

**WELCOME TO TECHNICAL ORDER 00-105E-9, 1 JULY 2004, REVISION 9.**

**THIS IS SEGMENT 4 COVERING CHAPTER 6 TO THE EC-18B.**

**TO NAVIGATE**

**CLICK ON THE BOOKMARKS AND CLICK ON THE (+) SYMBOLS, THEN CLICK ON SUBJECT LINKS TO GO TO SPECIFIC VIEWS IN THIS SEGMENT.**



**CONTINUE**

**NOTICE**

**CONTACT**

**TO GO DIRECTLY TO THE TECHNICAL ORDER,  
CLICK ON THE CONTINUE BUTTON.**

**TO SEE THE SEGMENT INFORMATION CHANGE NOTICE,  
CLICK ON THE NOTICE BUTTON.**



**TO CONTACT THE TECHNICAL CONTENT MANAGER ,  
CLICK ON THE CONTACT BUTTON.**

## TECHNICAL ORDER 00-105E-9 TECHNICAL CONTENT MANAGER

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For technical order improvements, correcting procedures, and other inquiries, please use the above media most convenient.

## SEGMENT 4 INFORMATION CHANGE NOTICE

This page is provided to notify the user of any informational changes made to Technical Order 00-105E-9 in this Segment and the current Revision. Informational changes will be referenced in the Adobe Reader's Bookmark tool as a designator symbol illustrated as a <[C]> for quick reference to the right of the affected aircraft. The user shall insure the most current information contained in this TO is used for his operation. Retaining out of date rescue information can negatively affect the user's operability and outcome of emergencies. If the user prints out pages his unit requires, the user shall print the affected page(s), remove and destroy the existing page(s), and insert the newly printed page(s) in the binder provided for that purpose. A Master of this TO shall be retained in the unit's library for reference, future printing requirements and inspections.

<u>CHAPTER</u>	<u>AIRCRAFT</u>	<u>PAGE</u>	<u>EXPLANATION OF CHANGE</u>
6	C-17	1 thru 8	Added redefined engine danger areas, new countermeasure system, and laser zones.
6	C-18D	1	Added new paint scheme page.
6	EC-18B	ALL	Remove aircraft from inventory.

## NOTE

Chapter 6 contains emergency rescue and mishap response information for the following aircraft:

USAF	C-5
USAF	C-7
USAF	(V)C-9A/C
USAF	C-12F
USAF	C-12J
USAF	C-17A
USAF	C-18
USAF	C-18D
USAF	C-20
USAF	C-20H
USAF	C-21
USAF	C-22B
USAF	C-23A
USAF	C-26
USAF	C-27A
USAF	C-32A
USAF	C-37A
USAF	C-38A
USAF	C-40
USAF	C-130
USAF	C-130J
USAF	C-135
USAF	C-135E
USAF	NKC-135E
USAF	OC-135B
USAF	RC-135S
USAF	RC-135U
USAF	RC-135V/W
USAF	TC-135S
USAF	TC-135W
USAF	WC-135W
USAF	(V)C-137
USAF	C-141
USAF	NC-141A
USAF	C-212
USAF	KC-10A

**CHAPTER 6****U.S. AIR FORCE****CARGO/TANKER/TEST****AEROSPACE EMERGENCY RESCUE  
AND MISHAP RESPONSE INFORMATION****6-1. INTRODUCTION AND USE.**

6-2. This section contains emergency rescue and mishap response information illustrations in alpha-numerical order relative to type and model of aircraft. This arrangement of illustrations is maintained from Chapter 4 throughout the remainder of the publication.

**6-3. GENERAL ARRANGEMENT.**

6-4. Aircraft type designation has been positioned in the upper right corner of the horizontal illustration for rapid identification. Additional aids to rapid orientation are:

a. Recent technological advances in aviation have caused concern for the modern firefighter. Aircraft hazards, cabin configurations, airframe materials, and any other information that would be helpful in fighting fires, the locating and rescue of personnel will be added as the information becomes available.

b. Suggested special tools/equipment are listed in the upper left corner, on the Aircraft/Entry page of each listed aircraft.

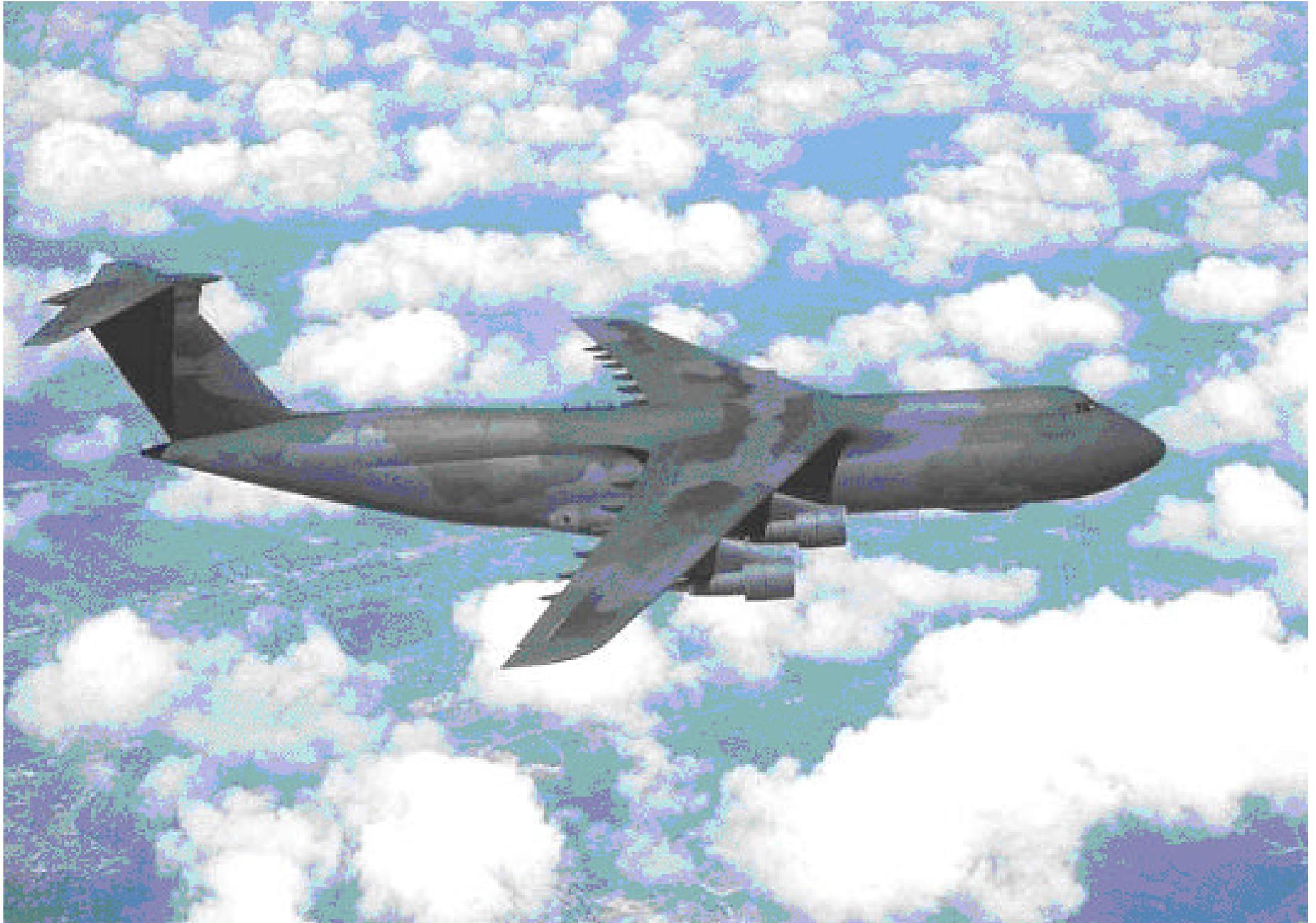
c. Procedural steps covering emergency/normal entrances, cut-ins, engine/APU shutdown, safetying ejection/escape systems, and aircrew extraction are outlined on the left side of each page with coordinated illustrations on the right.

d. Illustrations located on right side of pages are coordinated with text by numerals and small letters depicting both paragraph and subparagraph on the page.

e. Each illustration is consistently colored and/or pattern keyed to highlight essential emergency rescue information.

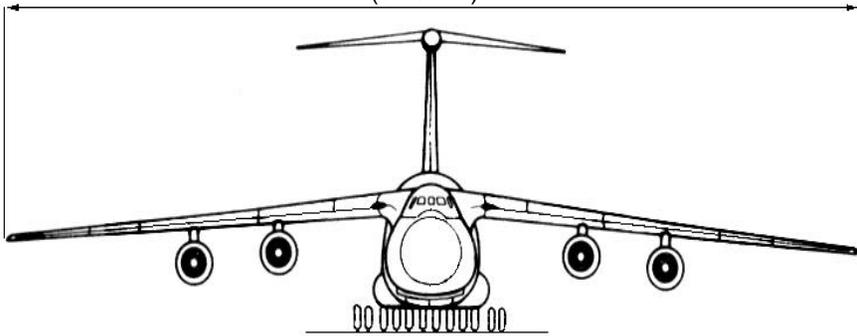
f. Details are pulled directly from the illustration to highlight an area, thus eliminating unnecessary searching for desired information.

# AIRCRAFT PAINT SCHEME

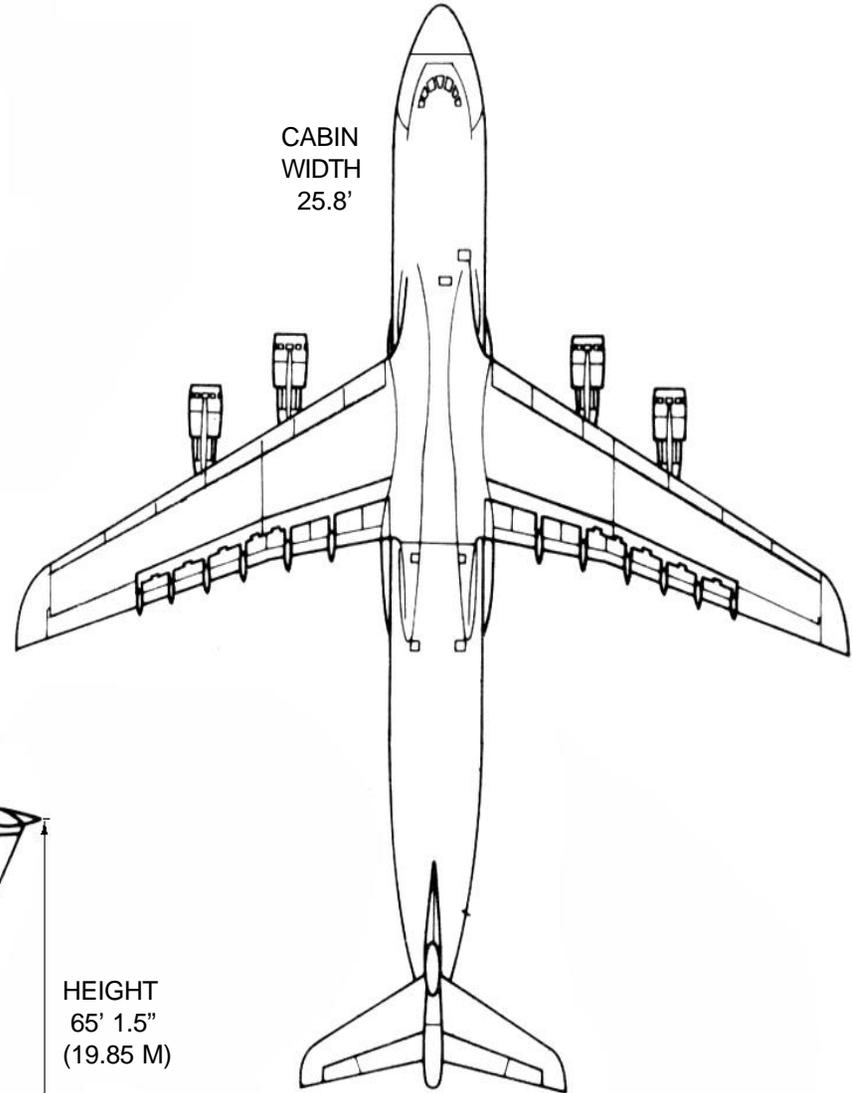


# AIRCRAFT DIMENSIONS

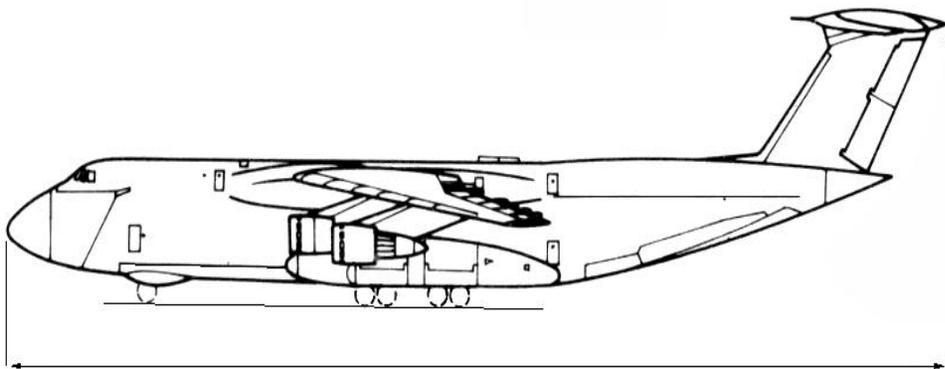
WING SPAN  
222' 8.5"  
(67.88 M)



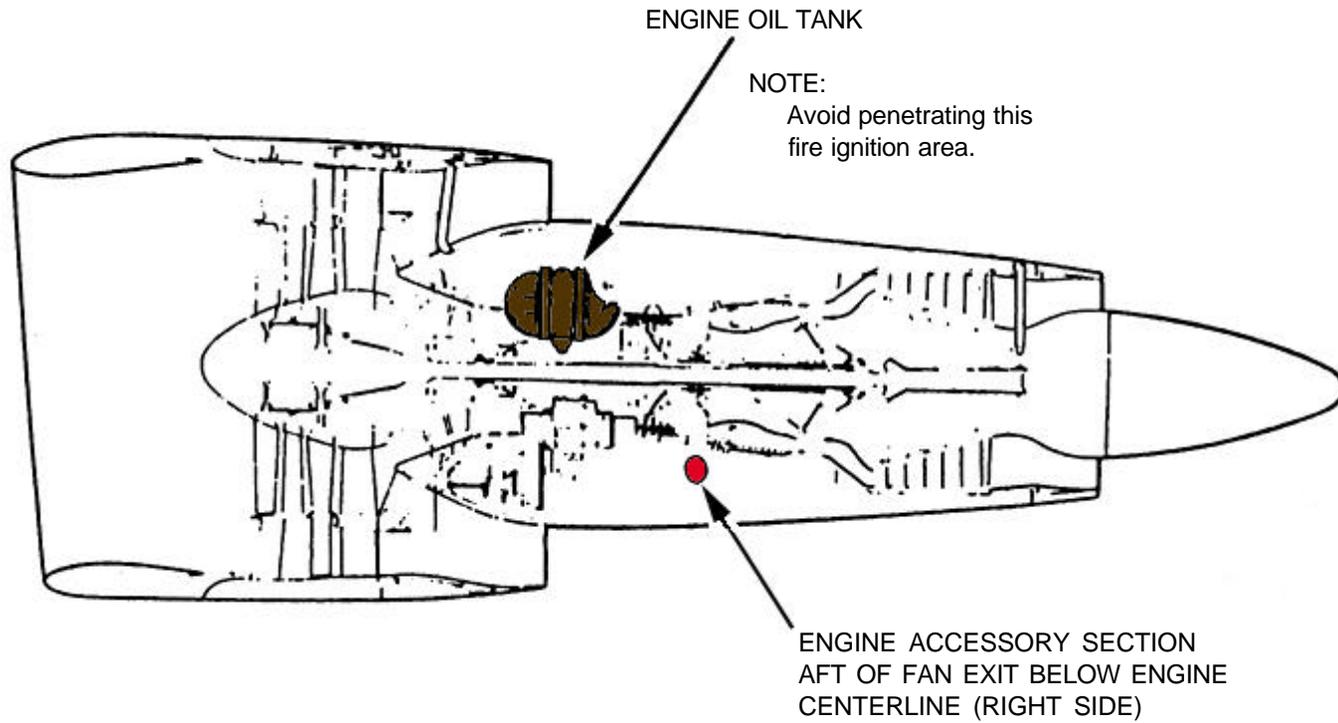
CABIN  
WIDTH  
25.8'



HEIGHT  
65' 1.5"  
(19.85 M)

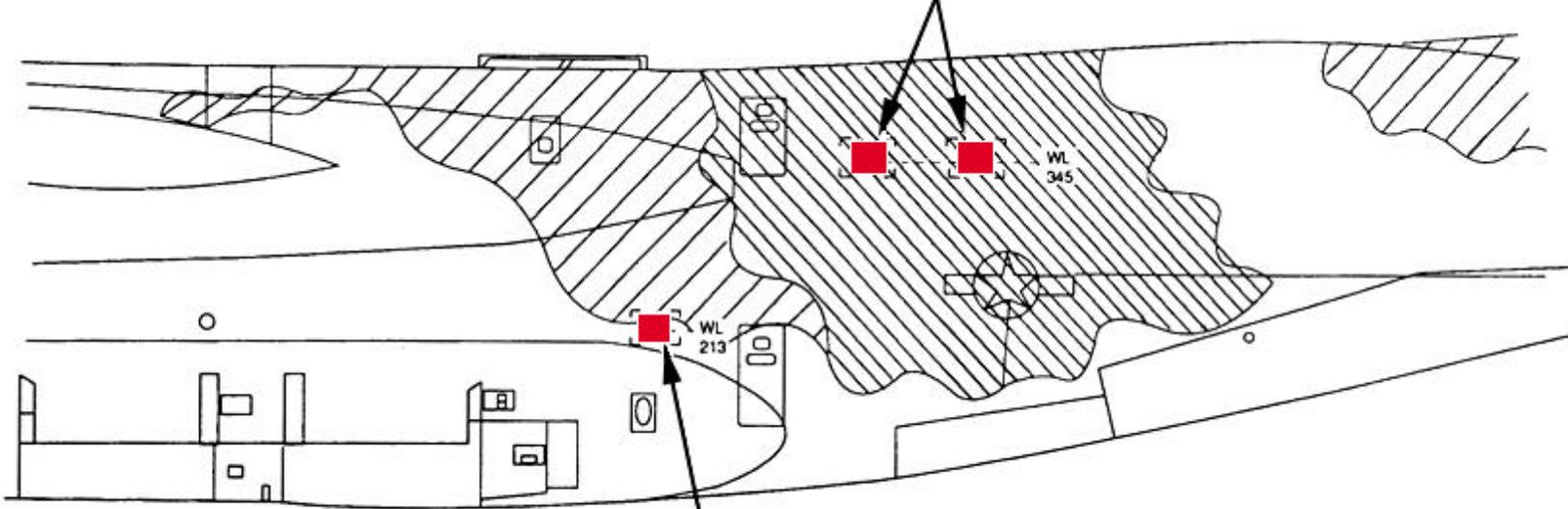


LENGTH: 247' 10" (75.54 M)



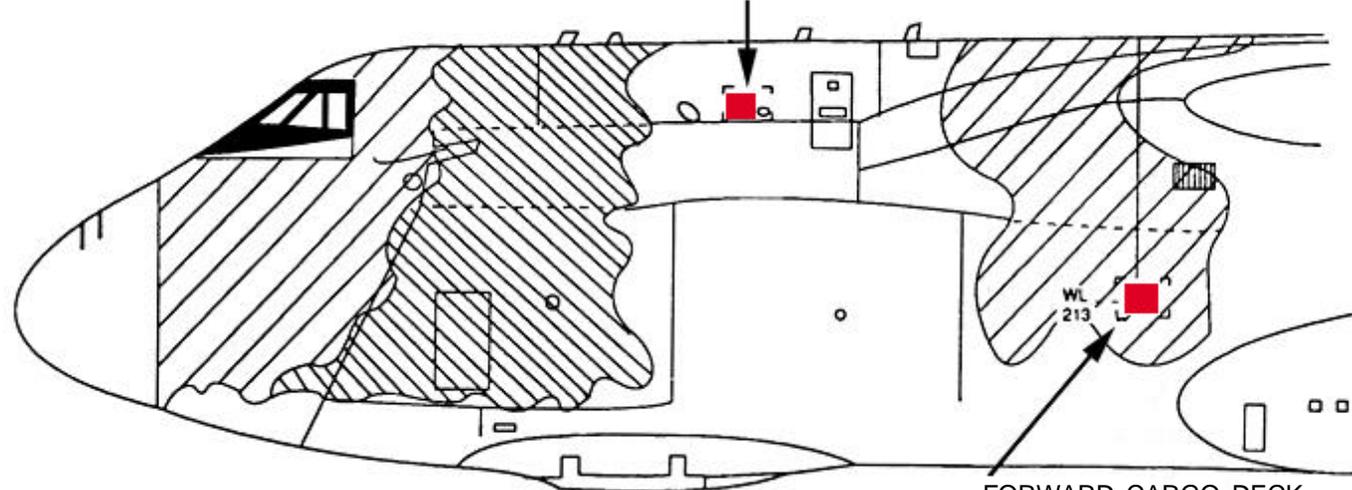
# AIRCRAFT SKIN PENETRATION POINTS- Continued

