

# DATA ITEM DESCRIPTION

Form Approved  
OMB No. 0704-0188

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**1. TITLE**  
AIRCRAFT EMERGENCY RESCUE INFORMATION (FIRE PROTECTION)  
SOURCE DATA

**2. IDENTIFICATION NUMBER**  
DI-TMSS-81532

**3. DESCRIPTION/PURPOSE**

3.1 This information is used as source data for the preparation and maintenance of Technical Order (TO) 00-105E-9, Aircraft Emergency Rescue Information (Fire Protection). This TO is used by firefighting personnel to rescue aircrew and passengers in the event of an aircraft accident.

**4. APPROVAL DATE**  
97/01/24

**5. OFFICE OF PRIMARY RESPONSIBILITY (OPR)**  
F-16

**6a. DTIC APPLICABLE**

**6b. GIDEP APPLICABLE**

**7. APPLICATION/INTERRELATIONSHIP**

7.1 This Data Item Description (DID) contains the format and content preparation instructions for the data product generated by the specific and discrete task requirement as delineated in the contract.

7.2 This DID is applicable to the acquisition and modification of all aircraft, helicopters, and aircraft systems that are to be used by the United States Air Force and United States Army and require fire protection and emergency rescue.

7.3 MIL-STD-38784 may be obtained from the Standardization Documents Order Clerk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.

**8. APPROVAL LIMITATION**

**9a. APPLICABLE FORMS**

**9b. AMSC NUMBER**

**10. PREPARATION INSTRUCTIONS**

10.1 Reference documents. The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendments, notices, and revisions, shall be as specified in the contract.

10.2 Format. Contractor format is acceptable. Abbreviations and acronyms shall be kept to a minimum and be in accordance with MIL-STD-38784.

10.3 Content. The source data shall include the following:

10.3.1 System coverage. All aircraft, helicopters, or aircraft systems that are to be used by the United States Air Force and United States Army, and require fire protection and emergency rescue.

10.3.2 Illustrations. (See Figures 1 thru 8) Illustrations needed in conjunction with this data are extracted from existing Technical Manuals (TM) or engineering drawings that are developed for the aircraft or system being acquired. Illustrations are created only when existing illustrations, found in the relevant TMs and engineering drawings, cannot satisfy the requirements of this DID. The following apply to illustrations:

- a. Illustrations are in accordance with MIL-STD-38784 with the exception that they do not have figure numbers and color is used as described in 10.3.2.1.
- b. Illustrations are turned 90 degrees counterclockwise (landscape).
- c. Each type and model aircraft starts on a left-hand page.

(Continued on page 2)

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Block 10, Preparation Instructions (Continued)

- d. The official military or commercial aircraft designations (F-15, C-5, B-2) are positioned in the upper right corner of left-hand pages and in the lower right corner of right-hand pages.
- e. A list of special tools and equipment required is boxed in the upper left corner of the first page of each type and model of aircraft (see Figure 1 and 2).
- f. Aircraft entry and model designation (F-15, C-5, B-2) is as shown in Figures 1 and 2.
- g. Illustrations are coordinated with text by showing applicable paragraph numbers (see Figure 2).

10.3.2.1 Color in illustrations. The following items are depicted on appropriate illustrations and are colored using the following guidelines:

- a. Fuel systems - blue.
- b. Oxygen systems and cut-in areas - yellow.
- c. Armament (interior and exterior) - red.
- d. Battery (main and auxiliaries) - black.
- e. Hydrazine - purple.
- f. Nitrogen systems - orange.
- g. Ammonia - green.
- h. Hydraulic systems - brown.
- i. Emergency and normal entry details:
  - (1) Emergency releases (interior and exterior) - red.
  - (2) Ejection handgrips - red.
  - (3) Jettison handles (canopies, doors, and hatches) - red.
  - (4) Ejection catapult safety pins - red.
- j. Engine shutdown details:
  - (1) Fire shutdown switches - red.
  - (2) T-handles - red.
  - (3) Power and battery switches - red.
  - (4) Throttle levers - red.
  - (5) Fuel selector switches - red.
  - (6) Mixture levers - red.
  - (7) Auxiliary Power Unit (APU) switches - red.
- k. Ejection seat details:
  - (1) Firing triggers - red.
  - (2) Arming levers - red.
  - (3) Safety pins - red.
  - (4) Initiators - red.
  - (5) Rocker catapult - red.
  - (6) Initiator hose quick disconnects - red.

## Block 10, Preparation Instructions (Continued)

## 1. Aircrew extraction details:

- (1) Restraint belts - red.
- (2) Releases for restraint belts, harnesses, straps and handles, survival kits - red.
- (3) Personal service quick disconnects - red.

10.3.3 External hazards. (see Figure 3) Illustrations and information for all external hazards such as emitting radar zones, approach areas to engine intakes and exhausts, propeller clearances, ejected seat and jettisoned canopy envelopes with associated shrapnel danger areas, spin and drag chute ignitors or cartridges, armament firing zones, hot brakes, engine starting cartridges, APU exhaust ports, flare tube outlets, chaff dispensing units, etc. These areas are depicted as a shaded area or with broken lines.

10.3.4 Fuel system (internal hazards). Illustrations and information for fuel systems, including fuel tanks, that are internally hazardous such as interconnecting lines with fuel tanks, etc., (see Figure 2).

10.3.5 Composite material hazards. Illustrations and information for areas containing composite materials and types (organic, inorganic, or both) which would create additional hazards in a fire. This information includes burn potential flash points of the composite materials and any environmental risks. These areas are depicted as a shaded area.

