AP 109B-0117-15F
(Formerly AP 109B-0117-1 and
superseding AP 109B-0117-5F
dated August 1972)

EJECTION SEATS

(MARTIN-BAKER)

TYPE 3H

(HUNTER F Mk 6, F(GA) Mk 9 and FR Mk 10 AIRCRAFT)

GENERAL AND TECHNICAL INFORMATION

BAY SERVICING SCHEDULES

BY COMMAND OF THE DEFENCE COUNCIL

Ministry of Defence

Sponsored for use in the
ROYAL AIR FORCE by DWSE (RAF)
Prepared by Martin-Baker Aircraft Co Ltd, Chalgrove
Publications authority: ATP/MOD(PE)

Service users should send their comments through the channel prescribed for the purpose in :
AP 100B-01 Order 0504 or 0575 (RAF)

AMENDMENT RECORD

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Amendments

Changes of technical import to this publication are indicated by the symbols ▶ ◀ outside the type area.

MODIFICATION RECORD

The following record confirms that this publication incorporates all technical changes necessitated by the modifications listed below. Information on modification titles, classification categories and Mark applicabilities is given in AP 109A-0003-2.

EJECTION SEAT
Mod No ES 421, 2627, 2773, 2880, 2928, 2968, 3150, 3292, 3341, 3351

LETHAL WARNING

1 The assisted escape system and associated explosive operated jettison mechanisms fitted to aircraft are a potential source of lethal injury to personnel and damage to Government property if inadvertently operated.

2 Safety devices in the form of safety pins, levers and switches are provided for use when the aircraft is on the ground to safeguard against this danger.

3 On entering the cockpit/cabin of an aircraft, it is the responsibility of the individual to be able to recognise the assisted escape system safety devices in that aircraft and to ensure that they are correctly applied at all times in accordance with para 4 below.

4 Instructions for the correct positioning of the assisted escape system safety devices in each aircraft type and mark are detailed in the Servicing Schedules and Aircrew Manual related to that aircraft.

EJECTION SEATS, TYPE 3H

(Hunter F Mk 6 F(GA) Mk 9 and FR Mk 10 Aircraft)

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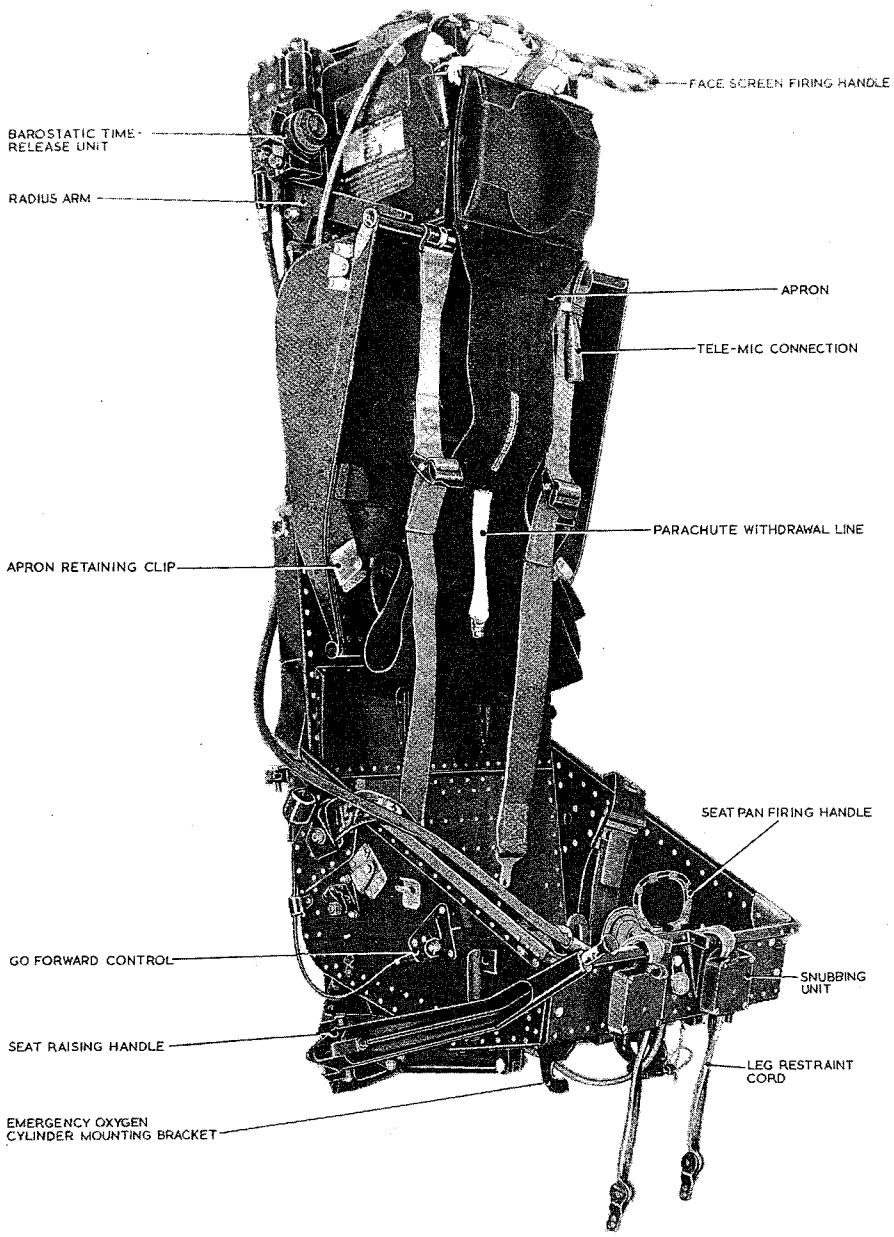

Fig 1 Details of seat (1)

MINISTRY OF DEFENCE
April, 1981

AP 109B-0117-15F
(Formerly AP 109B-0117-1 and
Superseding AP 109B-0117-5F)

EJECTION SEATS (MARTIN BAKER) TYPE 3H
(Hunter F Mk.6, F(GA) Mk.9 and FR Mk.10 aircraft)

TOPIC -5 SERVICING SCHEDULES

ADVANCE INFORMATION LEAFLET NO.1/81

Insert this page to face Page (iii).

Stiffnuts (self locking nuts) may be used on this equipment, and although supplied under a single stores reference number, may be of three different types; Aerotight, Philidas and Oddie. The Oddie type nut is not approved for use on this equipment and is not to be fitted. (AP 1464B, Vol 1, Pt 2, Sect 6, Chap 5 shows the difference between stiffnut types).

Notes ...

(1) The information contained in this leaflet will be incorporated by normal amendment action in due course.

(2) If, after receipt of this leaflet, an amendment with a prior date and conflicting information is received, the information in the leaflet is to take precedence.

Introduction

1. The Type 3H ejection seats (Ref. No. 27L/50057) are installed in Hunter F Mk. 6, GA Mk. 9 and FR Mk. 10 aircraft.

Associated equipment

2. The seat embodies the following items of associated equipment full details of which will be found in their relevant air publications as shown:—

(1) Type 3, Mk. 1 ejection gun— A.P. 109C-0103-1

(2) Type 2, Mk. 2 drogue gun— A.P. 109D-0202-1

(3) Type 1, Mk. 1 barostatic time release unit— A.P. 109E-0101-1

(4) Canopy jettison and time delayed ejection gun firing unit— A.P. 109C-0201-1

WARNING . . .

Safety precautions

(1) Safety pins with attached red labels are provided for rendering safe the face screen handle, seat pan firing handle, the canopy jettison firing unit sear and the time-delay unit trip lever. These pins MUST be removed before flight.

(2) Before entering the cockpit or before any servicing is commenced on or near the seat, the seat is to be made safe in accordance with current authorized procedures.

GENERAL DESCRIPTION AND INFORMATION

3. The seat (fig. 1 and 2) slides during ejection on four rollers attached to the inner faces of the seat main beams and which engage in a guide rail bolted to the aircraft structure. It is propelled by gases developed from the cartridge operated ejection gun located within the hollow guide rail.

4. The canopy is jettisoned and the ejection gun fired by the action of pulling down on the firing handle situated immediately above the headrest. Attached to the handle is a flexible screen which is normally stowed in a cavity behind the headrest. The screen protects the seat occupant's face from the adverse effects of the airstream and at the same time restrains his head back against the headrest preventing it jerking forward on ejection. Spring-loaded plungers prevent the screen from being drawn out of its stowage by the airstream should the canopy be opened during flight.

5. Attached to the face screen is a bifurcated cable one leg of which is connected to the canopy jettison unit and the other to the time-delayed ejection gun firing mechanism. When the screen has been extracted sufficiently to cover and protect the user's face, the cable pulls taut and withdraws the sear from the canopy jettison firing unit and the cartridge is detonated; at the same time the other leg of the cable operates the time-delay trip lever and, after approximately 1 sec., the articulated link withdraws the sear of the ejection gun firing unit and the gun is fired. The face screen and firing cable are so proportioned that the firing mechanism will be operated whether the seat occupant is wearing a protective helmet or not.

Seat pan adjustment

6. The seat pan accommodates a personal survival pack containing a liferaft and other items of survival equipment and can be adjusted for height by means of a handle on the starboard side of the seat structure. The pan moves relative to the headrest and can therefore accommodate different body lengths and yet still ensure that the occupant's head will be correctly located on the headrest whatever the position of the seat pan.

Seat pan firing handle

7. A seat pan firing handle is fitted to the front of the seat pan as an alternative means of initiating ejection. The firing cable is routed in a conduit to the top of the drogue container where it is attached, by means of the eye-end, to the RED fork of the face screen firing cable connected to the time-delay unit trip lever pawl.

Negative-G fittings

8. To provide restraint in adverse 'G' conditions, a negative-G strap is fitted to the seat pan. The lower end of the strap is attached to the front of the seat pan and the upper end terminates in a loop which locates over the lug of the port lap strap of the seat safety harness.

Leg restraining device

9. A leg restraining device is incorporated to ensure that the seat occupant's legs are drawn back and restrained close to the seat pan. This provides leg clearance during ejection and also prevents injury from the legs being blown apart by the airstream after ejection.

Parachute assembly

10. A back-type parachute is supported in a container hinged at its lower edge to the seat pan and attached at its upper edge to the seat frame by two telescopic radius arms. The arms may be freed by the action of a lever (*go-forward control*) fitted to the starboard side of the seat pan, permitting the occupant to lean forward as necessary. The arms may be locked in intermediate positions.

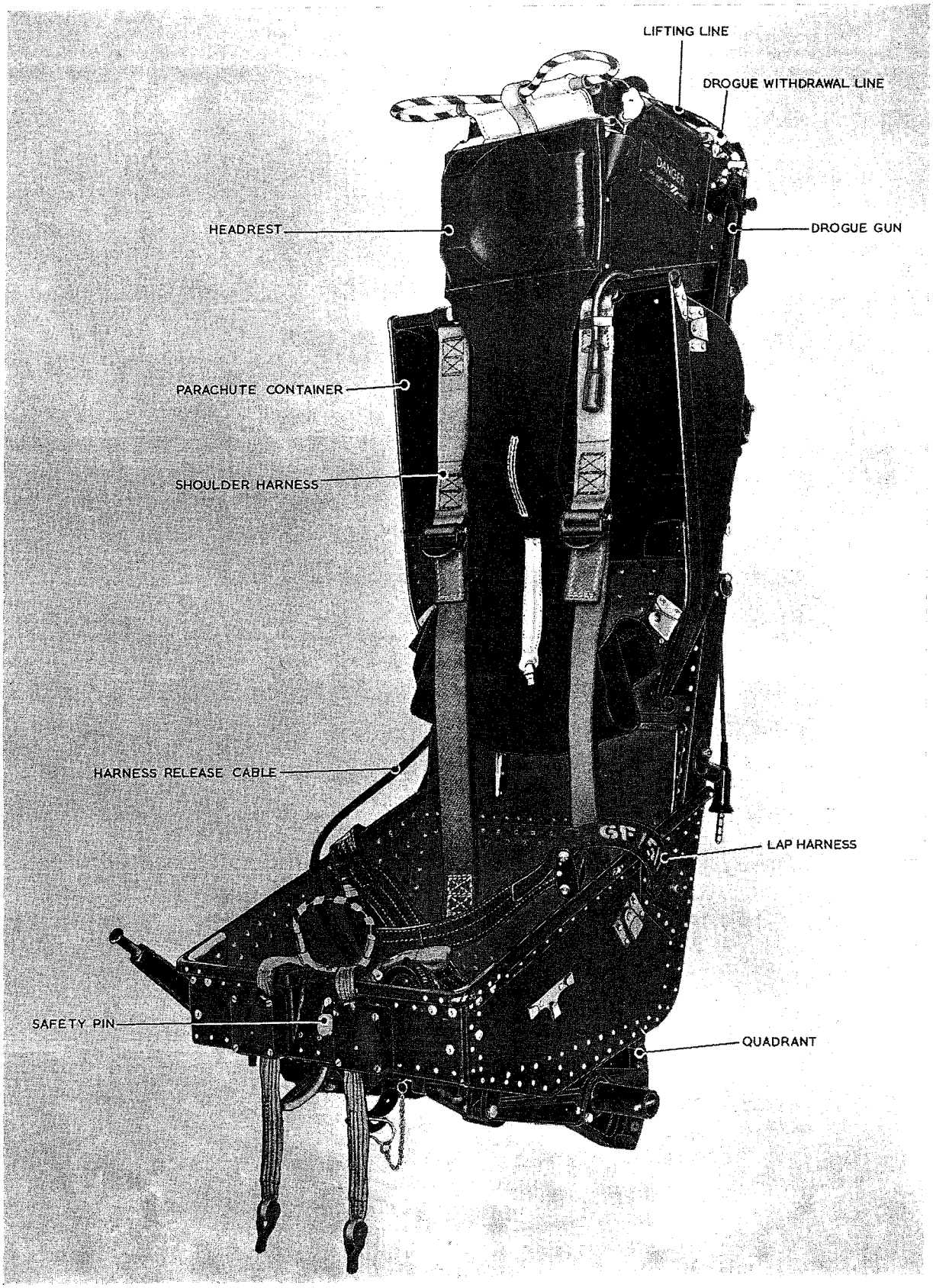

Fig. 2. Details of seat (2)