TROOP DECK  
F.S. 1944 W.L. 345  
F.S. 1999 W.L. 345 BOTH SIDES



AFT CARGO DECK  
F.S. 1784 W.L. 213 BOTH SIDES

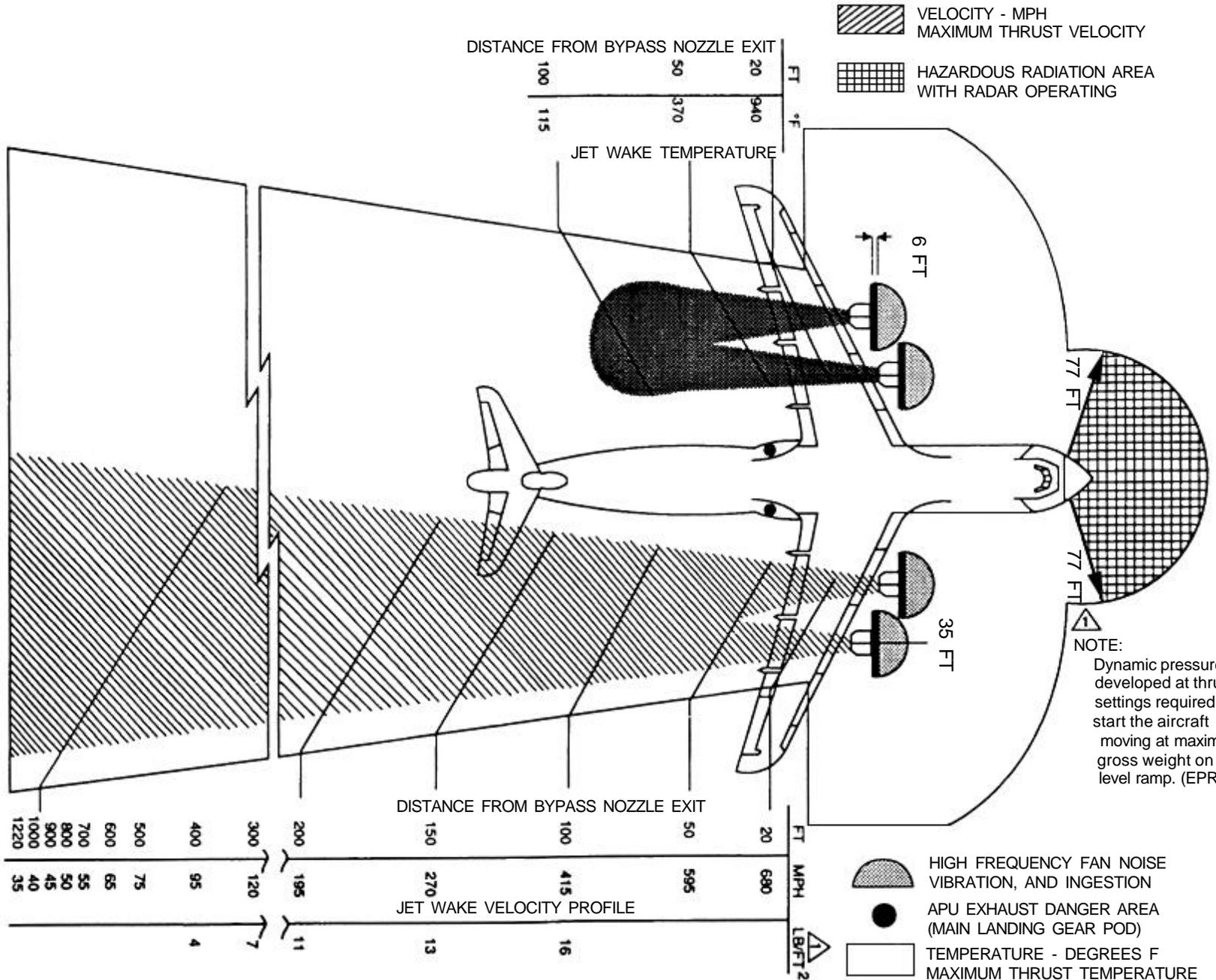
CREW DECK AT APPROXIMATELY  
F.S. 700 W.L. 340 BOTH SIDES



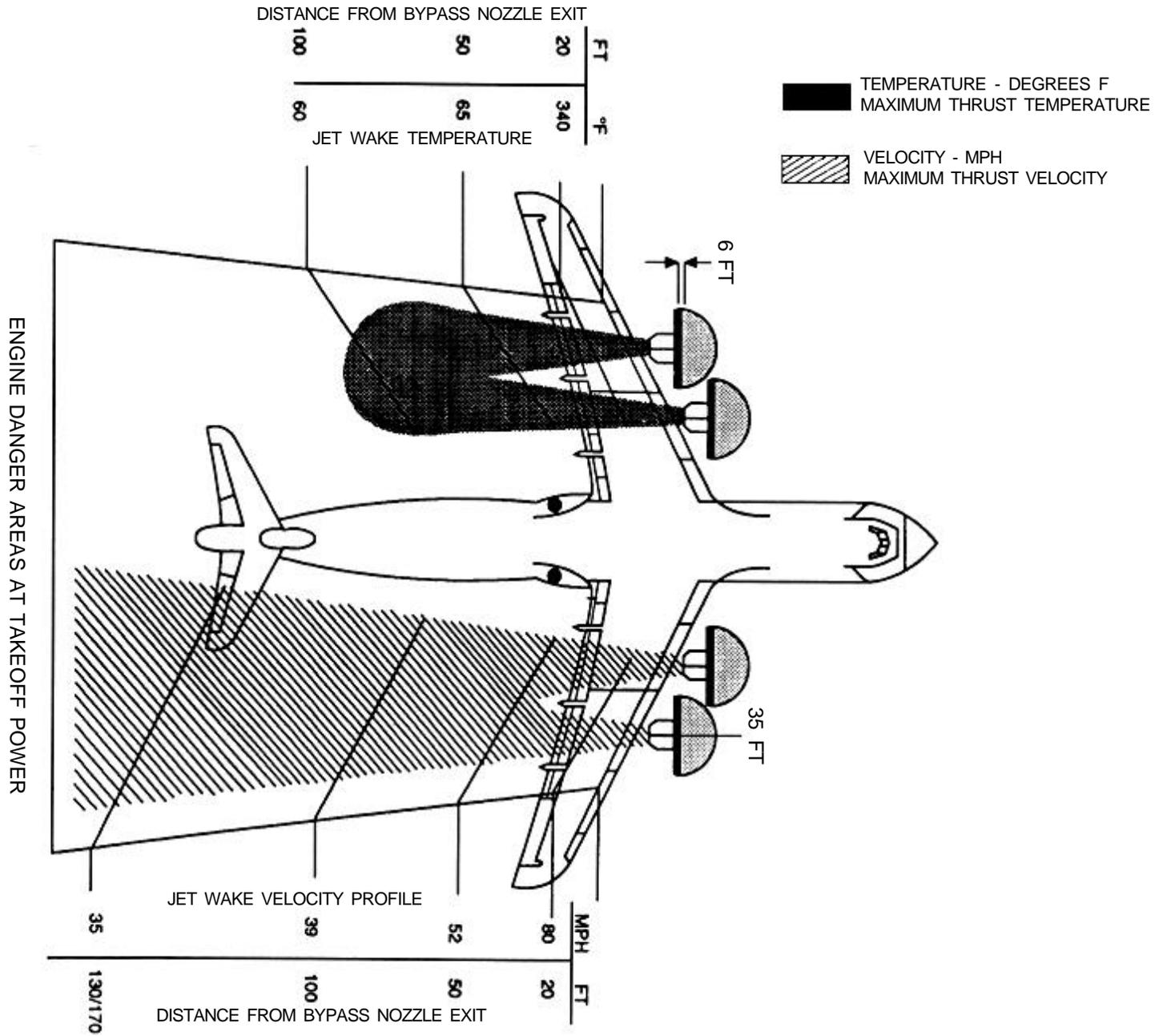
FORWARD CARGO DECK  
F.S. 1024 W.L. 213 BOTH SIDES

# AIRCRAFT HAZARD INFORMATION

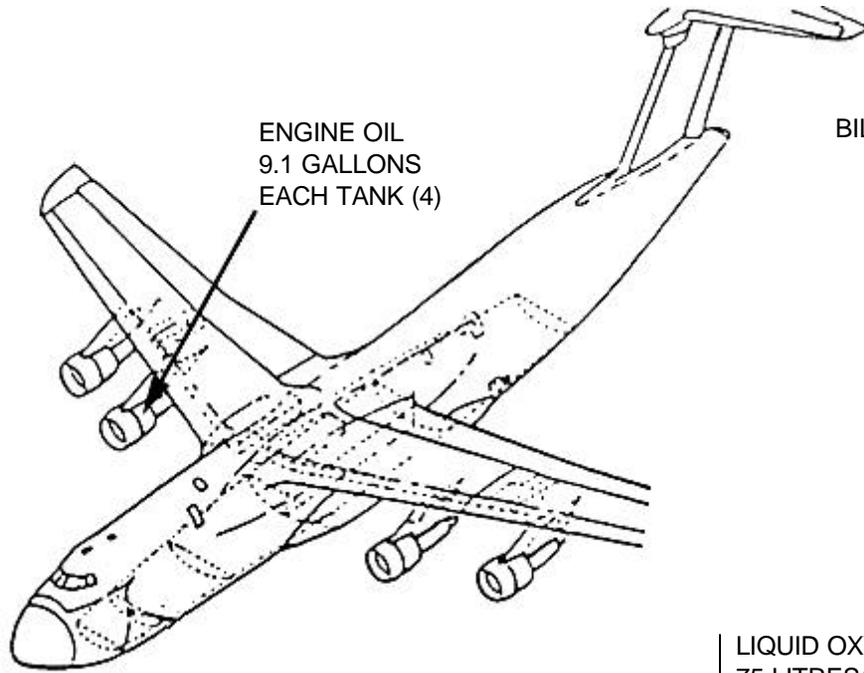
ENGINE DANGER AREAS AT TAKEOFF POWER



# AIRCRAFT HAZARD INFORMATION-Continued

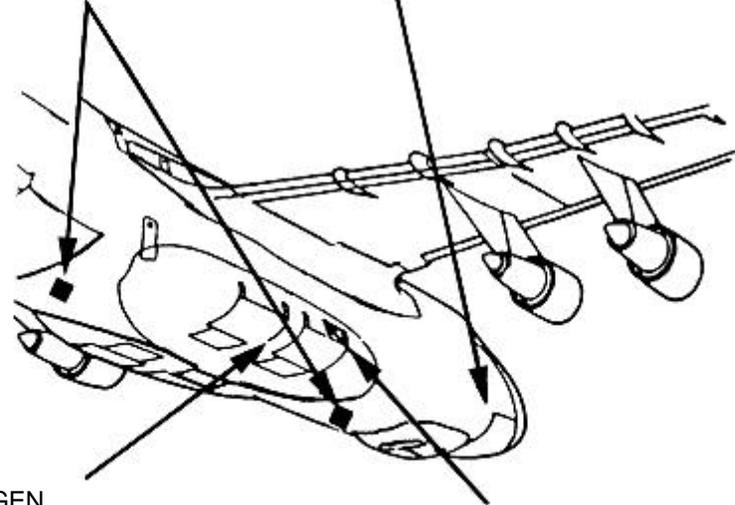


# AIRCRAFT HAZARD INFORMATION-Continued



ENGINE OIL  
9.1 GALLONS  
EACH TANK (4)

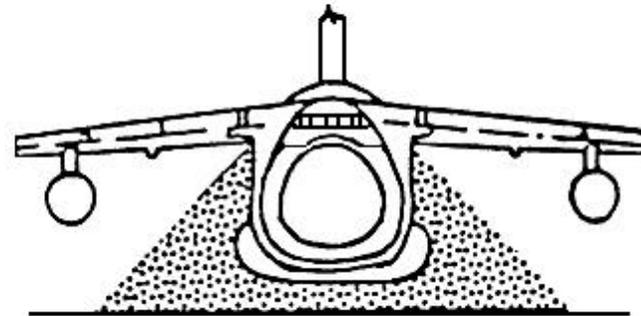
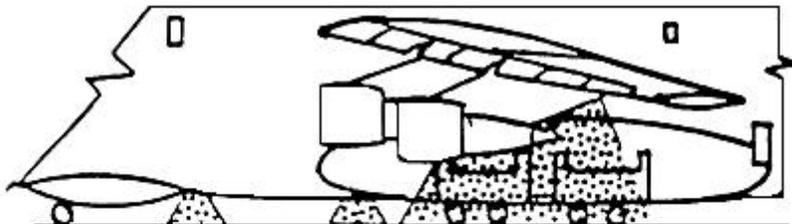
BILGE ACCESS DOORS



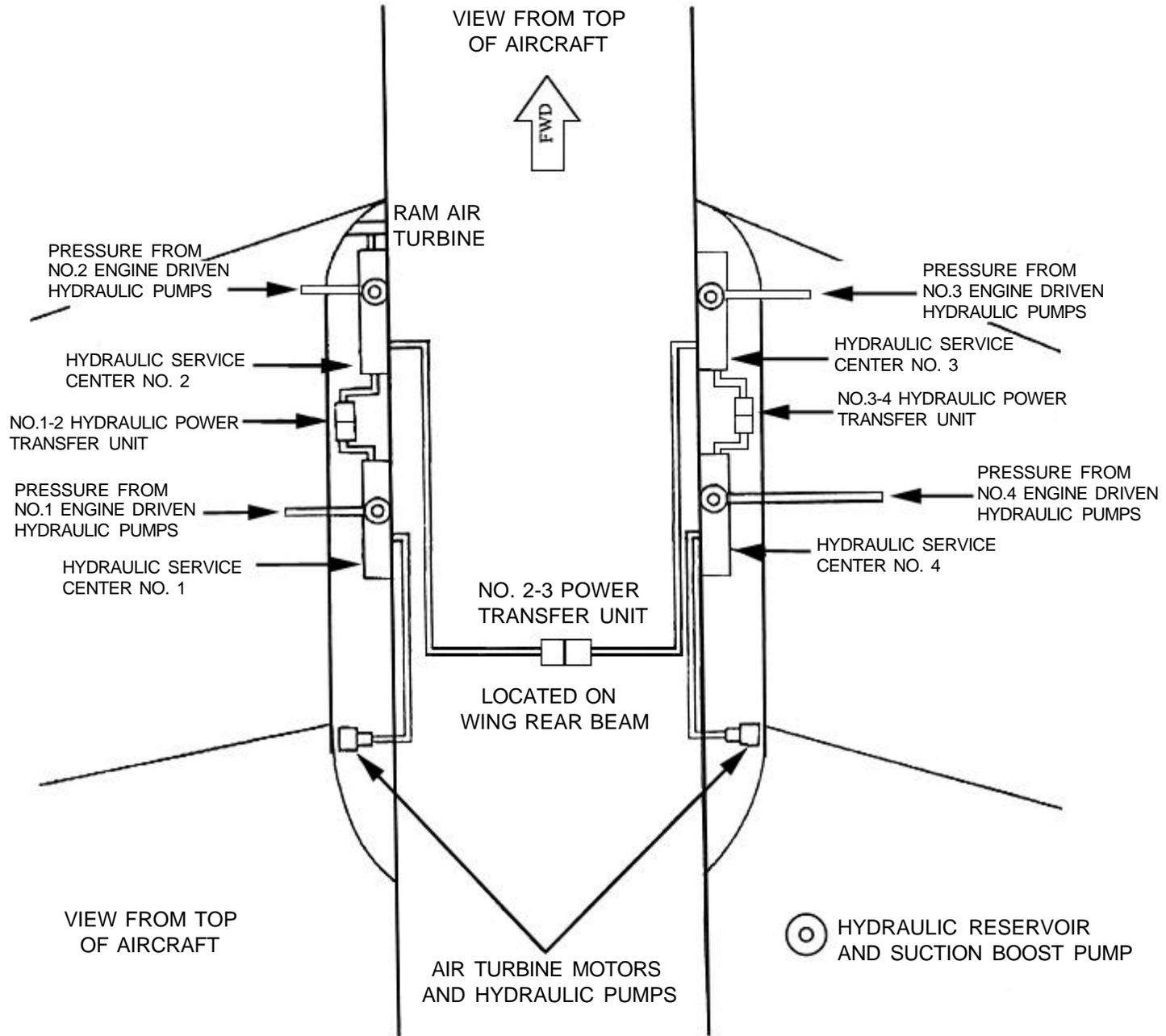
BATTERIES-  
CARGO COMPARTMENT RIGHT FORWARD  
WALL OPPOSITE THE CREW ENTRY DOOR

LIQUID OXYGEN  
75 LITRES/25 LITRES  
RIGHT MAIN LANDING GEAR POD  
BETWEEN FORWARD AND AFT  
MAIN LANDING GEAR.

HYDRAULIC RESERVOIRS BOTH  
SIDES 10 GALLONS/5.7 GALLONS  
NEAR F.S. 1300 FORWARD AND  
ABOVE FORWARD MAIN  
LANDING GEAR.



 FSS LIQUID NITROGEN OVERBOARD  
VENT, DANGER AREAS



VIEW FROM TOP OF AIRCRAFT

VIEW FROM TOP OF AIRCRAFT



RAM AIR TURBINE

PRESSURE FROM NO.2 ENGINE DRIVEN HYDRAULIC PUMPS

HYDRAULIC SERVICE CENTER NO. 2

NO.1-2 HYDRAULIC POWER TRANSFER UNIT

PRESSURE FROM NO.1 ENGINE DRIVEN HYDRAULIC PUMPS

HYDRAULIC SERVICE CENTER NO. 1

NO. 2-3 POWER TRANSFER UNIT

LOCATED ON WING REAR BEAM

AIR TURBINE MOTORS AND HYDRAULIC PUMPS

PRESSURE FROM NO.3 ENGINE DRIVEN HYDRAULIC PUMPS

HYDRAULIC SERVICE CENTER NO. 3

NO.3-4 HYDRAULIC POWER TRANSFER UNIT

PRESSURE FROM NO.4 ENGINE DRIVEN HYDRAULIC PUMPS

HYDRAULIC SERVICE CENTER NO. 4

HYDRAULIC RESERVOIR AND SUCTION BOOST PUMP

**SPECIAL TOOLS/EQUIPMENT**

- 35 Ft. Extension "A" Frame Ladder \*
- 3/8 In. Drive Ratchet for Engine Cowling
- Power Rescue Saw
- Portable Lights
- Fire Drill II

**WARNING**

Do not attempt to fight fire through APU and ATM compartment push-in doors during APU operation.

TOTAL FUEL:  
51,000 US GALS.  
TYPE: JP-8

**AIRCRAFT ENTRY ALL MODELS**

**NOTE:**

Crew entry door will usually have a mechanical lock installed on the inside and entry will not be possible. Use 7LT or 7RT.

**1. NORMAL ENTRY**

- a. Open crew entrance door control access cover.

**WARNING**

Ensure no personnel are standing under door.

- b. Pull the latch release handle (gray) down to pressurize the door system.
- c. Push crew door operate handle (black) up.

**NOTE:**

If the hydraulic system accumulator is depleted, the door can be extended by using the hydraulic hand pump located behind the crew entrance door controls access cover.

- d. Open aft personnel doors, No. 7LT and 7RT by pulling handles out, rotating clockwise and push in top of door lifting upward, to full up and locked position.

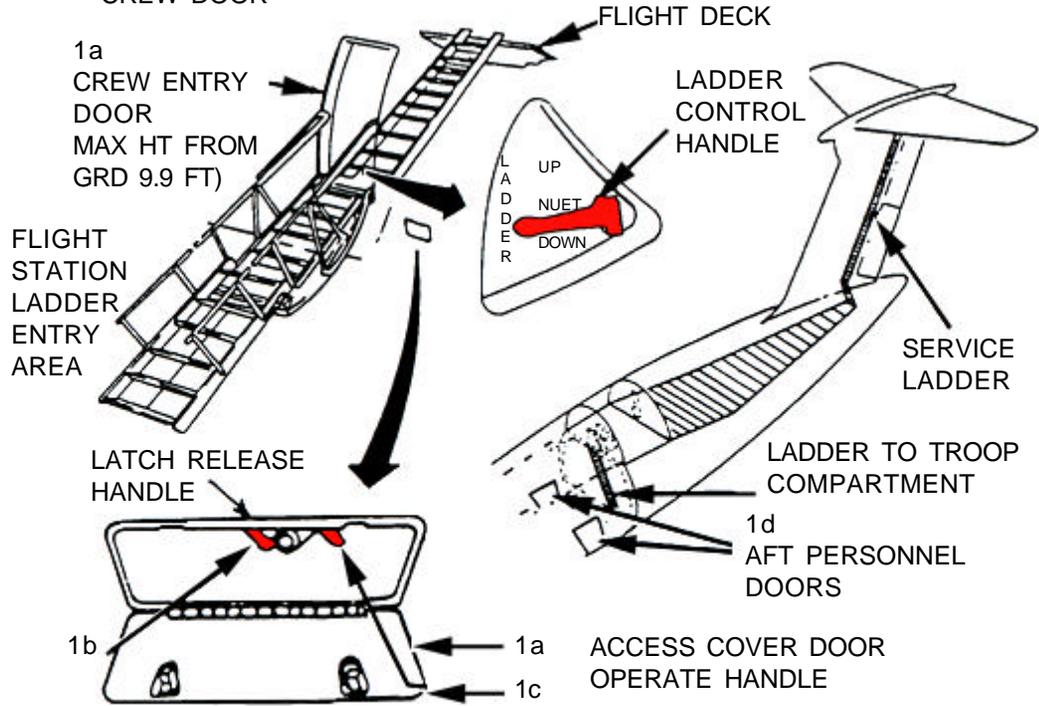
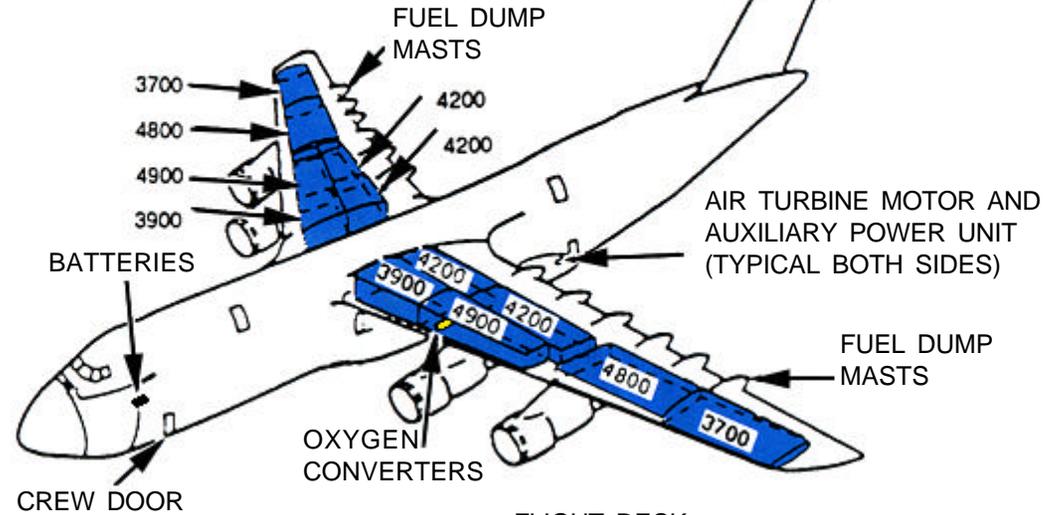
**NOTE:**

Escape slides must be deployed from inside.