10.3.6 Aircraft dimensions. Illustrations and information for aircraft dimensions with landing gear in down position, (i.e., height, width, and length). This information includes interior cubic footage to determine fire retardant agent usage and amount (see Figures 1 and 5).

10.3.7 Cockpit or flight deck. Illustrations and information for the cockpit or flight deck including controls for engine and APU shutdown (see Figure 4).

10.3.8 Cabin layout. Illustrations and information for cabin layout, crewmember and passenger configurations, capacity, and any possible locations outside the normal seating arrangements, (i.e., galley, latrine, equipment, and maintenance areas or bays, etc.) (see Figure 5).

10.3.9 Escape locations. Illustrations and information for exterior and interior detailed views and procedures for all entry doors, ramps, sliding windows, escape hatches, and any escape ropes and ladders associated with the above (see Figure 2).

10.3.10 Escape and ejection systems. Illustrations and information for escape and ejection systems employing pyrotechnics and their associated hazards. This information includes the safeing of such systems and required disconnection (e.g., oxygen and communication leads, etc.) enabling successful aircrew extraction and rescue (see Figure 6).

10.3.11 Restraint devices. Illustrations and information for seats employing restraint devices and procedures for releasing occupants from the seats, including positioning levers, (i.e., inertial reel control, vertical, horizontal, tilt, and pedestal controls for shifting the seat forward or aft) (see Figure 6).

10.3.12 Skin penetration points. Illustrations and information for skin penetration points and their dimensions for all potential fire areas. A broken line illustrates each area for skin penetration (see Figure 7).

10.3.13 Window cut-in areas. Illustrations and information for locations and dimensions of cut-in areas around all aircraft windows and their internal operation, if applicable (i.e., sliding open with associated controls, etc.). A broken line illustrates each area for cut-ins (see Figure 2).

10.3.14 Flotation equipment. Illustrations and information for the controls, locations, and use of flotation equipment deployment systems and any associated hazards during deployment. This information includes location and procedures for escape for overhead openings and hatch openings requiring ropes or ladders after deployment.

Block 10, Preparation Instructions (Continued)

10.3.15 Fire extinguishers. Illustrations and information for fire extinguisher locations, capacities, and types of extinguishing agents.

10.3.16 Engine fire bottles. Illustrations and information for engine fire bottle (if any) locations, capacities, and types of extinguishing agents.

10.3.17 Oxygen systems. Illustrations and information for locations, capacities, and number of oxygen regulators, shutoff valves, and cylinders or bottles in the system.

10.3.18 On Board Inert Gas Generating System (OBIGGS). Illustrations and information for any OBIGGS, as well as locations and capacities of nitrogen cylinders, and location of panel switches that control these systems.

10.3.19 Hydraulics. Illustrations and information for locations and capacities of hydraulic fluid reservoirs and lines.

10.3.20 Hazardous materials. Illustrations and information for the material, health hazard, first aid treatment, fire hazard, location, and amount.

10.4 Tools. Tools required for fire protection and emergency rescue for the system. If any tools must be locally manufactured, this information includes complete instructions for fabrication of the tool such as parts required, procedures for fabrication and treating, special processes, etc., (see Figure 8).

# C-17

**SPECIAL TOOL/EQUIPMENT**

35 ft Extension Ladder, "A" frame ladder, number 2 Phillips screwdriver for oxygen access, power rescue saw, portable lights, SP/AT tool.

**AIRCRAFT ENTRY**

**ALL MODELS**

Maximum crew seats (7)  
 Maximum Passengers (102)  
 Maximum Litters (48)

**AIRCRAFT DIMENSIONS**

LENGTH: --- 173'11"  
 WING SPAN: --- 169'9"  
 HORIZONTAL STABILIZER: --- 65'  
 HEIGHT (GEAR DOWN): --- 55'1"  
 HEIGHT (BOARDING) (GRND TO END): --- 6'11"  
 ENGINES (OUTBOARD) (GRND TO ENG): --- 7'6"  
 CREW ENTRY DOOR (DOOR TO GRND): --- 5'9"  
 FWD EMERGENCY DOOR (DOOR TO GRND): --- 5'9"  
 TROOP DOORS (DOOR TO GRND): --- 5'3"