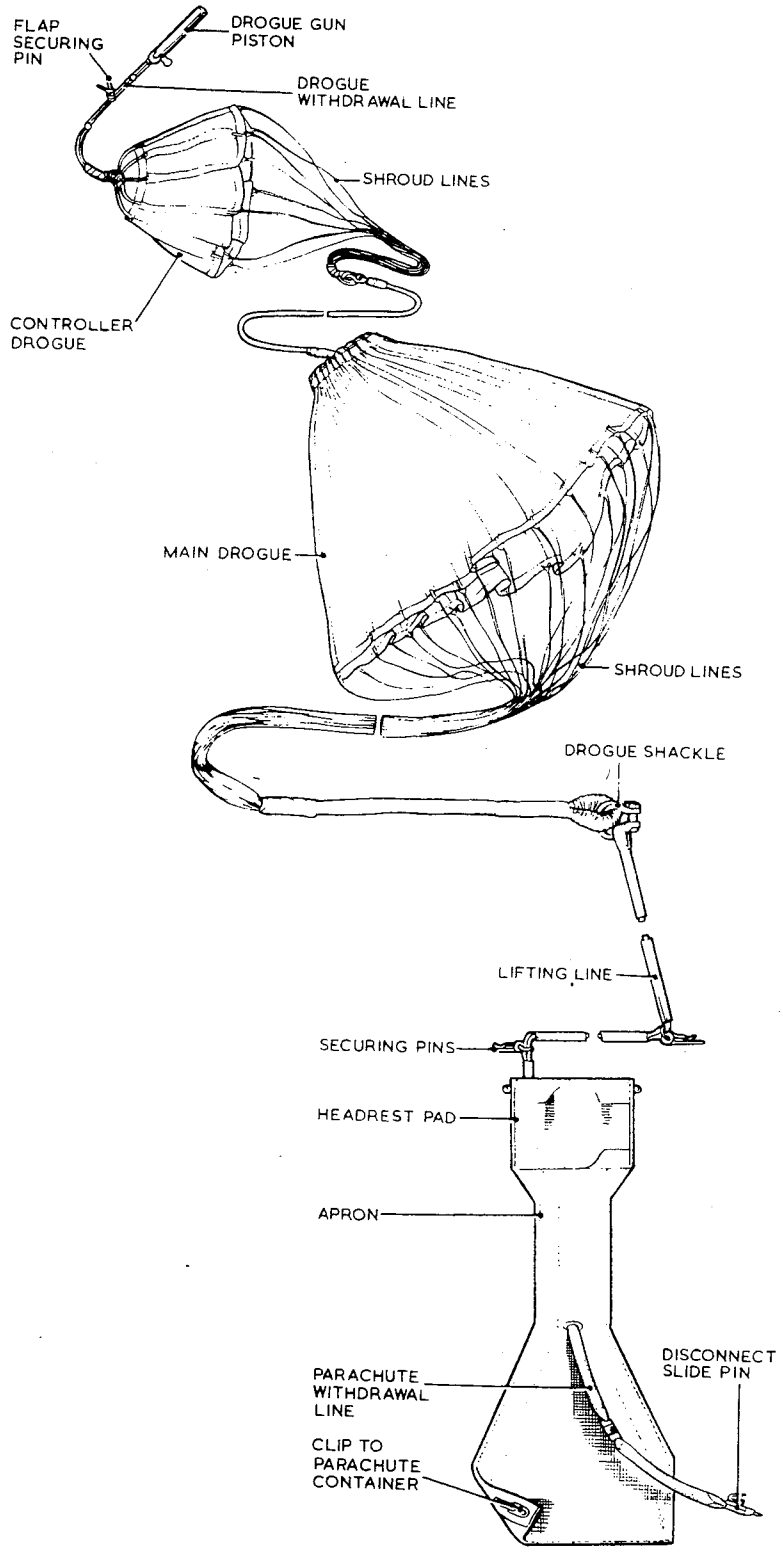

Fig. 3. Duplex drogue system

Safety harness

11. A Type 13, Mk. 2 safety harness is provided with the seat; the two shoulder straps are attached to the parachute container at the radius arms and the two thigh straps are attached at either side of the seat pan.

Duplex drogue system

12. Incorporated in the seat is a Duplex drogue system (fig. 3) consisting of two drogues, a controller drogue and a main drogue with diameters, in the developed state, of 22 in. and 5 ft. respectively. The controller drogue is connected to the main drogue by nylon tape and the main drogue is connected to the lifting lines by nylon shroud lines and the drogue shackle. The drogue shackle is in turn connected to the scissor shackle at the top of the seat frame to retain the drogue assembly to the seat structure.

13. The drogue withdrawal line is secured to the apex of the controller drogue canopy and its free end is connected to the drogue gun piston. Part-way along the line is a securing pin which retains the four flaps of the drogue container in the closed position.

14. The headrest is attached to the upper end of an apron and secured in position on the seat by two pins attached to the apron lifting line. At the lower end of the apron are two clips which retain the assembly to the parachute container. The apron is designed to pitch the seat occupant forward and then to open his parachute by means of an attached withdrawal line. After the occupant has left the seat and the apron has straightened, the weight of the seat frees the clips and the seat drops clear.

15. The lifting lines and the parachute withdrawal line are sewn to the rear of the apron and the parachute withdrawal line emerges from a slot approximately in the centre. The lifting lines are attached to the drogue nylon rope by a shackle thus forming a continuous line from the drogue gun connection to the parachute withdrawal line.

16. Secured at the end of the parachute withdrawal line is a quick-release connection which is screwed into a female counterpart on the parachute assembly. This connection can be by-passed, when necessary, by means of a slide disconnect pin operated by the first D-ring on the parachute harness, thus isolating the seat occupant from the withdrawal line and allowing him to make a manually controlled descent should the automatic facilities fail.

Drogue gun

17. The drogue gun is fitted to the port side of the seat structure and is operated by means of a telescopic static rod, one end of which is connected to the sear of the firing mechanism and the other end attached to a bracket secured to the guide rail. When the seat commences to rise, the static rod withdraws the sear and, after approximately 0·5 sec. delay, the gun is fired and the piston ejected which, in turn, withdraws the flap securing pin and then the controller drogue from the container. The controller drogue in turn extracts the main drogue and the two combine to stabilize and retard the seat until safe separation from the seat by the occupant is possible.

18. A neoprene friction bush is fitted to the drogue gun static rod to prevent a possible "*hair trigger*" condition and subsequent risk of the gun

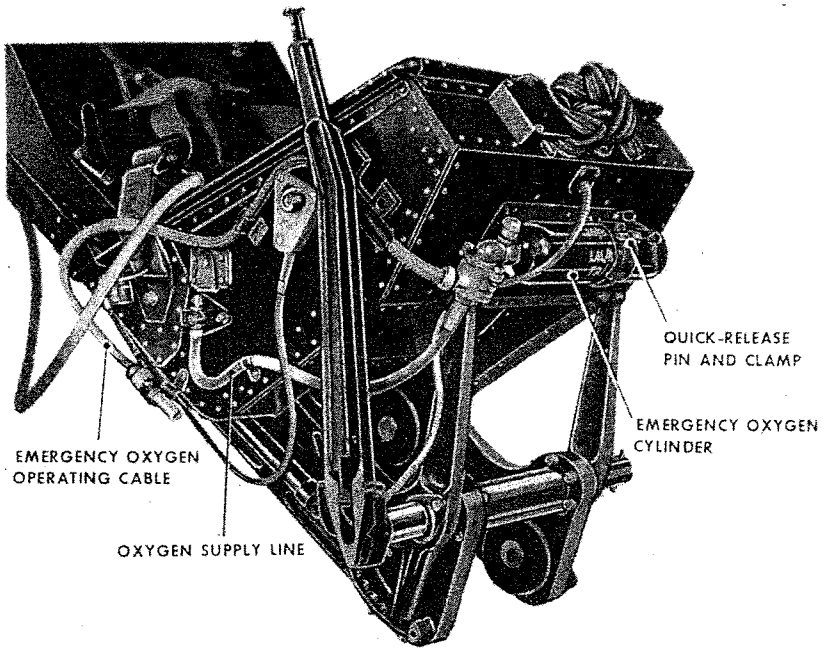

Fig. 4. Emergency oxygen system

◄(Routeing of operating cable changed)►

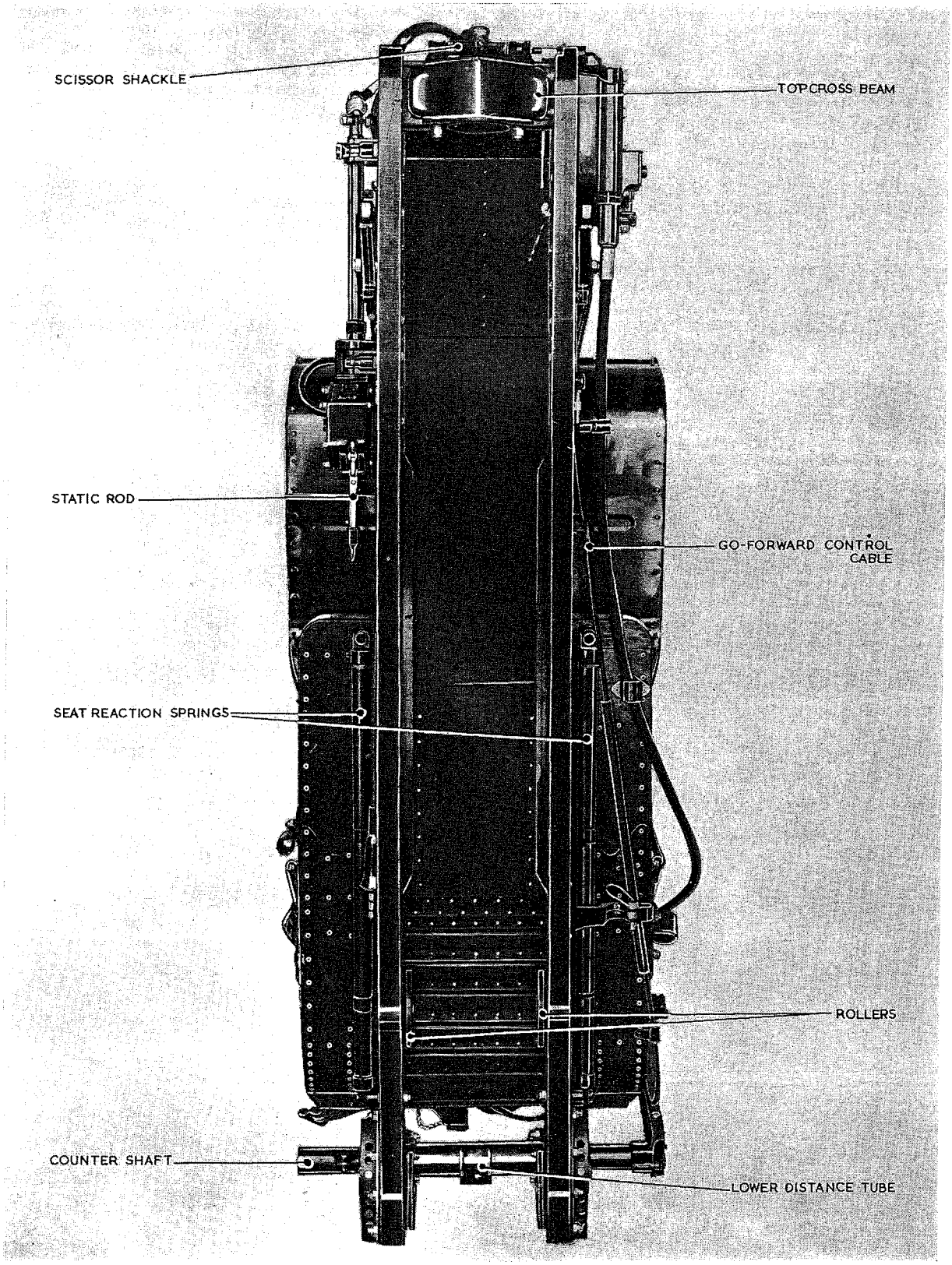

Fig. 5. Rear view of seat

being inadvertently operated, through the sear being partially withdrawn by the downward movement of the outer tube, when the static rod is disconnected from its bracket.

