

Chapter 1

HUNTER F MK.4 AND MK.5

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COMPOSITION OF THE ASSEMBLY

1. The aircrew equipment assembly for these aircraft consists of the following items:-

Ejection seat	Mk.2H
Safety harness	Type ZF
Parachute assembly	Back type Mk.13
Personal survival pack	Type J.J.
Emergency oxygen set	Mk.4A
Flying clothing	Will be included in an Appendix 1 in due course

The Mk.2H ejection seat

2. A modified Mk.2H seat is installed and is ejected by a cartridge operated gun; the seat slides in a guide rail attached to the aircraft structure. It incorporates main and alternative firing handles, a Type ZF safety harness, a headrest cushion, a parachute pack container, a seat pan which accommodates the personal survival pack (P.S.P.) and emergency oxygen cylinder and leg restraint cords. Both firing handles are interconnected with the canopy jettison system and the time delay between ejection and separation (after the forward speed and height have been reduced) is now 1.25 sec; provision is also made for the canopy to be jettisoned independently when occasion demands.

3. The seat is adjusted for height by a lever on the starboard side of the seat pan; the knob in the end of the lever must be depressed before the seat can be raised or lowered. A 'go-forward' lever is mounted on the outside of the starboard thigh guard; this lever is raised to free the safety harness lock and allow the seat occupant to bend forward without releasing the safety harness.

4. As the seat ascends the guide rail, all connections to the aircraft are broken, the emergency oxygen supply is turned on automatically and the leg restraint cords are tightened until rivets in the floor anchorages shear. When the leg restraint cords tighten they draw the legs back to the seat pan and hold them in that position; this has the effect of restricting movement (particularly flailing) and in this way prevents injury during ejection at high speed.

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5. Fully automatic facilities are provided to separate the pilot from the seat after ejection and to open the parachute canopy after separation. A manual override control (in the form of a D-ring) is provided on the parachute harness waistbelt (fig.2); this D-ring is pulled across the body (to the full extent of the cable) to disconnect the parachute automatic withdrawal device from the seat if the need arises to (a) make a manual bale-out from the aircraft or (b) make a manual separation from the seat after ejection.

6. A complete description of the Mk.2H ejection seat is contained in A.P.4288, Vol.1.

Connections to the aircraft

7. With the seat installed in the aircraft, the following items are connected to the airframe:-

(1) Left-hand side of seat:-

- (a) Mic/Tel lead.
- (b) Static rod from drogue gun.
- (c) Air supply hose for the angi-G suit.

(2) Right-hand side of seat:-

- (a) Static line from barostatic time-release unit.
- (b) Static line from emergency oxygen cylinder operating head.
- (c) Main oxygen supply hose.

(3) Top of seat:-

- (a) Canopy jettison and time delay unit operating cable.

EQUIPPING THE SEAT

8. The following procedure is to be adopted when equipping the seat; reference is to be made to fig.1, 2, 3, and 4 as necessary:-

- (1) Ensure that safety pins are in position in the seat at the top of the ejection gun, hood jettison seat, time delay trip lever and hood jettison handle.
- (2) Arrange the safety harness shoulder straps over the top of the parachute pack container and the lap straps over each side of the seat pan.
- (3) Ensure that the bottom edge of the apron is securely clipped to the lower extension of the parachute pack container.
- (4) Tension the apron against its clips and insert the parachute pack into its container; ensure that the bottom edge of the pack is located behind the corner plates of the container. Before pushing the pack fully home, connect the two halves of the parachute withdrawal line coupling and ensure that the protruding stiff section of the drogue link line is folded towards the starboard side of the parachute pack container.
- (5) Fit the restraining straps into the clips at the sides of the container.
- (6) Arrange the parachute harness straps to follow the contours of the seat pan and place the emergency oxygen cylinder against the front wall of the pan, operating head to the right and cushion above.
- (7) Pass the emergency oxygen operating cable and supply tube through the tunnel on the right-hand side of the parachute harness. Ensure that the cable emerges over the rear right-hand side of the pan and that it passes OVER the safety harness 'go-forward' release cable.
- (8) Connect the knurled and screwed union on the emergency oxygen operating cable to the corresponding union on the anchor section of the static line. Engage the end fitting of the operating cable housing with the anchor socket and connect the anchor hook to the static line-cum-manual operating cable.

