

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. 1, App. 1
Fire extinguisher push switch(5CW/5763)	4343C, Vol. 1, Book 3, Sect. 7
Fire extinguisher bottle Mk. 20A	957C, Vol. 1, 2nd edition, Part 1, Sect. 3, Chap. 1
Battery, alkaline, 2.4 volt, 3 amp./hour	4343A, Vol. 1, Sect. 12
Battery charging instructions	4343, Vol. 1, Sect. 3, Chap. 3

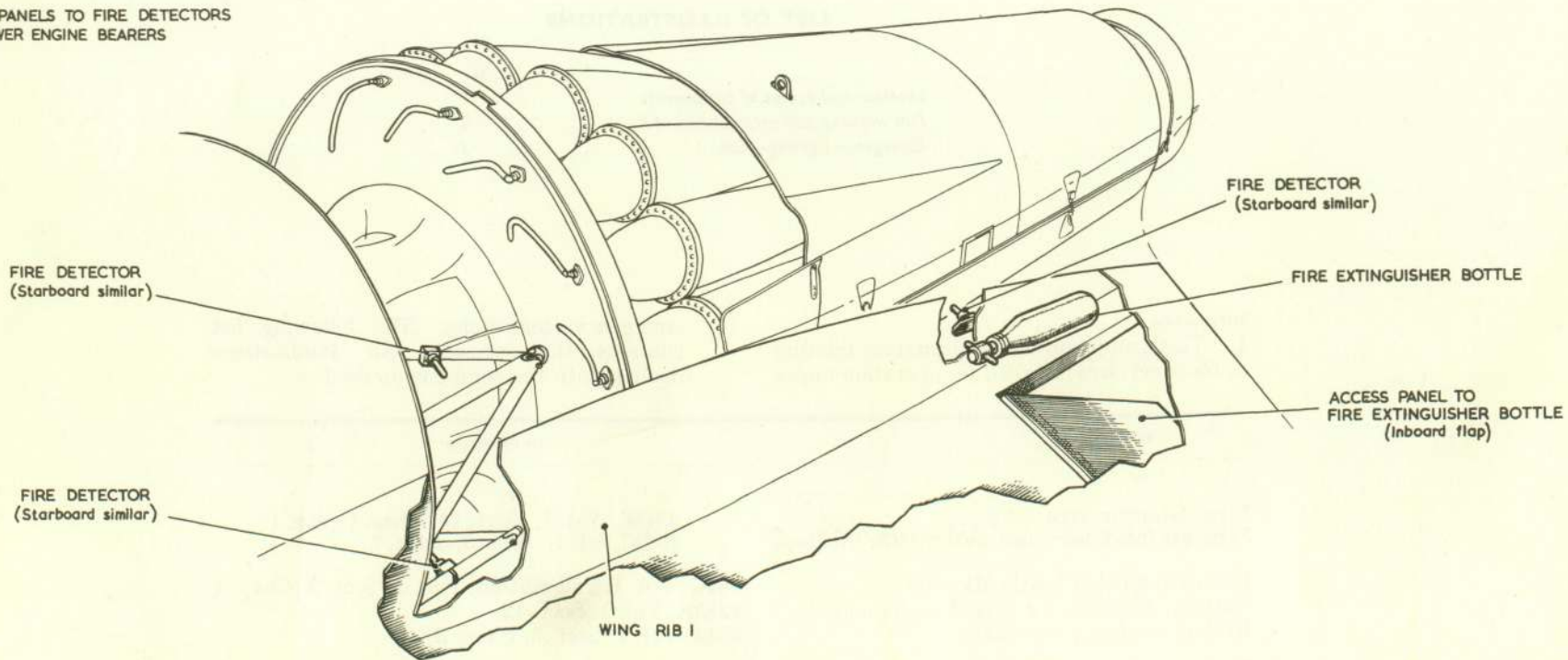
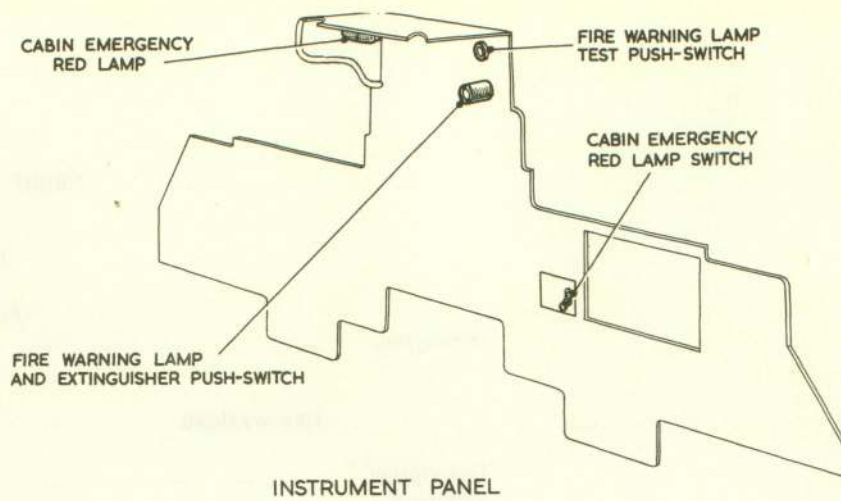
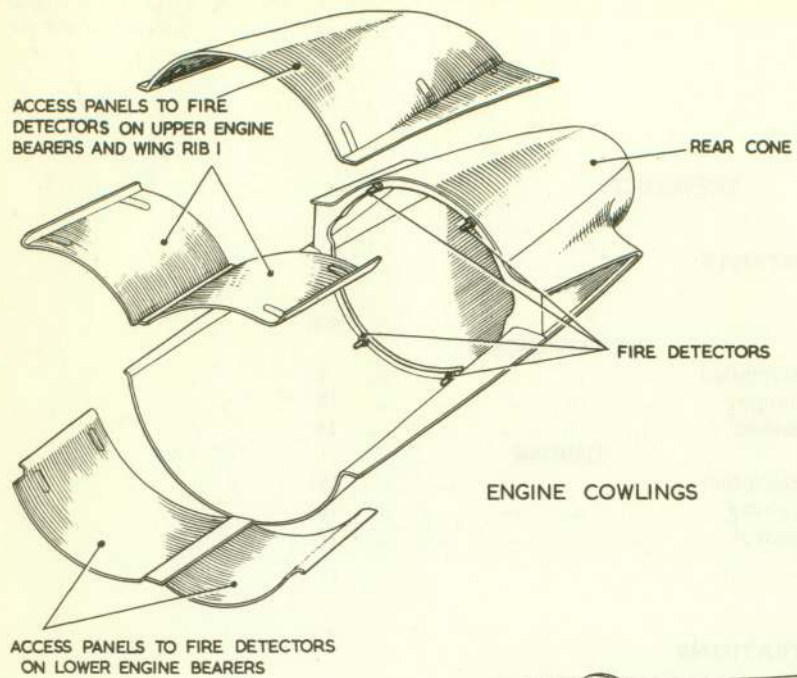