Barostatic time-release unit

19. Attached to the starboard side of the seat structure is a barostatic time-release unit which is provided to effect the automatic release of the drogues from the scissor shackle and the freeing of the safety harness at altitudes of approximately 10,000 ft. and below. Above this height, the unit is prevented from functioning by means of a barostat. For ejections at high speed, a G-controller switch fitted to the unit will prevent the mechanism from operating until the forward speed of the seat, and occupant, has been sufficiently reduced to ensure safe parachute deployment. The time-release unit is operated by a static rod similar in construction to that used with the drogue gun.

Emergency oxygen system

20. An emergency oxygen set is mounted beneath the seat pan (fig. 4) and the main oxygen supply, anti-G suit supply and Tel/Mic lead are connected to the aircraft services by quick-release connections. When the seat is ejected the main oxygen, anti-G suit and Tel/Mic services disengage automatically and further quick-release connections are provided for disconnecting these services when the occupant leaves the aircraft at completion of flight. A further quick-release connection is provided to operate the emergency oxygen bottle and then to automatically disengage.

Safety precautions

21. The safety precautions concerning ejection seats are referred to in the Warnings preceding para. 3 and are detailed in A.P. 109B–0117–5F.

Ejection gun

22. The ejection gun provides the power for the ejection of the seat and occupant from the aircraft and has a stroke of 72 in. with an ejection velocity of 80 feet per second. The propellant is contained in five cartridges, i.e., one primary and four secondary cartridges.

23. The assembly consists of three tubes, the outer cylinder tube which is attached at its lower end to the bottom mounting block fitted in the

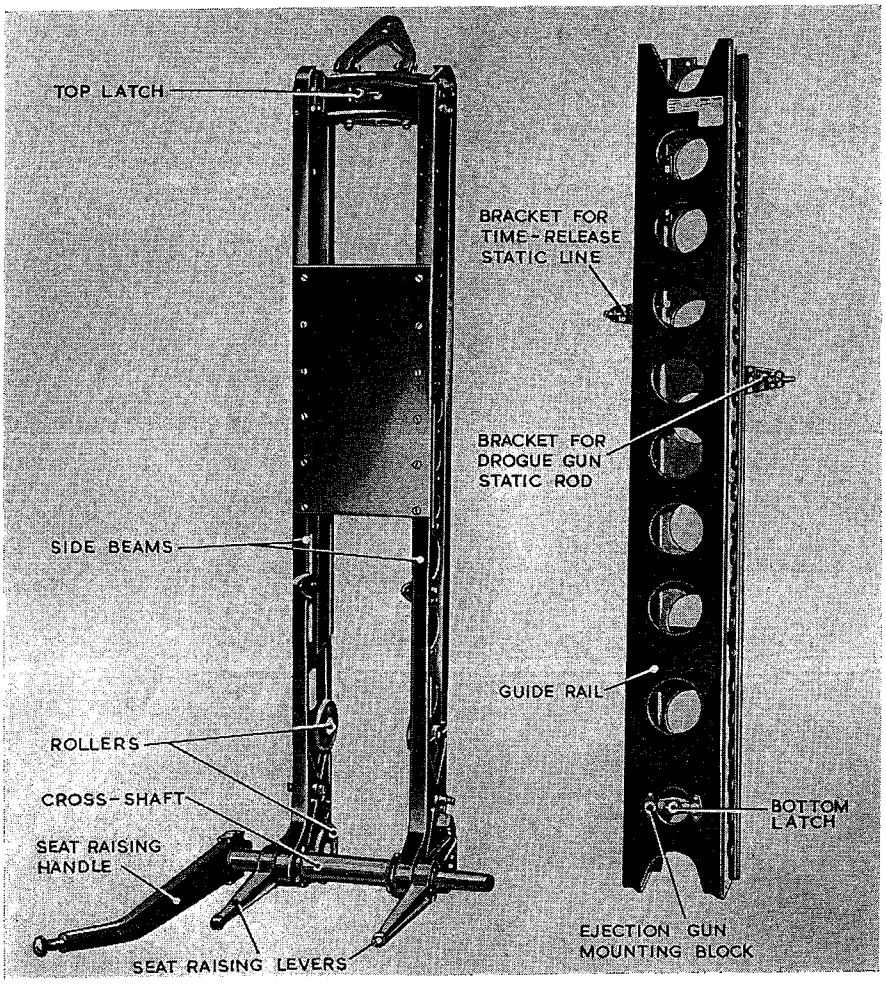

Fig. 6. Seat structure and guide rail

guide rail, the inner piston tube that is attached at its upper end to the top cross-beam of the seat frame and the intermediate tube which is situated between the two. The inner piston tube contains at its upper end a breech into which is fitted the primary cartridge and a firing unit. The outer cylinder tube contains the housings for the secondary cartridges.

Seat structure

24. The seat structure (fig. 5 and 6) is made almost entirely of light alloy. The main frame is built up from a pair of side beams connected at the top by a cross-beam which receives the thrust of the ejection gun piston tube and, at the bottom, by a cross-shaft through which passes a counter-shaft carrying the seat raising levers and handle. Each beam carries at its lower end, rollers which engage with the guide rail.

25. The seat is secured to the ejection gun piston by a spring-loaded latch and the ejection gun is itself secured lo the bottom mounting block within the guide rail by a second spring-loaded latch.

Important . . .

It is most important to ensure that both spring-loaded latches are fully home when the seat is installed otherwise, during certain manoeuvres, the seat and occupant would move up the guide rail with possibly disastrous results.

Guide rail

26. The guide rail (fig. 6) consists of a single extrusion bolted to the aircraft structure and it is not normally necessary for it to be removed. Built in it towards its lower end is a block which receives the thrust of the ejection gun piston and incorporates the bottom spring-loaded latch which retains the ejection gun. The slots in the upper end of the rail receive the seat cross-beam and restrains the forward impulse of the seat in the event of a crash landing. Bolted to the rear of the guide rail are two brackets to which the static rods for the drogue gun and barostatic time-release unit are attached by quick-release pins. The upper rear face of the rail is shaped to accommodate the canopy jettison and time-delayed ejection gun firing unit.

Seat pan

27. The seat pan is supported on two raising levers and restrained at its upper corners by two spring loaded plungers; the plungers sliding in guides machined in the side beams. When adjusting the height of the seat pan, the weight of the occupant is counter-balanced by two seat reaction springs (fig. 7 and 8).

Seat raising mechanism

28. The seat raising mechanism (fig. 7) is operated by a handle on the starboard side of the seat. The trigger control by means of the sear lever and connecting link, displaces axially the sear bar which, in turn, withdraws the pair of spring-loaded plungers from engagement with the quadrants and allows the seat raising levers attached to the countershaft to be rotated by the seat raising handle. On releasing the trigger control, the two plungers engage adjacent holes in the quadrants to lock the seat pan in the new position. Five positions are provided with a total adjustment of 4 in.

Leg restraining system

29. The leg restraining system is fitted to the ejection seat to draw back and restrain the occupant's legs close to the seat pan during ejection so preventing any injury to the legs due to flailing in the airstream. The system consists of leg restraining cords, snubbing units and leg restraint garters, the garters being part of the flying clothing.

30. The leg restraining cords pass through the snubbing units, each of which is similar but handed, fitted to the front face of the seat pan. The snubbing unit casing houses a snub lever, a spring tube and a release button. The design of the unit permits the leg cord to pass freely down through the unit but, locks the cord against any upward movement. The lower ends of the cords are anchored to the aircraft floor by means of rollers and brackets, the rollers being held in the brackets by light alloy rivets which are stressed to shear at approximately 400 lb.; the end loops of the cords are passed through the seat occupant's calf strap D-rings and secured to the shoulder harness lugs. As the seat commences to rise during ejection, the leg cords become taut and pull the occupant's legs rearwards and together. Since the cords cannot pass upwards through the snubbing units, his legs are held tight against the front of the seat pan and remain restrained in this manner until the safety harness is released. When this occurs the cords are pulled through the D-rings so freeing the legs. The snubbing unit release button permits the seat occupant to adjust the cords to give comfortable leg movement during flight.

Parachute container

31. The parachute container (fig. 9) is hinged at its lower edge to brackets bolted to the seat beams. The hinge is formed by spring-loaded plungers which may be freed by pulling the withdrawal knobs outwards. The upper edge of the container is secured to a pair of telescopic radius arms, the bodies of each being pivoted to the seat beam and the sliding member to the container. This latter point forms the attachment point for the shackles of the safety harness shoulder straps. Each sliding member has four notches which may engage with a spring-loaded plunger. Three of the notches are chamfered on their forward faces so that with the plunger in either one of these notches the seat occupant, by leaning back, can return the container to its next position without operating the go-forward control. The spring-loaded plungers

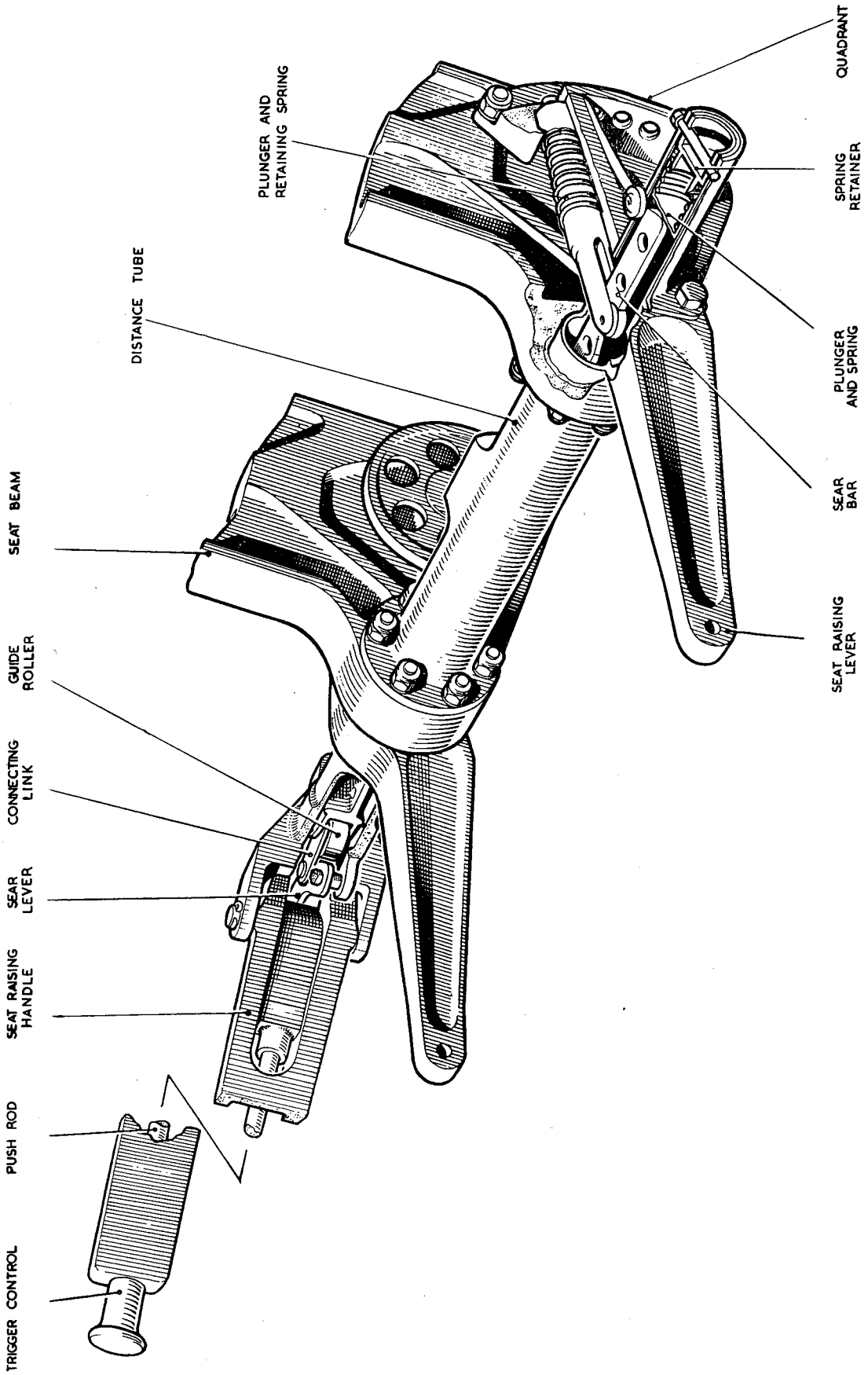

Fig. 7. Seat raising mechanism

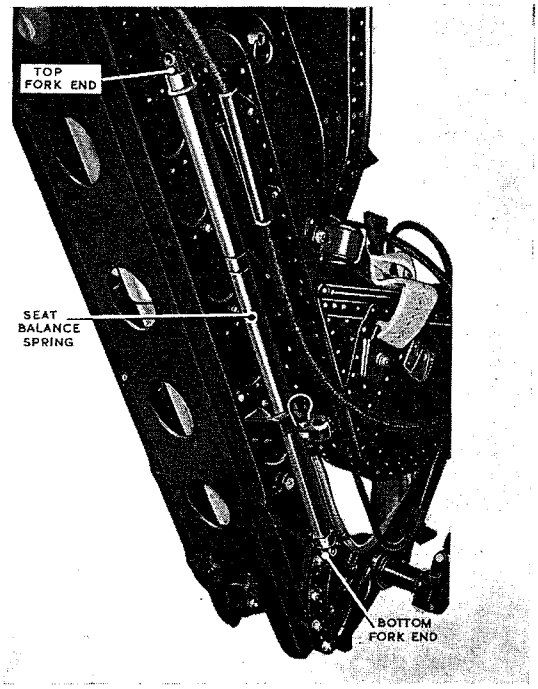

Fig. 8. Seat reaction springs

are controlled by the levers mounted on the cross-shaft, the starboard lever being actuated by the flexible cable leading from the go-forward control on the starboard side of the seat pan.