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AIRCREW EQUIPMENT ASSEMBLIES

ADVANCE INFORMATION LEAFLET NO. 7/62

Insert this leaflet in A.P. 1182, Vol. 1, Sect. 6, Chap. 1, to face para. 8.

1. The correct routing of the main oxygen hose and the automatic release cable of the safety harness quick-release fitting is shown in fig 3.
2. When assembling these items, ensure that the main oxygen hose passes OVER the automatic release cable.
3. Para. 8 and 9 and fig 1 and 6 will be suitably amended.

Notes

- (1) The information contained in this leaflet will be incorporated by normal amendment list action in due course.
- (2) If, after receipt of this leaflet, an amendment list with a prior date and conflicting information is received, the information in the leaflet is to take precedence.

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- (9) Remove and retain the safety pin from the emergency oxygen cylinder operating head and ensure that the 'tell-tale' wire is unbroken.
- (10) Fit the parachute harness sticker straps into the clips on each side of the seat pan.
- (11) Place the P.S.P. in the seat pan on top of the parachute harness; pull the parachute back pad upwards as far as possible. The flap carrying the lanyard is to point towards the front of the seat pan and the lanyard is to be draped over the right-hand front edge of the pan. Ensure that the pack is hard against the rear wall; this will allow the emergency oxygen cylinder and the cushion above to take up the correct position.
- (12) Ensure that the anti-G air supply hose is fitted through the loop on the left-hand safety harness lap strap.
- (13) Remove the safety pins from the ejection gun sear, time delay trip lever and hood jettison gun sear. Fit the appropriate safety pins in the main and alternative firing handles.

STRAPPING-IN PROCEDURE

9. The following procedure is to be adopted, reference to fig.5, 6 and 7 being made as necessary:-

- (1) Remove the safety pin from the main firing handle and place it in its stowage. Sit in the seat.
- (2) Remove the safety pin from the alternative firing handle and place it in its stowage.
- (3) Connect the P.S.P. lanyard and side quick-release couplings to the life jacket; the lanyard must pass OVER the right leg.
- (4) Connect the anti-G air supply hose, ensuring that it passes OUTSIDE the lower left-hand strap of the parachute harness.
- (5) Bring the parachute harness waistbelt across the front of the body and position the quick-release fitting centrally over the solar plexus. Fit and adjust the shoulder straps so that they pass UNDER the folds of the life jacket stole and retain the quick-release fitting in its central position (or slightly higher). Fit and adjust the leg straps; ensure that they pass through the leg loop correctly and that the right leg strap passes OVER the P.S.P. lanyard. Fit the safety clip behind the disc knob.
- (6) Fasten the safety harness lap straps, but do not tighten them.
- (7) Pass the right-hand leg restraint cord through the left leg garter D-ring and upwards under the safety harness left lap strap. Pass the lug of the left shoulder strap through the loop at the end of the cord and insert the lug into the safety harness quick-release fitting.
- (8) Pass the left-hand leg restraint cord through the right leg garter D-ring and upwards under the safety harness right lap strap. Pass the lug of the right shoulder strap through the loop at the end of the cord and insert the lug into the safety harness quick-release fitting.
- (9) Tighten the lap straps, keeping the quick-release fitting below the parachute harness quick-release fitting (well down in the lap).
- (10) Adjust and tighten the shoulder straps; do not overtighten these straps so that they compress the body down into the seat, they are intended to hold the shoulders back against sudden deceleration and to take up stretch of the body in inverted flight.
- (11) Adjust the leg restraint cords in their snubbing units to allow the required freedom of leg movement; take up the slack by drawing the cords downwards through the snubbing units.
- (12) Put on the flying and protective helmets and fasten the chin straps. Connect the Mic/Tel lead to the socket on the left shoulder straps of the safety harness.
- (13) Connect the main oxygen hose to the mask tube assembly. Ensure that it is clipped to the right safety harness lap strap and adjust its length to allow freedom of head movement.
- (14) Pass the emergency oxygen supply tube under the right safety harness shoulder strap and connect it to the mask tube assembly.