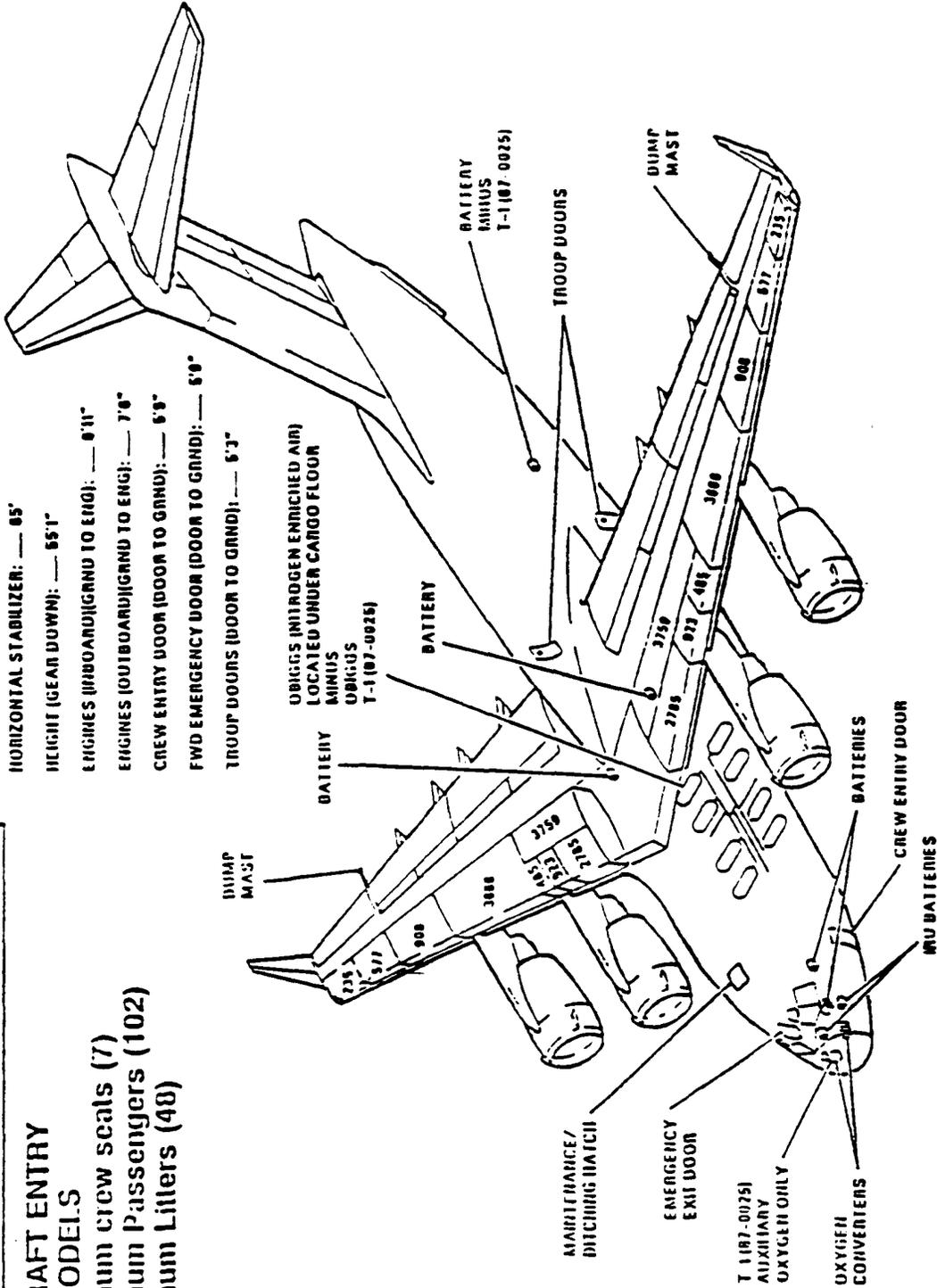


FIGURE 1. Example of list of special tools, number of personnel, entries, hatches, OBIGGS, and aircraft dimensions.

**F-111**

**SPECIAL TOOLS/EQUIPMENT**  
 Power Rescue Saw  
 Dzus Key/Screwdriver

**AIRCRAFT ENTRY**  
 ALL MODELS

**WARNING**

If the module is fired shrapnel fragments will be blown from sides and top of module.

**1. NORMAL/EMERGENCY ENTRY**

- a. Push internal lock release button, located both sides of aircraft below canopy rails.
  - b. Push forward end of external handle, located aft of internal lock release button, pull external handle and raise canopy to locked position.
  - c. Position handle back to the lock detent (midway) position to lock canopy open.
- 2. CUT-IN**
- a. Cut canopy along canopy frame.

**CAUTION**

Do not cut canopy frame.

**NOTE:**

Access for cooling of weapons can be accomplished through panel 2101 on left side and panel 2204 on right side of fuselage.

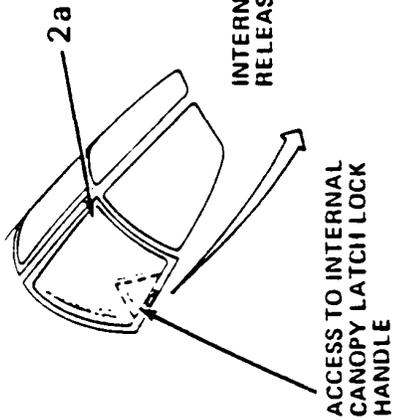
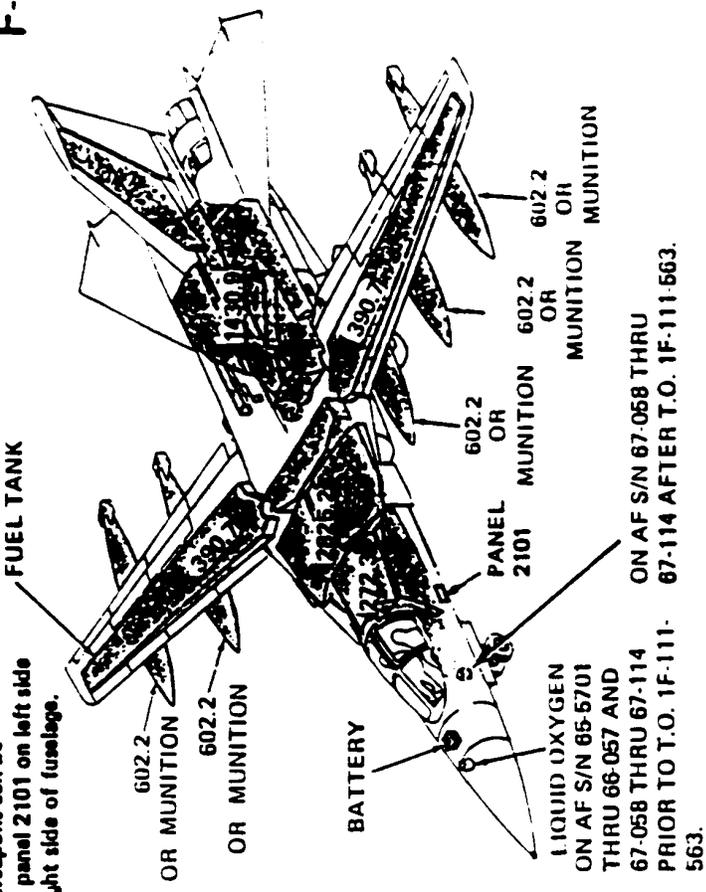