32. In the position shown in fig. 9, the mechanism is locked right back. The three notches provide positions of restraint against forward movement and the unchamfered one against backward movement. With all notches forward of the plunger, the sliding member moves freely but is limited in the forward direction by the retaining screw which butts against the edge of the groove in the sliding member. Clips for retaining the apron and parachute pack are embodied on the container.

Backrest flap

33. To prevent seat equipment from becoming lodged behind the seat pan with subsequent jamming of the pan and possible malfunction of the harness release after ejection, a backrest flap is hinged to the lower edge of the parachute container. Two fitted lugs on the flap are secured by the spring-loaded plungers that form the hinge for the lower edge of the parachute container.

Drogue container assembly

34. The drogue container is a box-like structure mounted at the top of the seat frame. The headrest pad is attached to the front of the container by two pins secured to the lifting lines. Above the headrest is the main firing handle which is attached to the front edge of the face screen and secured in position by two spring-loaded plungers. Sewn to the rear of the face screen are two nylon tapes, the free ends of which are secured by the two pins which also retain the headrest pad in position. These pins are withdrawn by the lifting lines after the scissor shackle has opened. A firing cable is connected to the centre of the face screen by a sewn nylon loop and passed through a conduit where it divides in two. One leg of the bifurcated cable is connected to the canopy jettison gun sear and the other leg to the time-delay trip lever. The drogues and drogue lines are stowed in a separate compartment at the rear of the face screen stowage. The drogue compartment contains a nylon sleeve for the protection of the main drogue and its shroud lines and, the top of the container is closed by four retaining flaps which are closed in a predetermined order and locked by the pin fitted part-way along the drogue withdrawal line.

SERVICING

Servicing the seat structure

To remove the seat pan

35. (1) Withdraw the seat pan firing handle, remove the nut and washer and separate the handle from the cable.

(2) Disconnect the clamp and cable from the front inside edge of the seat pan.

(3) Withdraw the plungers at the lower side of the parachute container, remove the backrest flap and hinge the parachute container clear.

(4) Remove the go-forward control cable from the bracket on the starboard side beam by removing the 2 B.A. screws and clamp.

(5) Disconnect the cable from the radius arm operating lever.

(6) Disconnect the oxygen and anti-G suit supply pipes from the clips on the seat pan.

(7) Disconnect the starboard harness lap strap from the seat pan.

(8) Disconnect the go-forward control cable from the seat pan.

(9) Sitting in the seat to counterbalance the reaction spring load, adjust the seat pan to its highest position.

(10) Pressing the seat pan back against the side beams to relieve the plungers of the seat reaction spring load, slide the two spring-loaded plungers outwards. Ease the pan forward until the reaction springs are relaxed and remove the springs.

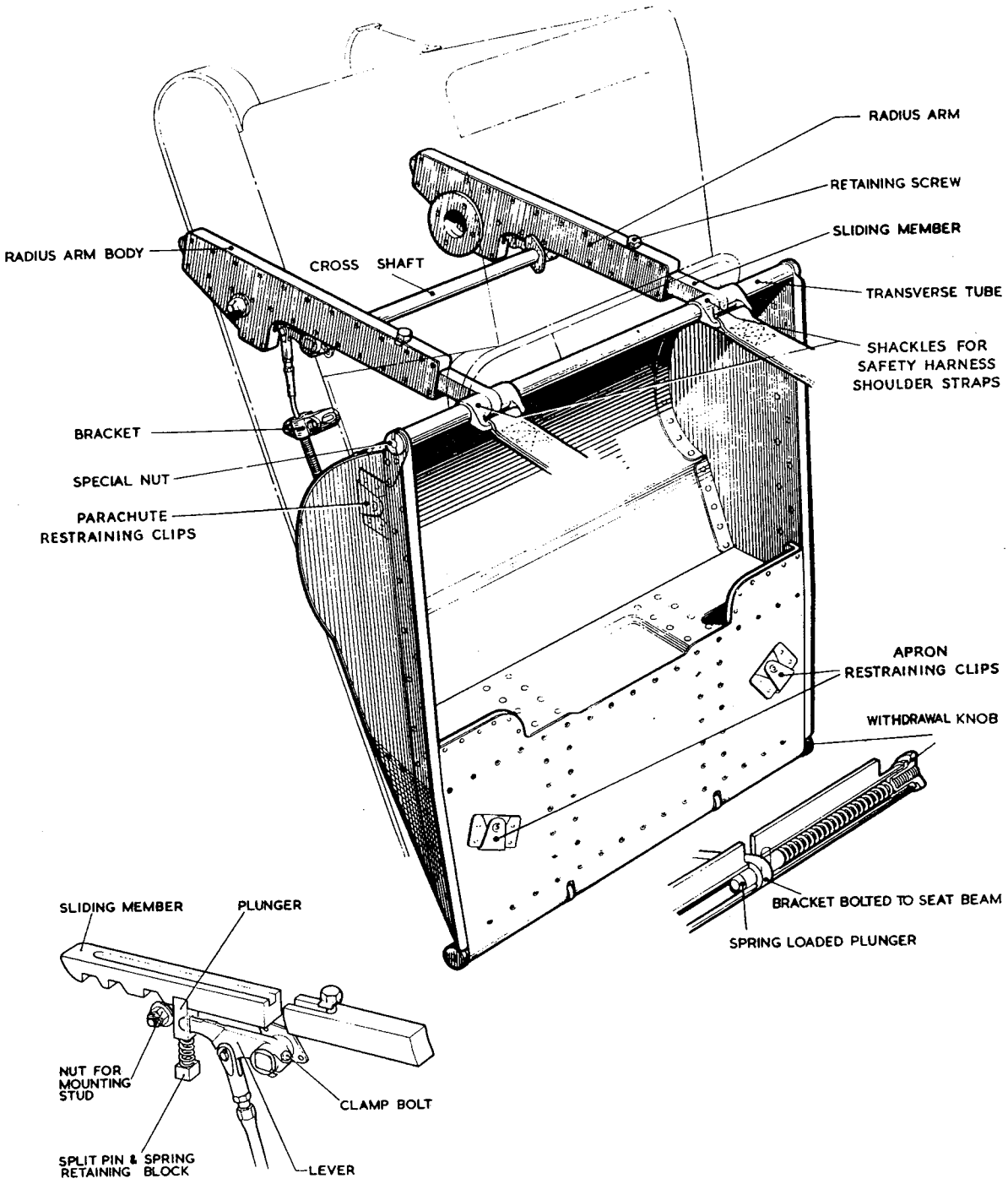

Fig. 9. Parachute container

(11) Remove the bolts from the ends of the seat raising levers and remove the seat pan from the main frame.

To remove and dismantle the radius arms

36. (1) Remove the split pin and special nut from the starboard upper corner of the parachute container; withdraw the transverse tube from the container.

(2) Remove the clamping bolt and nut and withdraw the radius arm body and the lever simultaneously.

(3) Remove the split pin and spring retaining block; withdraw the plunger.

(4) Remove the retaining screw and withdraw the sliding member from the radius arm body.

To assemble the radius arms

37. (1) Insert the radius arm into the body and replace the retaining screw.

(2) Insert the plunger and spring retaining

block. Secure with a new $\frac{1}{16}$ in. non-corrodible split pin.

(3) Assemble the radius arm body and lever. Insert the 2 B.A. clamping bolt and secure with the stiffnut.

(4) Assemble the radius arms to the parachute container. Refit the transverse tube and secure with the special nut and new $\frac{1}{16}$ in. non-corrodible split pin.

To dismantle the seat raising mechanism

38. (1) Unscrew the 2 B.A. stiffnut and remove the taper pin from the port end of the countershaft. Remove the roller from the shaft. DO NOT remove the $\frac{1}{4}$ in. bolts from the face of the lower distance tube.

(2) Remove the four locknuts on each quadrant and, depressing the trigger control on the seat raising handle, withdraw the quadrants. The bolts remain in position.

(3) Remove the seat raising handle by withdrawing the $\frac{3}{32}$ in. split pin and tapping out the handle hinge pin.

(4) Simultaneously pushing up the two plungers, pull out the sear bar from the starboard side.

(5) Remove both plungers and springs and withdraw the countershaft to starboard, out of the port seat raising lever and bearings.

(6) Remove the spring retainer, spring and plunger from the end of the countershaft and, if necessary, remove the starboard seat raising lever.

To assemble the seat raising mechanism

39. (1) Pass the shaft with the starboard seat raising lever attached through the bearings in the side beams. Pass the port seat raising lever with the countershaft end fitting attached on to the shaft. Assemble the roller and pin.

(2) Insert the locking plungers and springs into the seat raising levers and, depressing each plunger in turn, insert the sear bar into the countershaft passing it through the slots in the locking plungers.

(3) Replace the plunger, spring and retainer into the end of the countershaft. Insert the taper pin and secure with the 2 B.A. stiffnut.

(4) Replace the quadrants and seat raising handle.

To refit the seat pan

40. (1) Ensure that the seat raising levers are in the top position. Place the seat pan on the levers, securing in position with the $\frac{1}{4}$ in. bolts.

(2) Insert the seat reaction springs and press the seat pan back against the beams to compress the springs. Engage the spring-loaded plungers with their guides in the side beams. Ensure that both plungers have correctly engaged.

(3) Connect the starboard harness lap strap and go-forward control cable to the seat pan.

(4) Refit the parachute container and backrest flap and connect to the lower brackets by operating the spring-loaded plungers.

(5) Fit the go-forward control cable to the side beam and to the operating lever; ensure that the cable is correctly adjusted.

(6) Refit the seat pan firing cable and clamp to the seat using the 2 B.A. special countersunk screws and stiffnuts. Peen the screws over to lock. Refit the firing handle to the cable.

(7) Re-connect the oxygen and anti-G suit supply lines to the seat pan.

Testing the lifting line

41. (1) Disconnect the drogue withdrawal line from the drogue gun piston and the drogue shackle from the scissor shackle.

(2) Connect a spring balance to the drogue

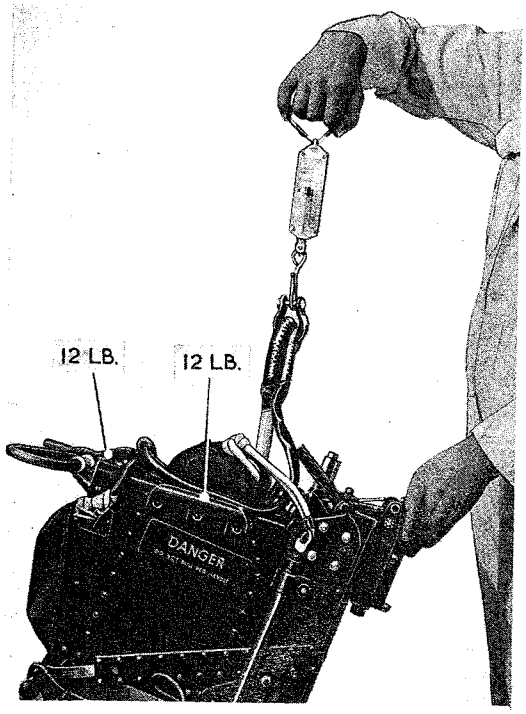

Fig. 10. Testing the lifting lines

shackle and pull upwards (fig. 10). The lifting line should not pull out of the first clip until the scale registers 12 lb. ± 2 lb. Adjustments may be made by opening or closing the clips as appropriate.

Note . . .

Some earlier models of the Type 3H ejection seat may have an additional clip at the rear of the drogue container. The lifting line should not pull out of this clip until the scale registers 16 lb. ± 2 lb.

Fitting the lifting line

42. Commencing at the front of the container, press the lifting line down into the clips, using thumb pressure, so that the line is disposed as shown in fig. 11.