- (15) Attach the mask tube locating chain to the D-ring anchorage on the life jacket.
- (16) Adjust the height of the seat; ideally the head should be in the centre of the headrest cushion.
- (17) Stretch both arms upwards (as though reaching for the firing handle) and ensure that the main firing handle can be reached with both hands together; DO NOT ATTEMPT TO PULL THE FIRING HANDLE.
- (18) Remove the safety pin from the hood jettison handle and place it in its stowage.

EMERGENCIES

10. Instructions for dealing with emergencies in flight are contained in A.P.4347D and E-P.N.

LEAVING THE AIRCRAFT AFTER LANDING

11. The following procedure is to be adopted:-

- (1) Remove the hood jettison handle safety pin from its stowage and fit to the handle.
- (2) Disconnect the main and emergency oxygen supply from the mask tube assembly.
- (3) Release the safety harness and leg restraint cords.
- (4) Release the parachute harness and disconnect the Mic/Tel lead.
- (5) Disconnect the anti-G air supply and fit the blanking plug into the seat end of the main hose.
- (6) Disconnect the personal survival pack lanyard and side quick-release couplings from the life jacket.
- (7) Insert the safety pins in the main and alternative firing handles.
- (8) Vacate the seat and leave the aircraft.

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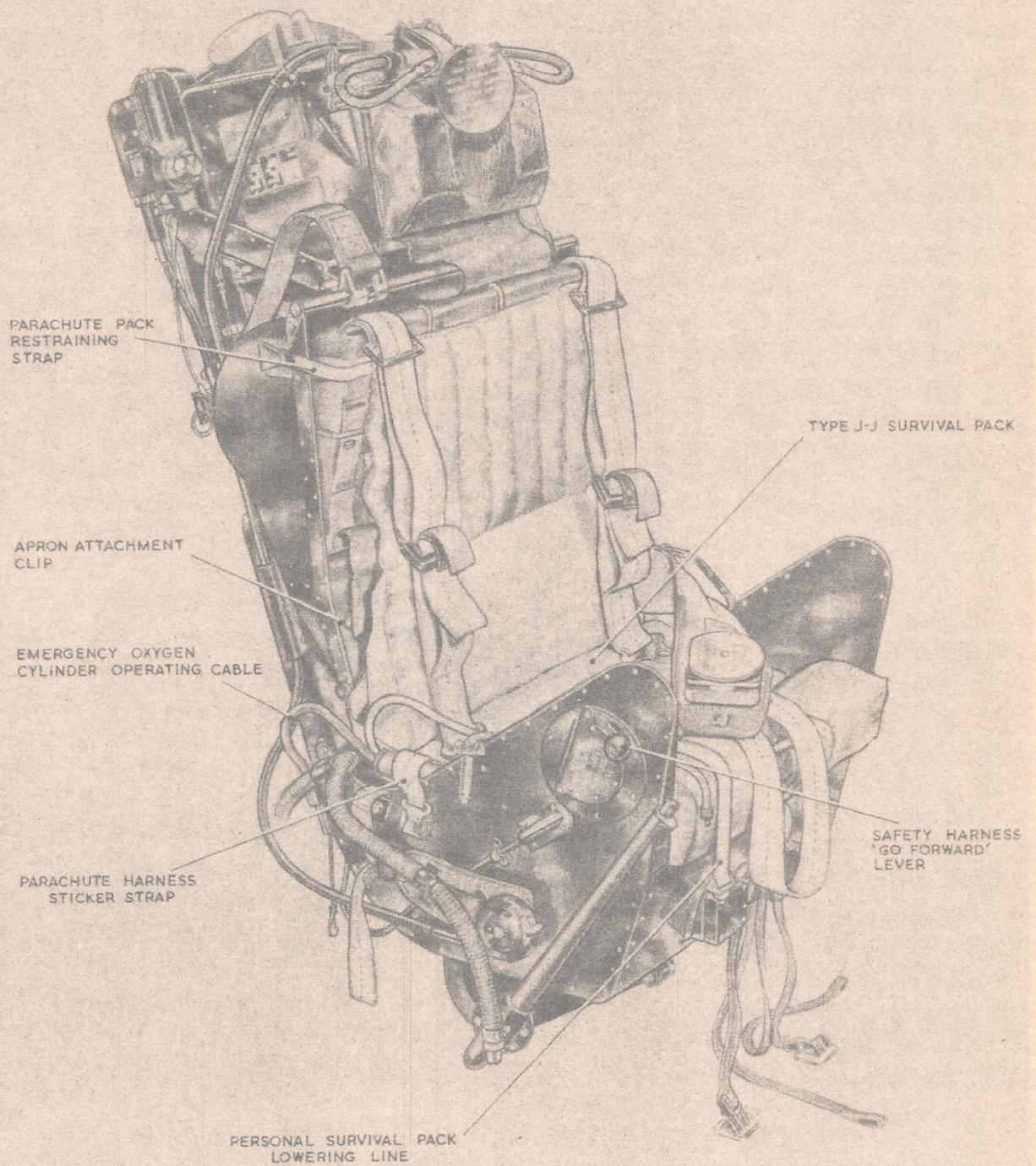