FIGURE 2. Example of general view depicting fuel, oxygen, armament, batteries, list of special tools, normal and emergency entry, cut-in procedures and miscellaneous aircraft information.

# C-17

## DANGER AREAS

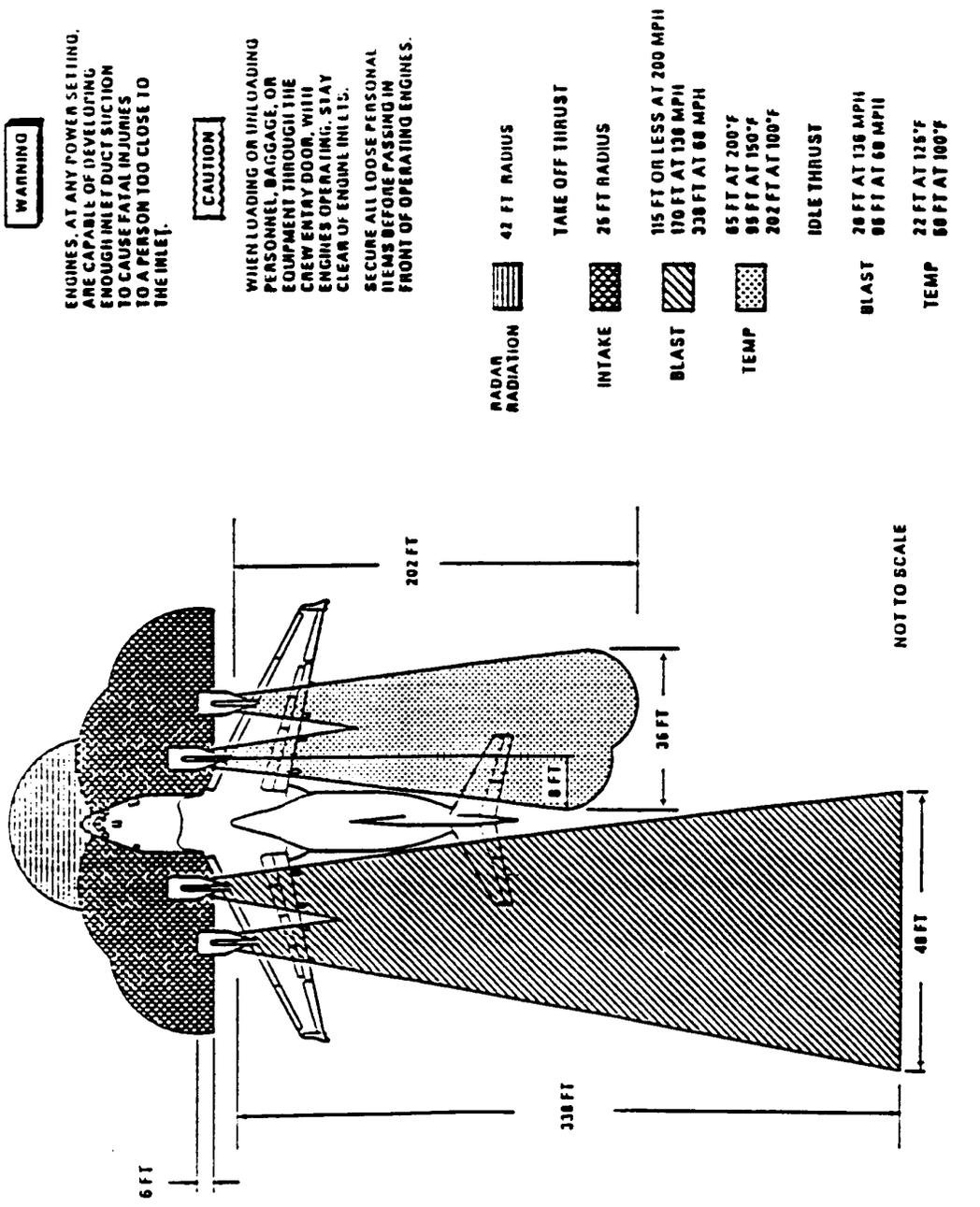
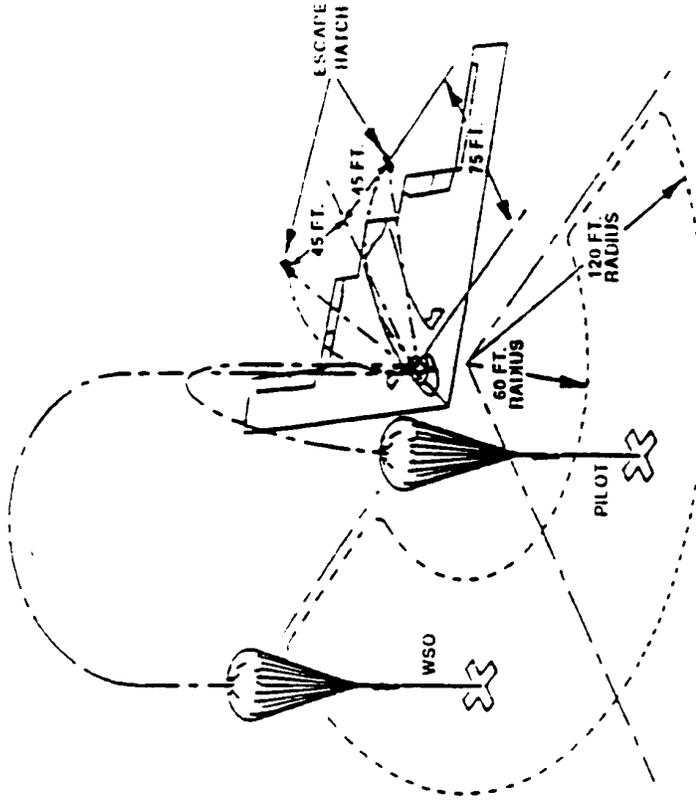


