

## Chapter II      EMERGENCY EQUIPMENT

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#### DESCRIPTION AND OPERATION



##### Introduction

1. The emergency equipment for abandoning the aircraft consists of two Martin Baker lightweight ejection seats, each of which incorporates an automatic barometrically-controlled mechanism to release the occupant from the seat and open the parachute after ejection. Each ejection seat gun is integral with the guide rail and can easily be removed from the aircraft. The observer's seat hinges forward automatically before ejection to avoid fouling the canopy structure, the bottom attachment bolt of the ejection gun being the pivot point (*fig. 1*). For full details of the seats and their equipment refer to A.P.4288N, Vol. 1.

2. Three safety release cables, attached to the hatch, ensure that the observer's seat cannot hinge forward, and the seats cannot be ejected, until the hatch has been jettisoned.

3. The observer's seat hinge release mechanism (*fig. 1*), mounted at the top of bulkhead No. 2, incorporates a release hook which normally retains the ejection gun and seat in the stowed position. When the hatch is jettisoned, a cable attached to the hatch central beam operates a snatch unit, a release cable from the unit pulls a lever catch sear allowing the release hook to drop, and a compression strut and spring-loaded

inner and outer tubes then thrust the ejection gun and seat forward to the ejection position.

4. A safety pin in each ejection gun sear (*fig. 2, detail B*) is attached to the hatch by a sear release cable to prevent the ejection guns being fired until the hatch is jettisoned.

#### SERVICING

##### General

5. Instructions for servicing the components of the ejection seats are given in A.P.4288N, Vol. 1, and for the survival equipment reference should be made to the following Air Publications:—

Parachute and parachute harness	1182A
Safety harness	1182B
Dinghies and associated equipment	1182C
Miscellaneous power cartridges	1661F

#### Observer's seat hinge release mechanism

6. (1) The observer's seat hinge release mechanism should be tested for correct functioning by lifting the hinge release cable lever on the snatch unit through its full travel. The lever must have unrestricted movement, and the release hook should drop allowing the gun and seat to hinge forward to the ejection position. Engage the operating cable hook with the snatch unit, and withdraw the locking plunger knob ensuring that the knob returns to its lowest position on the snatch unit, then break the hinged arm and push the ejection gun and seat back to the stowed position; the gun and seat should be retained automatically by engagement with the release hook. If necessary, the position of the lever catch sear may be adjusted by disconnecting the eye end, slackening the 2 B.A. stiffnut and screwing the eye end in or out accordingly. After checking the release mechanism for correct

functioning, lock the eye end with the stiffnut.

(2) With the observer's seat in the stowed position, the load required on the snatch unit operating cable (to release the seat to the ejection position) must not exceed 20 lb.

(3) The release mechanism must be periodically lubricated with grease XG-275, in accordance with the Servicing Schedule.

#### REMOVAL AND ASSEMBLY

##### General

7. For the procedure for the removal and assembly of the ejection seats, cartridges and drogue guns, refer to A.P.4288N, Vol. 1. Before removing the seats, it will be necessary to disconnect the safety release cables and remove the canopy hatch (*Sect. 3, Chap. 1*).

##### Safety release cables

8. (1) The snatch unit operating cable is disconnected by lifting the hinge release cable lever until the cable hook is free from the snatch unit as in the jettison position (*fig. 2, detail A*). On re-assembly, engage the hook with the snatch unit, and withdraw the locking plunger knob ensuring that the knob

returns to its lowest position on the snatch unit.

(2) The gun sear release cables are disconnected by withdrawing the safety pins from the gun sears. On re-assembly, it is essential that each safety pin points *out-board*, otherwise the pins will not withdraw correctly when the hatch is jettisoned.

##### Ejection seat guns (*fig. 1*)

9. (1) *Pilot's ejection gun*. Before removal of the pilot's seat, remove the cartridges as described in A.P.4288N, Vol. 1. Remove the top and bottom attachment bolts as shown in the illustration, and lift the gun from the cabin.

(2) *Observer's ejection gun*. Before removal of the observer's seat, remove the cartridges as described in A.P.4288N, Vol. 1. Operate the release hook by lifting the hinge release cable lever on the snatch unit, to allow the gun to hinge forward to the ejection position. Remove the top and bottom attachment bolts as shown in the illustration, and lift the gun from the cabin. As the inner and outer tubes of the mechanism part, retain the spring from the inner tube.

