

## Chapter 3      EMERGENCY CONTROLS, EQUIPMENT AND EXIT

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#### General

**1.** This chapter describes the emergency controls and equipment in the cockpit and indicates the method of operation wherever this is not obvious. As indicated in the following paragraphs, the emergency controls associated with the main systems are fully covered in the appropriate Sections of this publication. The location of the various items, together with brief instructions for their operation is given in fig. 1.

#### Fuel system

**2.** The high-pressure fuel cock (*item 2*) is used as an emergency fuel shut-off in the case of engine failure. *In the event of fire the low pressure fuel cock should also be closed.* Additional emergency equipment relating to the fuel system are the pressure warning lamp (*item 8*), the drop tank jettison lever (*item 18*) and the fuel pump isolating switch (*item 11*). Details of this emergency equipment relating to the fuel system are given in Section 4, Chap. 2, and in the Goblin engine publication A.P.4121B and C.

#### Alighting gear

**3.** The solenoid-operated plunger, which locks the alighting gear selector lever in the down position when the aircraft is on the ground, may be overridden in an emergency, such as overshooting, by pulling back a switch (*item 19*). In the event of failure of the engine driven hydraulic pump the alighting gear may be operated by the hand pump (*item 16*). The warning lamp (*item 6*) is provided as a reminder should the alighting gear be in the retracted position when the throttle is less than  $\frac{1}{4}$  open.

#### Hydraulic system

**4.** The hydraulic emergency hand pump (*item 16*) mounted aft between the pilots' seats, will operate the alighting gear, flaps and canopy fasteners at a reduced rate, but it will not operate the dive brakes unless the manually operated non-return valve in the gun bay is depressed. Full details of the emergency operation of the hydraulic system are given in Sect. 3.

#### Fire protection system

**5.** The warning lamp (*item 10*) will indicate an engine fire or a split combustion chamber. The method of determining which of these emergencies has occurred is described in Sect. 4, Chap. 5. The extinguisher bottle is only discharged when the switch (*item 9*) is depressed.

#### Emergency exit

**6.** The normal entry and exit hatch in the canopy may be jettisoned in an emergency by pulling out the toggle handle (*item 20*), located below the instrument panel. This toggle handle operates a hydraulic selector valve which in turn pressurises a hydraulic jack to release the latch bolts. In the event of the accumulator pressure failing, the hand pump can be used. Details of the system are contained in Sect. 3, Chap. 6.

#### Note . . .

*The canopy jettison control handle must be locked with 22 S.W.G. wire attached between the two P.K. screws after ensuring that the handle is in the "OFF" position. The valve must be pressed into the top of the selector to render the mechanism operative.*

#### Emergency crash equipment

**7.** A first-aid pack is fitted in the aft portion of the canopy behind the first pilot's seat, and a crowbar, and hand-operated fire extinguisher, behind the second pilot's seat.

#### Signal discharger unit

**8.** One cartridge at a time may be discharged from the unit by pressing the switch in the cockpit (*item 1*). Full details of the discharger unit are given in Sect. 7, Chap. 1.