**2. EMERGENCY ENTRY**

**NOTE:**

- All escape doors and hatches; if jamming occurs, break guide on top left corner of doors, doors will fall inward, then remove prior to deploying slide.
- \* Bed ladder should be marked at 10<sup>th</sup> rung from bottom to indicate middle fly ladder catch location. This will extend proper amount of ladder to enter doors No. 5 and 6.
- Due to fuselage curvature and wing fillets, handles No. 1, 2, 3 LT, and 3RT should not be used as primary entry points with a ladder.



## AIRCRAFT ENTRY - Continued

### NOTE:

Manual oxygen shut-off valve should be shut off during interior fire fighting operations or any time the possibility of an oxygen-enriched fire occurs. The valve is normally safety-wired open, so a pair of wire cutters may be required to shutoff the valve. The valve is located behind a small compartment door which may be covered by aircraft insulation. Approximate location of the valve:

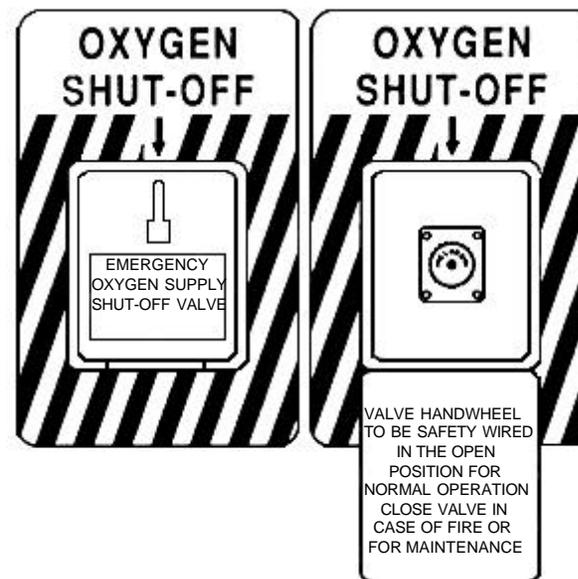
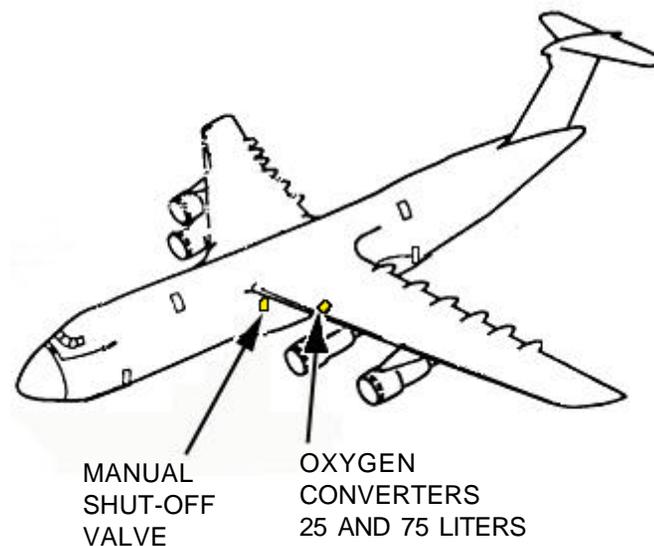
- Midway through cargo compartment, left side.
- Near station #1460
- 79 ft. from normal crew entry door.
- 32 ft. from door 7L.
- 3 ft. above cargo deck.

### NOTE:

Hydraulic system operating pressure is 3000 PSI. Four systems are located in the walls of the cargo compartment: (1) 10 gallons on the left wall near fuselage station 1300, just forward and above the left forward main landing gear. (2) 5.7 gallons on the left wall just forward of the #1 system. (3) 5.7 gallons on the right wall opposite #2 system. (4) 10 gallons on the right wall aft of #3 and opposite #1 system.

### WARNING

When landing gears are in the extended position, hydraulic lines to doors and locks are pressurized. This creates a possible hazard should lines be ruptured. A ruptured condition can be identified by a high pressure mist.



MANUAL SHUT-OFF VALVE

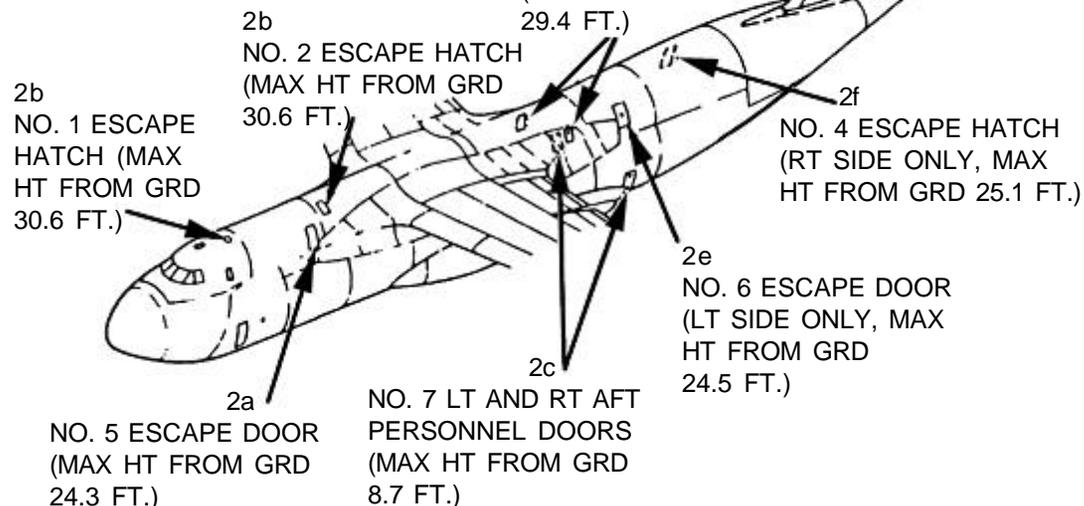
# AIRCRAFT ENTRY - Continued

## 2. EMERGENCY ENTRY - Continued

- Open escape door No. 5 by pulling handle, rotating clockwise and push in at top and lift upward, to full up and locked position.
- Open escape hatch No. 1 and hatch No. 2 by pulling handles and removing hatches. Hatch No. 1 is hinged. Hatch No. 2 falls free.
- Open aft personnel doors No. 7LT and 7RT by pulling handles out, rotate clockwise and push in top of door and lift upward to full up and locked position.
- Open escape hatches No. 3LT and 3RT (troop compartment) by depressing lock on panel and pulling handle upward, push in door and pull upward at bottom of door. Hatches will fall inward.
- Open escape door No. 6 3LT and 3RT (troop compartment) service door (left side only) by pulling handle out, rotate clockwise and push door in and lift upward to full up and locked position.
- Open escape door No. 4 (right side only) by pulling handle out and down. Hatch falls inward when unlatched.

### NOTE:

Heights are with landing gear in taxi or takeoff position.



### NOTE:

Access cannot be gained from flight deck to the troop compartment in the upper deck and vice versa.

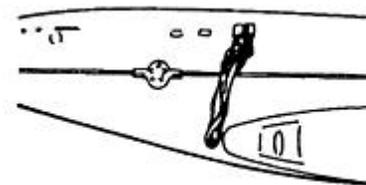
## 3. ESCAPE SLIDE DEPLOYMENT

- Release the quick disconnect buckle.
- Using the assist handle(s), lift case straight up and rest bottom of case on sill of hatch.
- Push case overboard by applying force to the upper edge of the case. The case should split and fall. The escape slide should unfold and automatically inflate as it falls to the ground.
- If the case does not split or the slide does not inflate, grasp both cables attached to the girt bar, slide your hand down the cables as far as possible and then sharply pull the cables. The retaining straps should part, case split, and the slide inflate. If the slide does not inflate pull the red webbing handle marked "Pull to Inflate".

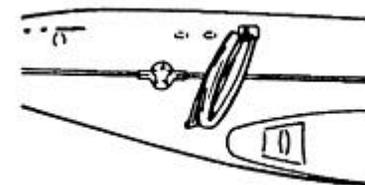
### NOTE:

Five (5) slides are installed, escape doors No. 5 and 6; and escape hatches No. 3LT and RT and 4.

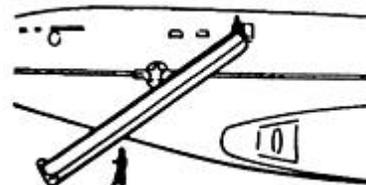
### ESCAPE SLIDE DEPLOYMENT



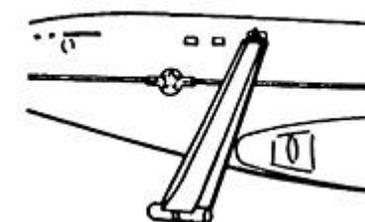
a. SLIDE DEPLOYMENT



b. SLIDE INFLATION



c. SHOULD WIND MOVE SLIDE DURING OR AFTER EXTENSION, STRAIGHTEN AS SHOWN IN 4.



d. SLIDE EXTENSION IN CORRECT POSITION

# AIRCRAFT ENTRY - Continued

## 4. CUT-IN

- a. Left and right side of relief crew compartment.
- b. Two (2) each side of troop compartment aft of service door No. 6 and escape hatch No. 4.
- c. Left and right side of forward cargo compartment forward of wheel pods.

### NOTE:

Access cannot be gained from flight deck to the troop compartment in the upper deck.

- d. Left and right side forward of aft cargo compartment personnel doors.

## 5. CREW ENTRY DOOR (INSIDE OPERATION)

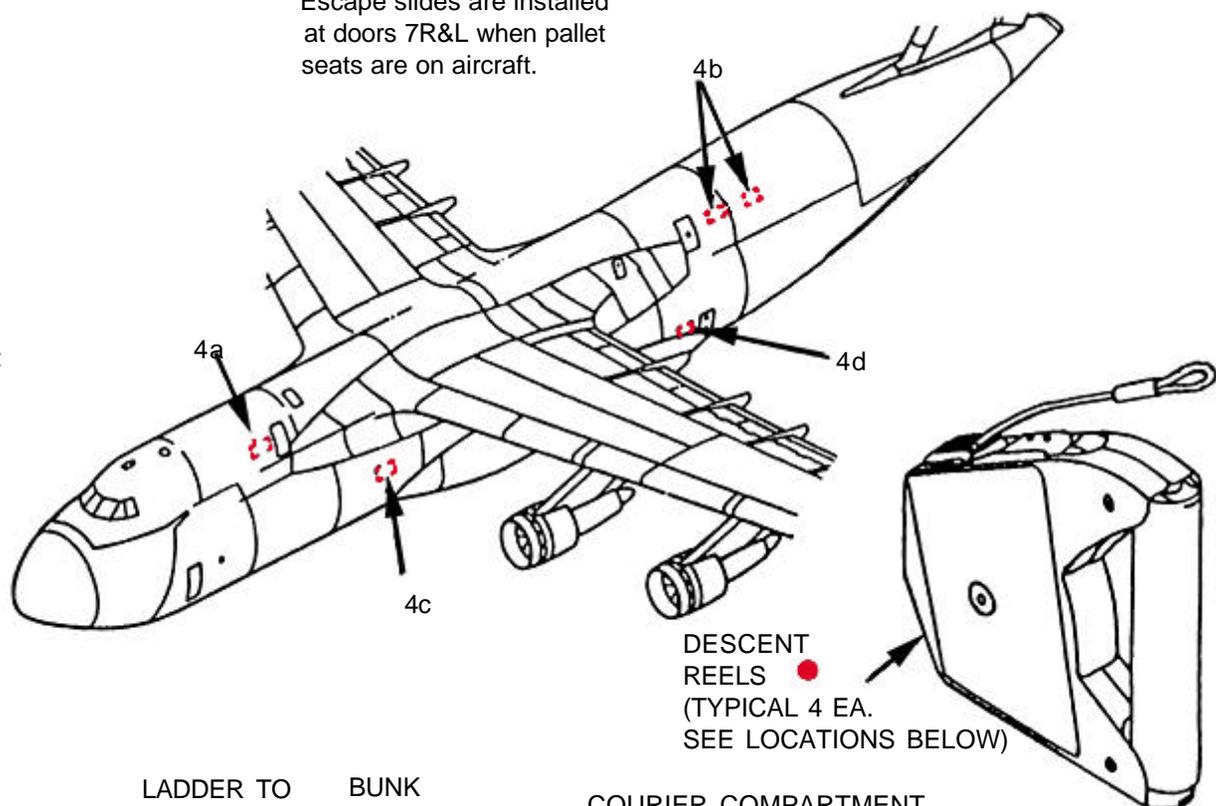
- a. Remove the Mechanical Lock from the door.
- b. Pull down on the crew entrance door emergency egress handle, and push out on crew door.
- c. Push down and hold on control if needed, then push door open.

**WARNING**

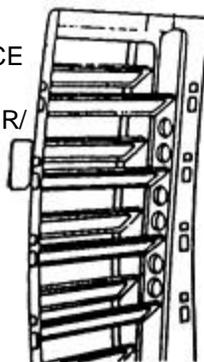
The crew entrance ladder may not fully extend and may be as much as 5 feet above the ground.

### NOTE:

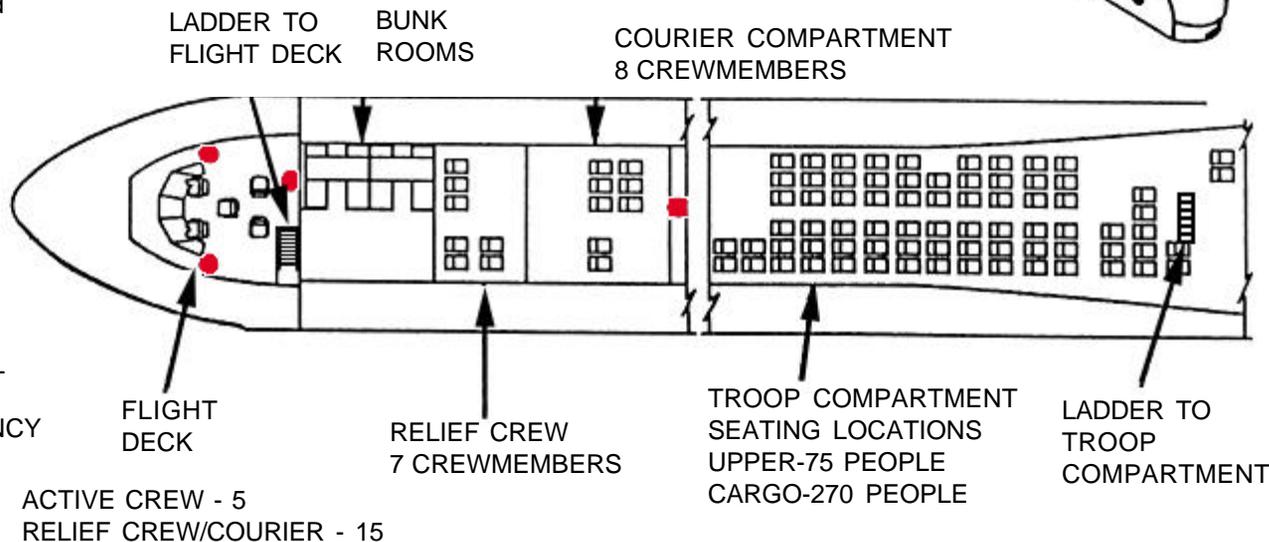
Escape slides are installed at doors 7R&L when pallet seats are on aircraft.



CREW  
ENTRANCE  
DOOR  
AND STAIR/  
LADDER



CREW  
DOOR  
CONTROL  
HANDLE  
EMERGENCY  
ESCAPE



# ENGINE/APU SHUTDOWN AND AIRCREW EXTRACTION

## 1. ENGINE/APU SHUTDOWN

- a. Pull fire emergency control T-handles, located top center portion of the pilot instrument panel.

**NOTE:**

Battery switch is not required to be turned off.

- b. Pull fire emergency control T-handles located on upper left corner of flight engineer control panel, to shut off both auxiliary power units.

**NOTE:**

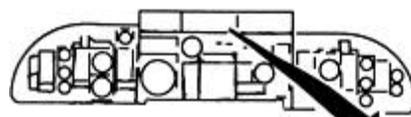
Fire Emergency Control T-handles for APUs are located inside crew entry door at the Fwd Load Masters Panel.

## 2. AIRCREW EXTRACTION CREW COMPARTMENT C-5A AF 66-8303 THROUGH 70-0467

- a. Seats for NAV, ENGR, and OB, pivot and position aft. For pilot and copilot seats, puch outboard.
- b. Release lap belts and remove shoulder harness restraint straps.
- c. Push knob forward to move seat horizontally in track. Rotate knob clockwise to rotate seat 90 degrees left or right.

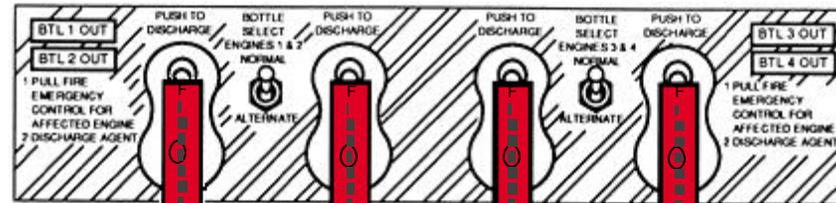
**NOTE:**

Troop deck seats are equipped with lap belts only.