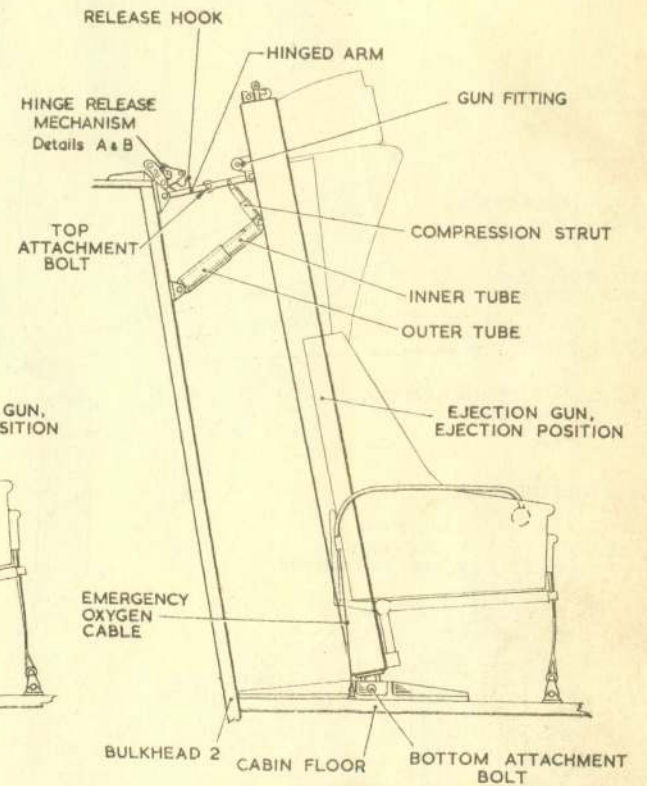
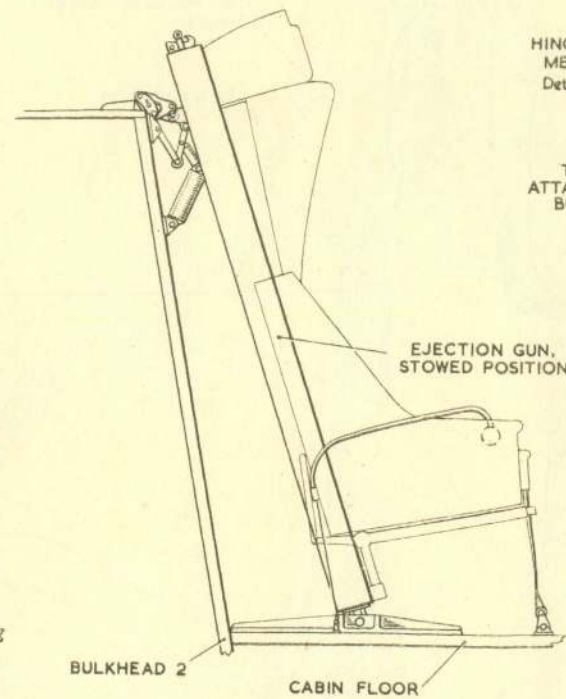
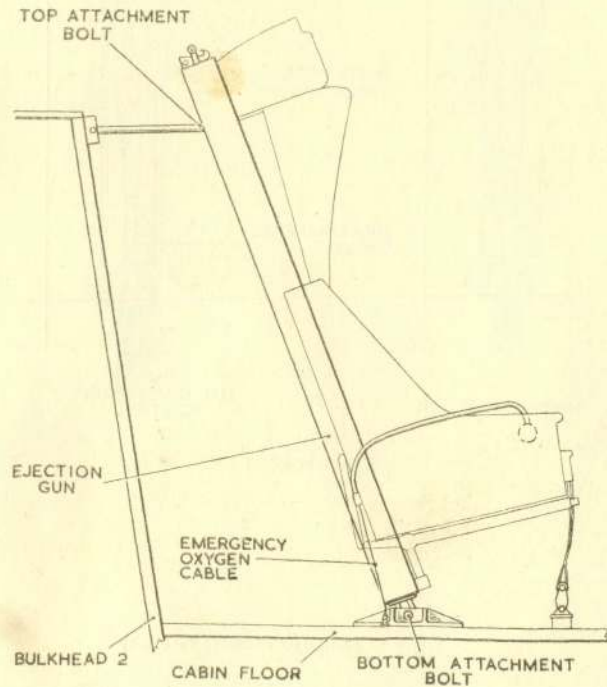
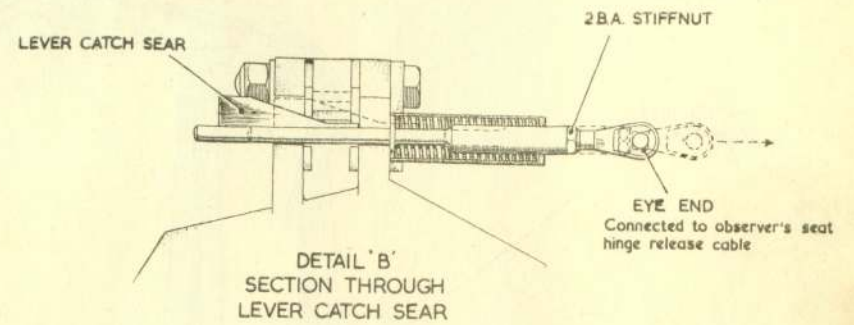
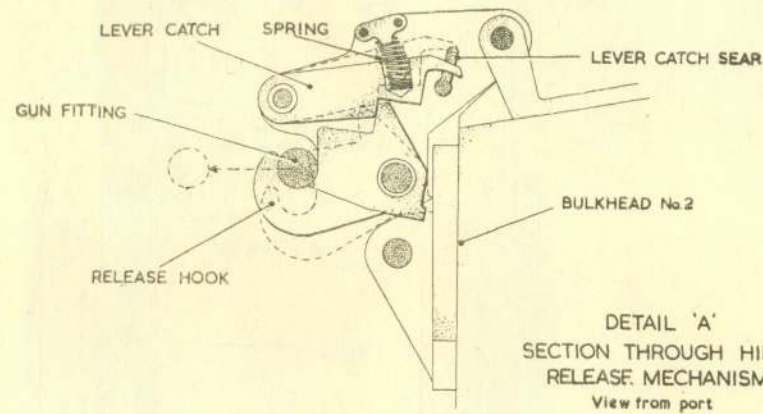