Fig.1. Location and access of components

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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, resetting type fire detectors disposed one on each upper engine bearer support strut one on each engine lower bearer, one on each wing rib 1 at the rear cone front former location and four radially on the rear cone front former.

4. All these detectors are wired in parallel with each other but in series with the warning lamp, this lamp being mounted inside the fire extinguisher push switch. A push switch, fitted beneath the instrument panel coaming, allows the serviceability of the warning lamp filament to be tested. Power for the fire warning and fire extinguishing systems is taken directly from the aircraft battery via the main fuse block on the starboard side of the cockpit floor just aft of No. 1 bulkhead.

Servicing

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

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

- (1) Depress the fire warning lamp test push-switch to ensure that the red warning lamp is serviceable. When the fire push-switch lamp lights, release the push-switch and check that the lamp goes out.

(2) Place a fire detector tester, (Ref. No 5G/566), over one of the resetting type fire detectors until the lamp lights. Remove the tester, allow the lamp to go out and check the remainder of the detectors in turn.

Removal

7. All the flame switches and/or fire detectors are easily removed, the method being apparent when viewed on the aircraft. The fire extinguisher push-switch and the lamp test push-switch are also easily removed.

FIRE EXTINGUISHER**Description**

8. A single fire extinguisher bottle is fitted in the port flap bay recess inboard of the boom. It is electrically detonated when the fire extinguisher push-switch is depressed.

9. The switch body protrudes round the centre push-switch to prevent inadvertent operation. The fire extinguisher system is fully described in Sect. 4, Chap. 5 of this book.

Servicing

10. The fire extinguisher bottle is described in the Air Publication listed in para. 1.

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

12. To test the cartridge it must first be removed from the extinguisher 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 fuze, using a safety ohmmeter. The resistance value should be between 7 and 11 ohms.

13. 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 . . .

If the extinguisher bottle should be accidentally discharged, do not inhale the gas.

Removal

14. When viewed on the aircraft the method of removing the bottle and its mounting bracket will be obvious; removal should be carried out in conjunction with the engine tradesman.