FIG.1. THE SEAT EQUIPPED (1)

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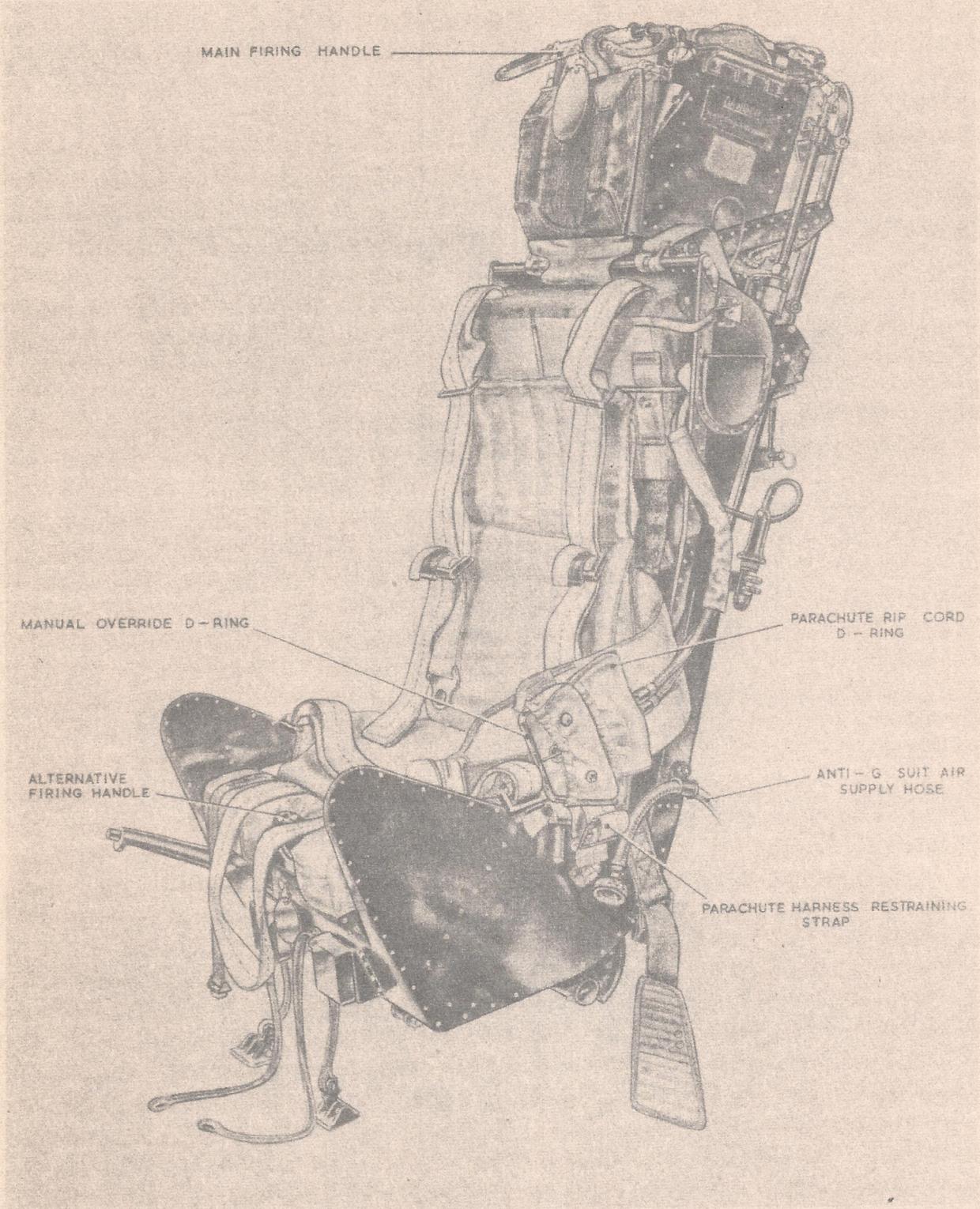