FIGURE 3. Example of external hazards.

**IMPACT DANGER AREAS**



Keep personnel and vehicles clear of impact areas during emergency entry.



**B-2A**

FIGURE 3. Example of external hazards - Continued.



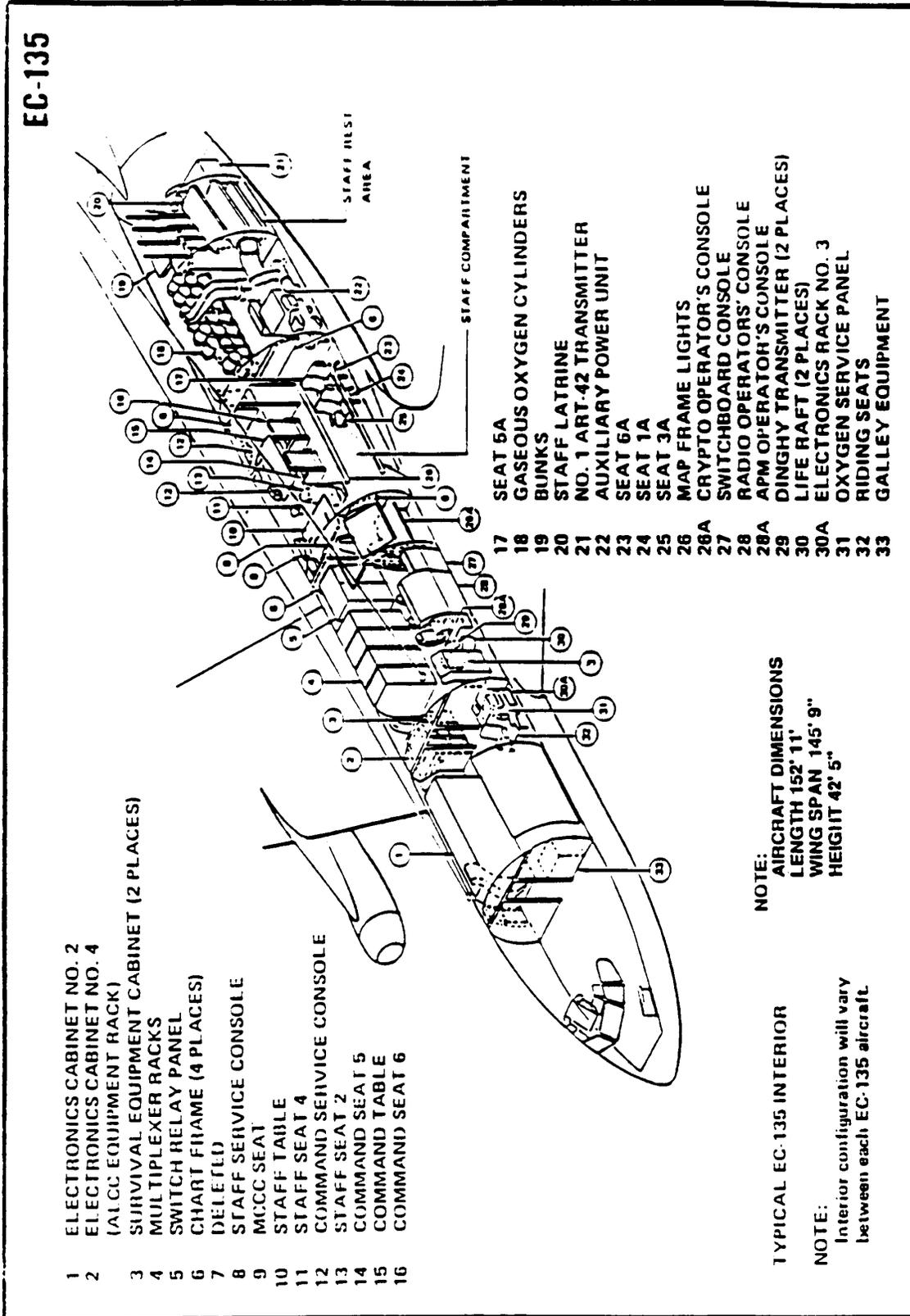


FIGURE 5. Example of cabin arrangement and aircraft dimensions.