PILOT'S INSTRUMENT PANEL

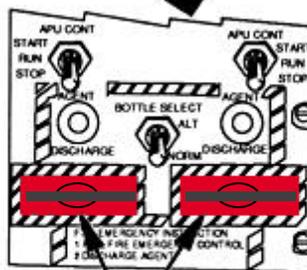
## ENGINE FIRE DETECTION AND EXTINGUISHING SYSTEM CONTROLS AND INDICATOR PANEL



1a PULL FIRE EMERGENCY CONTROL T-HANDLES

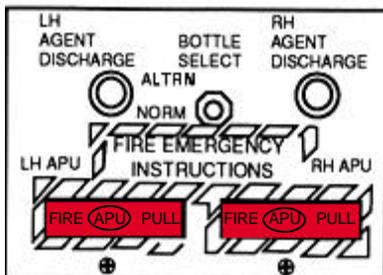


FLIGHT ENGINEER'S CONTROL PANEL

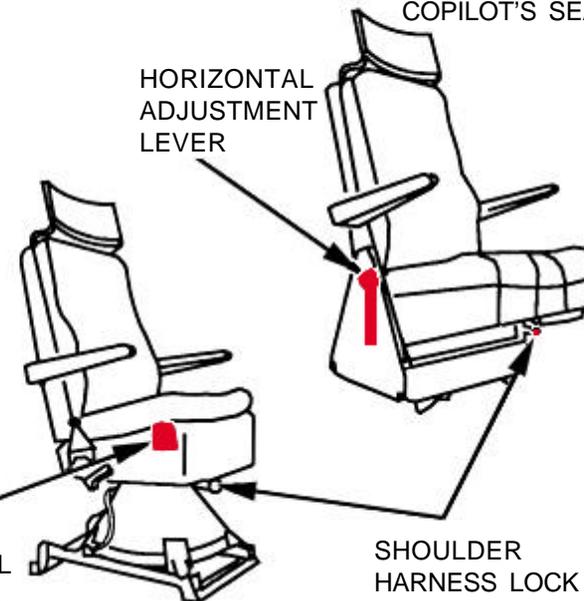


1b APU FIRE T-HANDLES

APU FIRE EMERGENCY CONTROL T-HANDLES AT FWD LOADMASTER'S PANEL



## PILOT'S AND COPILOT'S SEATS



2c HORIZONTAL AND SWIVEL ADJUSTMENT LEVER

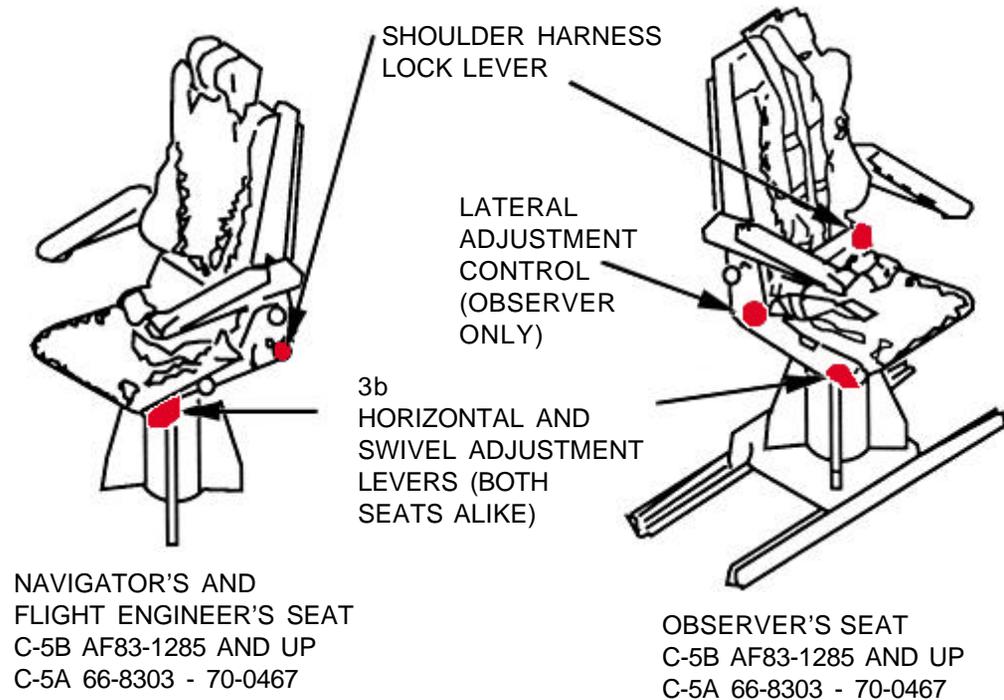
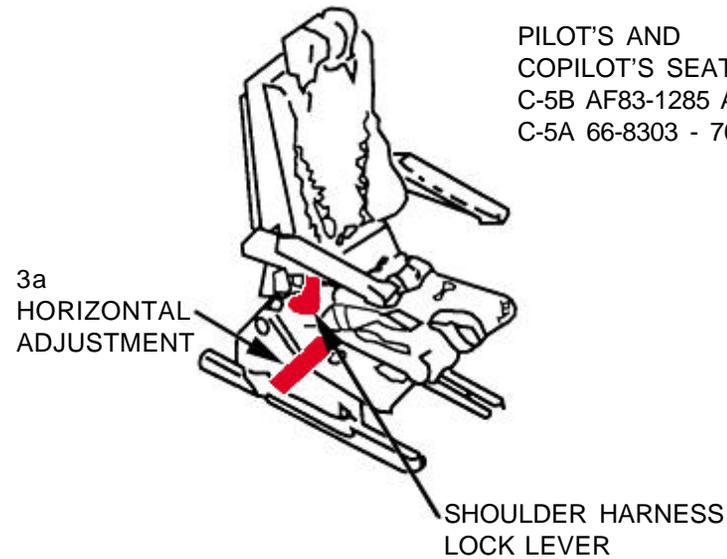
NAVIGATOR'S, FLIGHT ENGINEER'S, AND OBSERVER'S SEATS

SHOULDER HARNESS LOCK LEVER

## AIRCREW EXTRACTION - Continued

3. AIRCREW EXTRACTION CREW COMPARTMENT C-5B AF 83-1285 AND UP. (May also be installed on some C-5A aircraft.)
- Move pilot's and copilot's seats full aft and outboard. Pull aft on horizontal adjustment lever to move the seat forward and aft and push lever toward the seat for lateral movement.
  - Rotate navigator's, flight engineer's, and observer's seat 90 degrees left or right. Push down on the horizontal adjustment lever and the swivel release lever on the seats to move them horizontally and to swivel.
  - Release lap belts and remove shoulder harnesses.

PILOT'S AND  
COPILOT'S SEAT  
C-5B AF83-1285 AND UP  
C-5A 66-8303 - 70-0467



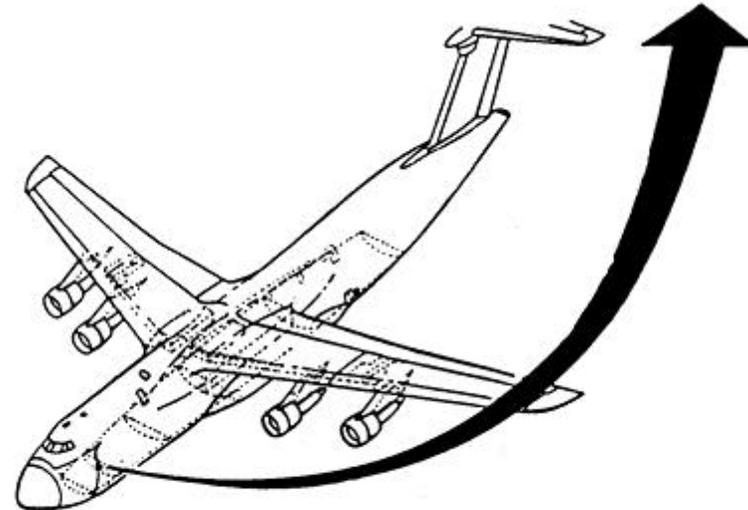
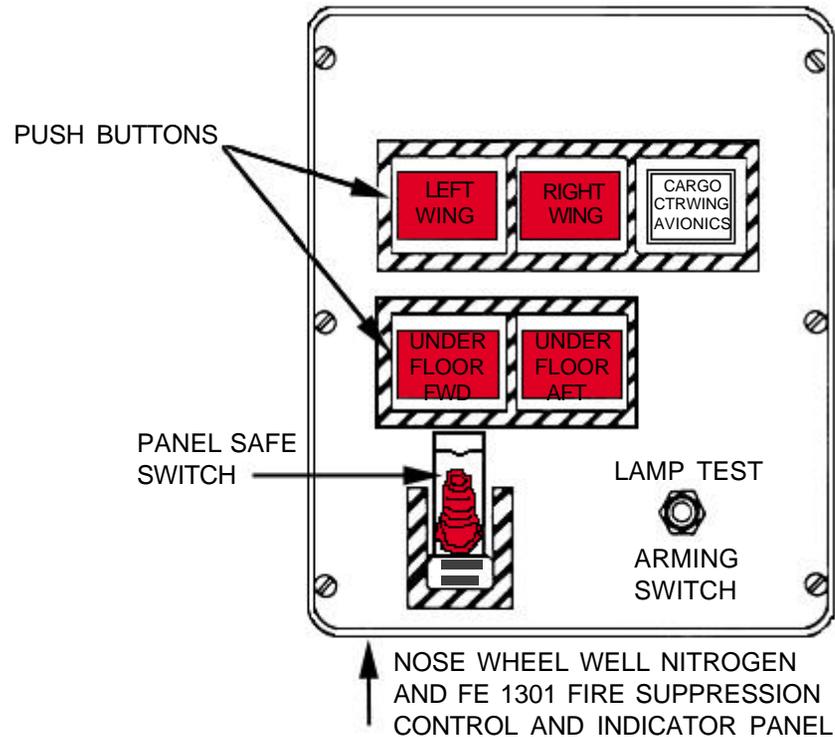
# FIRE SUPPRESSION SYSTEM (FSS)

## WARNING

Do not remain in a closed space with nitrogen without an oxygen mask. Nitrogen is a harmless gas, but when it occupies a closed space to the exclusion of breathable air it can result in suffocation of personnel.

### NOTE:

- All C-5 aircraft have a fire detection system; FE1301 FSS, and nitrogen FSS. FE1301 FSS on C-5A aircraft is a one-shot discharge into the affected area. All C-5B aircraft have a fire detection system and nitrogen FSS. C-5B **DOES NOT** have FE1301 FSS. For the C-5B aircraft, the buttons on the FSS control panels for occupied areas are indicator lights only, for the detection system. They will not discharge FE1301. C-5A and C-5B nitrogen FSS can be discharged more than once (2 of 3 times) into the same affected area if needed. For ALL C-5A aircraft, the FE1301 FSS can be armed from the nose wheel well or the flight engineer's control panel. The FE1301 system can be discharged only from the flight engineer's control panel. There is a FE1301 indicator panel in the cargo bay near door 7 left.
- Nose wheel well nitrogen control panel provides fire suppression capabilities for the left wing; right wing; under floor fwd; under floor compartments. Control panel will be inaccessible if aircraft is encountered in a gear up crash configuration or forward kneel position, and other fire suppression methods must be employed. The FSS panel operates off the battery.



# FIRE SUPPRESSION SYSTEM - Continued

## 2. NITROGEN FIRE SUPPRESSION CONTROL AND INDICATOR PANEL

**NOTE:**

Nitrogen can be semi-depleted on long flights. Nitrogen gas fills the empty space of used fuel.

- a. Place arming control switch, located on the FE1301 Fire Suppression Control and Indicator Panel on lower left section of flight engineer's overhead control panel to ARM position.

**NOTE:**

On C-5B 83-1285 and up, the fire suppression control panel is inscribed FIRE SUPPRESSION.

- b. Depress discharge pushbuttons for affected area to discharge nitrogen fire suppression system.

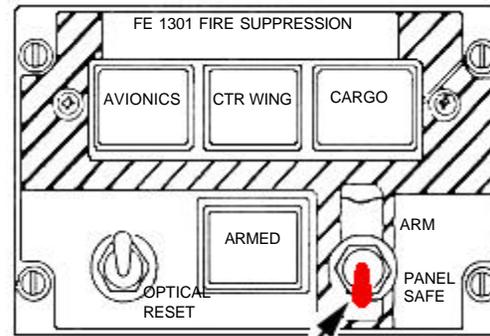
**NOTE:**

The twelve nitrogen discharge pushbuttons located on the nitrogen fire suppression control and indicator panel at the flight engineer's station discharge nitrogen into their associated fire zones, as indicated in chart below. Aircraft power is required to operate this panel.

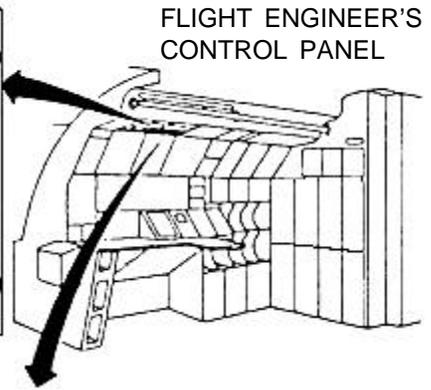
NITROGEN FIRE SUPPRESSION ZONES AND CONTROLS  
(ON AIRCRAFT MODIFIED BY TO 1387)

ZONE	SPACES INCLUDED IN ZONE	FLIGHT ENGINEER'S PANEL DISCHARGE PUSHBUTTON	NOSE WHEEL WELL PANEL DISCHARGE PUSHBUTTON
①	LEFT WING DRY BAY, LEFT OUTBOARD LEADING EDGE, LEFT OUTBOARD PYLON LEADING EDGE	LEFT OUTBD WING	LEFT WING
②	LEFT WING ROOT DRY BAY, LEFT INBOARD LEADING EDGE, LEFT INBOARD PYLON LEADING EDGE	LEFT INBD WING	
③	RIGHT WING ROOT DRY BAY, RIGHT INBOARD LEADING EDGE, RIGHT INBOARD PYLON LEADING EDGE	RIGHT INBD WING	RIGHT WING
④	RIGHT WING DRY BAY, RIGHT OUTBOARD LEADING EDGE, RIGHT OUTBOARD PYLON LEADING EDGE	RIGHT OUTBD WING	
⑤	NOSE WHEEL WELL	NOSE WHEEL WELL	
⑥	CARGO UNDERFLOOR, FORWARD	UNDERFLOOR FWD	
⑦	CARGO UNDERFLOOR, MID	UNDERFLOOR MID	UNDERFLOOR FWD
⑧	LEFT MAIN WHEEL WELL	LEFT MAIN WHEEL WELL	
⑨	RIGHT MAIN WHEEL WELL	RIGHT MAIN WHEEL WELL	
⑩	CARGO UNDERFLOOR, AFT	UNDERFLOOR AFT	UNDERFLOOR AFT
⑪	LEFT PTU COMPARTMENT	LEFT PTU	
⑫	RIGHT PTU COMPARTMENT	RIGHT PTU	UNDERFLOOR FWD

## FE 1301 FIRE SUPPRESSION CONTROL AND INDICATOR PANEL



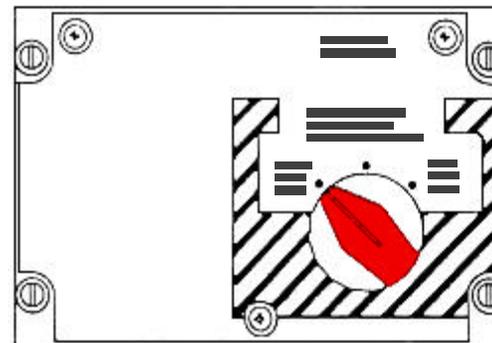
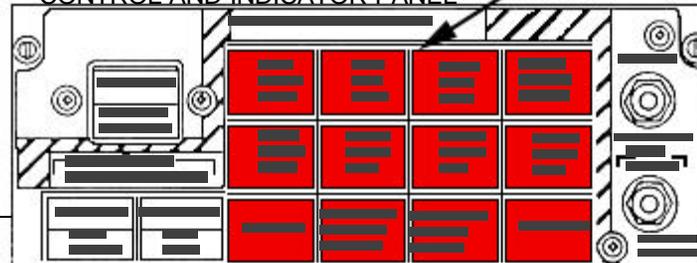
2a ARMING SWITCH



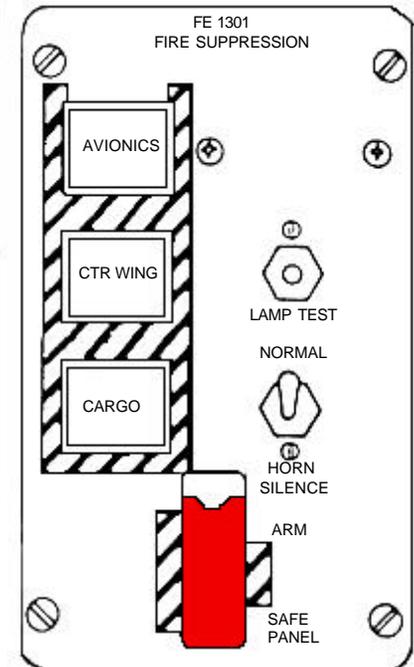
FLIGHT ENGINEER'S CONTROL PANEL

## NITROGEN FIRE SUPPRESSION CONTROL AND INDICATOR PANEL

4b PUSHBUTTONS



CARGO VOLUME SELECTOR PANEL



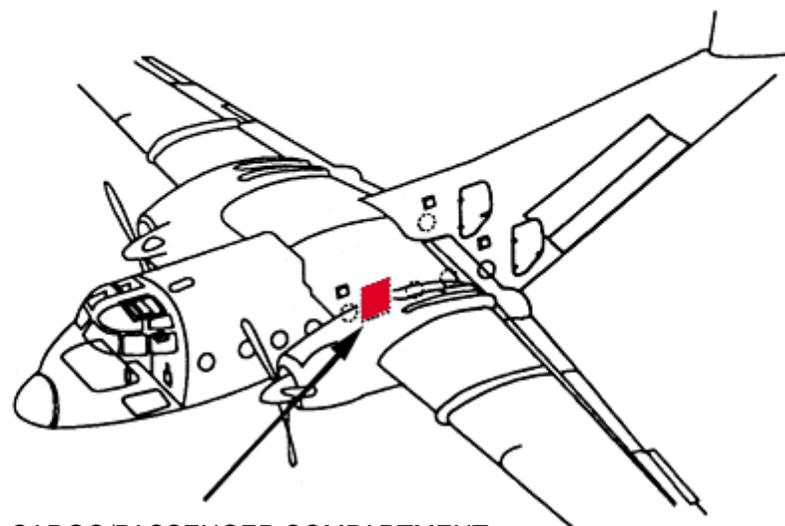
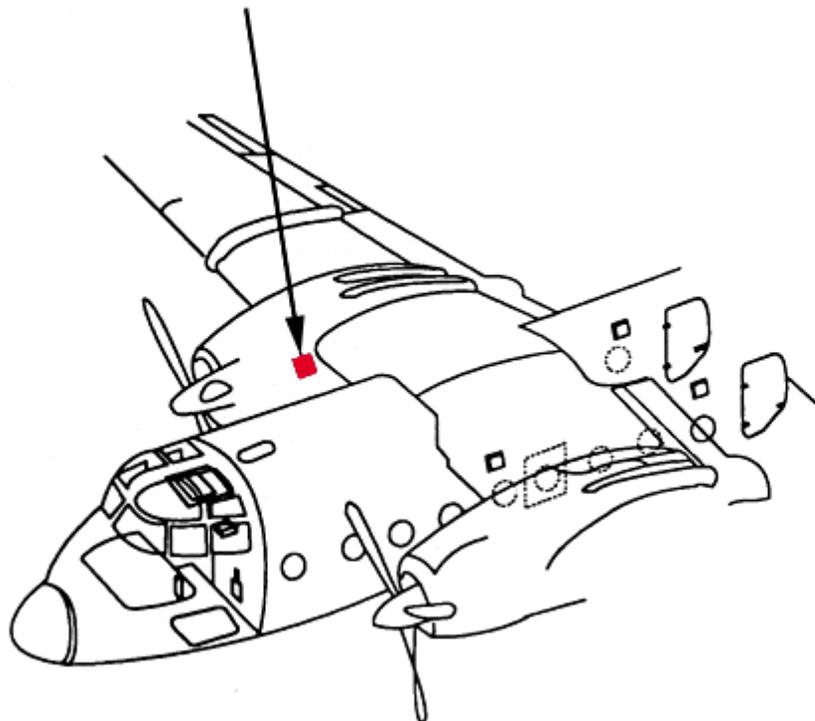
CARGO COMPARTMENT FE 1301 FSS PANEL

C-7.1 **AIRCRAFT SKIN PENETRATION POINTS**

**C-7**  
T.O. 00-105E-9

NOTE:  
Penetration points are the same for  
both left and right engines.

ENGINE NACELLES (BOTH SIDES)  
11" FORWARD OF WING LEADING EDGE  
MEASURED 10" DOWN



CARGO/PASSENGER COMPARTMENT  
CENTER LEFT FUSELAGE BENEATH WING

## SPECIAL TOOLS/EQUIPMENT

Power Rescue Saw  
12 FT Ladder  
Fire Drill II

## AIRCRAFT ENTRY- ALL MODELS

## 1. NORMAL ENTRY

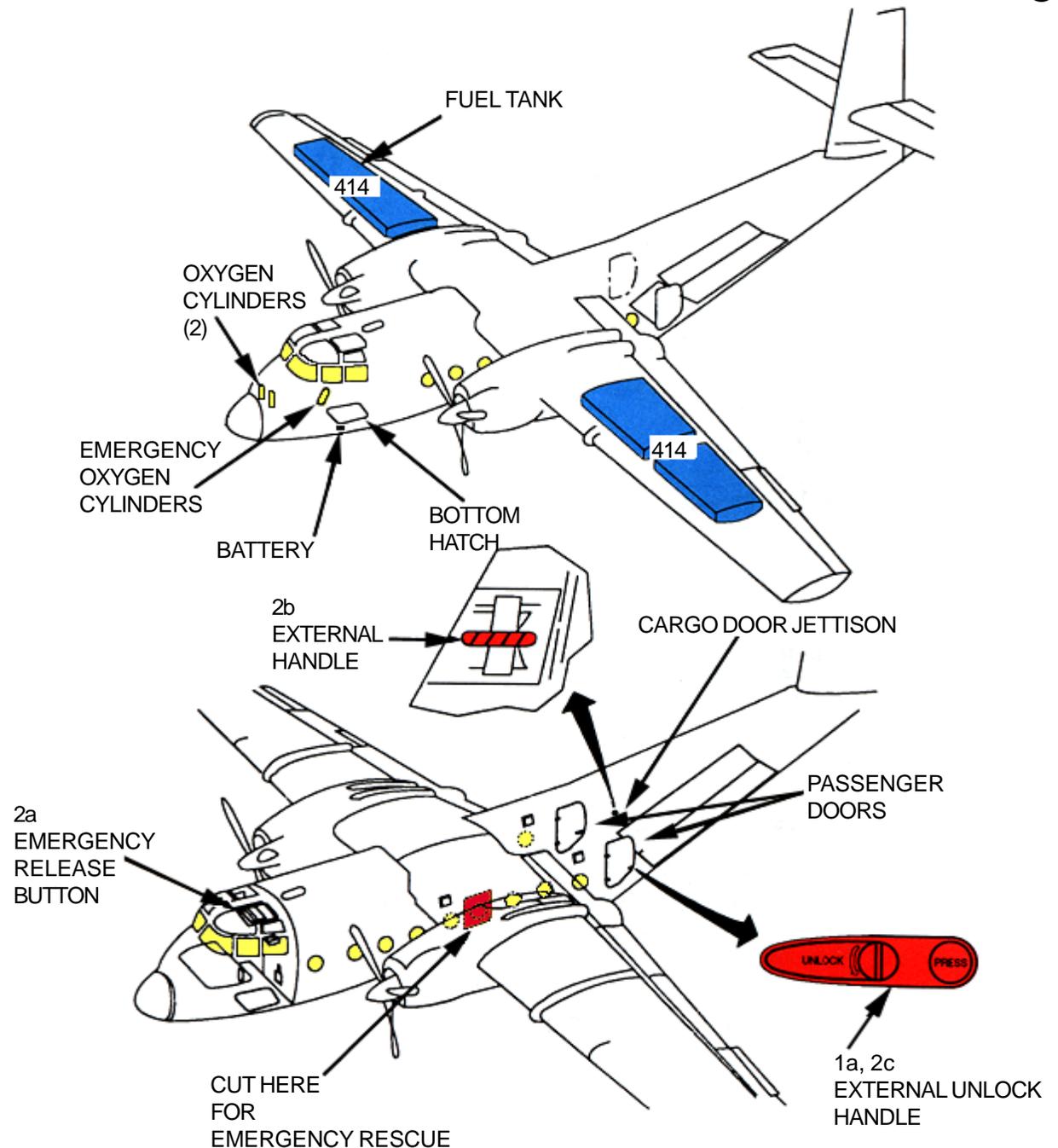
- a. Press button and turn handle, located on passenger door, counterclockwise to open passenger doors.