Packing the face screen

43. (1) Ensure that the nylon tapes are securely attached to the eye-ends on the sides of the drogue container. Stretch the face screen to its full extent.

(2) Push the fullness up into convex form (upper diagram, fig. 12).

(3) Form a longitudinal crease just right of the centre line.

(4) Fold the centre bulk to lie on the right edge of the screen with the edges roughly parallel and the cable anchorage proud (lower hand diagram, fig. 12). The face screen is now in three thicknesses on the right and one on the left.

(5) Retaining the fold, roll the screen over the lower edge of the slot in the container and press it down into its compartment.

WARNING . . .

Whenever a face screen is packed (or the firing cable is connected to the firing unit) ensure that the exposed firing cable is kept as short as possible between the firing units and the drogue container, i.e., leave only sufficient cable to reach the firing units. If not, there is a serious danger of snagging of the cable when the firing handle is pulled, possibly resulting in non-firing of the ejection gun.

(6) Insert the firing handle into its sockets and press home into engagement with the locking plungers; ensure that the tongue of the strap is placed fully home in the restraining clip.

Renewing the drogue protective sleeve

44. New drogue protective sleeves as issued by the manufacturer are not provided with attachment holes. These holes must be introduced as follows:—

(1) Remove the unserviceable sleeve from the container, identifying each securing strip to ensure correct re-assembly. Discard the old sleeve.

(2) Place each of the retained securing strips over the corresponding attachment strip of the new sleeve and use as templates to mark out the positions of the attachment holes in the sleeve attachment strips. Remove the securing strips.

(3) Bore the holes, heat sealing the fabric, using an iron soldering, Instrument 220/240 volts, 25w (Ref. No. 1B/9005691) fitted with a $\frac{3}{16}$ in. copper bit.

(4) Replace the securing strips in their respective positions on the sleeve attachment strips, clamping the sleeve to the strips using "Avdell" spring pins (*or other suitable clamps*). Assemble the sleeve to the drogue container with the flap securing pin pocket facing the front of the headrest and ensuring that the sleeve attachment strips are sufficiently positioned between the container skin and securing strips.

Packing the drogues

To pack the main drogue

45. (1) Open the four flaps and the protective sleeve of the drogue container. Roll the sleeve down so that it does not obstruct packing operations.

(2) Extend the main drogue shroud lines at arms length and ensure that they are not entangled (Action 1, fig. 13).

◀ (3) Pair off the shroud lines and fold the drogue into twelve folds (Action 2, 3, and 4, fig. 13). ▶

(4) Bring the drogue to the container but before stowing, insert the sleeve protected shroud lines into the rear right-hand corner (*the corner furthest from the drogue gun*) and fold the remaining lines down into the container. Stow the drogue (*periphery first*) packing it concertina-fashion well down into the port compartment of the container (fig. 14).

(5) Ensuring that the nylon tape is not twisted, lay it in the container from left to right on top of the main drogue, working from front to rear.

(6) Unroll the protective sleeve and fold it over to enclose the main drogue and nylon tape in such a manner that the tape emerges from the starboard corner adjacent to the sleeve protected shroud lines.

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Demand No. 176822, 226, 8/75, 1909 (12349-7)

To pack the controller drogue

46. (1) Extend the shroud lines at arms length and ensure that they are not entangled.

(2) Pair off the shroud lines and fold the drogue into five folds. Loop the shroud lines on top of the protective sleeve (covering the complete area of the sleeve) and stow the drogue (periphery first) finishing with its apex towards the drogue gun as shown in fig 14. The controller drogue withdrawal line must emerge from the corner of the compartment nearest to the drogue gun and should extend sufficiently to expose approximately 4in of line beyond the flap securing pin.

(3) Close the port, starboard and rear flaps (in that order) ensuring that the wire loop ► passes through each flap eyelet in turn. Close the front flap and pass the legs of the ◄ securing pin through the wire loop and into the pocket on the front flap.

Note . . .

Safe ties are to be made using a reef knot with the loose ends tightly secured by a half hitch around the main thread against each side of the reef knot as shown in the inset on fig 11.

(4) Close the scissor shackle down on top of the flaps. Lock the shackle to the securing pin by threading a length of No. 8 cord underneath the securing pin and through the drogue rope loop and the scissor shackle, and tie off (fig 11).

WARNING . . .

IT IS MOST IMPORTANT TO ENSURE THAT THE No. 8 CORD SECURING TIE IS THREADED UNDER AND NOT THROUGH THE PIN, SO THAT WHEN THE PIN IS WITHDRAWN THE SCISSOR SHACKLE IS FREE TO LIFT UP.

(5) Safe-tie the flap securing pin to the fabric loop on the front flap and tie off (fig 11).

(6) Route the drogue withdrawal line OVER all other lines and connect to the drogue gun piston.

WARNING . . .

IT IS VITAL THAT THE DROGUE WITHDRAWAL LINE PASSES OVER ALL OTHER LINES SO THAT THE DROGUES CAN BE WITHDRAWN WITHOUT DANGER OF ENTANGLEMENT.

Arrangement of safety pins

47. Fig 15 shows the arrangement of safety pins when servicing is to be carried out.

Renewing the drogue withdrawal line

48. To remove the drogue withdrawal line:-

(1) Loosen the tie at the apex of the controller drogue shroud lines and remove the old withdrawal line.

(2) Remove and retain the flap retaining pin and shackle.

49. To fit the drogue withdrawal line (Part No. MBEU/23008):-

(1) Pass the long loop of the new withdrawal line through the centre of the controller drogue shroud lines, pass the long loop through the short one and draw tight (Action 2 & 3, fig 16).

(2) Pass the long loop of the line through the eye of the flap securing pin and form a knot with its centre 10in from the end of the long loop. Position the plastic sleeve bearing the date of manufacture close to the knot. (Action 4, fig 16).

(3) Pass the long loop through the eye of the retained shackle and back over the open end of the shackle; pull tight. (Action 5, fig 16).

Renewing connecting strop between 22in and 5ft drogues

50. (1) Remove the old connecting strop from the drogues.

(2) Pass 15in of the new nylon connecting strop (Spec MBFD 39) through the shroud lines of the 5ft drogue, tie a double half hitch knot, pull tight. (Action 1, fig 17).

(3) Take 26in of 1in black nylon tape (Spec MBFD 44) and bind the loose end of the knot (approx 4.1/2in) finish by turning end of black tape under 1/2in and stitch down using nylon thread (Spec LTCN2/210D/4C Bonded Black). Secure by stitching black tape to connecting strop at end nearest knot. (Action 2, fig 17).

(4) Take 15in of the free end of the connecting strop and attach it to the loop of the 22in drogue shroud lines and secure with a reef knot and a double half hitch knot. Pull tight. (Action 3, fig 17).

(5) Using a 26in length of 1in black nylon tape bind the loose end of the knot (approx 4.1/2in). Finish by turning end of black tape under 1/2in and stitch down using nylon thread. Secure by stitching black tape to connecting strop at end nearest knot. (Action 2, fig 17).

Note . . .

The finished connecting strop must be approx 10ft in length from the loop of the controlier drogue shroud lines to the attachment point in the apex of the main drogue.

▶ Fitting the drogue shackle

51. Pass the shackle through the end loop of the lifting line and the eye of the main drogue. Pass a new bolt through the shackle so that the head is nearest the lifting line. Tighten the nut and bolt and secure by centre punching in three places. When securing the drogue shackle in the scissor shackle ensure that the shackle nut is uppermost when the scissor shackle is rotated forward. ◀

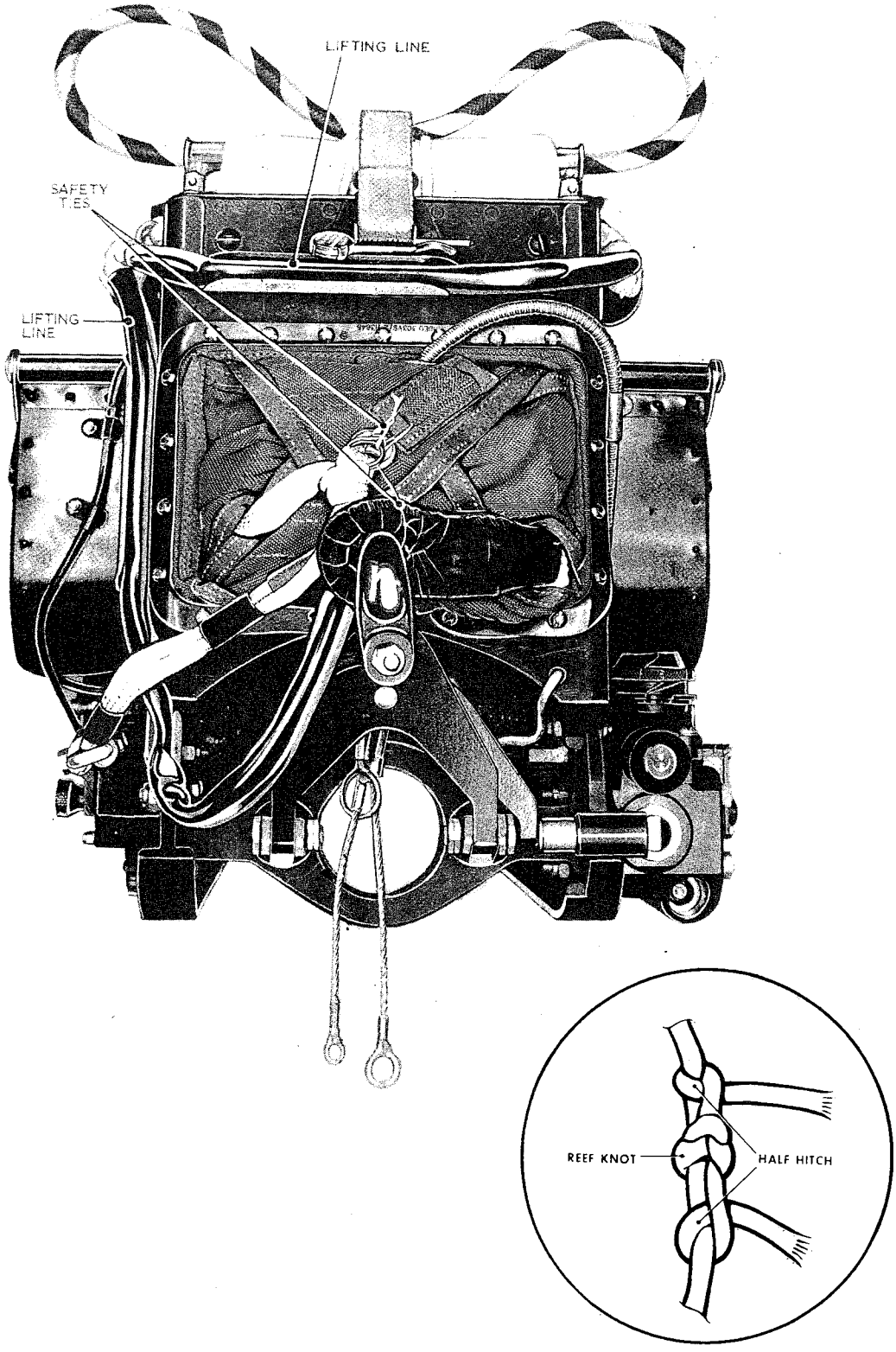

Fig 11 Fitting the lifting lines and safety ties

(Inset added)

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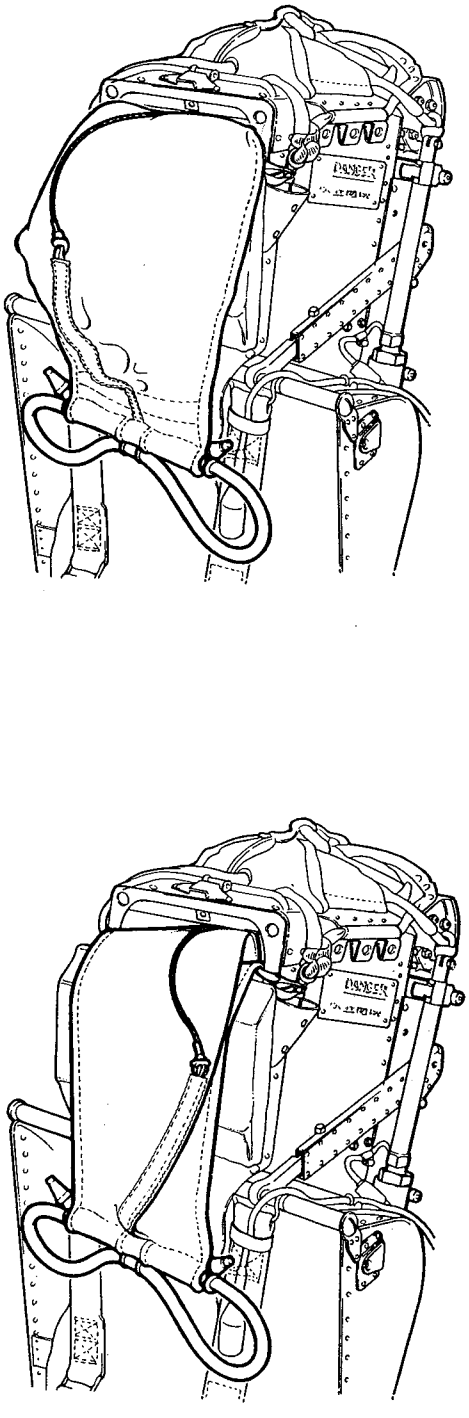