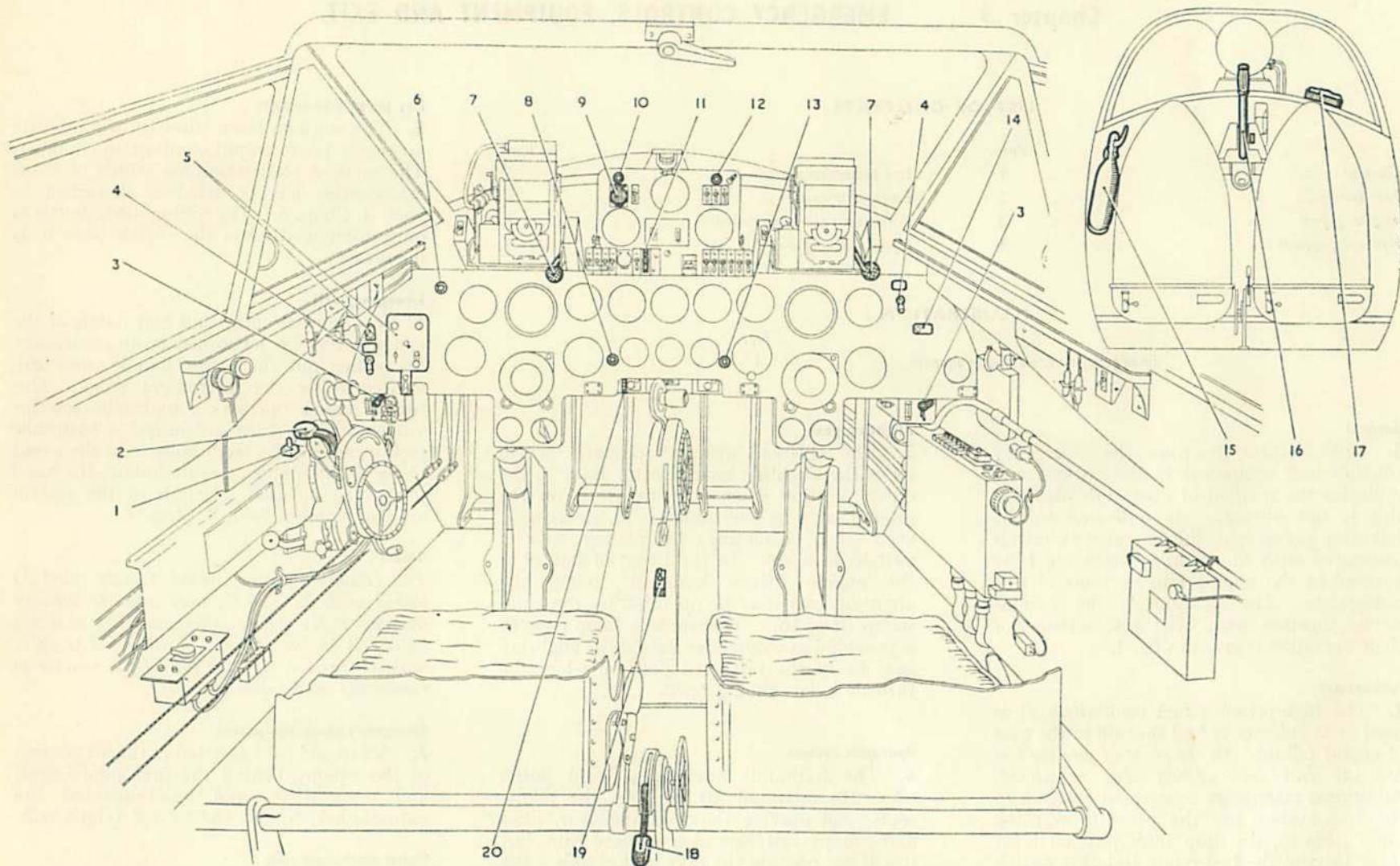


Fig. 1. Emergency controls and equipment

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KEY TO FIG. 1 (EMERGENCY CONTROLS AND EQUIPMENT)

- |  |  |   |
|--|--|---|
| 1 SIGNAL DISCHARGER CONTROL SWITCH   | 9 FIRE EXTINGUISHER PRESS BUTTON   | 16 HYDRAULIC HAND PUMP  |
| 2 HIGH-PRESSURE FUEL COCK CONTROL LEVER  | 10 FIRE WARNING LAMP   | 17 FIRST-AID PACK   |
| 3 OXYGEN EMERGENCY CONTROLS  | 11 FUEL PUMP ISOLATING SWITCH  | 18 DROP TANK JETTISON LEVER<br>Pull UP to jettison                              |
| 4 EMERGENCY LIGHT SWITCH   | 12 GENERATOR WARNING LAMP  | 19 ALIGHTING GEAR EMERGENCY RETRACTION SWITCH<br>Back to retract alighting gear |
| 5 BEAM APPROACH SWITCH AND CONTROL PANEL   | 13 CABIN PRESSURE WARNING LAMP<br>Illuminates when pressure drops $\frac{1}{2}$ lb. below normal for<br>any altitude | 20 CANOPY HATCH JETTISON CONTROL<br>Pull OUT to jettison                        |
| 6 UNDERCARRIAGE WARNING LAMP   | 14 BEAM APPROACH BEACON SELECTOR SWITCH  |   |
| 7 GUNSIGHT EMERGENCY RETRACTING CONTROLS   | 15 HAND FIRE EXTINGUISHER  |   |
| 8 FUEL PRESSURE WARNING LAMP<br>Illuminates when the pressure drops below $1\frac{1}{2}$ lb. per sq. in. |  |   |

Chapter 3 EMERGENCY CONTROLS, EQUIPMENT AND EXITS  
(Completely Revised)

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General

1 This chapter describes the emergency controls and equipment in the cabin and indicates the method of operation wherever this is not obvious. As indicated in the following paragraphs, the emergency controls associated with the main systems are fully covered in the appropriate Sections of this publication. The location of the various items, together with brief instructions for their operation, is given in Fig. 1.

