such that the toggle must be held down to light the lamp. This arrangement provides morsing (SIGNAL) facilities.

Servicing

18. The downward identification lamp circuit components are described in the specialist Air Publications listed in para. 1. The lamp glass must be kept clean and free

from the engine fuel and oil at all times, particular attention being given to the actual lamp housing itself inside the rear cone.

Removal

19. The lamp is mounted to a bracket inside the rear cone by three 2 BA bolts and washers. The lamp is covered externally by a perspex window screwed to the rear cone skinning. To remove the lamp, the rear cone must first be removed from the aircraft.

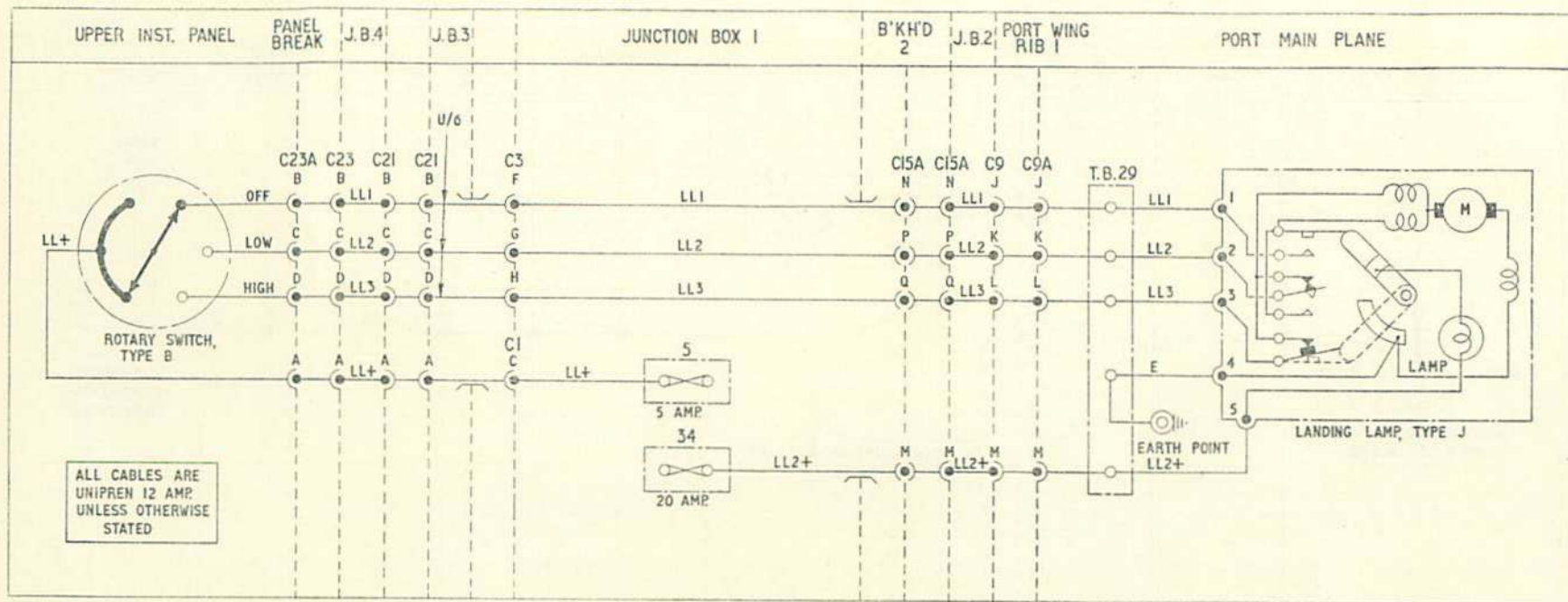


Fig. 6. Landing lamp—LL

LANDING LAMP

Description

20. A retractable landing lamp is installed in the port main plane underskin. The retracting motor is controlled by a three-position rotary switch fitted to the upper instrument panel, the switch having an OFF position and two alternative (LOW and HIGH) operating-angle positions for the lamp relative to the aircraft longitudinal datum.

21. The filament lamp is supplied from a separate fuse to that which supplies the motor, the lamp circuit being completed by the motor action whilst moving the lamp from its retracted (OFF) position to its intermediate (LOW) angle position. Fig. 6 shows the circuit routing chart.

Servicing

22. The circuit components are described in the specialist Air Publications listed in

para. 1. The glass of the lamp housing should be kept clean at all times.

Removal

23. The lamp has its own flange mounting which is secured to the main plane skin by twelve counter-sunk screws. These screws, when removed, allow the lamp to be withdrawn from the main plane; disconnection of the electrical plug and socket connection then being required before the lamp can be removed from the aircraft.



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