FIG.2. THE SEAT EQUIPPED (2)

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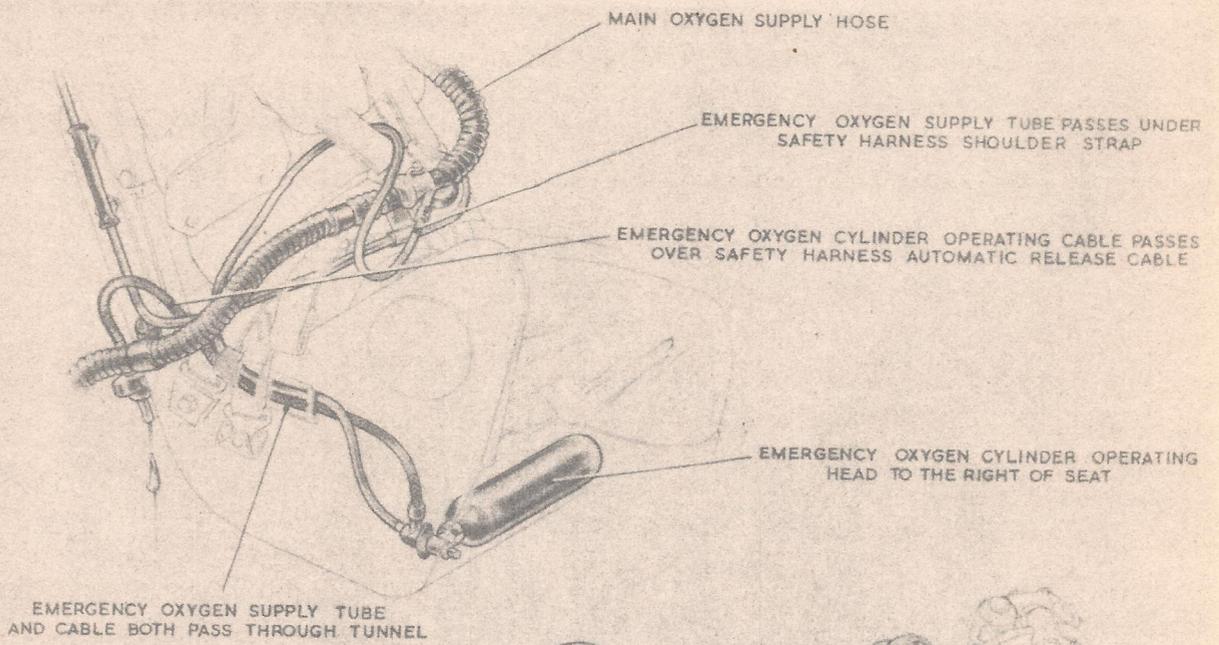