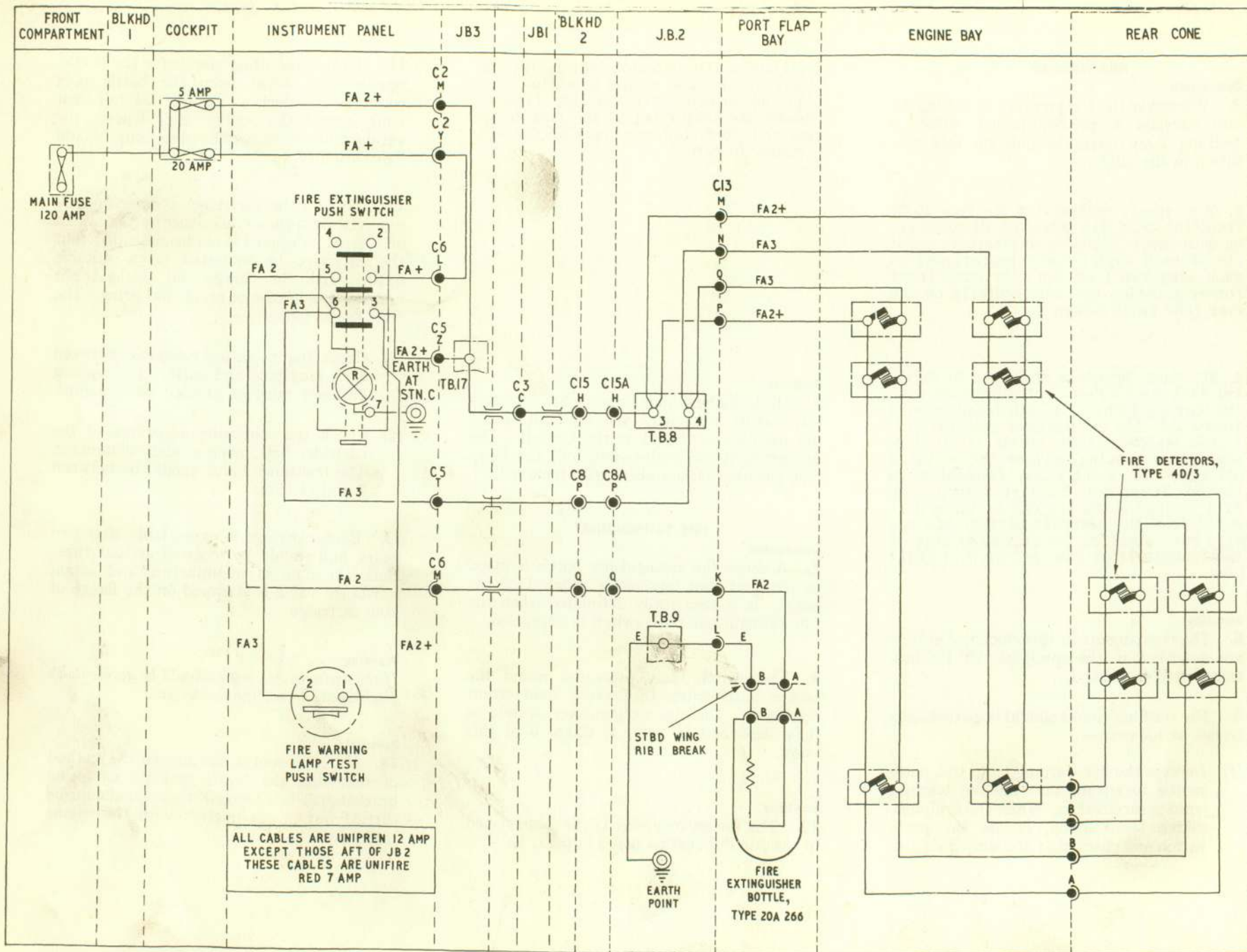


Fig. 2. Fire warning and extinguisher-FA

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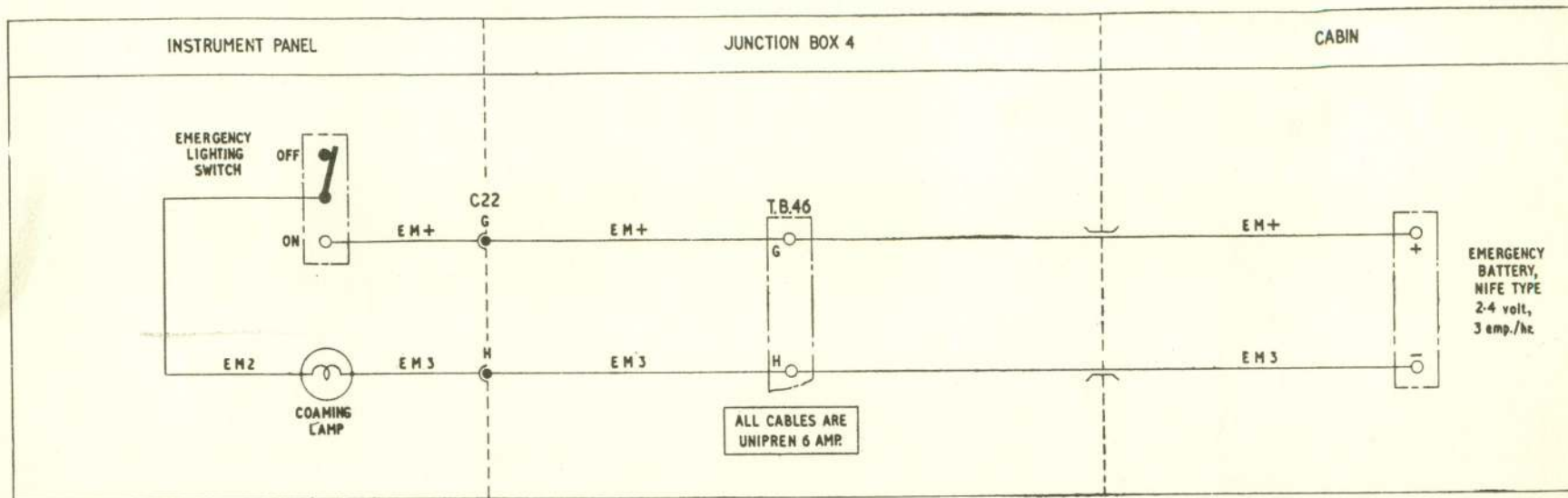


Fig. 3. Emergency lighting—EM

LIGHTING**Description**

15. If the normal cabin lighting fails, an emergency lamp may be switched on to illuminate the instrument panel. The lamp is fitted to the instrument panel coaming, the controlling switch to the panel itself, whilst the emergency alkaline type battery is fitted to the forward face of bulkhead 2 behind the pupil pilot's seat. The 2.4 volt battery has a capacity of 3 ampere-hours.