Fig. 1. Diagram of pilot's and observer's ejection seats

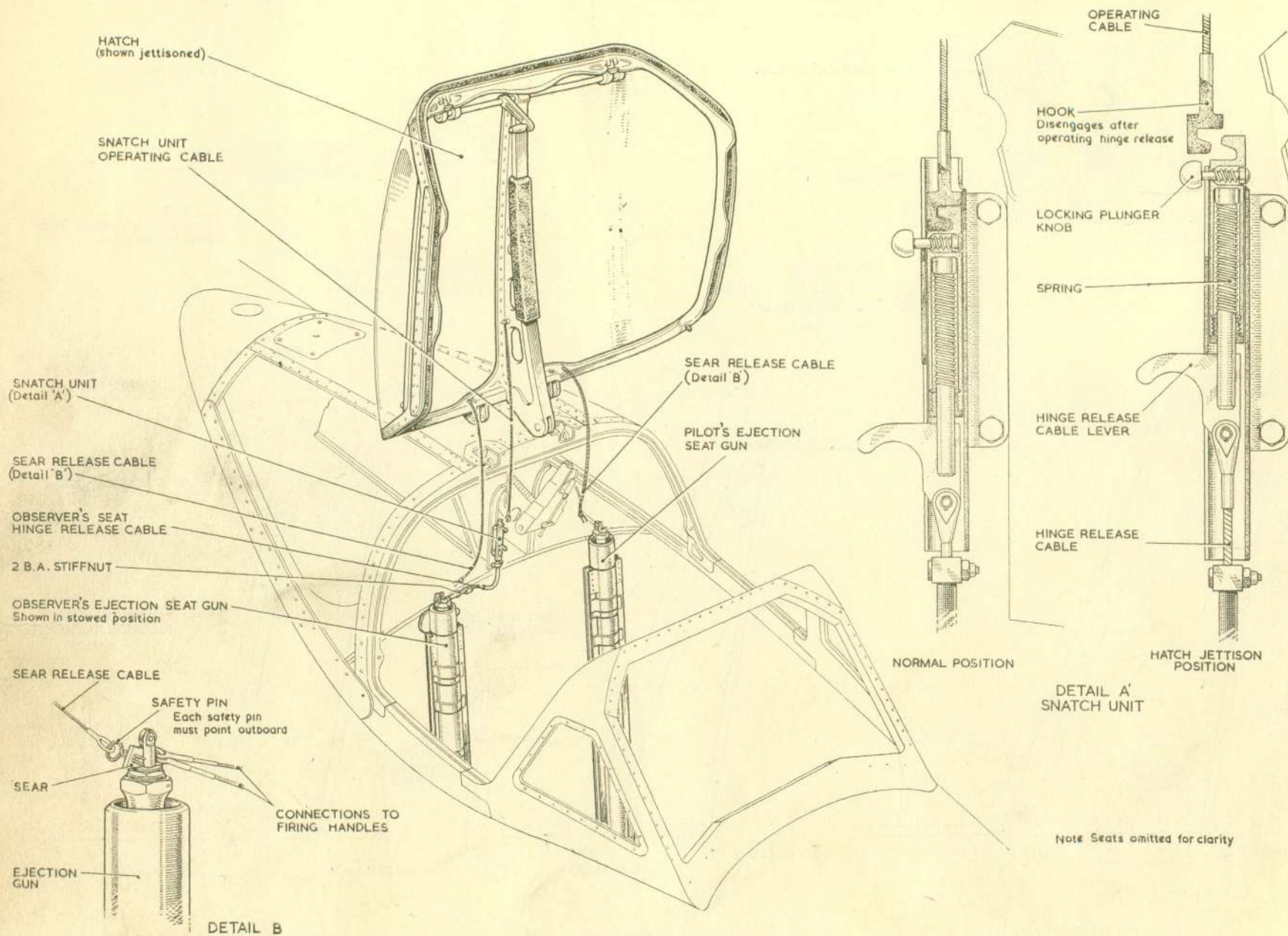