## 2. EMERGENCY ENTRY

- a. Press emergency release button and rotate external handle clockwise to open flight compartment roof hatch.
- b. Open hatch and pull external handle, located right side aft fuselage, to jettison cargo door.
- c. Press button and turn handle, located on passenger

## 3. CUT-IN

- a. Cut-in area located beneath wing, left side of fuselage.



# ENGINE SHUTDOWN AND AIRCREW EXTRACTION

## 1. ENGINE SHUTDOWN

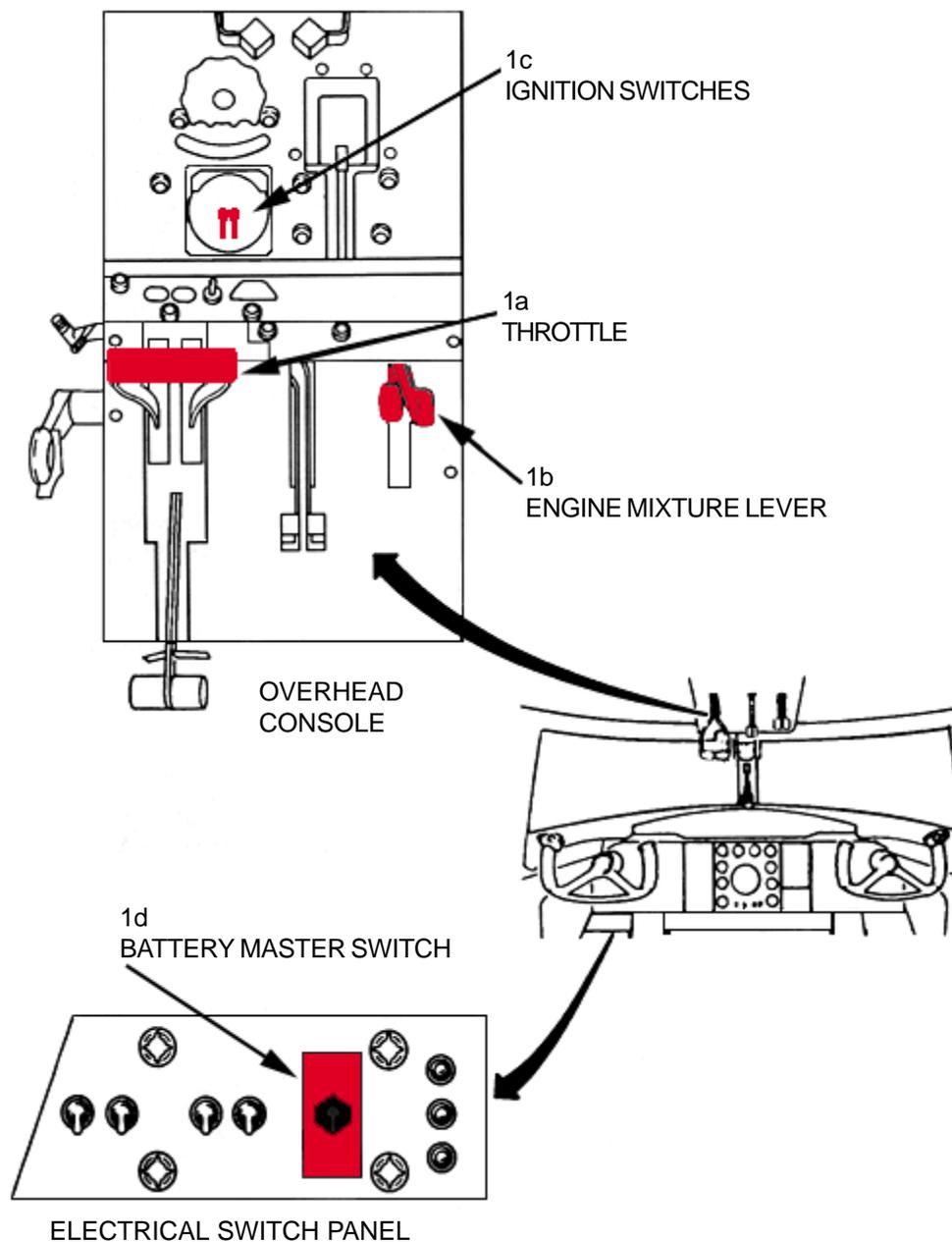
- a. Retard throttles, located on center overhead console, to full THROTTLE CLOSED position.
- b. Retard engine mixture levers, located on center overhead console, to IDLE CUT-OFF position.
- c. Place ignition switches, located center overhead console, to OFF position.
- d. Place battery master switch, located left forward electrical switch panel, to OFF position.

## 2. AIRCREW EXTRACTION

- a. Unlatch lap belt and remove shoulder harness from crewmember(s).

### NOTE:

The passengers seats are equipped with seat belts only. If seat's tracks are not damaged during crash landing, use adjustable seat controls to retract seats in aft position to aid in removing crewmember(s).

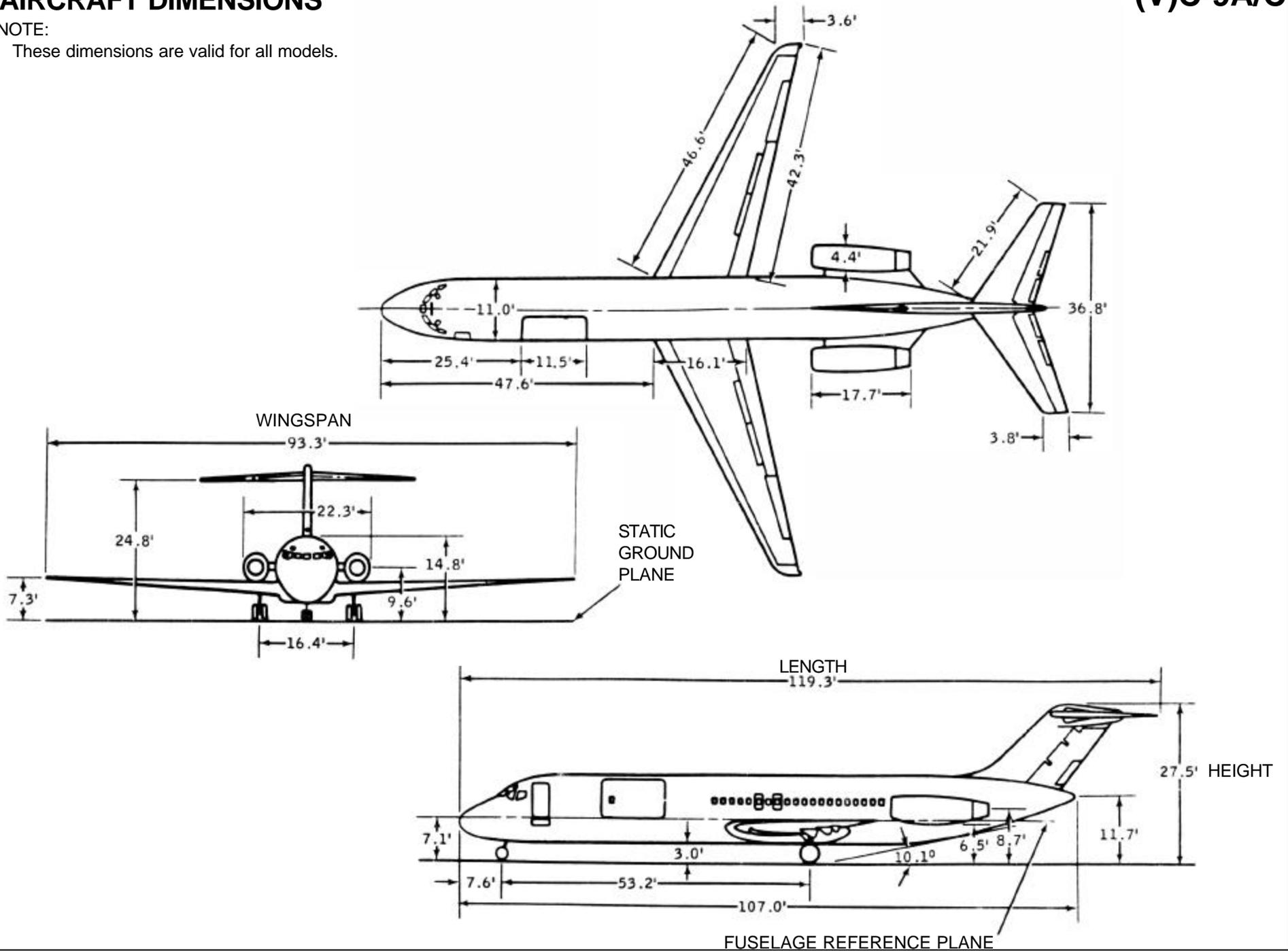


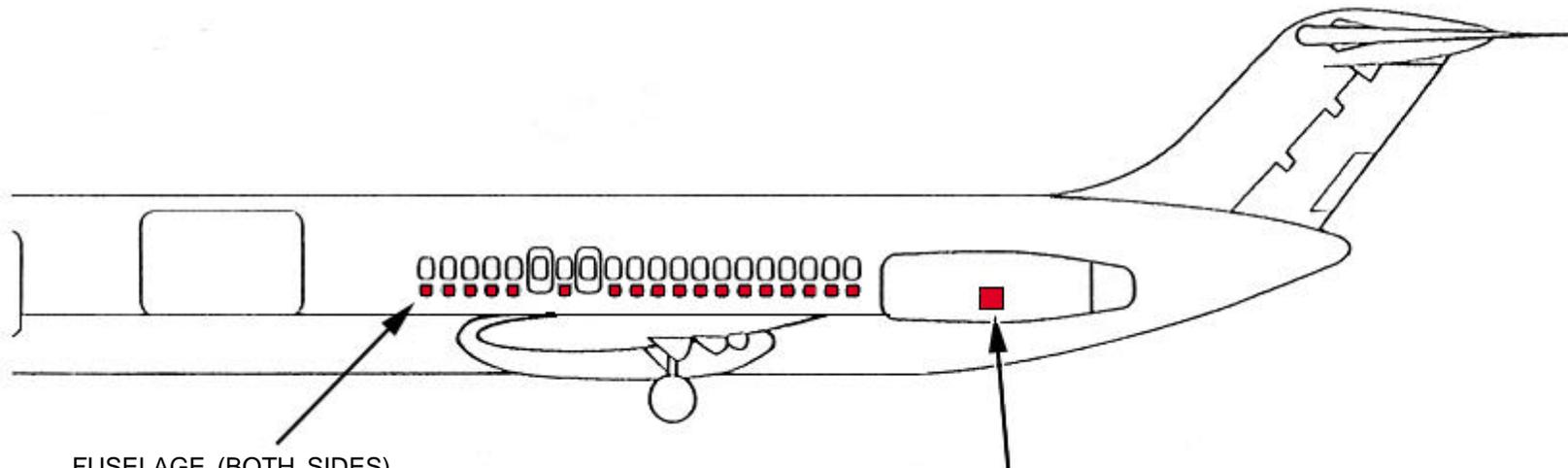
# AIRCRAFT PAINT SCHEME



# AIRCRAFT DIMENSIONS

NOTE:  
These dimensions are valid for all models.





FUSELAGE (BOTH SIDES)  
PENETRATE APPROXIMATELY 4 INCHES  
BELOW CABIN WINDOWS. AVOID  
PENETRATING EMERGENCY EXITS.

ENGINE NACELLES (BOTH SIDES)  
PENETRATE MID-SECTION OF ENGINE  
BELOW ENGINE CENTERLINE

SPECIAL TOOLS/EQUIPMENT

- Power Rescue Saw
- 12 FT Ladder
- Fire Drill II

AIRCRAFT ENTRY - ALL MODELS

1. NORMAL ENTRY

- a. Pull forward entrance and service door external handle, entrance door located on forward left fuselage, service door located on forward right fuselage, out and rotate counterclockwise to OPEN position (service door opposite).
- b. Lift stairwell external door handle, located below forward entrance door, and raise to up position.

NOTE:

If aircraft is shut down, auxiliary power switch under latch handle must be held in the ON position while depressing DOWN button.

- c. Depress lower button marked DN to extend stairwell ladder.
- d. Open rear stairway control panel, located on aft left exterior fuselage, push control handle to forward OPEN position to release stairway.

**WARNING**

Stairway free falls to down position. Keep area clear.

2. EMERGENCY ENTRY

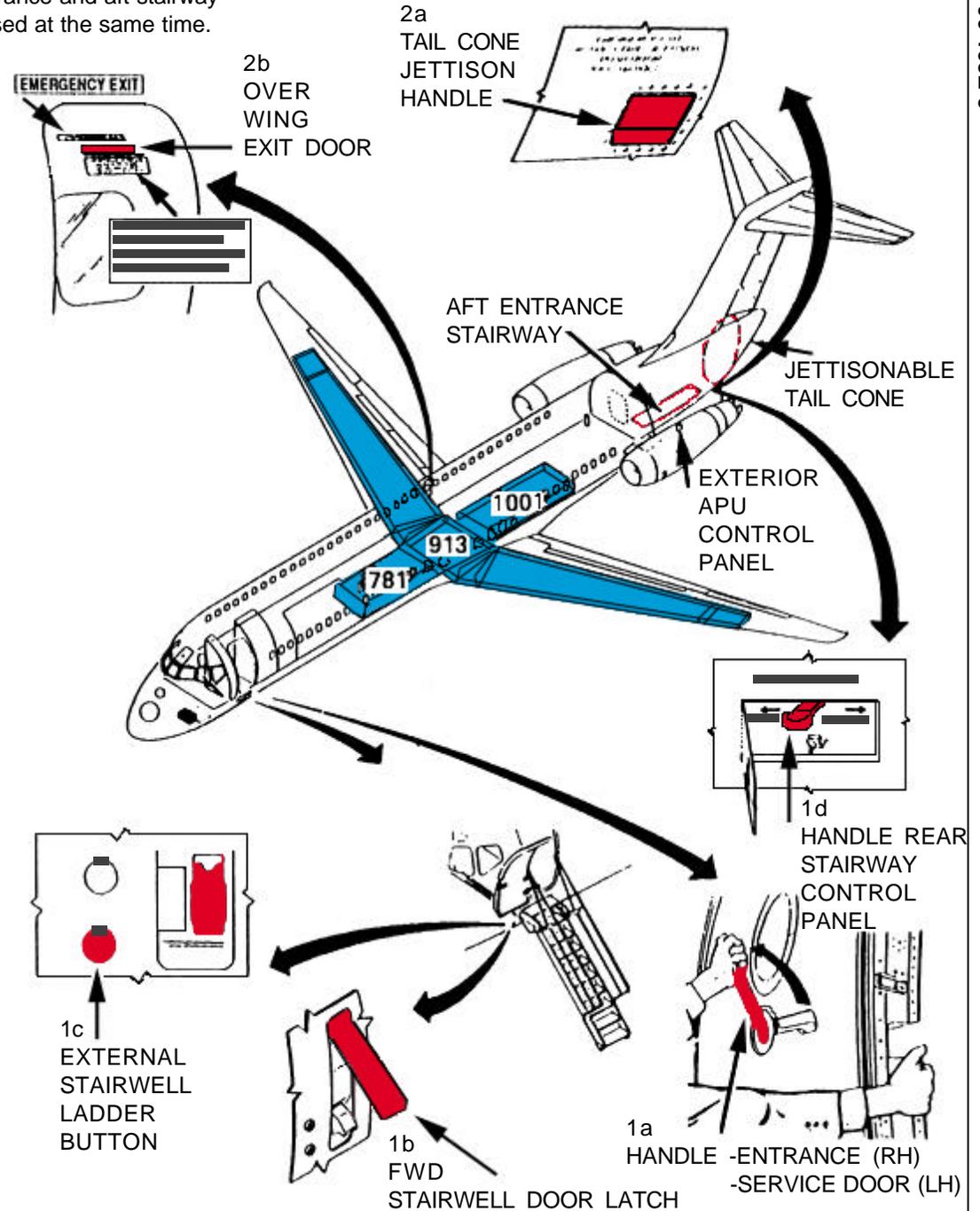
**WARNING**

Caution must be exercised when releasing tail cone. Keep personnel clear. Tail cone free falls when released from aircraft.

- a. Push in jettisonable tail cone T-handle door, located on left fuselage forward of tail cone, pull T-handle to jettison tail cone. Jettison door is approximately 8.5 feet high.
- b. Push overwing exit door handle release, two doors are located over each wing, pull handle to unlatch door, push in and lift up forcibly.

NOTE:

Tail cone entrance and aft stairway cannot be used at the same time.



# ENGINE SHUTDOWN AND AIRCREW EXTRACTION

## 1. ENGINE SHUTDOWN

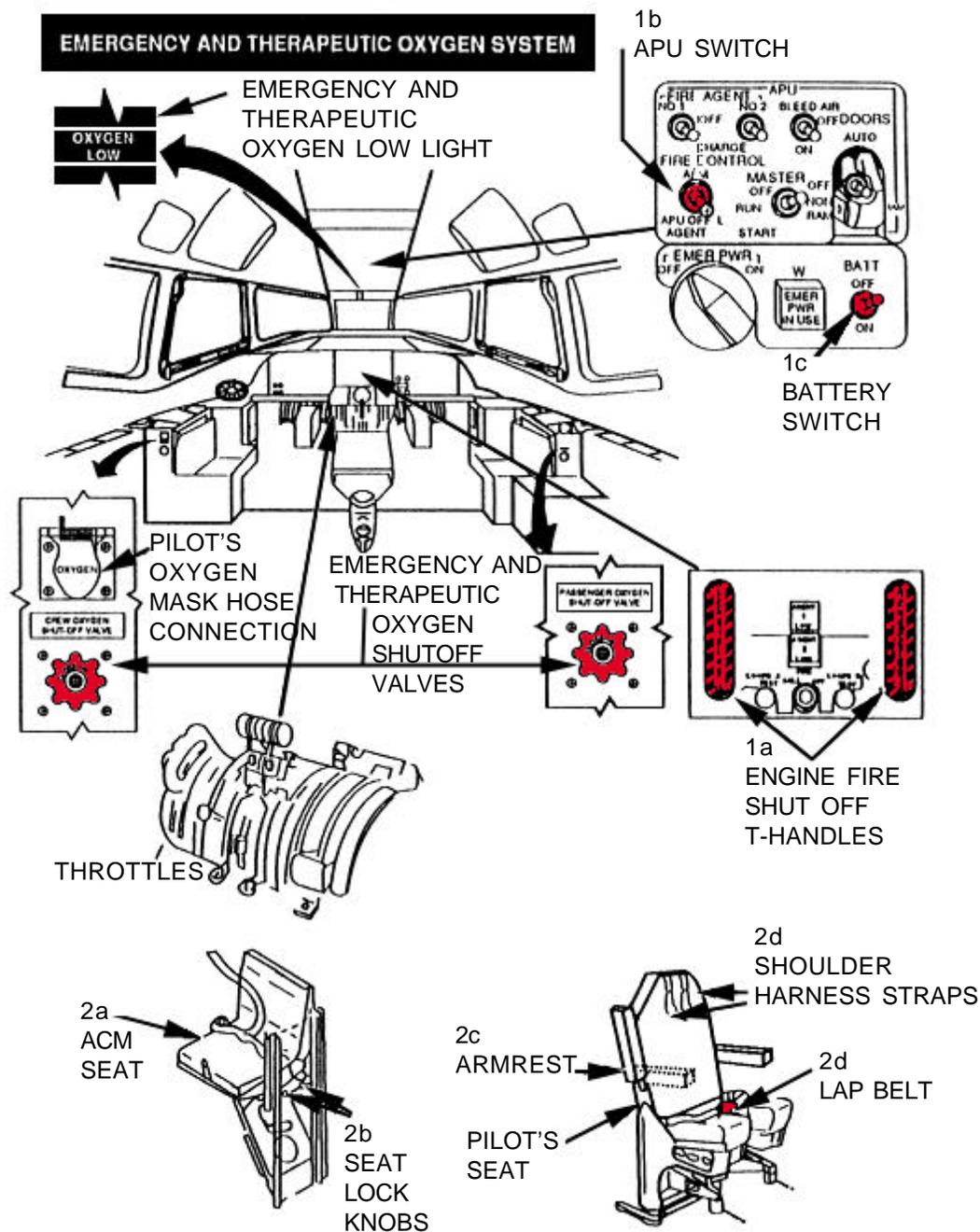
- a. Pull engine fire shut-off T-handles, located on upper portion of instrument panel.
- b. Place APU fire control switch, located on overhead switch panel, to OFF and AGENT ARM position.
- c. Place battery switch, located below APU control panel to OFF position.
- d. Main oxygen shutoff valves (2 each; 1- crew oxygen and 2- passenger oxygen). Valves are painted red and located 15-1/2" above flightdeck floor.