Fig. 12. Folding the face screen

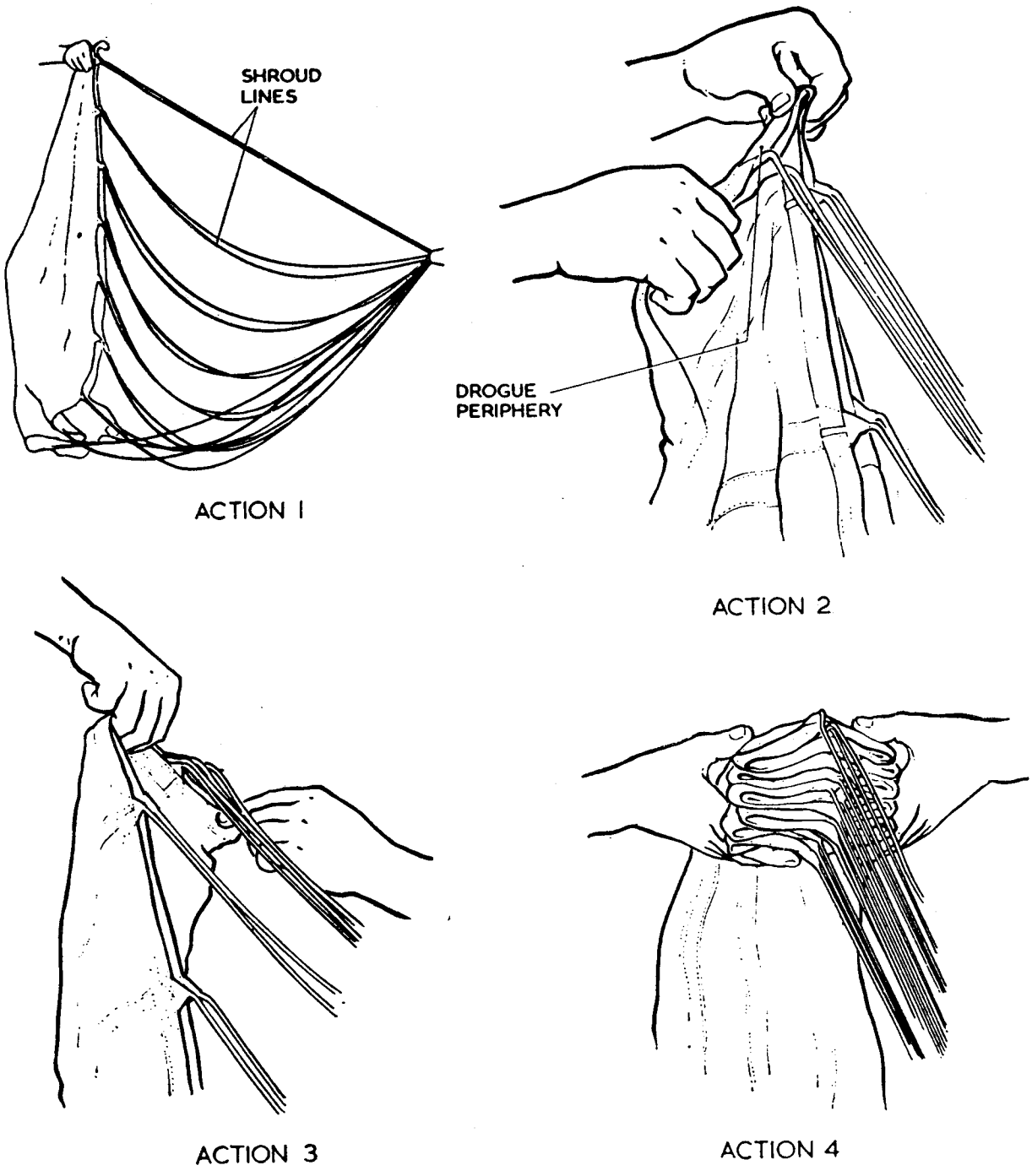

Fig. 13. Folding the drogues

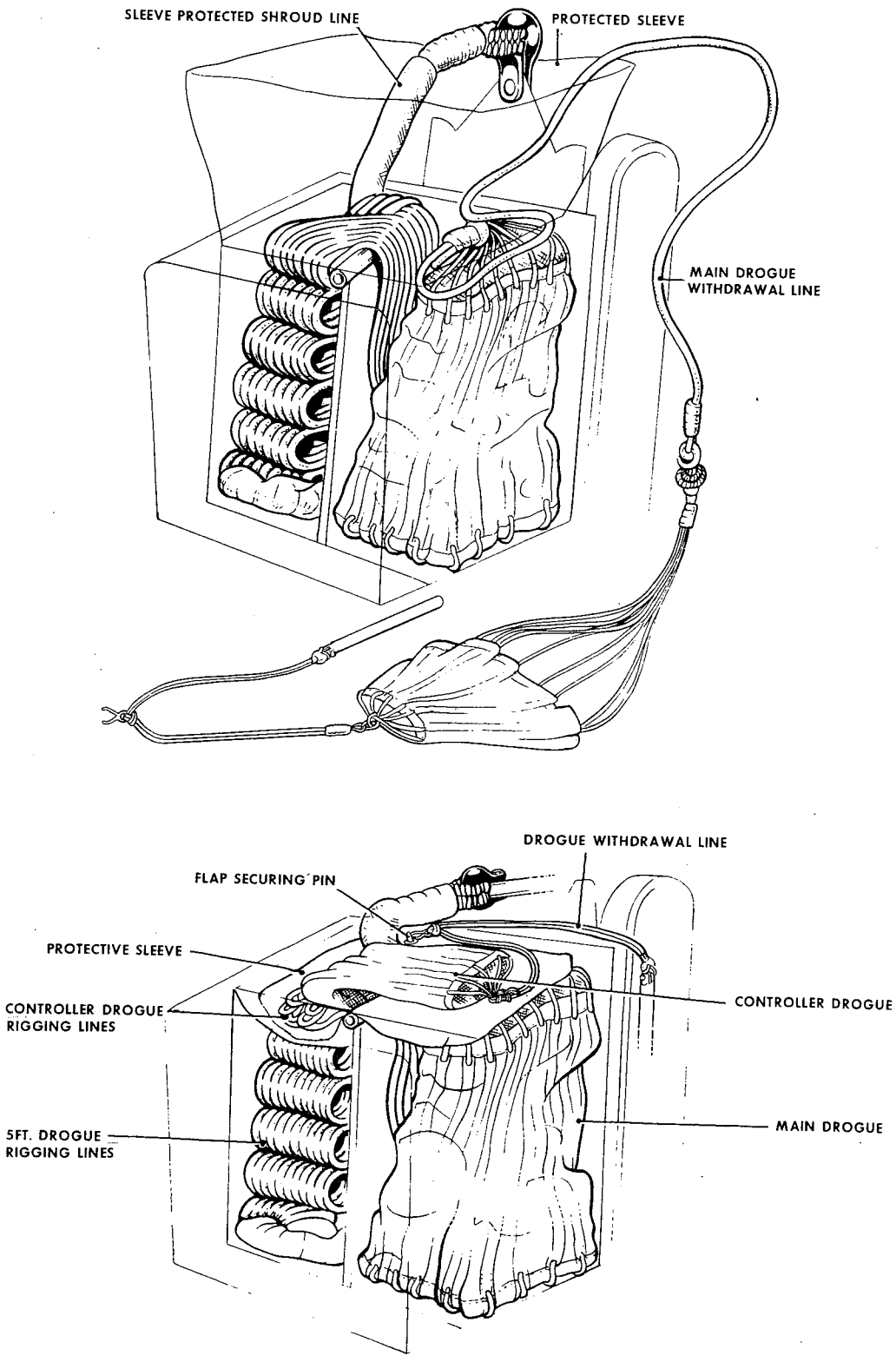

Fig. 14 Packing the drogues
▶ (Drawing re-annotated) ◀

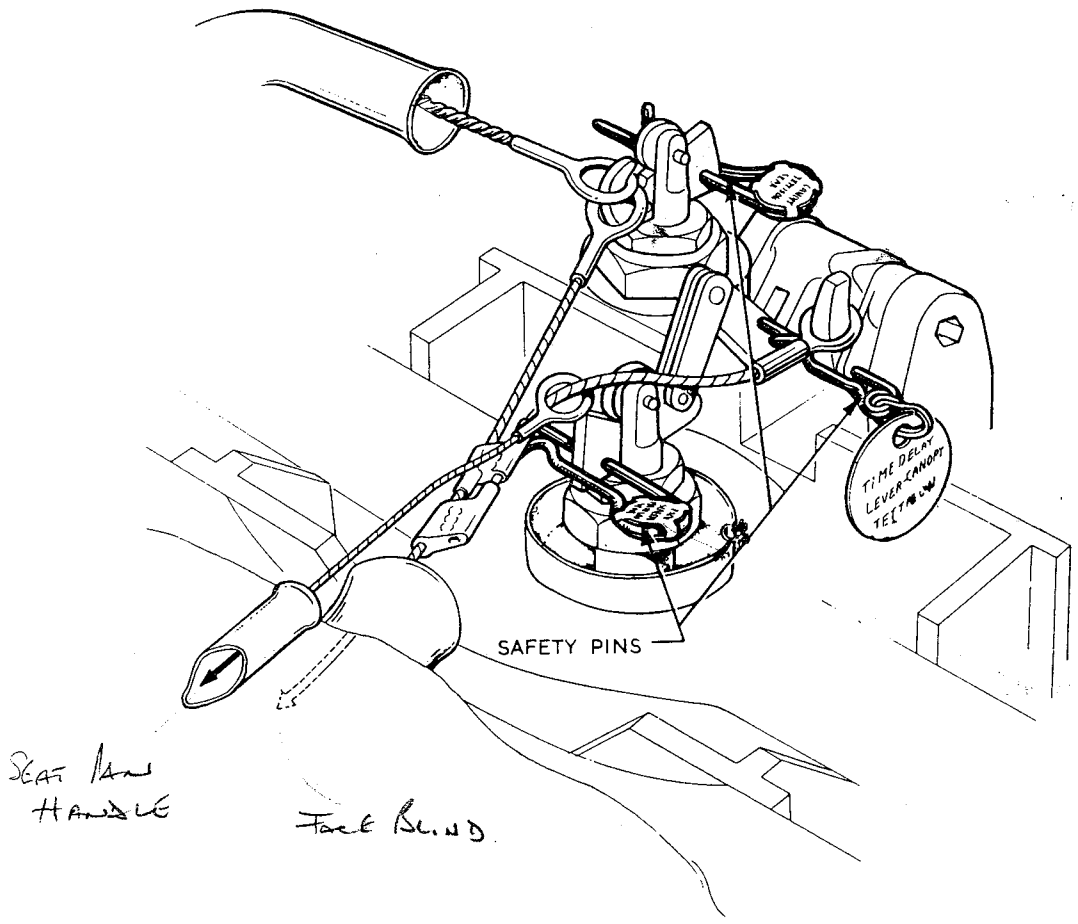

Fig. 15. Arrangement of safety pins for servicing

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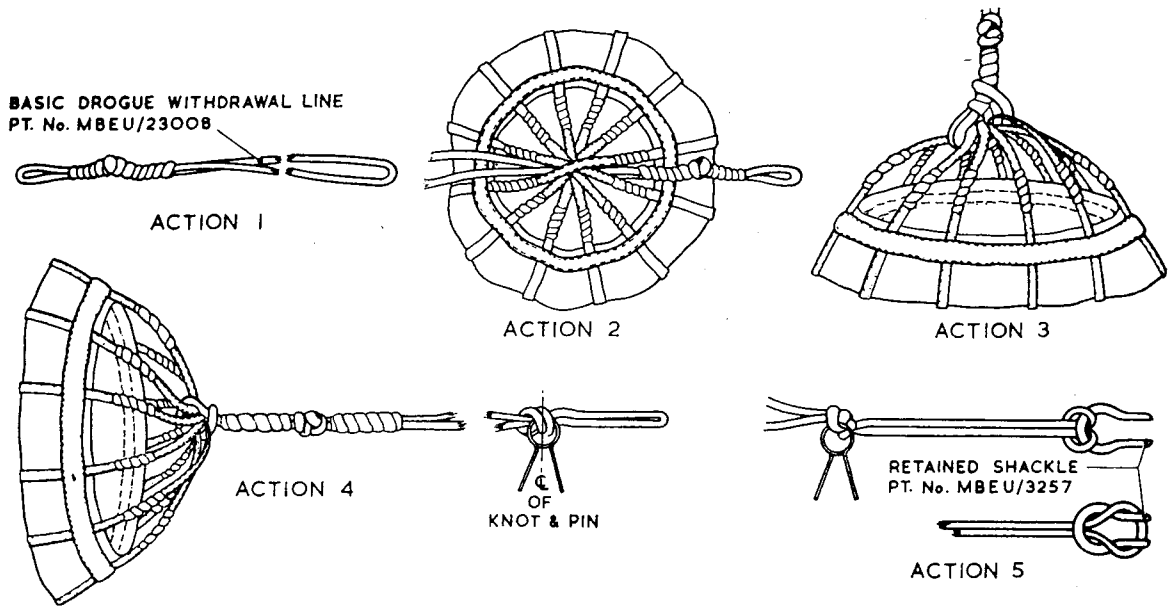
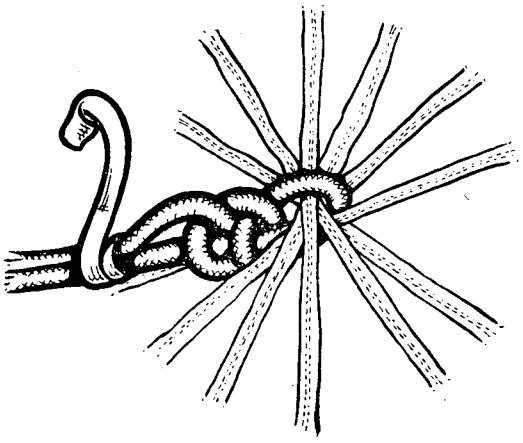
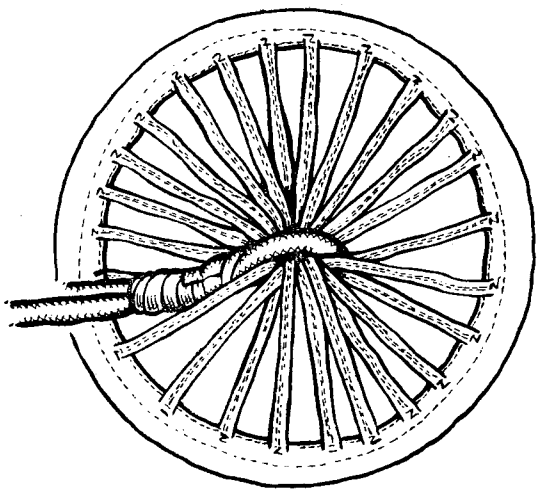


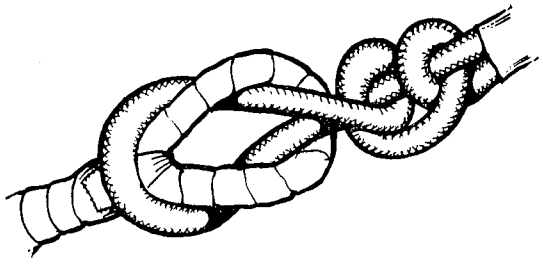
Fig. 16. Renewing the drogue withdrawal line
◀ *(New illustration)* ▶



Action 1



Action 2



Action 3

Fig. 17. Renewing the connecting strop
◀*(New illustration)*▶

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(72770) Demand 841811 220 6/70 Gp. 483/7 (13/5/70 526398)

FITTING A NEW FACE SCREEN FIRING CABLE

52. To fit a new firing cable to the face screen proceed as follows:-

(1) Place the ring of the single swaged end of the firing cable over the face screen loop followed by the black plastic locking ring (Action 1, fig. 18).

(2) Thread the free end of the cable through the face screen loop and pull tight (Action 2).

(3) Finally position the plastic locking ring as shown in Action 3.

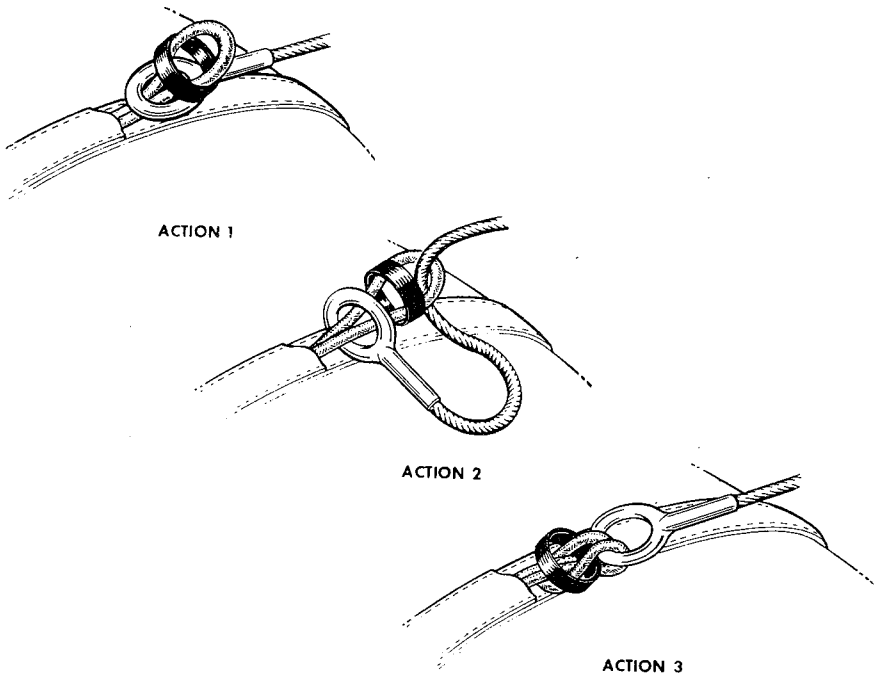

Fig. 18 Fitting a new face screen firing cable

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Demand No. 117287, 175, 10/78, 1909, (13162-4)

BAY SERVICING SCHEDULES (-5F)

SERVICING NOTES

1 Servicing of timed components is to be carried out by an Aircraft Technician (W).

2 Timed components are not to be dismantled at the six-monthly servicing unless they are found to be outside the limits on the timing test.

3 The oxygen system together with all tools and equipment used during its servicing are to be kept free from oil and unauthorised grease.

4 Whenever it is necessary to service any part of the assisted escape system, installed in an aircraft, personnel are to comply with the Safety and Servicing Notes applicable to the Hunter F6, GA9 and FR10 aircraft.

5 Servicing checks detailed in this schedule are to be carried out in accordance with the instructions contained in AP 100B-01, Order 5635.

6 Glossary. The servicing operations detailed in this schedule have the meaning given in the 'Concise Oxford Dictionary' EXCEPT for the following:

6.1 Examine - Carry out a survey of the condition of an item. For example the condition of an item can be impaired by one or more of the following:

(a) Insecurity of attachment.

(b) Cracks, fractures or crazing.

(c) Corrosion, contamination or deterioration.

(d) Distortion.

(e) Loose or missing rivets.

(f) Chafing, fraying, scoring or wear.

(g) Faulty or broken locking devices.

(h) Loose clips or packing, obstruction of or leaks from pipelines.

(i) External damage.

(j) Overheating or leaking of fluids, possibly indicated by discolouration.

6.2 Inspect - Review the work carried out by tradesmen to ensure that it has been performed satisfactorily.

6.3 Check - Make a comparison of a measurement of time, pressure, temperature, resistance, dimension or other quantity with a known figure for that measurement.

6.4 Test - Ascertain, by using the correct test equipment that an item or system functions correctly.

6.5 Operate - Ensure an item or system functions correctly as far as can be ascertained without the use of test equipment or reference to measurement.

6.6 Fit - Correctly attach one item to another.

6.7 Refit - Fit an item which has been previously removed.

6.8 Replace - Remove an item and fit a new or serviced item.

6.9 Disconnect - Uncouple or detach cables, pipelines or controls.

6.10 Re-connect - Reverse of disconnect.

7 For further information on testing, servicing, dismantling and re-assembly procedures, the following publications are to be consulted:

(a) AP 109B-0117-1

(b) AP 109C-0103-1 and 5F

(c) AP 109C-0201-15F

(d) AP 109D-0202-1 and 5F

(e) AP 109E-0101-1 and 5F

(f) AP 109F-0104-15F

(g) AP 109S-0001-15F

(h) AP 109S-0100-1

▶ 8 Stiffnuts (self locking nuts) may be used on this equipment, and although supplied under a single stores reference number, may be of three different types; Aerotight, Philidas and Oddie. The Oddie type nut is not approved for use on this equipment and is not to be fitted. (AP 1464B, Vol.1, Pt.2, Sect.6, Chap.5 shows the difference between stiffnut types).

NOTE...

AIL 1/81 incorporated. ◀

EJECTION SEAT TYPE 3H
(Hunter F6, GA9 and FR10 Aircraft)

BAY SERVICING
OPERATIONS TO BE DONE AT THE SIX-MONTHLY AND