**SAFETYING EJECTION SEAT AND AIRCREW EXTRACTION**

**WARNING**  
 After TC TO 13A5-56-540, the seat is armed regardless of canopy position. Prior to TC TOs 540 and 544, jettisoning the aircraft canopy automatically armed the ACES II ejection seat. On two seat aircraft, both seats must be safetied before either can be considered safe. Prior to entering cockpit, locate **FIRE WARNING INDICATOR** on seat bulkhead left side near canopy sill. A red spiral indicator will indicate system actuation or system malfunction if seat(s) are still in aircraft. Look for raised **EJECTION CONTROL HANDLES**. Use **EXTREME CAUTION** under these circumstances, system can still actuate!

**1. NORMAL SAFETYING OF EJECTION SEAT(S)**

- a. Rotate Ground Safety Lever, located left side of seat directly aft of the left Ejection Control Handle, UP and FORWARD.

**NOTE:**

The Ejection Control Handle safety pin can ONLY be installed from the forward inboard side of the left handle.

- b. Install safety pin in left Ejection Control Handle.

- c. Install safety pin in Restraint Emergency Release handle, located on right side of seat. After TC TO 13A5-56-540 this handle will be referred to as the Emergency Manual Chute Handle.

**2. EMERGENCY SAFETYING OF EJECTION SEAT(S) AFTER CANOPY JETTISON**

**WARNING**

Rotating the Ground Safety Lever in this situation does not adequately prevent the possibility of inadvertent ejection.

- a. Insert safety pin in left Ejection Control Handle.

- b. Cut ballistic hoses on left and right sides of seat(s), above disconnects, to prevent ballistic gas from actuating ejection devices.

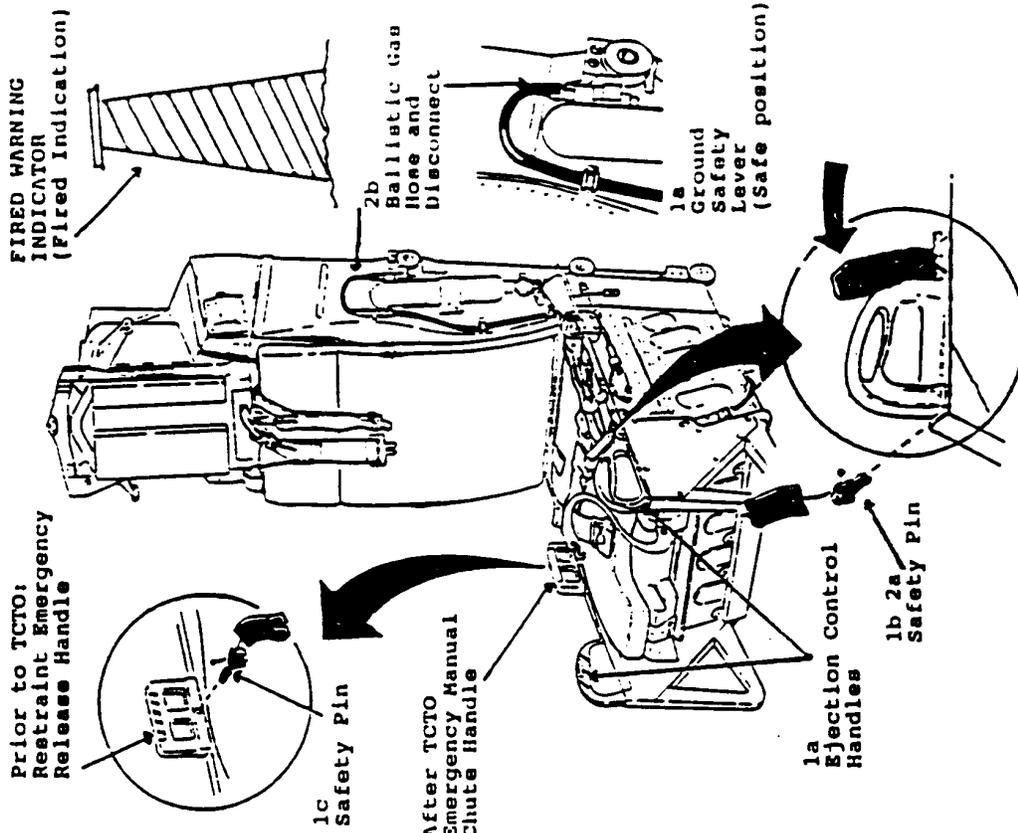


FIGURE 6. Example of safeing ejection seat and restraint systems.