Fig.3 Arrangement of oxygen supply on seat

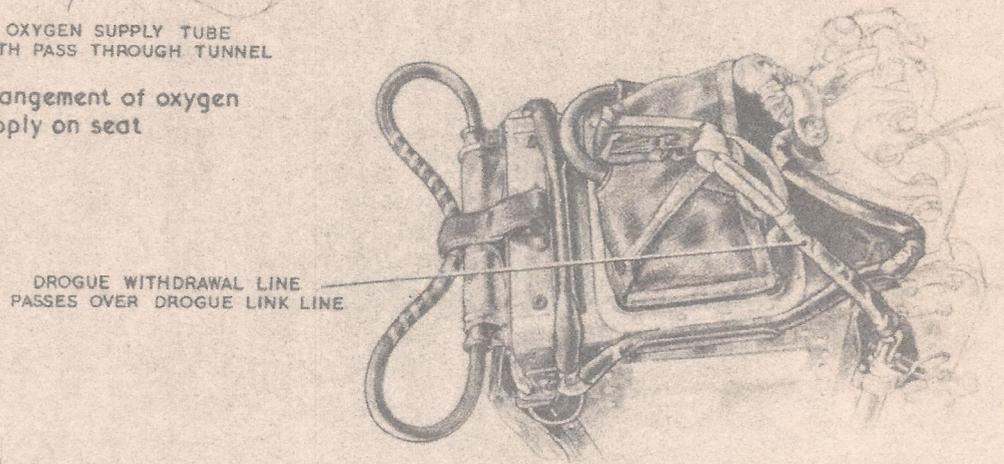


Fig.4 Arrangement of drogue withdrawal and drogue link lines