ANNUAL SERVICING OF THE EJECTION SEAT

Item No.	Item	Operation
Note... The following item is to be done by the N.C.O. in charge of the servicing bay upon receipt of the ejection seat.		
1	(a) Form 731	Examine for correctness of detail and report of defects.
	(b) Form 4805	(1) Ensure that the serial numbers of the seat and its components correspond with those listed on the form.
		(2) Take note of concessions granted in respect of the pull-off weights of the face screen and/or the seat pan firing handles.
		(3) Check the modification state and take note of any outstanding modifications.
		(4) Take note of any current Servicing Instructions.
	(c) Form 720	Enter the "Servicing Detail" in the "Instruction and Progress" column.
	(d) Air Publications (e) Servicing Schedules	Ensure that a copy of each relevant Air Publication and Servicing Schedule is available in the servicing bay.
2	Barostatic time-release unit	(1) Insert the lugs of the seat harness shoulder and waist straps into the harness release fitting.
		(2) Operate the time-release unit by withdrawing the sear and ensure that the lugs have been released.
		(3) Ensure that the scissor shackle has opened and that the drogue shackle has been released.

Item No.	Item	Operation
3	(a) Safety harness (b) Lifting lines, headrest pad and apron assembly (c) Drogues (d) Face screen assembly (e) Leg restraint lines (f) Neg-g strap	(1) Unscrew the 5/8 in B S F union nut and remove the harness release cable housing from the unit and the cable from the seat structure. (2) Remove the seat safety harness from the seat assembly. (3) Break the safety tie, open the drogue container flaps and remove the lifting lines, headrest pad and apron assembly, drogues and face screen assembly from the seat. (4) Remove the leg restraint lines from the snubbing units and the neg-g strap from the seat pan. (5) Attach completed F731 to each item of equipment and transport to the Safety Equipment servicing bay.
4	(a) Emergency oxygen set (b) Low-pressure oxygen hose	(1) Remove the items from the seat structure. (2) Attach completed F731 to each item of equipment and transport to the Oxygen Equipment servicing bay.
5	Mic/tel lead	(1) Remove from the seat structure. (2) Attach completed F731 to the item and transport to the Air Radio servicing bay.
6	Canopy jettison and time-delay unit	(1) Ensure that the "Free from Explosive" label is attached. (2) At the six-monthly/annual servicing of the ejection seat, service, as applicable, as detailed in AP 109C-0201-5F.
7	Ejection gun	(1) Ensure that the "Free from Explosive" label is fitted. (2) Service the gun as detailed in AP 109C-0103-5F.
8	Canopy jettison jacks	At the annual servicing of the ejection seat, service the jacks as detailed in AP 109F-0104-5F.
9	Barostatic time-release unit	(1) Remove the primary plunger cap and remove the unit from the seat structure leaving the special bolt in position in the unit. (2) At the six-monthly/annual servicing of the ejection seat, service, as applicable, as detailed in AP 109E-0101-5F.

Item No	Item	Operation
10	Drogue gun	(1) Ensure that the "Free from Explosive" label is fitted. (2) Remove the gun from the seat structure. (3) At the six-monthly/annual servicing of the ejection seat, service, as applicable, as detailed in AP 109D-0202-5F.
11	(a) Seat pan assembly	(1) Clean using a clean dry rag. (2) Examine the assembly for damage, distortion and loose or missing rivets. (3) Examine the locking plungers for corrosion and security of attachment; lightly lubricate using grease XG-287. (4) Examine the attachment clips and brackets for damage and security of attachment. (5) Examine the go-forward lever and housing for damage and security of attachment. (6) Examine the go-forward cable for fraying, kinking and security of attachment to the go-forward lever. (7) Examine the snubbing units for damage and security of attachment. (8) Examine the neg-g brackets for damage and security of attachment.
	(b) Servicing checks	(1) Examine the go-forward lever for damage and security of attachment. (2) Examine the go-forward release cable for damage and security of attachment to the go-forward lever. (3) Examine the snubbing units for damage and security of attachment.
12	(a) Seat pan raising and lowering mechanism	(1) At the six-monthly servicing of the ejection seat, service as follows: (a) Examine the mechanism for damage and security of attachment.

Note...

If bolts are removed or found to be loose, the threads are to be lightly coated with Loctite 221 during assembly.