Servicing

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

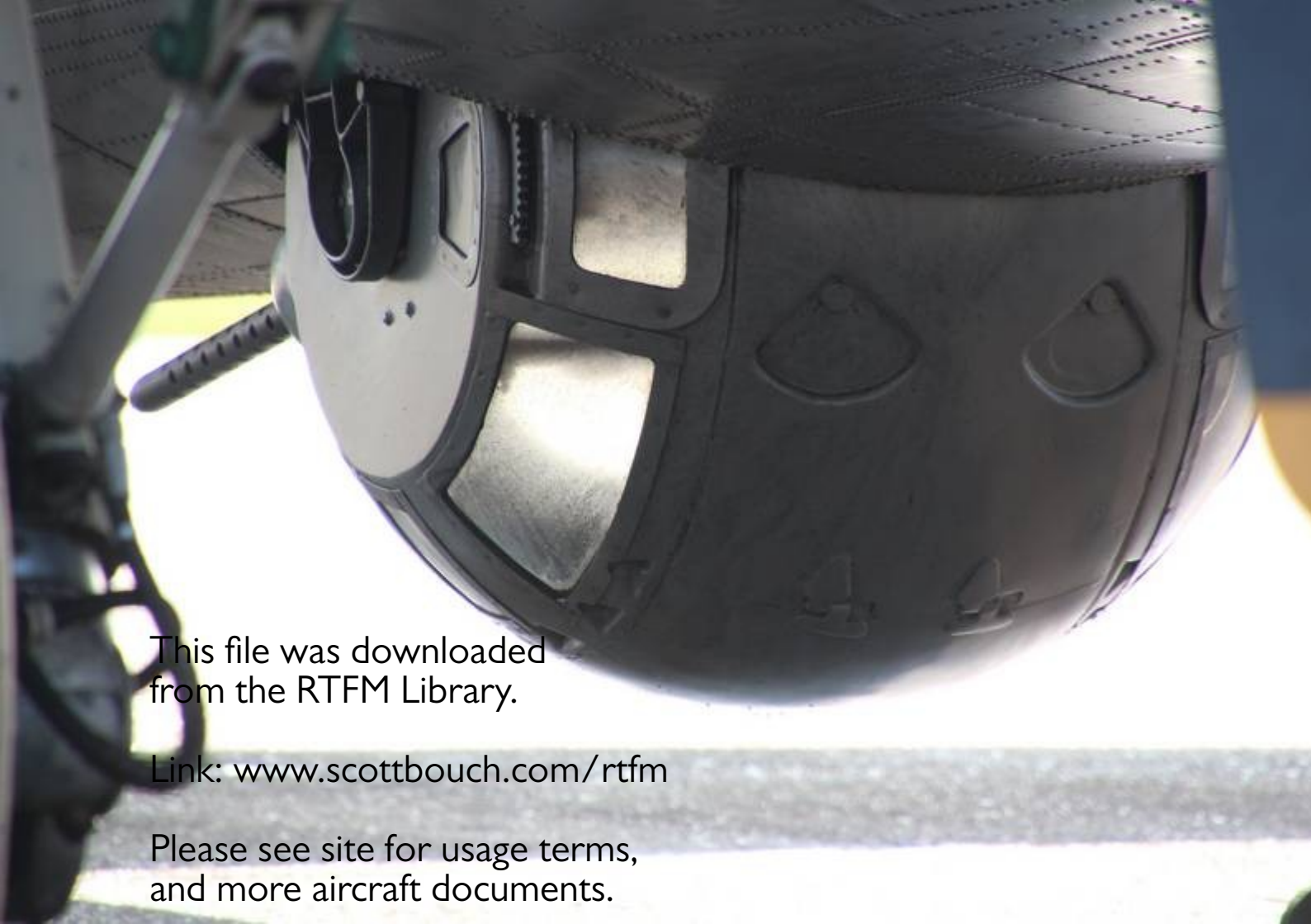
Removal

17. The battery is fitted in a bracket secured to the bulkhead. To remove the battery, remove the terminal covers and the

battery cables. Loosen the two upper 2 B.A. bracket securing bolts and remove the battery. Refitting is the reverse of removal.

Note . . .

The pupil pilot's ejection seat must be removed to gain access to the battery.



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