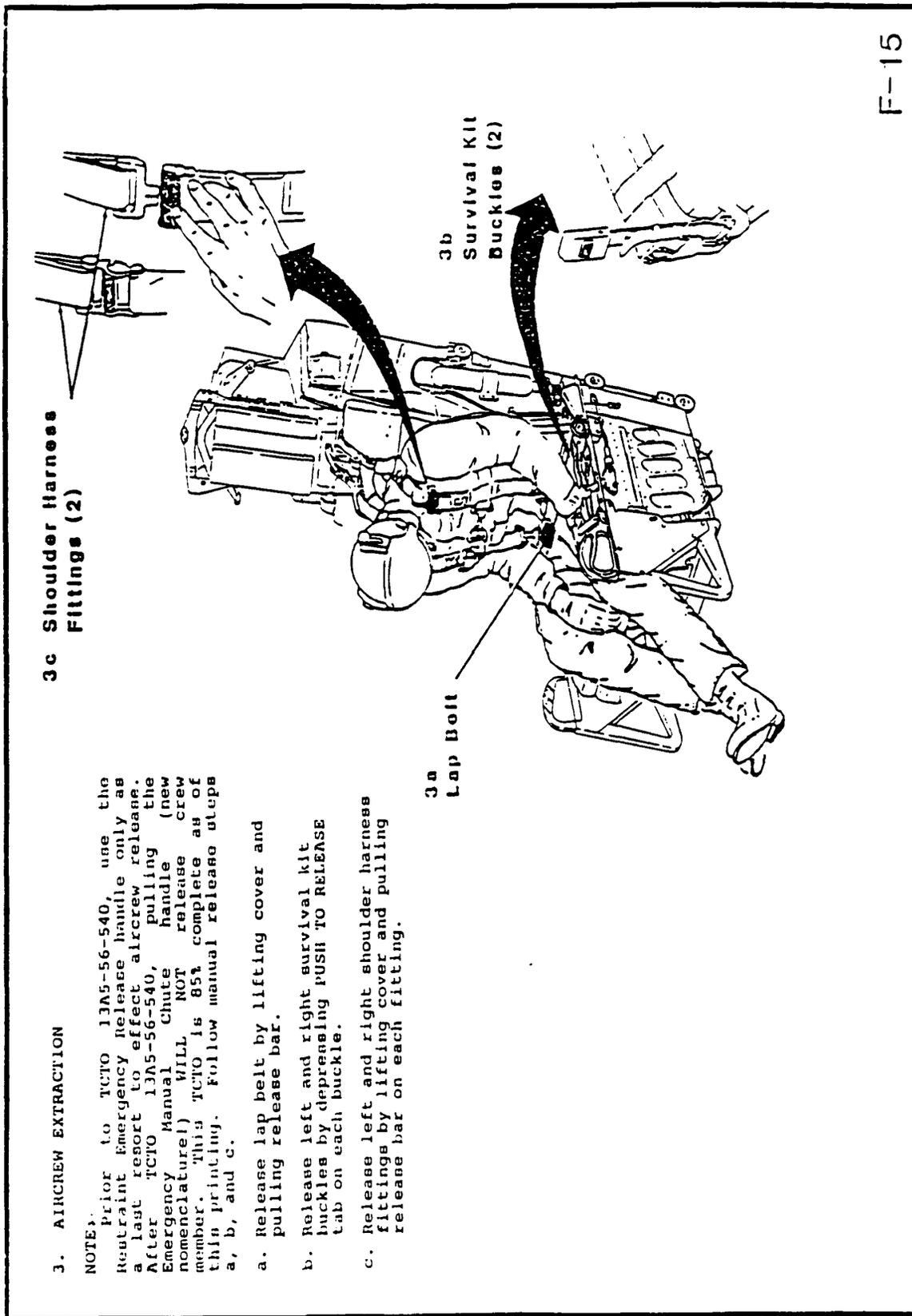


FIGURE 6. Example of safing ejection seat and restraint systems - Continued.