Item No		Item	Operation
12	(a)	Cont'd	(b) Ensure that the bolts securing the seat raising levers to the shaft and countershaft are fully tightened.

Note...
In order to avoid possible hydraulicking between the locking plungers and quadrants, 'lightly lubricate', is interpreted as first applying a liberal coating of grease and wiping away all excess that may exude between the plunger and quadrant interfaces throughout the entire range of holes.

(c) Lightly lubricate the mechanism using grease XG-287.

(d) Examine the mechanism (by operation) for correct functioning ensuring that the mechanism locks in all positions on the quadrant.

(2) At the annual servicing of the ejection seat, service as follows:

(a) Remove the seat pan and dismantle the mechanism as detailed in Topic 1.

Note...
No elongation of the seat raising mechanism quadrant holes is permitted. Polished countersinking around the quadrant holes caused by the locking plunger is permissible provided the hole remains symmetrical. Seat raising quadrants that fail this criteria are to be exchanged, it is prudent also to change locking plungers and springs. Ensure the radiused edge of the locking plunger protrudes through the rear face of the quadrant locking holes, rectify if necessary by reaming the locking holes IAW AP 109A-0100-6 leaflet B19.

(b) Examine quadrant and particularly for elongation of the locking plunger holes.

(c) Ensure the radiused edge of the locking plunger protrudes through the rear face of the quadrant locking holes, rectify if necessary by reaming the locking holes IAW AP 109A-0100-6 leaflet B19.

(d) Examine all components of the mechanism for damage and corrosion.

(e) Ensure that the sear bar is straight in both planes and that the ramp faces are not worn.

Item No	Item	Operation
		Note... If bolts are removed or found to be loose, the threads are to be lightly coated with Loctite 221 during assembly.
		(f) Ensure that the bolts securing the seat raising levers to the shaft and countershaft are fully tightened.
		(g) Ensure that the locking plungers move freely in their housings and that the springs are serviceable and have a free length of 4.25in ± 0.062in.
		Note... In order to avoid possible hydraulicking between the locking plungers and quadrants, 'lightly lubricate', is interpreted as first applying a liberal coating of grease and wiping away all excess that may exude between the plunger and quadrant interfaces throughout the entire range of holes.
		(h) Lightly lubricate all components using grease XG-287.
		(j) Assemble the mechanism and refit the seat pan as detailed in Topic 1.
	(b) Servicing checks	(1) Examine the seat pan and seat raising mechanism for correct assembly.
		(2) Examine the seat raising mechanism (by operation) for correct functioning over its complete range of movement ensuring that the mechanism locks in all positions on the quadrant.
		(3) Lock the seat pan in its highest position.
13	(a) Seat pan counterbalance assemblies	(1) Remove the assemblies from the seat and clean the housings and springs using lead-free gasoline.
		(2) Examine the housings for damage, corrosion, bowing and cracks.
		(3) Examine the springs for damage, corrosion, and collapsed coils.
		(4) Lightly lubricate the housings and springs using grease XG-287.
		(5) Examine the locating lugs on the seat beam and seat pan for damage and security of attachment.
		(6) Refit the assemblies to the seat structure.
	(b) Servicing check	Examine the assemblies for security of attachment.

Item No	Item	Operation
14	(a) Seat pan firing handle and firing cable assembly	(1) Remove the safety pin, ease the handle from its housing and pull on the cable to expose as much cable as possible. (2) Examine the flexible handle for damage, cracking of cover and the loop for security of attachment to the cross bar (Post-Mod ES 3341). (3) Examine the exposed cable for dirt, damage, corrosion and security of attachment to the handle. (4) Examine the firing handle housing for dirt, damage and corrosion; lightly lubricate the plunger using grease XG-287. (5) Pull the cable through from the headrest end and refit the handle to its housing. (6) Examine the exposed cable at the headrest end for dirt, damage, corrosion and the end fitting for security of attachment. (7) Examine the conduit for damage, corrosion and security of attachment to the seat structure. (8) Examine the safety pin for damage, the Integral Tally for legibility and refit the safety pin ensuring that it secures the handle to its housing.
	(b) Servicing checks	(1) Ensure that the safety pin secures the handle to its housing. (2) Examine the cable and conduit for security of attachment.
15	(a) Parachute container	(1) At the six-monthly servicing of the ejection seat, service as follows: (a) Examine the radius arms for damage, distortion and corrosion; lightly lubricate using grease XG-287. (b) Lightly lubricate the axis points using oil OM-12. (c) Examine the parachute container for damage, distortion and missing or broken rivets. (d) Examine the torsion bar for damage and distortion. (e) Examine the parachute retainer spring clips for damage and security of attachment.

Item No		Item	Operation
15	(a)	Cont'd	(2) At the annual servicing of the ejection seat, remove, service and replace the container as detailed in Topic 1.
	(b)	Servicing checks	(1) Examine the container for correct fitment (2) Examine the radius arms for distortion. (3) Examine the container for security of attachment. (4) Examine the go-forward mechanism (by operation) for correct functioning.
16	(a)	Seat structure	(1) Clean using a clean dry rag. (2) Examine for damage, distortion, corrosion and missing or broken locking devices and rivets. (3) Examine the emergency oxygen support brackets for damage and security of attachment. (4) Examine the drogue gun securing brackets for damage and security of attachment.
	(b)	Top latch	(1) Clean using a clean dry rag. (2) Examine the exposed portion of the plunger for burrs and corrosion. (3) Lightly lubricate the plunger using grease XG-287. (4) Examine (by operation) for freedom of movement. (5) Examine the securing pin for damage and the lanyard for security of attachment to the pin and seat.
	(c)	Guide rollers	(1) Examine for damage, distortion and security of attachment. (2) Lightly lubricate the rollers using grease XG-287. (3) Examine (by operation) for freedom of movement.
	(d)	Scissor shackle	(1) Examine the shackle for damage and security of attachment.
	(e)	Release plunger	(2) Examine the plunger for damage and excessive pitting. (3) Examine the release plunger housing for damage and security of attachment.

Item No		Item	Operation
16	(e)	Cont'd	(4) Lightly lubricate the plunger using grease XG-287. (5) Push the shackle fully forward and attach a spring balance (0-100 lb) to the apex. (6) Pull upwards on the spring balance; the load required to lift the shackle is to be not less than 5 lb and not more than 15 lb.

Note...

Adjust by screwing or unscrewing the shackle securing nuts or by the addition of shims (27L/4540927 fitted under the bolt heads) as necessary. After adjustment, ensure that the nuts are locked to the bolts by centre punching in three places.

	(f)	Servicing checks	(1) Examine the seat main beams for distortion. (2) Examine the guide rollers (by operation) for freedom of movement. (3) Examine the top latch for security of attachment and (by operation) for freedom of movement. (4) Examine the scissor shackle and release plunger housing for security of attachment, and the scissor shackle securing nuts for correct locking. (5) Examine the release plunger for freedom of movement.
17	(a)	Drogue container	(1) Clean and examine for damage, distortion, corrosion and security of attachment. (2) Examine the danger notices for legibility and security of attachment. (3) Examine the flaps and protective sleeve for damage, defective stitching, dampness and security of attachment. (4) Examine the metal eyelets and wire loop for damage and security of attachment. (5) Examine the face screen firing handle retaining plungers (by operation) for correct functioning.
	(b)	Servicing checks	(1) Examine the container for security of attachment. (2) Examine the heads of the securing bolts inside the drogue container for burrs. (3) Examine the flaps and protective sleeve for dampness and security of attachment.

Item No	Item	Operation
18	(a) Seat safety harness (b) Face screen assembly (c) Drogues (d) Lifting lines, headrest pad and apron assembly (e) Leg restraint lines (f) Neg-g strap	(1) Obtain the serviced items from the Safety Equipment servicing bay. (2) Scrutinise labels F731 and ensure that the correct equipment is received. (3) Ensure that the servicing checks (where necessary) have been done. (4) Transport the equipment to the ejection seat servicing bay.
	(g) Servicing checks	(1) Scrutinise labels F731 and ensure that the correct equipment has been received. (2) Examine the equipment for damage and contamination. (3) Examine the leg restraint lines for damage and in particular ensure that the shear rivets are intact. (4) Examine negative-g strap adjustment buckle upper and lower special nut for security of attachment and correct locking.
19	(a) Emergency oxygen set (b) Low pressure oxygen hose	(1) Obtain the serviced items from the Oxygen Equipment servicing bay. (2) Scrutinise labels F731 and ensure that the correct equipment is received. (3) Ensure that the servicing checks (where necessary) have been done. (4) Transport to the ejection seat servicing bay.
	(c) Servicing checks	(1) Scrutinise labels F731 and ensure that the correct equipment has been received. (2) Ensure that the tell-tale wire is intact. (3) Ensure that the transit pin is fitted. (4) Examine the low-pressure oxygen hose for damage and contamination.

Item No	Item	Operation
20	(a) Mic/tel lead	(1) Obtain the serviced item from the Air Radio servicing bay. (2) Scrutinise labels F731 and ensure that the correct equipment is received. (3) Ensure that the servicing checks (where necessary) have been done. (4) Transport to the ejection seat servicing bay.
	(b) Servicing check	Examine the lead for damage.
21	(a) Leg restraint lines (b) Snubbing units	(1) Suspend each line by one end and attach a weight of 5lb to the other, taking care not to produce any snatch. (2) Measure the length of the lines, under load, between the shear rivet and the extreme end of the loop at the opposite end. (3) The length of the line should be not less than 45in and not more than 49in. (4) Fit the lines to the snubbing units and examine the units (by operation) for correct functioning.
	(c) Neg-g strap	Fit the strap to the seat pan.
	(d) Servicing checks	(1) Examine the snubbing units (by operation) for correct functioning. (2) Examine the neg-g strap for correct routeing.
22	(a) Drogues (b) Face screen assembly (c) Lifting lines, headrest pad and apron assembly	Fit the items to the seat structure and weight the pull-offs of the lifting lines as detailed in Topic 1.
	(d) Servicing check	Examine all components for correct fitment and security of attachment.
23	(a) Seat safety harness	Refit to the seat structure.
	(b) Servicing check	Examine the harness for security of attachment.
24	(a) Barostatic time-release unit	(1) Fit the serviced unit to the seat structure.

Item No		Item	Operation
24	(a)	Cont'd	(2) Fit the harness release plunger and cable assembly to the unit and screw fully home using spanner, 5/8in B S F. Lock the union nut to the unit body using 22 S W G non-corrodible steel wire. (3) Secure the harness release cable and conduit to the seat structure. (4) Fit the sear, complete with trip rod, into the slot in the operating plunger. (5) Turn the operating plunger through 90 deg., press inwards and turn back through 90 deg. (6) Ensure that the scissor shackle is closed over the drogue shackle and that the locking plunger is pushed hard against the leg of the scissor shackle and clear of the shackle release plunger. (7) Press downwards on the primary plunger until fully home using tool Ref No 27L/272. (8) Press downwards on the harness release plunger until fully home, using tool Ref No 27L/271 and ensure that the quick-release box release lever moves to the 'fasten' position.
	(b)	Servicing check	(1) Examine the unit for security of attachment. (2) Ensure that the unit is correctly cocked. (3) Insert the lugs of the shoulder and waist straps into the quick-release fitting and ensure that they are securely held. (4) Operate the unit by withdrawing the sear and ensure that the harness lugs have been released. (5) Ensure that the scissor shackle has opened and that the drogue shackle has been released. (6) Recock the unit and refit the primary plunger cap. (7) Examine the drogue shackle nut and bolt for orientation, security and correct locking.
25	(a)	Drogue gun	(1) Ensure that the "Free from Explosives" label is attached. (2) Fit the serviced gun to the seat structure.

Item No	Item	Operation
25	(b) Servicing checks	(1) Examine the gun for security of attachment. (2) Ensure that the gun is correctly cocked and that the firing pin is not protruding.
26	Drogue gun trip rod	(1) Ensure that the rod is free from oil and grease. (2) Attach a spring balance to the outer tube of the rods in turn. (3) Pull on the spring balance and ensure that the weight required to extend the rod is not less than 2 lb and not more than 7 lb. (4) Change the friction bush as required.
27	(a) Mic/tel lead	Refit the serviced item to the seat.
	(b) Servicing check	Examine for security of attachment.
28	(a) Emergency oxygen set (b) Low-pressure oxygen hose	Fit the serviced items to the seat structure.
	(c) Servicing checks	(1) Examine the emergency oxygen set and low-pressure hose for correct fitment. (2) Ensure that the transit pin is fitted through the cylinder head.
29	Anti-g hose	(1) Remove and examine. (2) Refit, leaving $8\frac{1}{2}$ inches of free length aft of seat mounted clip.
30	All safety pins	Examine.
31	(a) F731	Attach completed F731 to the seat and ancillary items of equipment.
	(b) F4805/F749/F735A	Enter any change of parts, serial numbers and modifications embodied, together with details of any Servicing Instructions complied with.
	(c) F720	(1) Sign as having done the six-monthly or annual servicing as appropriate. (2) Enter and sign a servicing check certificate in accordance with AP 100B-1 Order 5635. ◀