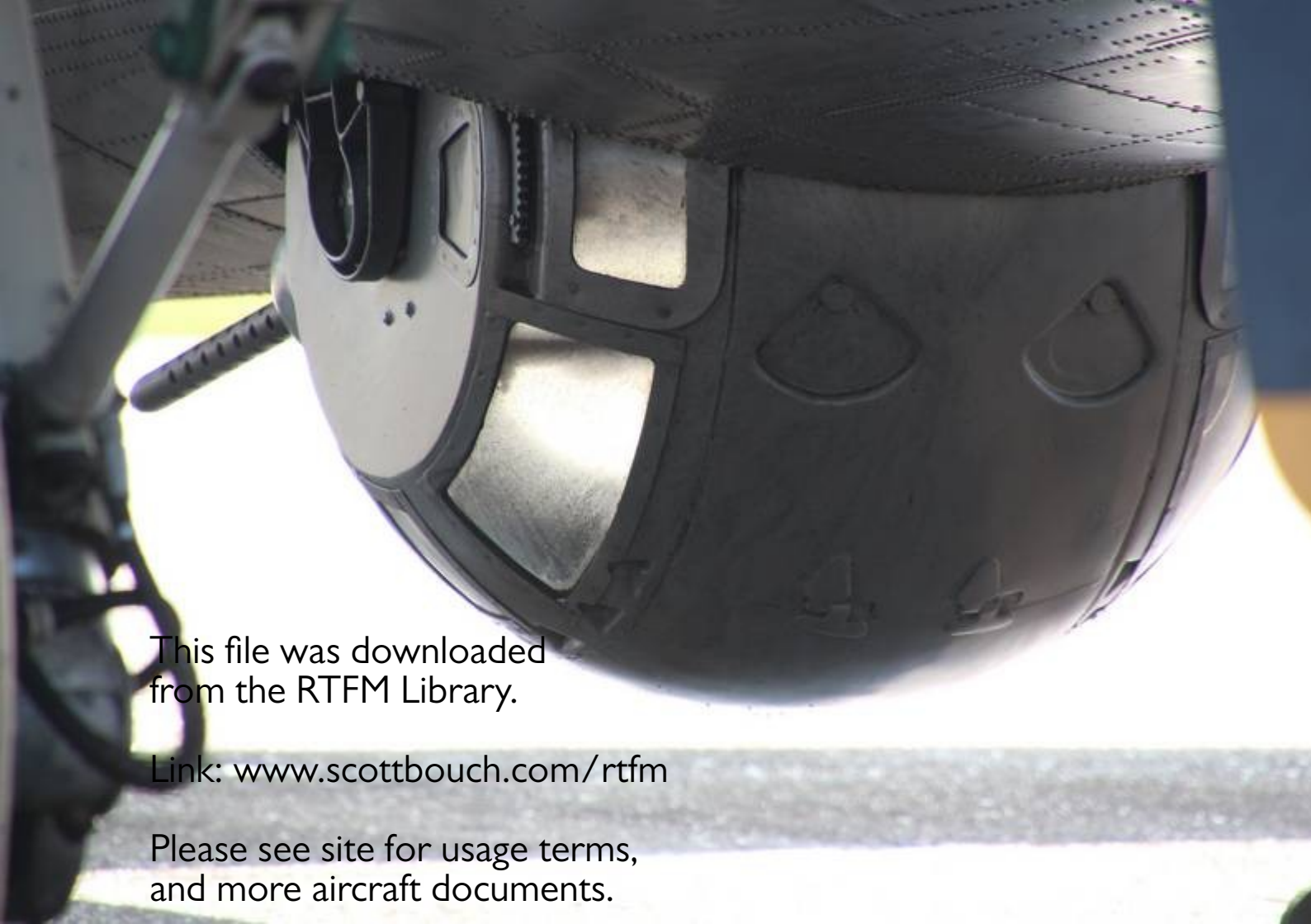


Fig. 2. Safety release cables

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