## 2. AIRCREW EXTRACTION

- a. Raise (ACM) additional crewmember seat, located in doorway of crew cabin, for access to cabin.
- b. Pull seat lock knobs, located left side seat, inward and raise seat to wall of cabin.
- c. Raise pilot's armrest as necessary.
- d. Unlatch lap belt and remove shoulder harness from crewmember(s).

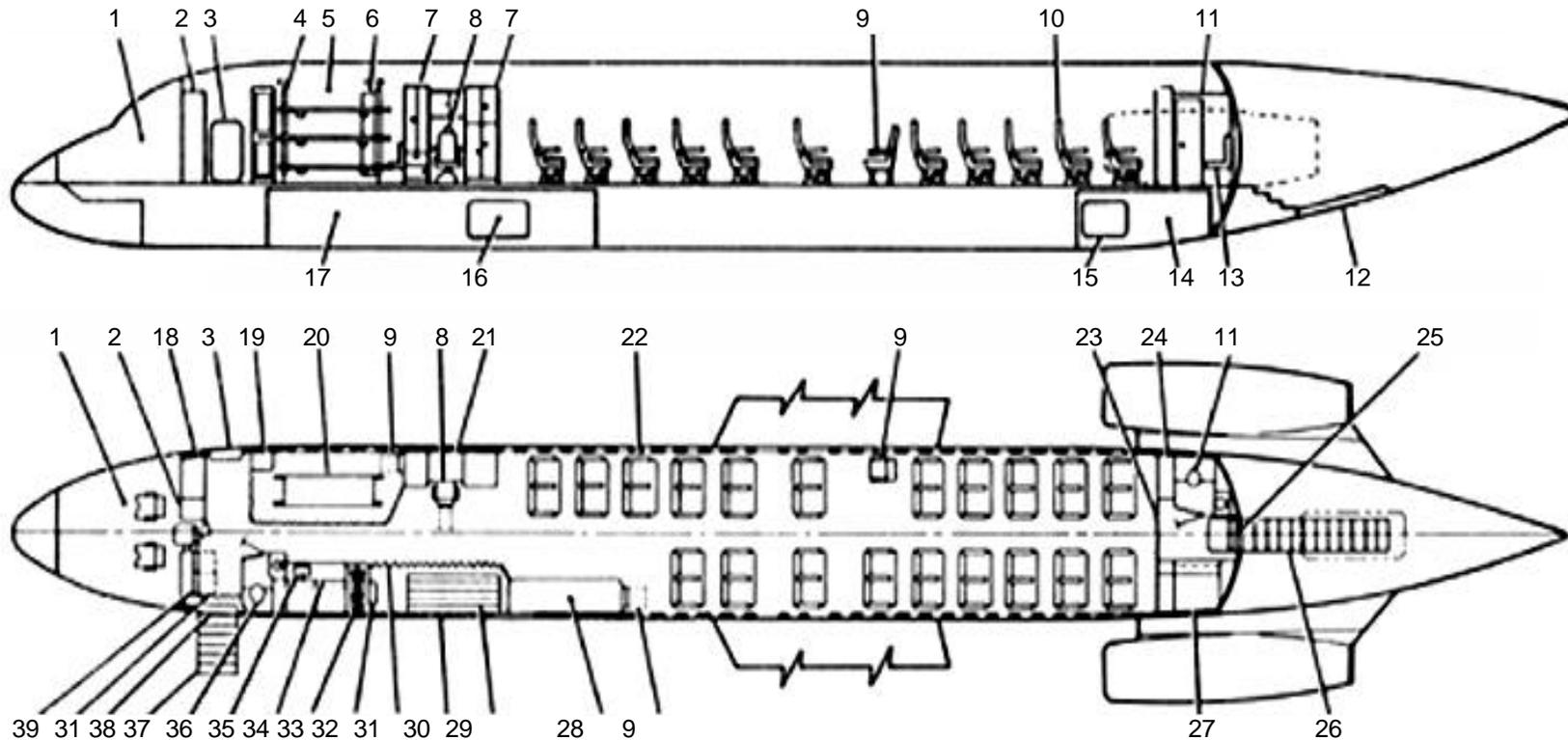
### NOTE:

If seat tracks are not damaged during crash landing, use adjustable seat control handle to retract seat to aft position.



# CABIN CONFIGURATIONS

## 1. CABIN CONFIGURATION FOR INTERIOR ARRANGEMENT - 40 AMBULATORY PATIENT



1 FLIGHT COMPARTMENT

2 CREW STOWAGE

3 SERVICE DOOR

4 STANCHION - SPECIAL CARE AREA

5 SPECIAL CARE AREA

6 UTILITY STANCHION - SPECIAL CARE AREA

7 MEDICAL STOWAGE

8 MEDICAL CREW DIRECTOR'S SEAT

9 MEDICAL CREW SEAT

10 AMBULATORY PATIENT'S SEAT

11 AFT LAVATORY

12 AFT STAIRWAY DOOR

13 SENIOR AEROMEDICAL TECHNICIAN'S SEAT

14 AFT LOWER CARGO COMPARTMENT

15 AFT LOWER CARGO COMPARTMENT DOOR

16 FORWARD LOWER CARGO COMPARTMENT DOOR

17 FORWARD LOWER CARGO COMPARTMENT

18 FORWARD GALLEY

19 WASTE CONTAINER

20 SPECIAL CARE AREA PATIENT'S LITTER

21 MEDICAL CREW DIRECTOR'S DESK

22 AMBULATORY PATIENT'S SEAT

23 CURTAIN

24 STOWAGE AND WASTE CONTAINERS

25 AFT ENTRANCE DOOR

26 AFT STAIRWAY

27 AFT GALLEY

28 CENTRAL STOWAGE COMPARTMENT:

LITTERS, PILLOW, ETC

29 LITTER PATIENT RAMP

30 LITTER PATIENT DOOR

31 WEATHER CURTAIN

32 DOOR AND RAMP CONTROL CONSOLE

33 COATROOM

34 WORK TABLE, MEDICAL BOTTLE RACK,  
MISCELLANEOUS STOWAGE

35 MEDICAL SINK

36 FORWARD LAVATORY

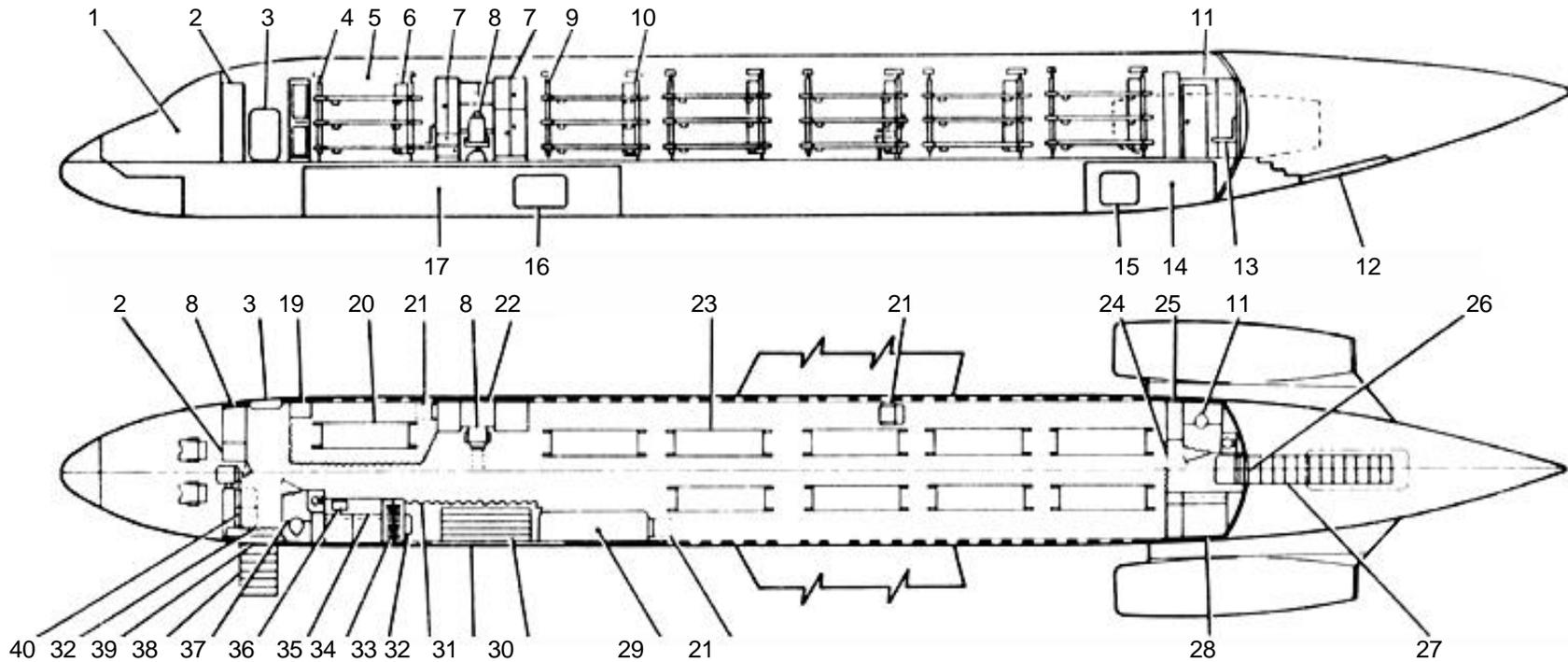
37 FORWARD STAIRWAY

38 FORWARD ENTRANCE DOOR

39 DOUBLE SEAT FOR ADDITIONAL  
MEDICAL CREW MEMBERS

# CABIN CONFIGURATIONS - Continued

## 1. CABIN CONFIGURATION FOR INTERIOR ARRANGEMENT - 30 LITTER PATIENT



1 FLIGHT COMPARTMENT

2 CREW STOWAGE

3 SERVICE DOOR

4 STANCHION - SPECIAL CARE AREA

5 SPECIAL CARE AREA

6 UTILITY STANCHION - SPECIAL CARE AREA

7 MEDICAL STOWAGE

8 MEDICAL CREW DIRECTOR'S SEAT

9 STANCHION

10 UTILITY STANCHION

11 AFT LAVATORY

12 AFT STAIRWAY DOOR

13 SENIOR MEDICAL TECHNICIAN'S SEAT

14 AFT LOWER CARGO COMPARTMENT

15 AFT LOWER CARGO COMPARTMENT DOOR

16 FORWARD LOWER CARGO COMPARTMENT DOOR

17 FORWARD LOWER CARGO COMPARTMENT

18 FORWARD GALLEY

19 WASTE CONTAINER

20 SPECIAL CARE AREA PATIENT'S LITTER

21 MEDICAL CREW SEAT

22 MEDICAL CREW DIRECTOR'S DESK

23 PATIENT'S LITTER

24 CURTAIN

25 STOWAGE AND WASTE CONTAINERS

26 AFT ENTRANCE DOOR

27 AFT STAIRWAY

28 AFT GALLEY

29 CENTRAL STOWAGE COMPARTMENT:

LITTERS, PILLOW, ETC.

30 LITTER PATIENT RAMP

31 LITTER PATIENT DOOR

32 WEATHER CURTAIN

33 DOOR AND RAMP CONTROL CONSOLE

34 COATROOM

35 WORK TABLE, MEDICAL BOTTLE RACK,  
MISCELLANEOUS STOWAGE

36 MEDICAL SINK

37 FORWARD LAVATORY

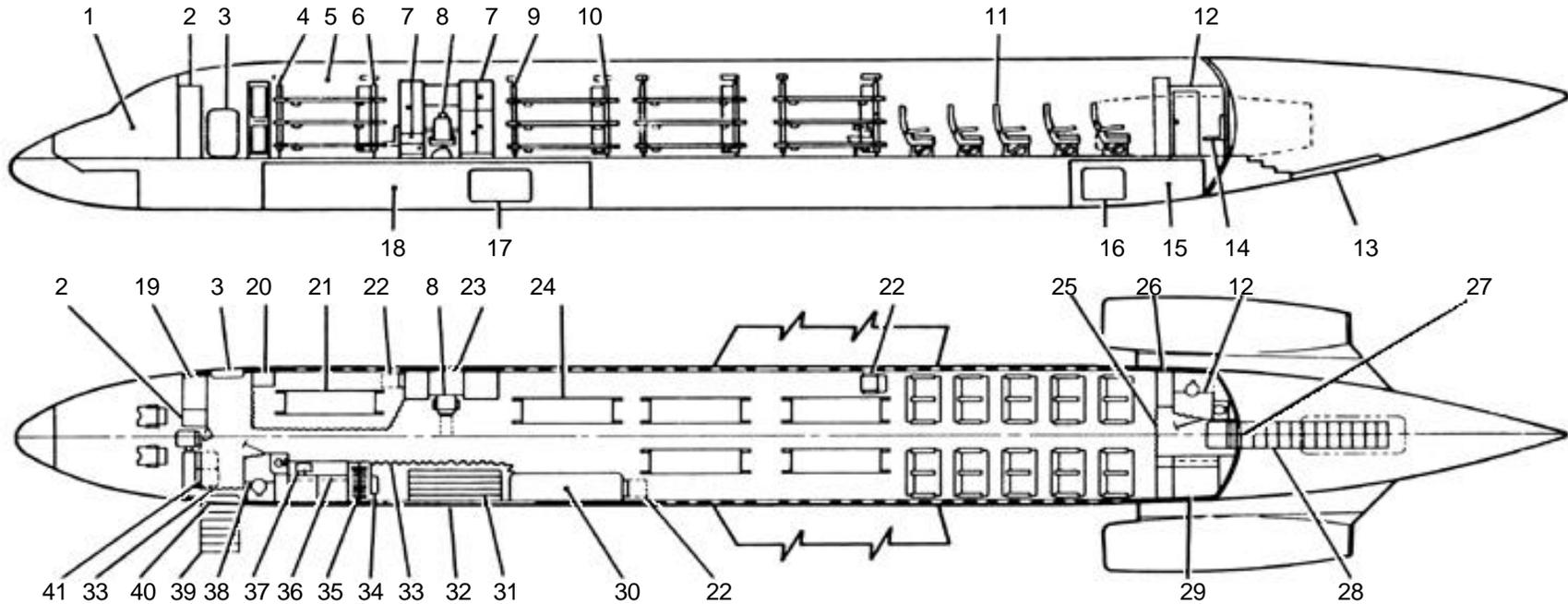
38 FORWARD STAIRWAY

39 FORWARD ENTRANCE DOOR

40 DOUBLE SEAT FOR ADDITIONAL  
MEDICAL CREW MEMBERS

# CABIN CONFIGURATIONS - Continued

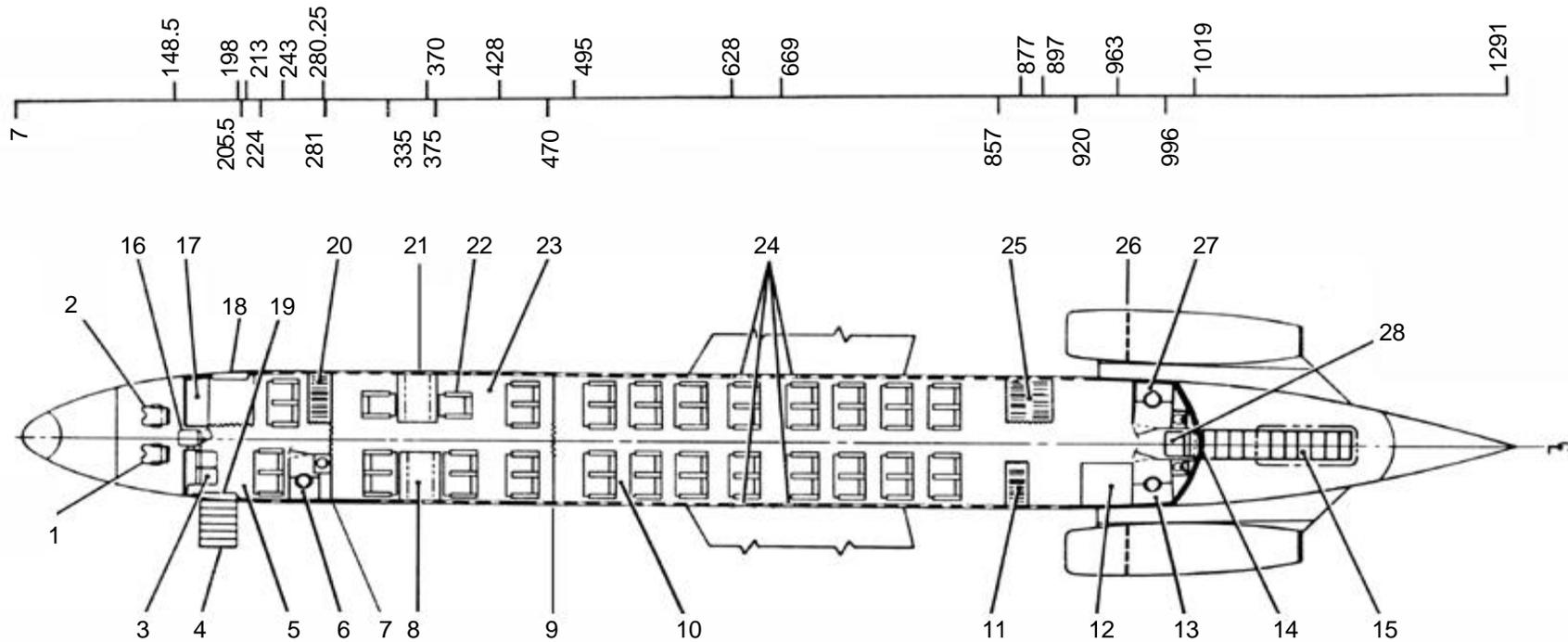
## 1. CABIN CONFIGURATION FOR INTERIOR ARRANGEMENT - 18 LITTER PATIENT AND 20 AMBULATORY PATIENT



- |                                     |  |  |
|-------------------------------------|--|--|
| 1 FLIGHT COMPARTMENT                | 16 AFT LOWER CARGO COMPARTMENT DOOR                      | 31 LITTER PATIENT RAMP                                       |
| 2 CREW STOWAGE                      | 17 FORWARD LOWER CARGO COMPARTMENT DOOR                  | 32 LITTER PATIENT DOOR                                       |
| 3 SERVICE DOOR                      | 18 FORWARD LOWER CARGO COMPARTMENT                       | 33 WEATHER CURTAIN   |
| 4 STANCHION - SPECIAL CARE AREA     | 19 FORWARD GALLEY  | 34 DOOR AND RAMP CONTROL CONSOLE                             |
| 5 SPECIAL CARE AREA                 | 20 WASTE CONTAINER                                       | 35 COATROOM  |
| 6 AFT STANCHION - SPECIAL CARE AREA | 21 SPECIAL CARE AREA PATIENT'S LITTER                    | 36 WORK TABLE, MEDICAL BOTTLE RACK,<br>MISCELLANEOUS STOWAGE |
| 7 MEDICAL STOWAGE                   | 22 MEDICAL CREW SEAT                                     | 37 MEDICAL SINK  |
| 8 MEDICAL CREW DIRECTOR'S SEAT      | 23 MEDICAL CREW DIRECTOR'S DESK                          | 38 FORWARD LAVATORY  |
| 9 FORWARD STANCHION                 | 24 PATIENT'S LITTER                                      | 39 FORWARD STAIRWAY  |
| 10 UTILITY STANCHION                | 25 CURTAIN   | 40 FORWARD ENTRANCE DOOR                                     |
| 11 AMBULATORY PATIENT'S SEAT        | 26 STOWAGE AND WASTE CONTAINERS                          | 41 DOUBLE SEAT FOR ADDITIONAL<br>MEDICAL CREW MEMBERS        |
| 12 AFT LAVATORY                     | 27 AFT ENTRANCE DOOR                                     |  |
| 13 AFT STAIRWAY DOOR                | 28 AFT STAIRWAY  |  |
| 14 SENIOR MEDICAL TECHNICIAN'S SEAT | 29 AFT GALLEY  |  |
| 15 AFT LOWER CARGO COMPARTMENT      | 30 CENTRAL STOWAGE COMPARTMENT:<br>LITTER, STOWAGE, ETC. |  |

