GROUP C — EMERGENCY

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Introduction

1. This group contains information relating to those services installed for operation under emergency conditions. The following list contains the specialist Air Publications dealing with the components used.

Equipment	Air Publication
◀Fire detector, Type 4D/3	4343E, Vol.1, Sect.14, Chap.2. ▶
Fire extinguisher push-switch (5CW/5763)	4343C, Vol.1, at a later date
Fire extinguisher bottle, Type 20A	957C, Vol.1, 2nd Edn., Part 1, Sect.3, Chap.1
Battery, alkaline, 24-volt, 0.4 amp/hr.	4343A, Vol.1, Sect.12, Chap.8
Battery charging instructions	4343, Vol.1, Sect.3, Chap.3
Push-switch, Type B	4343C, Vol.1, Sect.1, Chap.3

FIRE—WARNING

Description

2. Whenever the temperature in the engine bay exceeds a pre-determined value a warning lamp lights to indicate this condition to the pilots.

◄ **3.** The circuit consists of ten Type 4D/3 ► re-setting type fire detectors disposed one on each upper engine bearer support strut, one on each lower engine bearer, one on each wing rib 1 at the rear cone front former location and four radially on the rear cone front former.

4. The detectors are wired in parallel, and control the warning lamp. The lamp is an integral part of the fire extinguisher push-switch fitted to the upper instrument panel. A filament test push-switch bracketed to the upper 'panel coaming affords a test factility for the warning lamp. The circuit is shown on fig. 2.

Servicing

5. The components used in this electrical system are dealt with in the specialist Air Publications listed in para. 1.

6. The warning circuit should be periodically tested as follows :—

(1) Depress the filament test push-switch to ensure that the warning lamp is servicable.

(2) Place a shroud-type fire detector tester (Stores Ref. 5G/566) over one of the detectors until the warning lamp lights. The lamp should light when the detector under test has been heated to a temperature of 170 to 190 deg. C. Remove the tester, wait until the lamp goes out and check the remaining detectors in turn.

Removal

7. The method of removal of all components will be apparent when viewed on the aircraft.

FIRE EXTINGUISHER

Description

8. Should a fire occur in the engine bay a methyl-bromide fire extinguisher bottle, fitted in the port inboard flap bay, can be fired by a remote electrical push-switch in the cabin. The push-switch body protrudes round the central push-button of the switch unit to obviate inadvertent operation ; this switch also houses the fire warning lamp. The circuit is shown on fig. 2, whilst the fire extinguisher system is described in Sect. 4, Chap. 5 of this book.

Servicing

9. Servicing instructions for the fire extinguisher bottle are given in the specialist Air Publication listed in para. 1.

10. To test the bottle firing circuit remove the socket from the bottle plug connections, insert a suitable 24-volt test lamp across the socket poles and depress the fire extinguisher push-switch ; the lamp should light brightly.

11. To test the bottle cartridge it must first be removed from the bottle. As an additional safeguard it is recommended that the cartridge be mounted on a suitable fixture with the charge end shielded but unrestricted in case of accidental firing. The tests are as follows :—

(1) Check the insulation resistance between each plug pole and earth ; the reading obtained must be at least 20 Megohms.

(2) Check the continuity resistance of the cartridge fuse, using a safety ohmeter. The resistance valve should be between 7 and 11 ohms.

12. Each cartridge is expendable after two years, and should be renewed at that time. Both the date of manufacture and actual resistance value is stamped on the flange of each cartridge.

WARNING

The minimum current required to fire the fuze is 0·35 amp. Should the extinguisher bottle be accidentally discharged, DO NOT INHALE THE GAS.

Removal

13. When viewed on the aircraft the method of removing the bottle will be obvious ; it should be carried out in collaboration with the engine tradesman. When refitting the bottle it is essential that it should be positioned with the breeze plug pointing vertically downwards, and that maximum clearance is obtained between the end of the bottle and the flap.