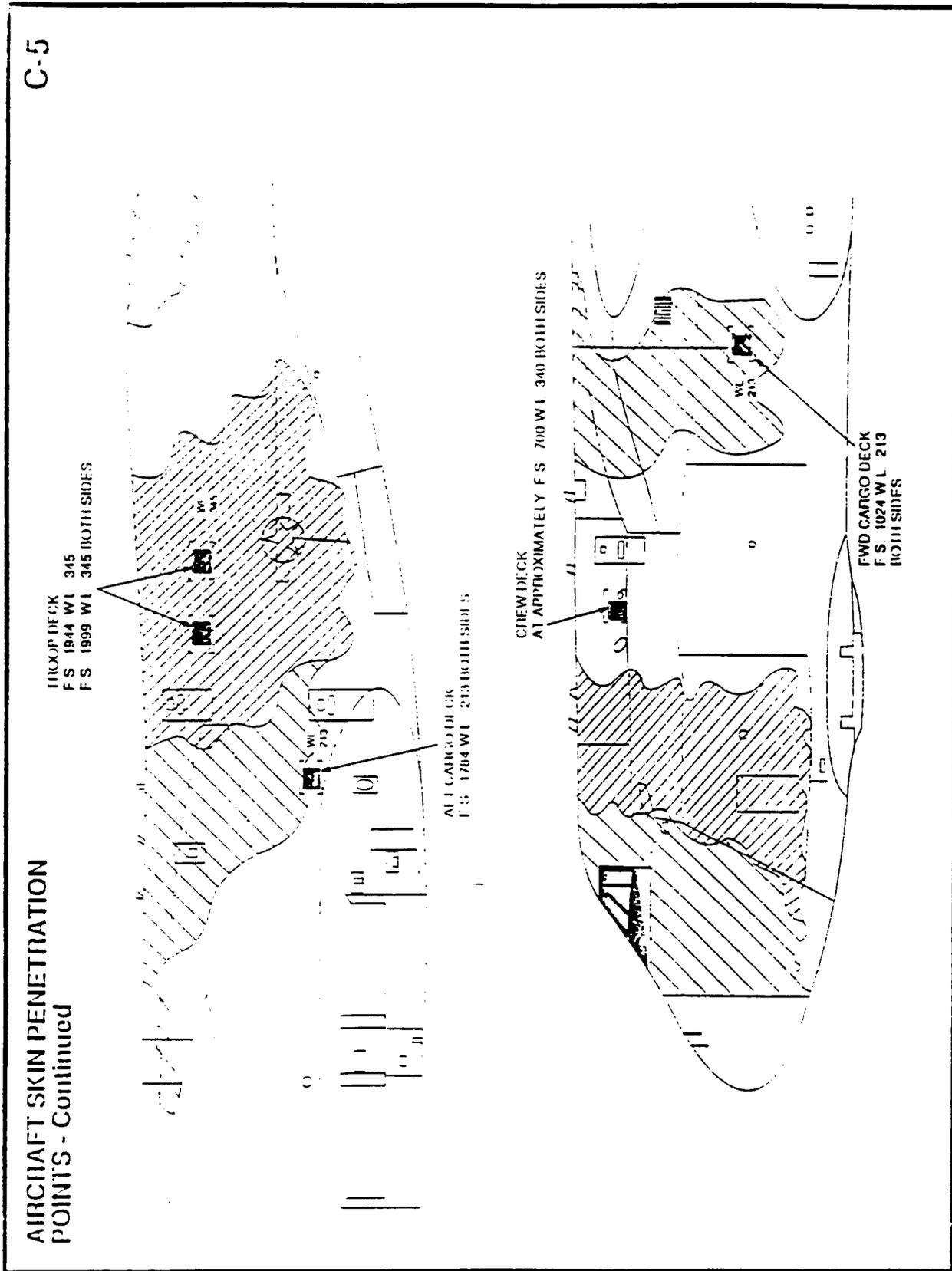
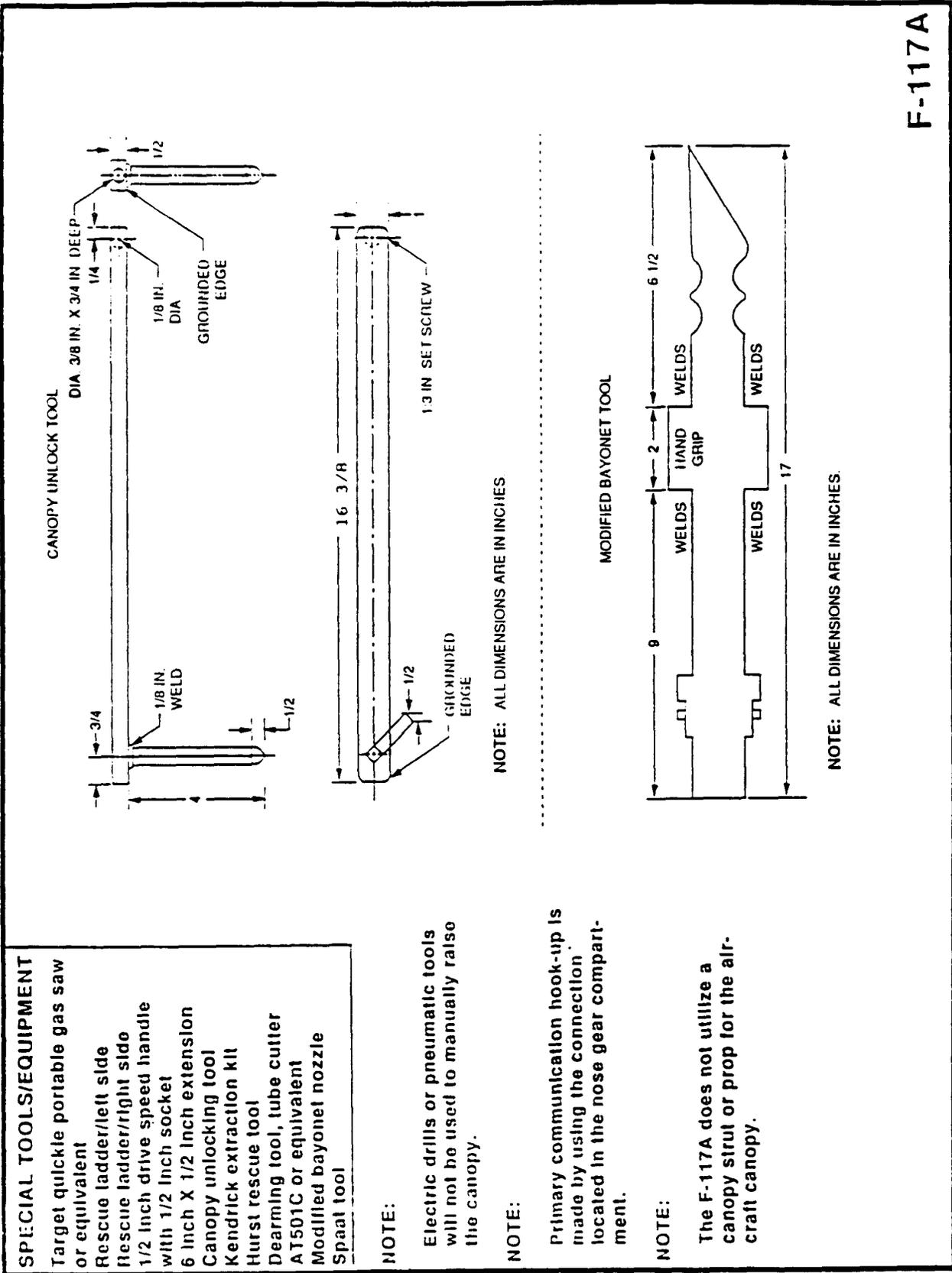


FIGURE 7. Example of skin penetration points.



F-117A

FIGURE 8. Example of special tools.