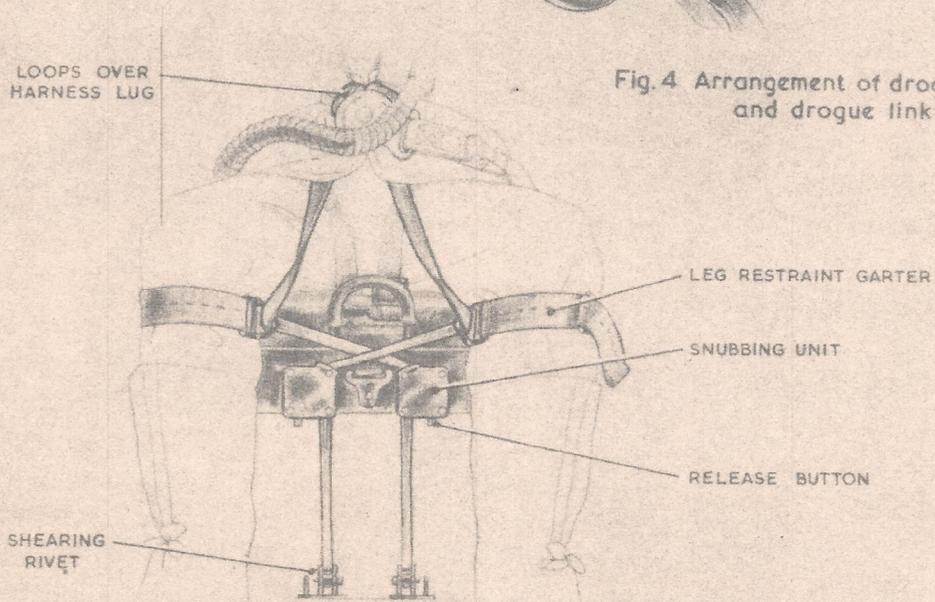


Fig.5 Arrangement of leg restraint cords

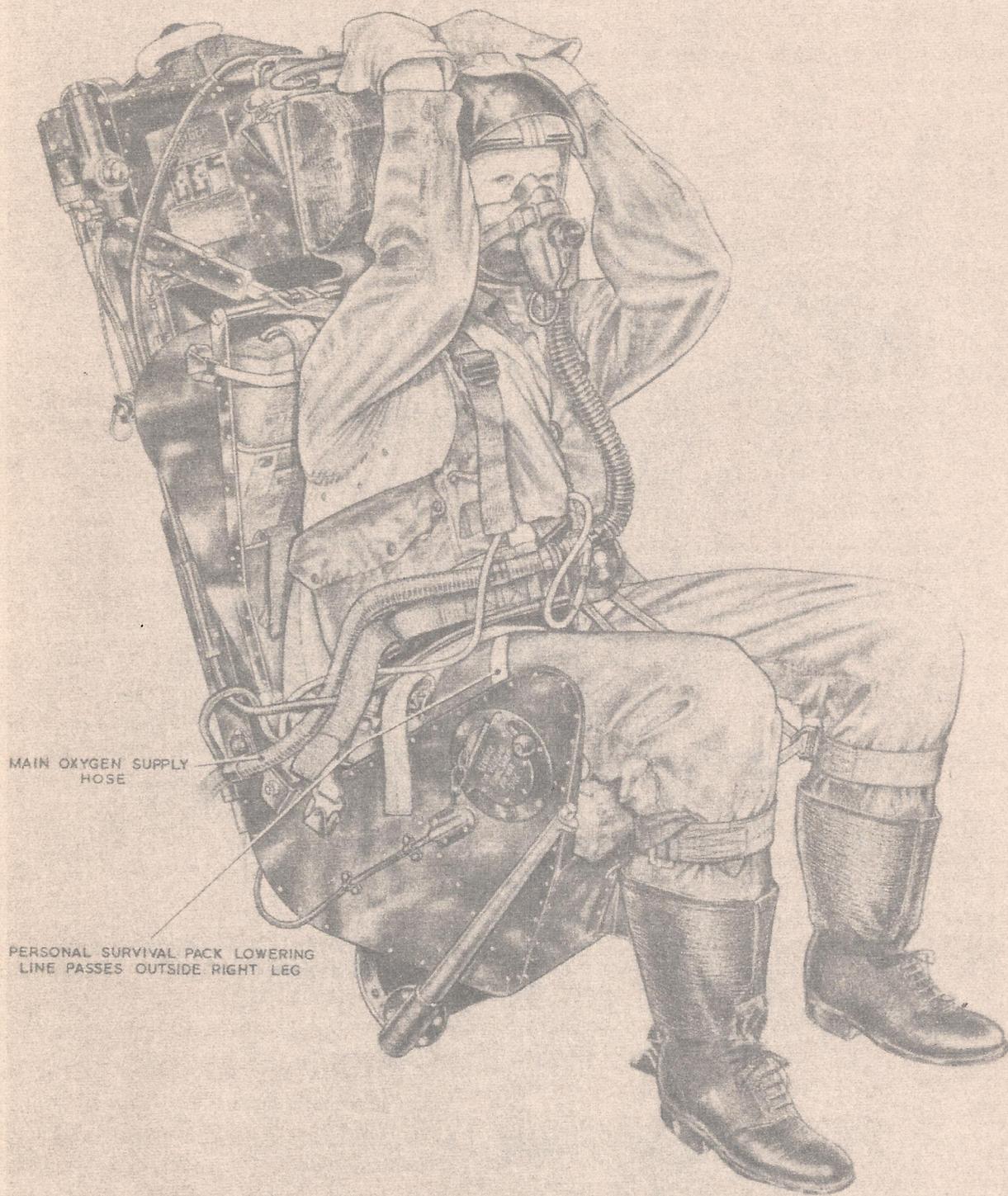


FIG.6. THE SEAT OCCUPIED (1)