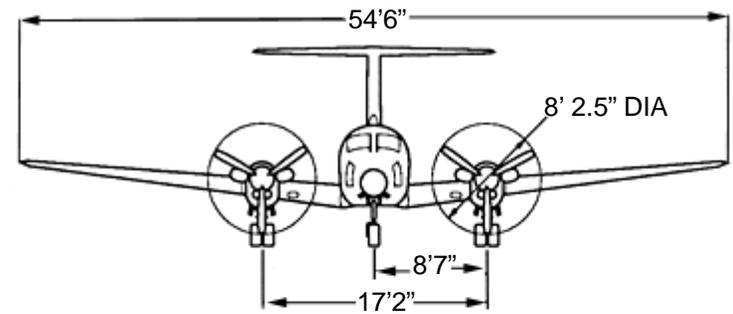
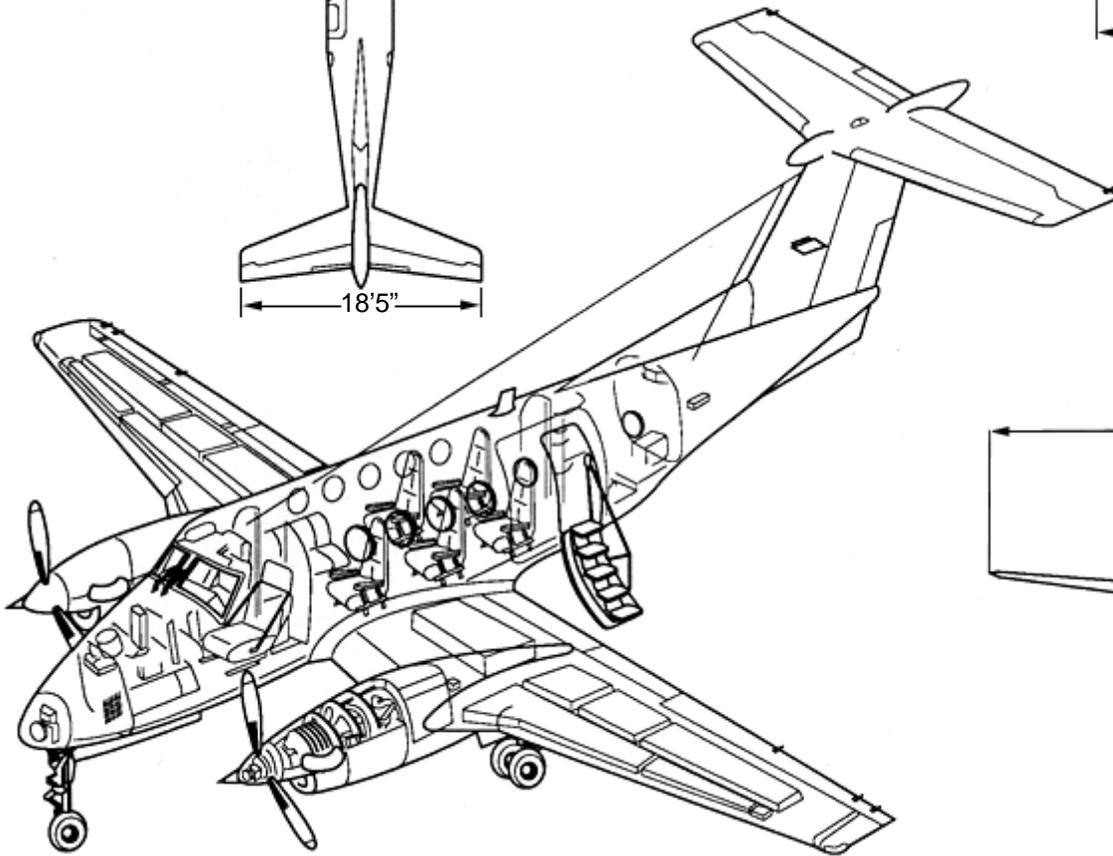
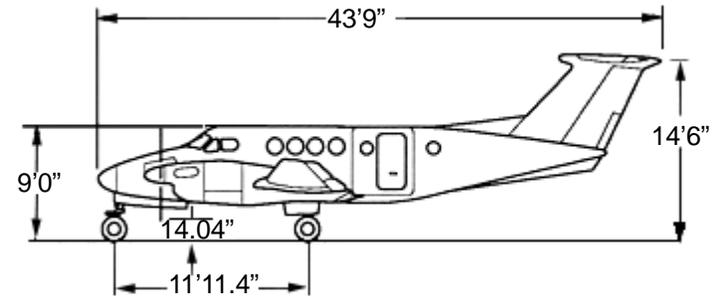
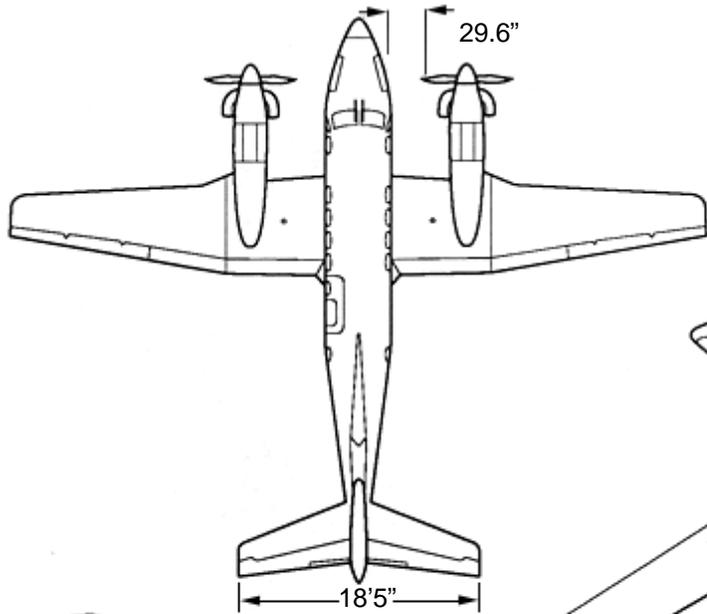
# CABIN CONFIGURATIONS - Continued

## 1. CABIN CONFIGURATION FOR INTERIOR ARRANGEMENT - 42 PASSENGERS AND 4 STEWARDS



- |                               |  |
|-------------------------------|--|
| 1 PILOT                       | 15 VENTRAL STAIRWAY  |
| 2 CO-PILOT                    | 16 FLIGHT MECHANIC'S SEAT                                  |
| 3 DOUBLE STEWARD'S SEAT       | 17 FORWARD GALLEY  |
| 4 FORWARD STAIRWAY            | 18 27 X 48   |
| 5 FORWARD CABIN               | 19 34 X 72   |
| 6 LAVATORY                    | 20 COATROOM  |
| 7 PARTITION WITH FOLDING DOOR | 21 A COUCH MAY BE LOCATED HERE IN LIEU OF TABLE AND CHAIRS |
| 8 2 TABLES                    | 22 2 SWIVEL CHAIRS   |
| 9 PARTITION WITH FOLDING DOOR | 23 DISTINGUISHED VISITOR'S COMPARTMENT                     |
| 10 MAIN CABIN                 | 24 OVERWING EMERGENCY EXITS                                |
| 11 COATROOM                   | 25 DOUBLE COATROOM   |
| 12 AFT GALLEY                 | 26 ENGINE MOUNT BULKHEAD                                   |
| 13 LAVATORY                   | 27 LAVATORY  |
| 14 28 X 72                    | 28 DOUBLE STEWARD'S SEAT                                   |

# AIRCRAFT DIMENSIONS



CABIN ARRANGEMENT: PASSENGER CAPACITY= 8 TO 15

## SPECIAL TOOLS/EQUIPMENT

Power Rescue Saw  
Fire Drill II

## AIRCRAFT ENTRY

## 1. NORMAL ENTRY

- a. Depress button adjacent to door handle in center of passenger door.
- b. Rotate handle, located in center of passenger door left side of aircraft, and swing door down.

## NOTE:

- Difficulty in opening door with engine(s) running may be caused by inflated door seal.
- On D & F models the cargo door can only be opened from inside.

## 2. EMERGENCY ENTRY

- a. Pull out handle on Emergency Exit hatch, located on right side of fuselage.
- b. Push in on hatch and remove from fuselage.

## NOTE:

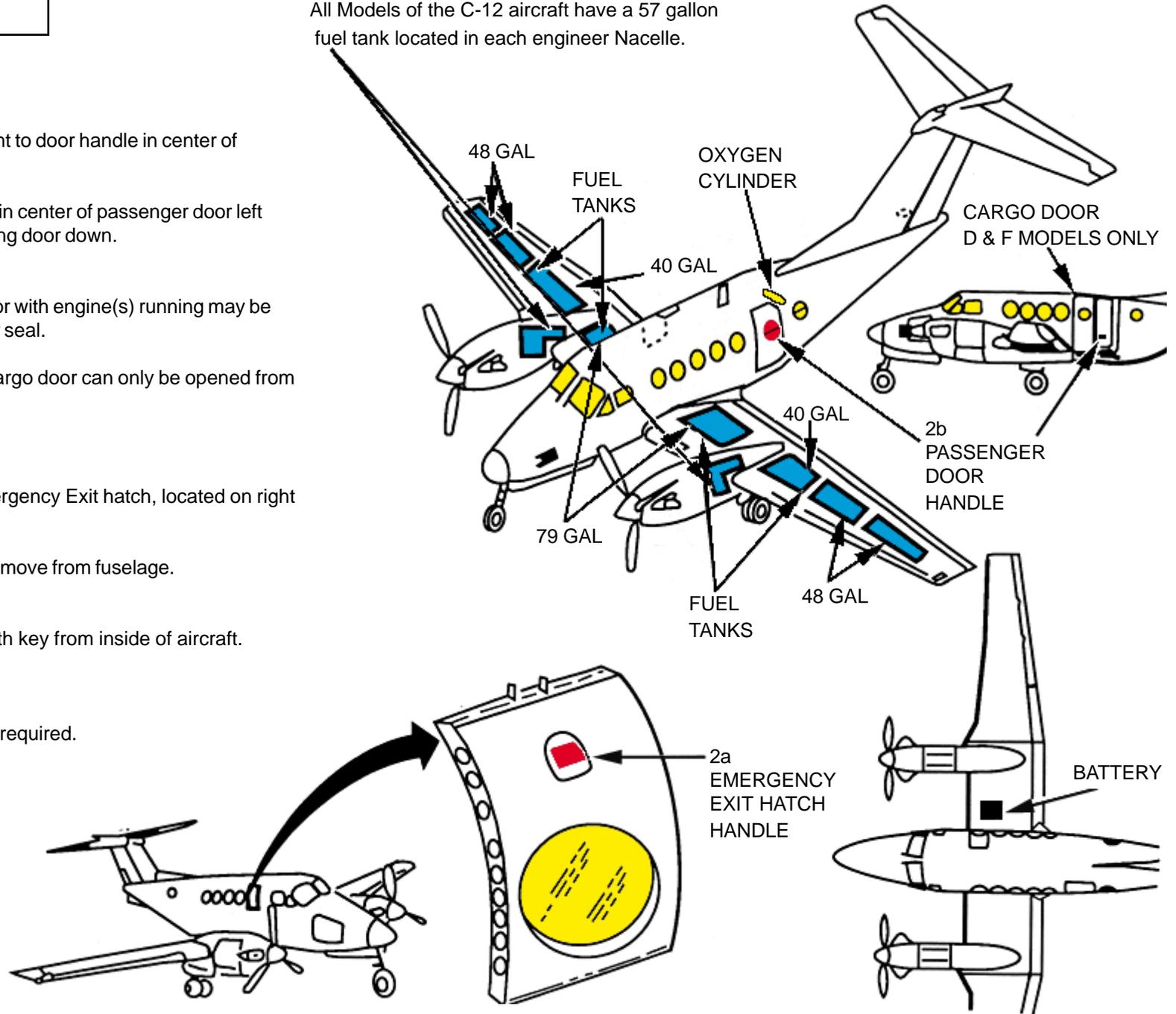
Hatch may be locked with key from inside of aircraft.

## 3. CUT-IN

- a. Cut cabin enclosure as required.

## NOTE:

All Models of the C-12 aircraft have a 57 gallon fuel tank located in each engine Nacelle.



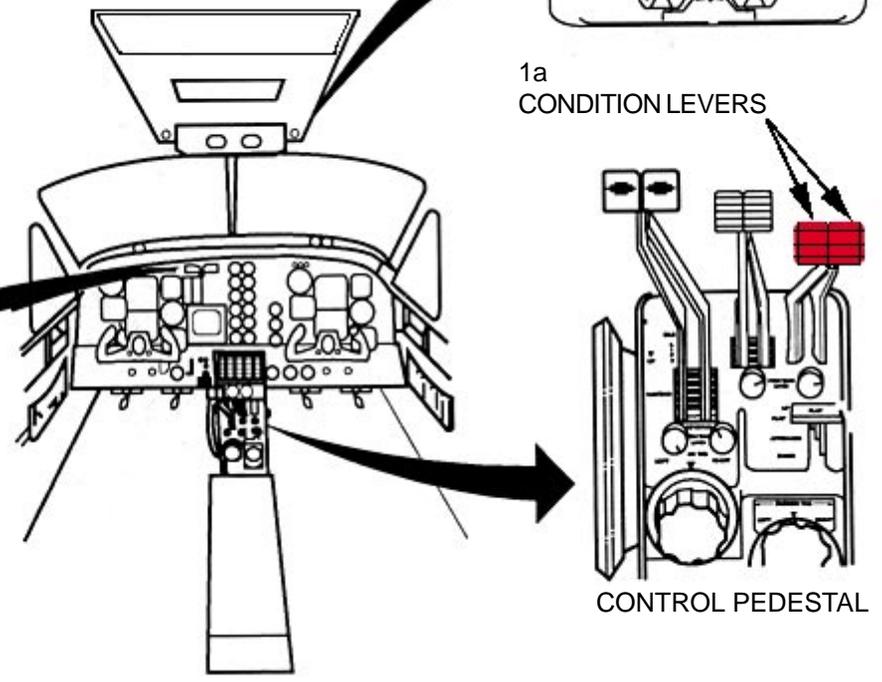
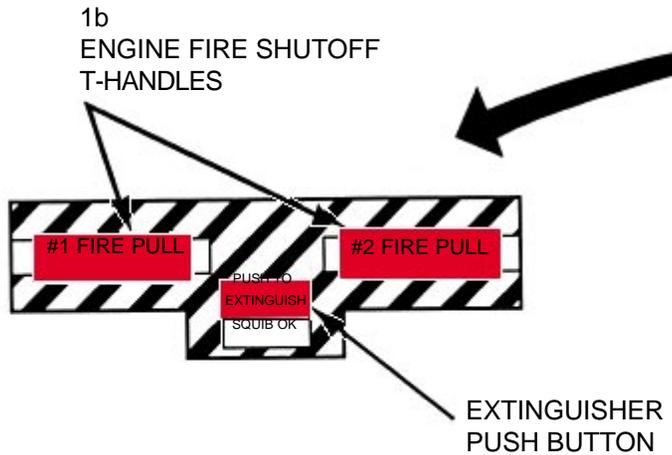
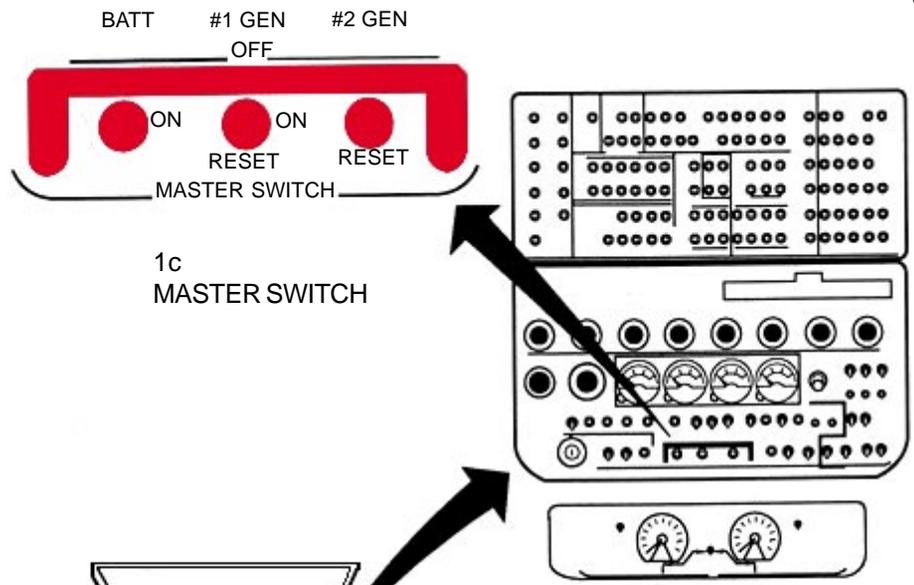
# ENGINE SHUTDOWN AND AIRCREW EXTRACTION

## 1. ENGINE SHUTDOWN (All Models Except C-12F)

- a. Retard condition levers, located on right side of pilot's control pedestal, to FUEL, CUT OFF POSITION.
- b. Pull engine fire shutoff T-Handles, located on upper portion of pilot's instrument panel.

NOTE:  
If Fire T-Handles are illuminated, actuate Fire Extinguisher Push Button, located between Fire T-Handles.

- c. Place master switch, located on pilot's overhead control panel, to OFF position.



# ENGINE SHUTDOWN AND AIRCREW EXTRACTION - Continued

## 2. ENGINE SHUTDOWN - C-12F

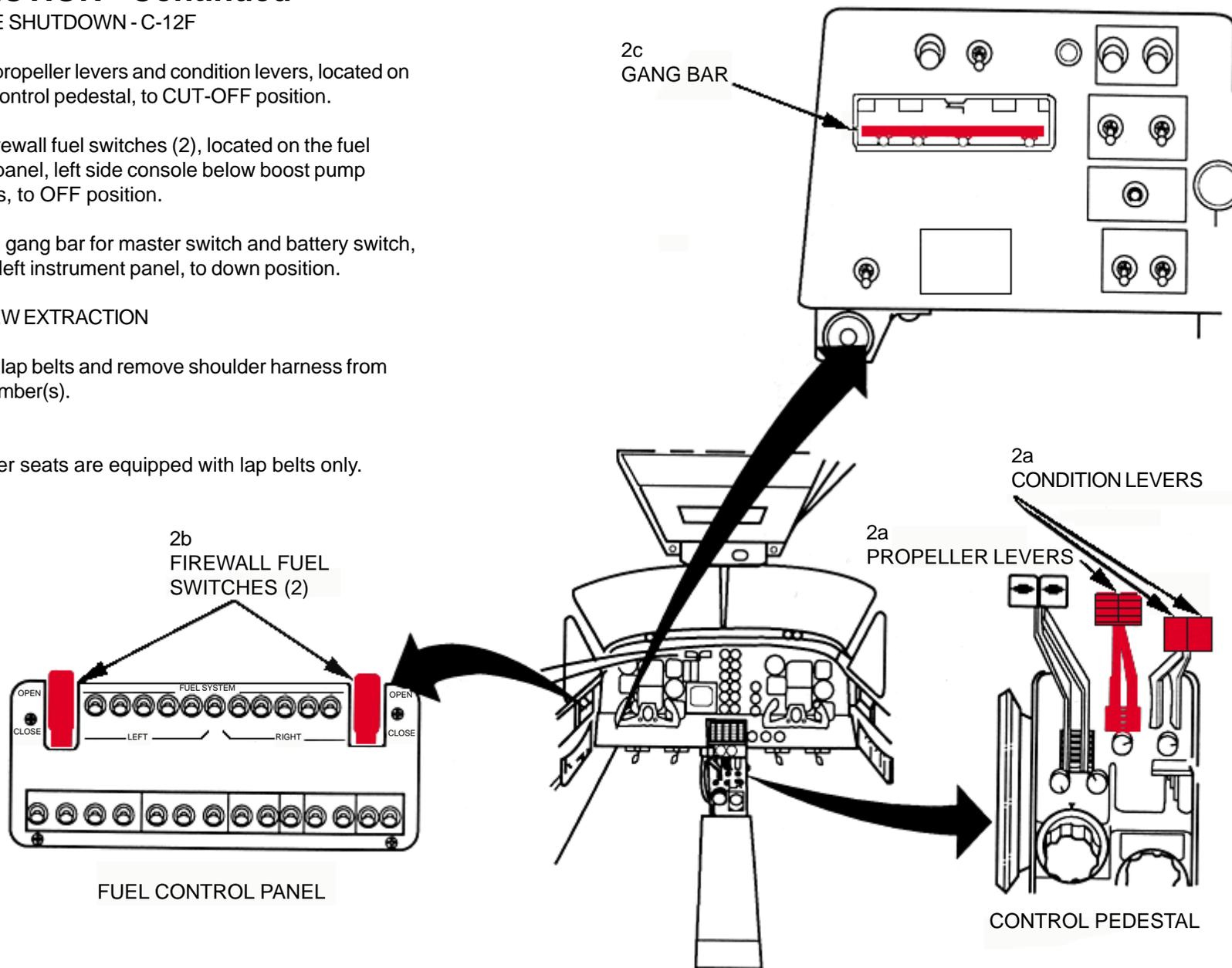
- Retard propeller levers and condition levers, located on center control pedestal, to CUT-OFF position.
- Place firewall fuel switches (2), located on the fuel control panel, left side console below boost pump switches, to OFF position.
- Position gang bar for master switch and battery switch, located left instrument panel, to down position.

