Chapter 11 EMERGENCY SYSTEMS

(Completely revised)

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WARNING

AIRCRAFT EJECTION SEATS ARE FITTED TO THIS AIRCRAFT.

Before attempting to enter the cabin ensure that the instructions detailed on the LETHAL WARNING marker card at the front of the Handbook have been complied with.

General

1. The emergency systems installed in this aircraft are :—

(a) Cartridge operated ejection seats.
(b) A hood jettison mechanism.
(c) Alighting gear and flaps emergency down selection.
(d) Wheel brake accumulators.
(e) Aileron and elevator power control accumulators.
(f) Cabin hood accumulator.
(g) Oxygen.
(h) Tail plane actuator emergency circuit.
(j) Cabin emergency lighting.

Ejection seat and hood jettison mechanism

2. The cartridge operated ejection seats are fully automatic and are inter-connected with the hood release mechanism to ensure automatic jettisoning of the hood when seat ejection action is taken, a time delay ensuring that the seats are not ejected until the hood is clear of the aircraft. The hood can, however, be jettisoned independently if desired. The hood mechanism is described in Sect. 3, Chap. 1, its operation in Sect. 1, Chap. 1 and its emergency operation in Sect. 1, Chap. 3. The ejection seats are described and their servicing detailed in A.P.109 Group.

Alighting gear and flap emergency down selection

3. In the event of hydraulic failure, the alighting gear and landing flaps may be lowered by the operation of emergency selections which admit high pressure air into the hydraulic jacks. The systems are described in Sect. 3, Chap. 6 and its operation in Sect. 1, Chap. 3.

Wheel brake accumulator

4. The wheel brake accumulator provides for approximately 40 brake operations should hydraulic failure occur. The accumulator system is described in Sect. 3, Chap. 6.

Aileron and elevator power control accumulators

5. The aileron and elevator power control accumulators provide a smooth change over from power operation to manual operation in the event of hydraulic failure. The accumulators provide for a few operations of the aileron and elevator. The system is described in Sect. 3, Chap. 6.

Cabin hood accumulator

6. In the event of hydraulic failure the cabin hood may be opened and closed by means of energy stored in a hydraulic accumulator in the circuit. The system is described in Sect. 3, Chap. 6.

Emergency oxygen

7. A small oxygen cylinder, attached to each ejection seat, provides an emergency oxygen supply when selected manually or when the seat is ejected. The system is described in Sect. 3, Chap. 10 and its operation in Sect. 1, Chap. 3.

Tail plane incidence

8. The incidence of the tail plane is varied by means of a two speed electric actuator, the normal high speed movement is controlled by a switch on each control column. In the event of a breakdown in the normal control circuit, the emergency low speed circuit can be brought into operation by means of a switch on the cabin port shelf. The system is described in Sect. 5, Chap. 1 and its operation in Sect. 1, Chap. 3.

Cabin emergency lighting

9. In the event of failure of the normal cabin lighting small batteries, providing current for an emergency lighting system, can be brought into operation. The system is described in Sect. 5, Chap. 1 and its operation in Sect. 1, Chap. 3.