Fuel system

2 The high-pressure fuel cock is used as an emergency fuel shut-off in the case of engine failure. In the event of fire, the low-pressure fuel cock should also be closed. Additional emergency equipment relating to the

fuel system are the pressure warning lamp, the drop tank jettison lever and the fuel pump isolating switch. Details of this emergency equipment relating to the fuel system are given in Section 4, Chap. 2, and in the Goblin engine publication A. P. 4121B and C.

Relighting the engine in flight

3 A relight button is incorporated in the handle of the high-pressure fuel cock lever (Fig. 1). The procedure to be adopted is detailed in A. P. 4121B and C, Vol. 1.

Alighting gear

4 The solenoid-operated plunger, which locks the alighting gear selector lever in the DOWN position when the aircraft is on the ground, may be overridden in an emergency, such as

overshooting, by pushing forward a switch. In the event of failure of the engine driven hydraulic pump, the alighting gear may be operated by the emergency system. The warning lamp is provided as a reminder should the alighting gear be in the retracted position when the throttle is less than  $\frac{1}{4}$  open.

Hydraulic system

5 Two emergency accumulators are provided for operation of the alighting gear, flaps, canopy fasteners and windscreen wiper, if the main accumulator is exhausted. The pressure from these accumulators is fed into the main system by operation of the control lever situated between the pilots' seats. The dive brakes cannot be operated by the emergency