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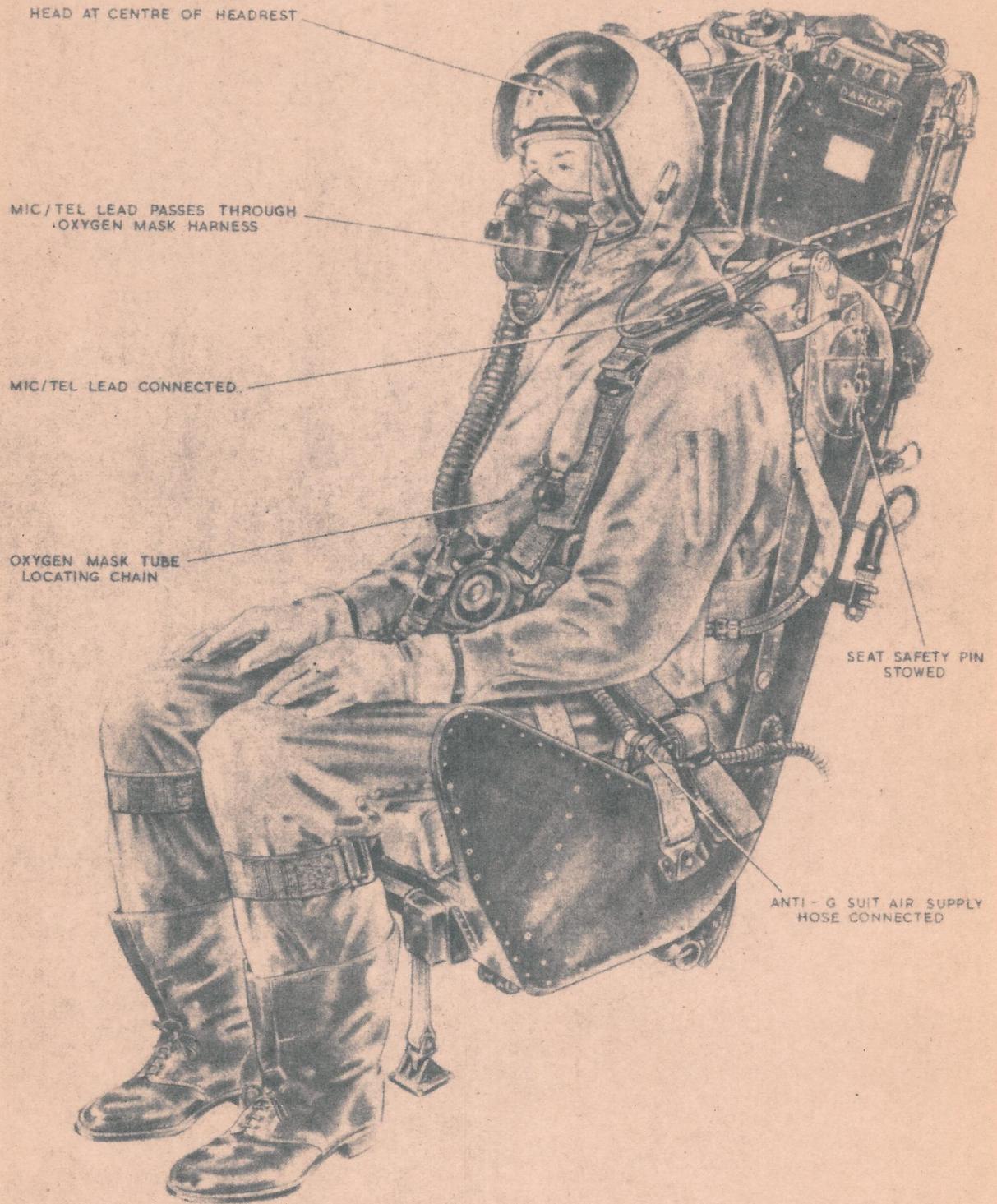


FIG.7. THE SEAT OCCUPIED (2)

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