LIGHTING

Description

14. Should the normal cabin lighting fail an emergency lighting system may be switched on to illuminate the instrument panels. This self-contained electrical system comprises an alkaline battery clamped to the cabin false floor forward of the instrument panel, and two lamps, both bracketed to the upper instrument panel coaming, which are controlled by a single-pole toggle switch fitted to the main instrument panel. The circuit is shown on fig. 3.

Servicing

15. The battery in this circuit is described in the specialist Air Publication listed in para. 1.

Removal

16. The battery is seated in a tray on the cabin false floor, and secured by a spring-clip assembly, the clips firmly holding a fibreglass cover over the battery. To remove the battery the clips have only to be unlatched and the cover removed.

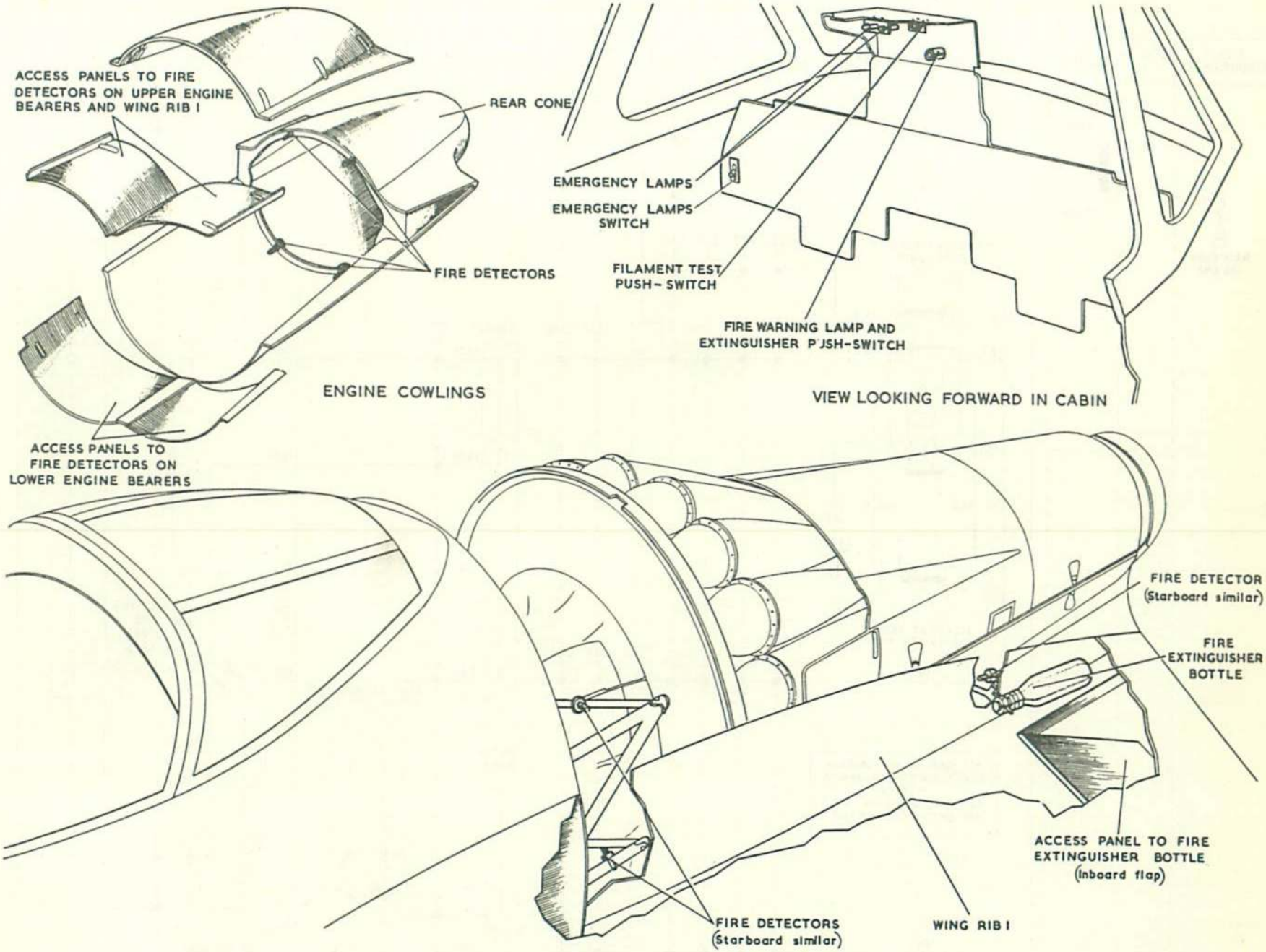

Fig.1. Location and access of components

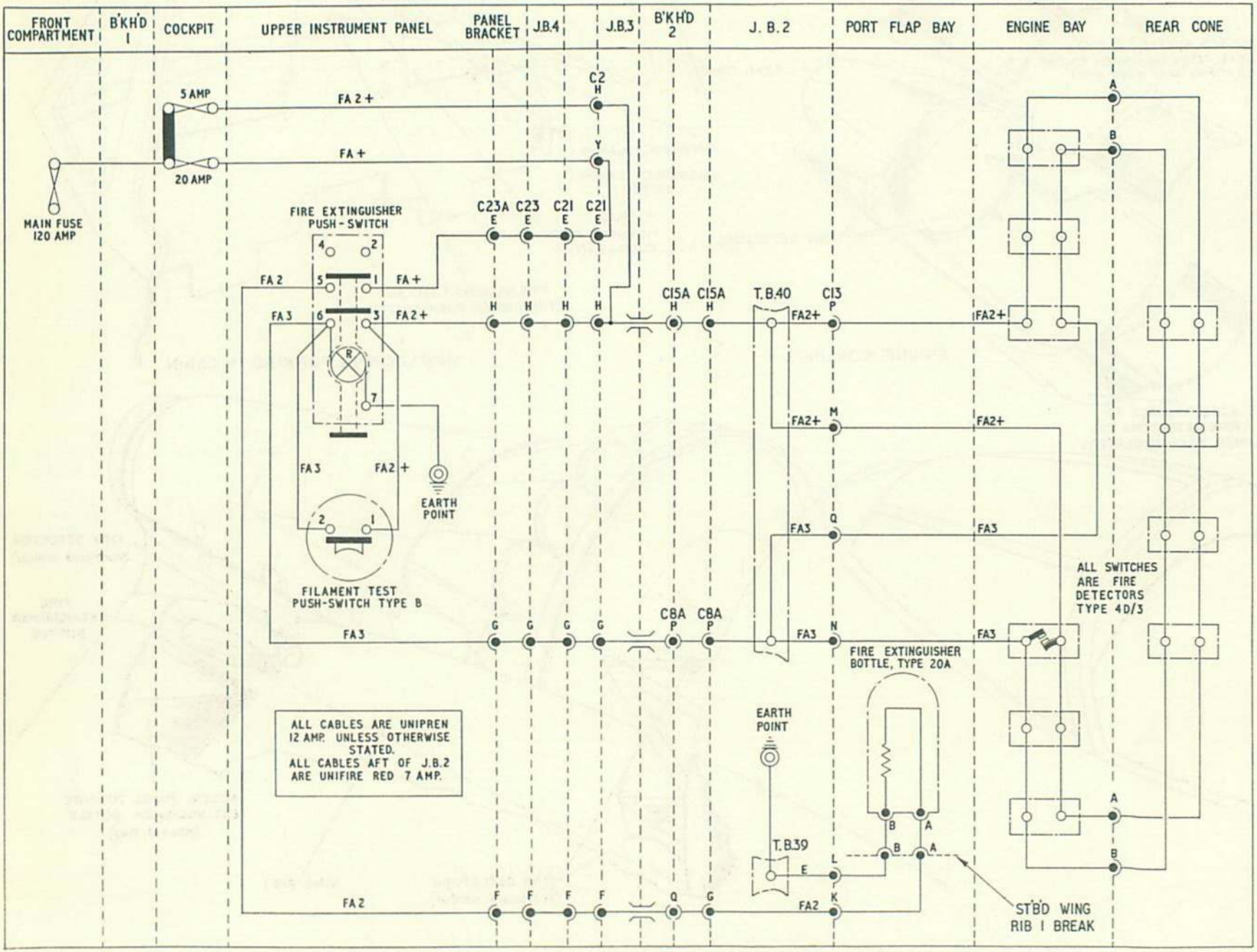

Fig. 2. Fire warning and extinguisher – FA

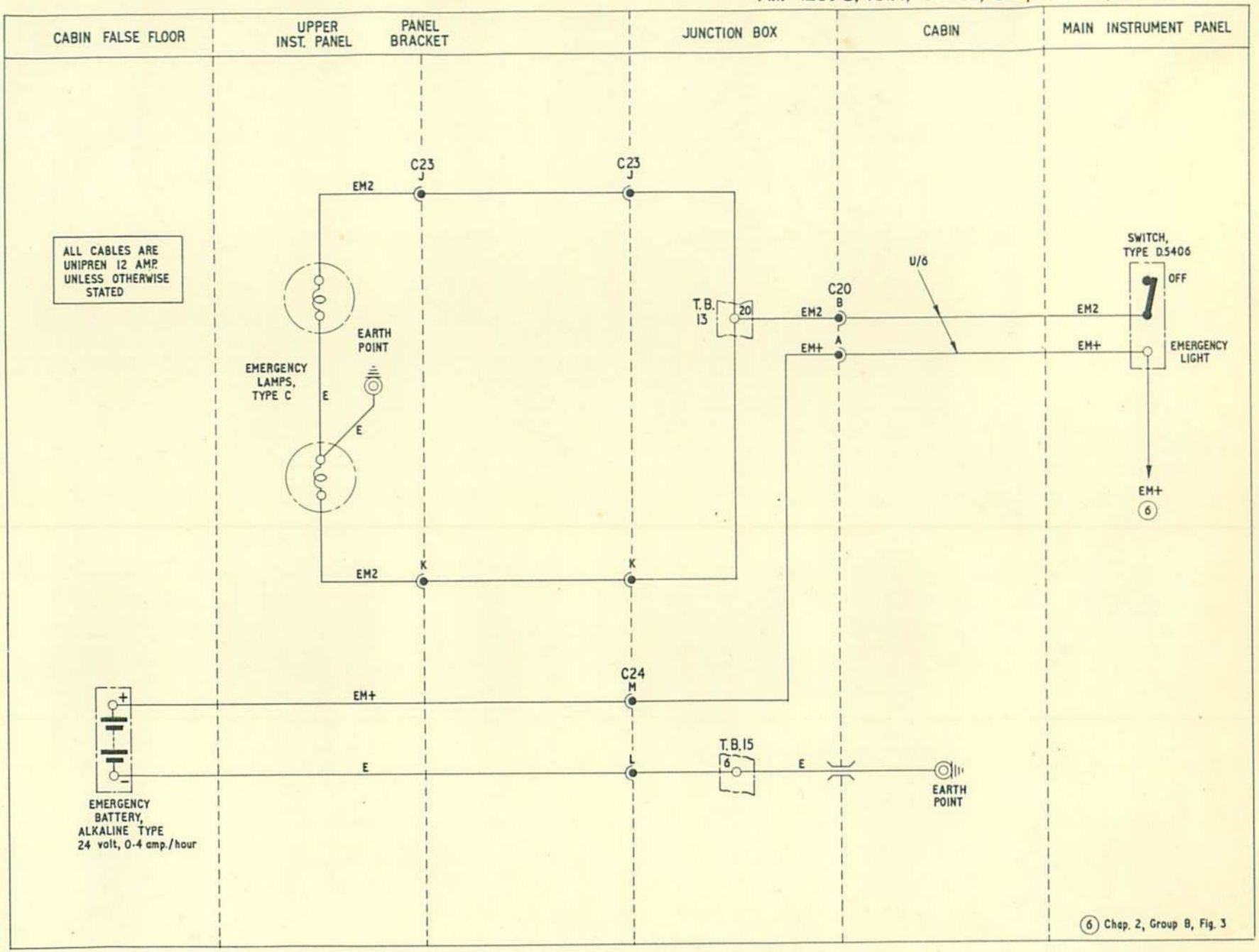

Fig. 3. Emergency lighting – EM

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