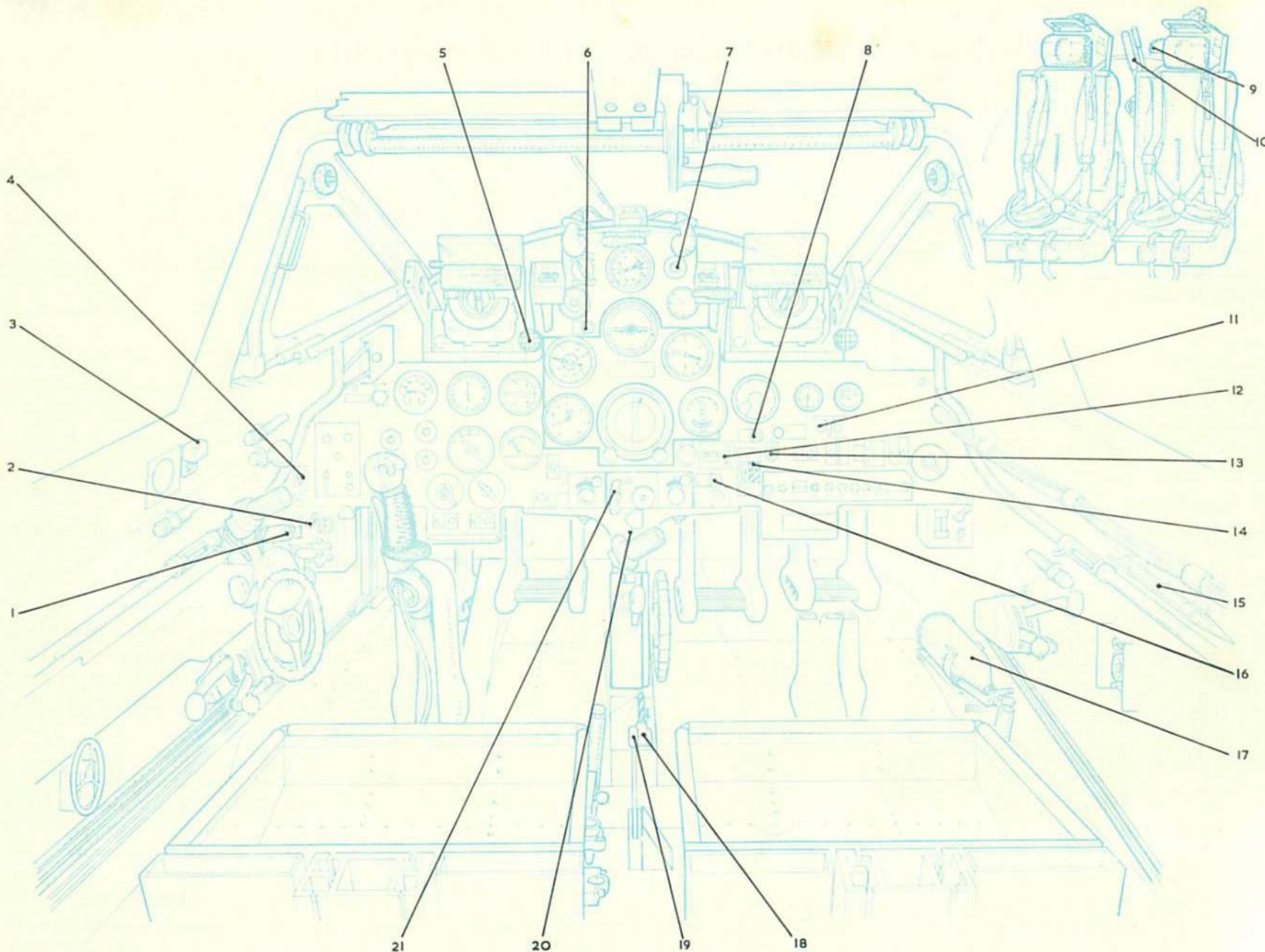


Fig. 1. Emergency controls and equipment

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## KEY TO FIG. 1 (EMERGENCY CONTROLS AND EQUIPMENT)

- |    |  |    |   |
|----|--|----|---|
| 1  | ENGINE RELIGHT BUTTON  | 11 | No.1 INVERTER FAILURE MAGNETIC INDICATOR  |
| 2  | MAIN OXYGEN EMERGENCY CONTROL  | 12 | TURN AND SLIP EMERGENCY SWITCH  |
| 3  | FIRST PILOT'S ALIGHTING GEAR SELECTOR<br>LEVER LOCK OVERRIDE SWITCH<br>Lift guard and push switch FORWARD, then re-<br>tract alighting gear (Sect.5, Chap.1) | 13 | GENERATOR FAILURE WARNING LAMP  |
| 4  | EMERGENCY LIGHT SWITCH   | 14 | FUEL PUMP ISOLATING SWITCH  |
| 5  | GUNSIGHT EMERGENCY MANUAL RETRACTION<br>HANDLE   | 15 | CROWBAR   |
| 6  | ALIGHTING GEAR WARNING LAMP  | 16 | CABIN PRESSURE WARNING LAMP   |
| 7  | FIRE EXTINGUISHER PUSH BUTTON AND WARN-<br>ING LAMP  | 17 | MANUAL FIRE EXTINGUISHER  |
| 8  | FUEL PRESSURE WARNING LAMP<br>Illuminates when the pressure drops below $1\frac{1}{2}$ lb.<br>per sq. in.  | 18 | EMERGENCY HYDRAULIC ACCUMULATOR<br>LEVER  |
| 9  | FIRST-AID PACK   | 19 | MID-WING TANKS JETTISON LEVER<br>Pull UP to jettison                                  |
| 10 | HYDRAULIC HAND PUMP  | 20 | SECOND PILOT'S ALIGHTING GEAR SELECTOR<br>LEVER LOCK OVERRIDE SWITCH<br>As for item 3 |
|    |  | 21 | HATCH JETTISON HANDLE<br>Pull OUT to jettison   |

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system. Full details of the operation of the hydraulic system are given in Section 3.

#### Fire protection system

6. The warning lamp will indicate an engine fire; the fire protection system is described in Sect. 4, Chap. 5. The extinguisher bottle is only discharged when the switch is depressed.

#### Emergency exit

7. The normal entry and exit hatch in the canopy may be jettisoned in an emergency by pulling out the toggle handle located below the instrument panel. This toggle handle operates

a hydraulic selector valve which in turn pressurizes a hydraulic jack to release the latch bolts. In the event of the main accumulator pressure failing, the emergency system can be used. Details of the system are contained in Sect. 3, Chap. 6.

#### NOTE...

The canopy jettison control handle must be wire-locked in the OFF position with 26 s.w.g. locking wire passing round the handle to the housing attachment bolt.

#### Ejection seats

8. After the canopy hatch has been

jettisoned as described in para. 7, each pilot may eject himself in his seat by pulling the red-coloured firing handle above the head rest. The connections to the radio and main oxygen systems automatically disengage at the quick-release points on ejection. Accidental ejection of either seat while the aircraft is on the ground is prevented by the safety pin. Full details of the seats are given in A. P. 4288C, Vol. 1.

#### Emergency crash equipment

9. A first aid pack, crowbar, and manually operated fire extinguisher are mounted as shown in Fig. 1.



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