## 3. AIRCREW EXTRACTION

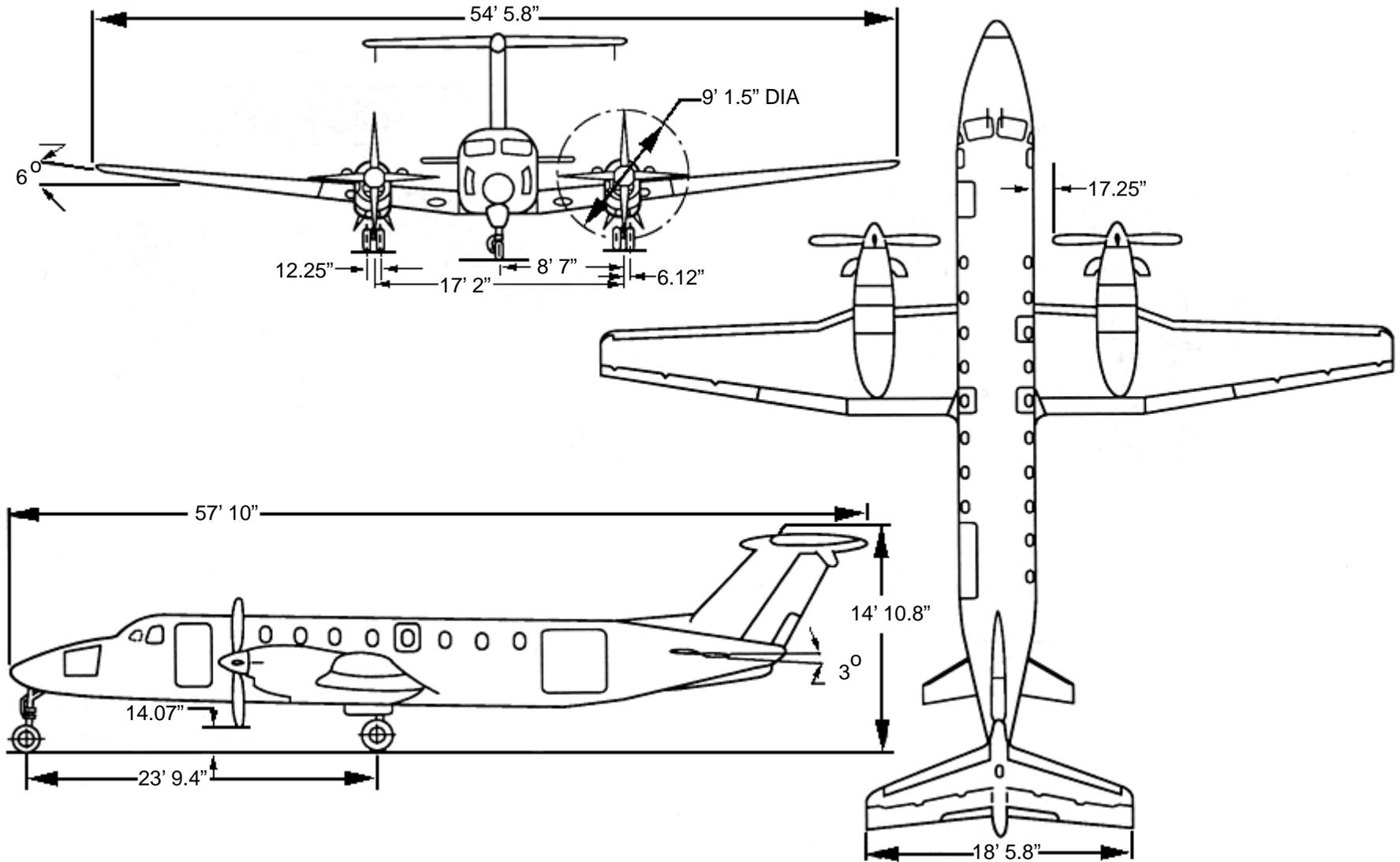
- Unlatch lap belts and remove shoulder harness from crewmember(s).

### NOTE:

Passenger seats are equipped with lap belts only.



# AIRCRAFT DIMENSIONS



SPECIAL TOOLS/EQUIPMENT  
Power Rescue Saw  
Fire Drill II

PERSONNEL CAPACITY  
20 PASSENGERS  
2 CREWMEMBERS

FUEL CAPACITY: 675.2 GALLONS  
WET WING DESIGN, NO FUEL  
BLADDERS IN WINGS

AIRCRAFT ENTRY

1. NORMAL ENTRY

- a. Depress button adjacent to door handle in center of passenger door or cargo door.
- b. Rotate handle clockwise. Passenger door opens down. Cargo door opens up.

**WARNING**

Do not enter through crew door with left engine running. Beware of left engine exhaust/turbulence when entering the cargo door.

NOTE:

Difficulty in opening door with engine(s) running may be caused by inflated door seal.

2. EMERGENCY ENTRY

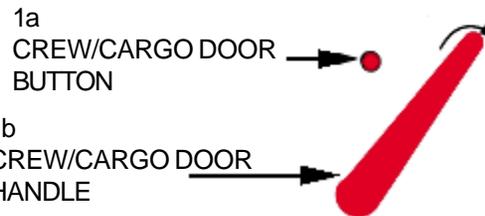
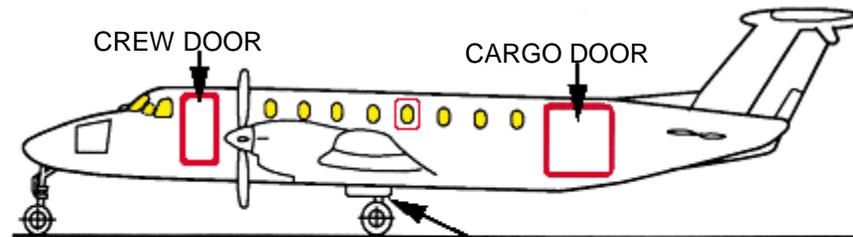
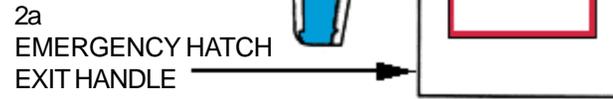
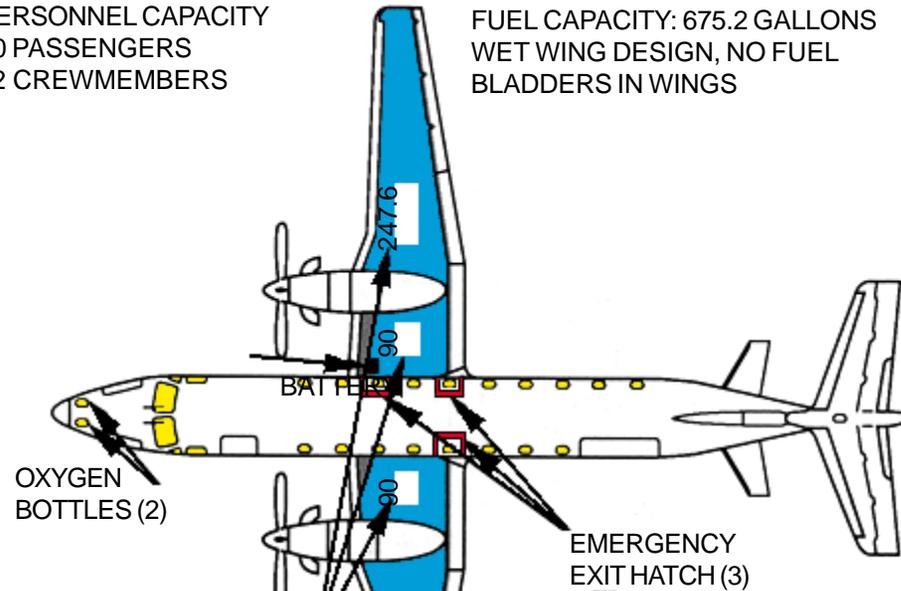
- a. Pull out handle on Emergency Exit Hatch located over right wing (two places) and left wing (one place).
- b. Push in on hatch and remove from fuselage. Door locks can be over ridden from inside the aircraft when locked.

NOTE:

Hatch may be locked with key from inside of aircraft.

3. CUT-IN

- a. Cut cabin enclosure as required.



FIRE BOTTLE  
(1 EACH WHEEL WELL)

# ENGINE SHUTDOWN AND AIRCREW EXTRACTION

## 1. ENGINE SHUTDOWN

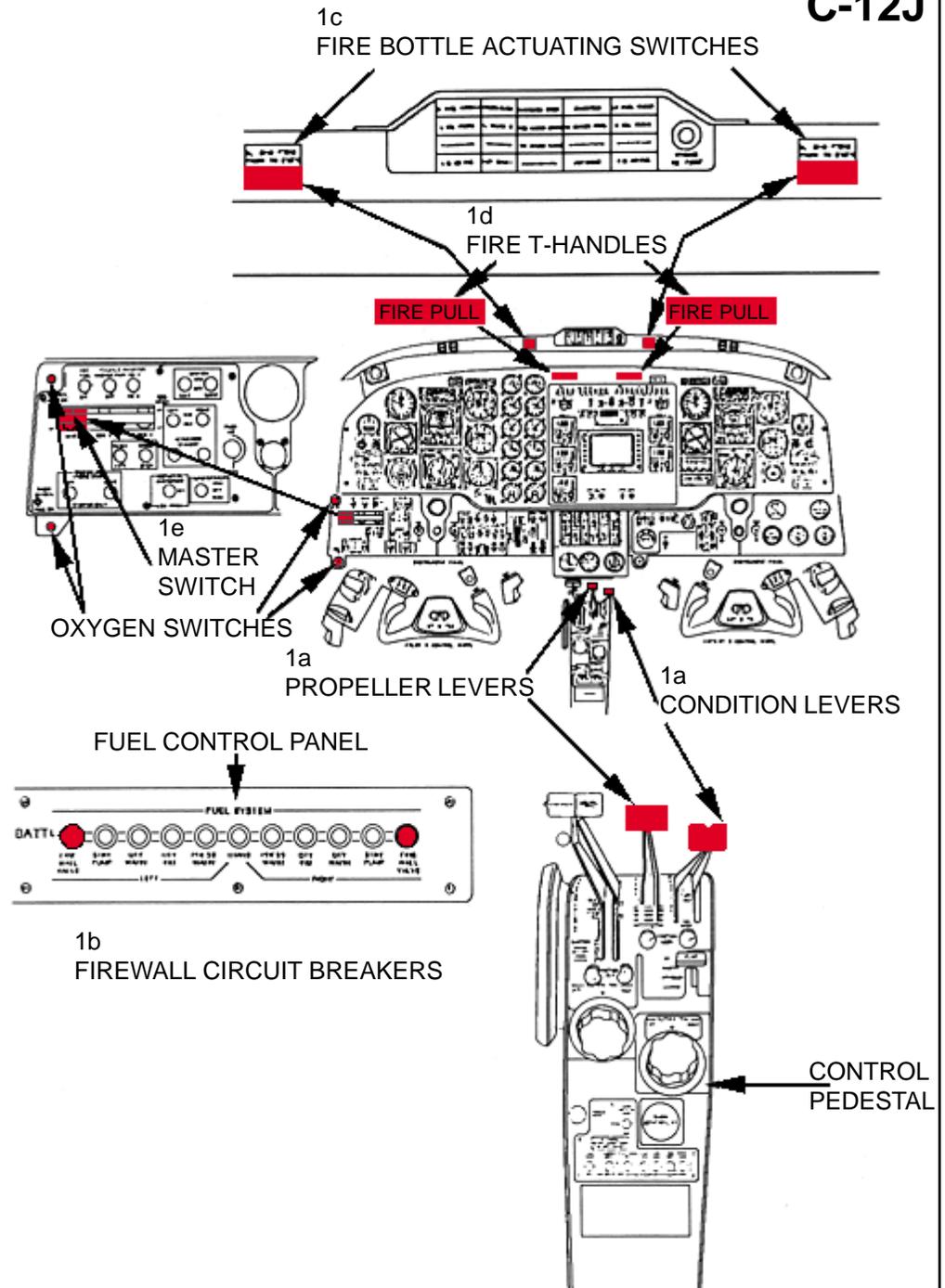
- a. Retard Propeller Levers and Condition Levers, located on right side of pilot's control pedestal, to CUT OFF position.
- b. Pull 5 AMP Firewall Valve circuit breakers (right and left), located on the fuel control panel, left side console, to OFF position. (Go to step e, if no engine fire.)
- c. IN CASE OF ENGINE FIRE: Push Fire Bottle Actuating Switches, located above right and left fire T-handles.
- d. Pull Engine Fire Shutoff T-handles, located on upper portion of pilot's instrument panel. Agent is CB.
- e. Place Master Switch, located on pilot's lower left instrument panel, to OFF position.

### NOTE:

Oxygen shutoff push/pull switches (2), are located on left side of instrument panel, O<sub>2</sub> capacity is 38.3 liters. No LOX is used.

## 3. AIRCREW EXTRACTION

- a. Unlatch lap belts and remove should harness from crewmembers. Crew seats have up and down and forward and back movement only. Armrests lift up.
- b. Unlatch lap belts from passengers.





# AIRCRAFT DIMENSIONS

## OTHER DIMENSIONS:

HORIZONTAL STABILIZER: - 65'

ENGINES (INBOARD) (GRIND TO ENG): - 8' 11"

ENGINES (OUTBOARD) (GRNT TO ENG): - 7' 8"

CREW ENTRY DOOR (DOOR TO GRND): - 5' 9"

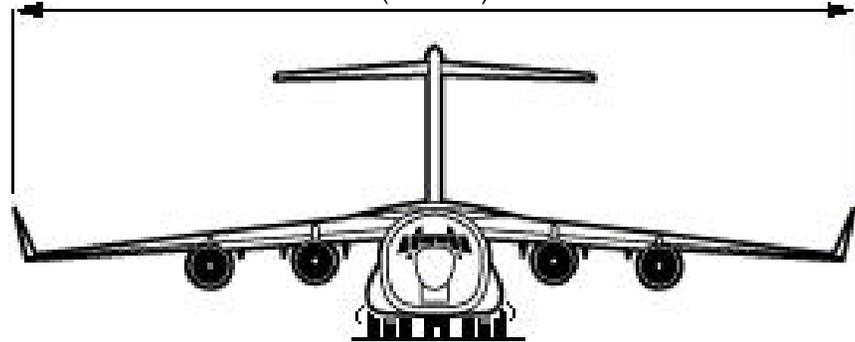
FWD EMERGENCY DOOR (DOOR TO GRND): - 5' 9"

TROOP DOORS (DOOR TO FRND): - 5' 3"

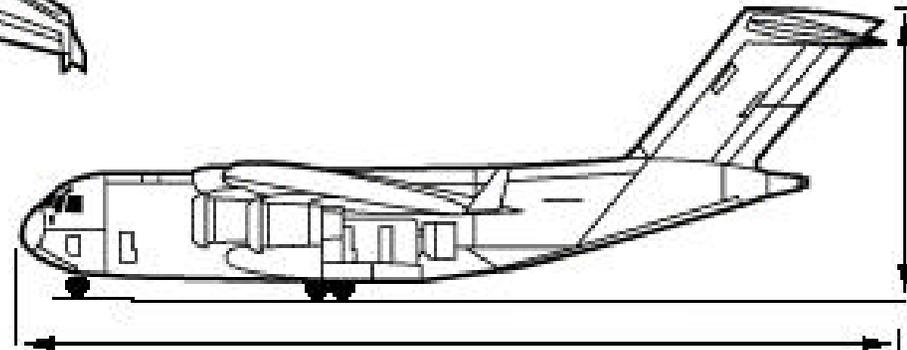
CARGO COMPARTMENT LENGTH: -19' 10"

LOADABLE WIDTH: -18' 0"

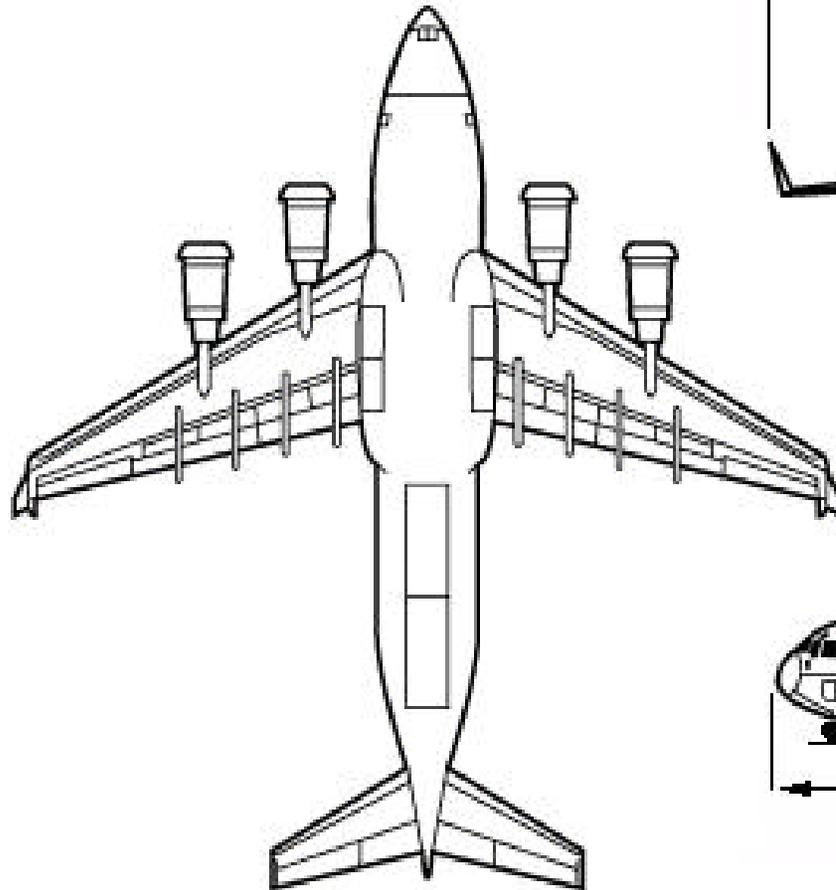
WING SPAN  
(AT WING TIPS)  
169' 9"  
(51.74 M)



HEIGHT  
(GEAR DOWN)  
55' 1"  
(16.79 M)



LENGTH  
173' 11"  
(53.04 M)



# DANGER AREAS

## WARNING

Engines, at any power setting are capable of developing enough inlet duct suction to cause fatal injuries to a person too close to the inlet.

## CAUTION

When loading or unloading personnel, baggage, or equipment through the crew entry door, with engines operating, stay clear of engine inlets. Secure all loose personal items before passing in front of operating engines. Application of high power settings with jet blast directed toward the path of other aircraft is not recommended. Jet blast is cumulative with surface winds and may exceed the operating limits of other aircraft.

**NOTE:**

If winds exceed 25 knots or ramp surfaces are slippery, add 50% to distance at intake.

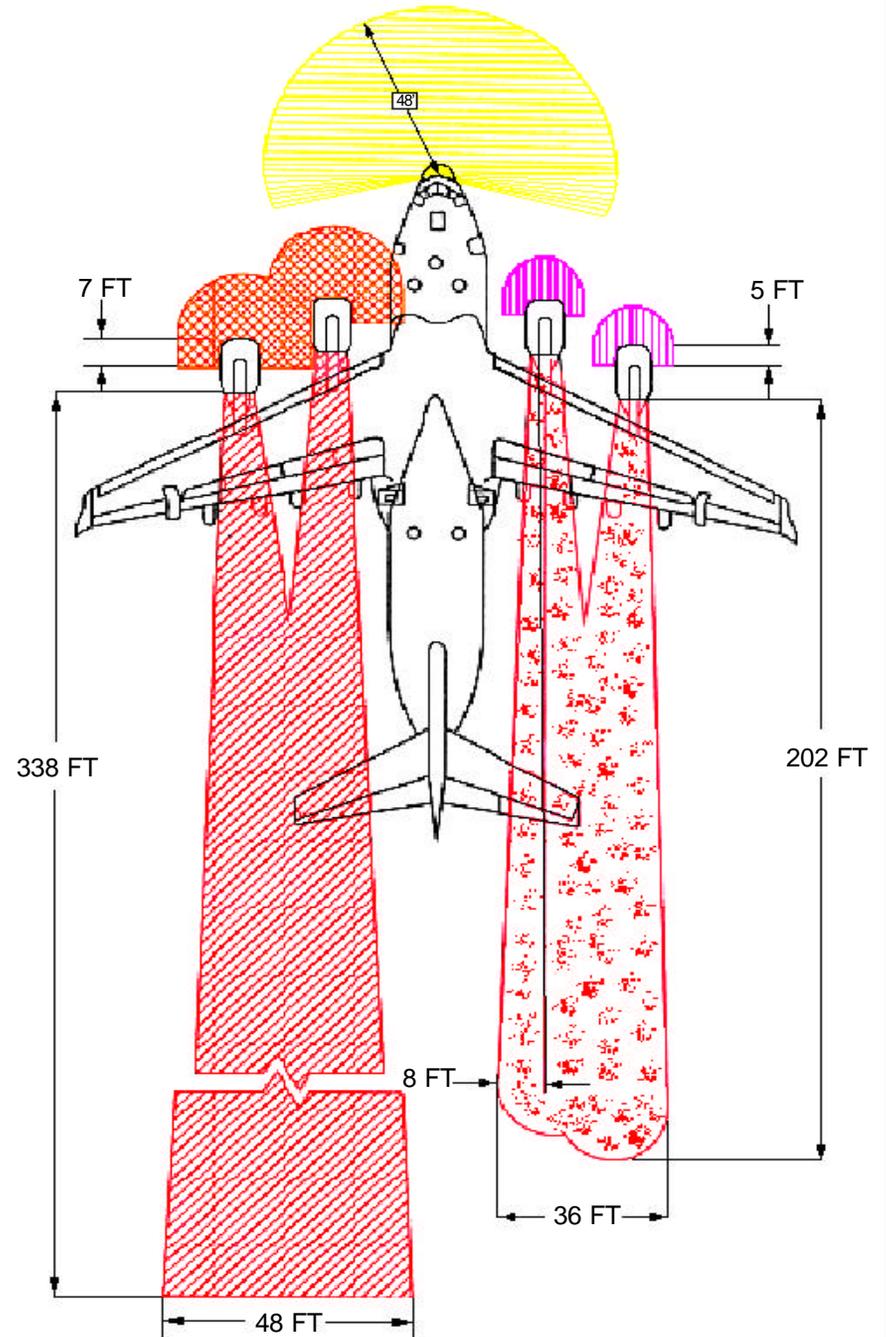
### LEGEND

**RADAR:**  
 RADIATION 48 FT RADIUS

**TAKE OFF THRUST:**  
 INTAKE  
 16 FT RADIUS  
 BLAST (TWO ENGINES)  
 283 MPH AT 115 FT OR LESS  
 167 MPH AT 170 FT  
 69 MPH AT 338 FT  
 27 MPH AT 1100 FT  
 20 MPH AT 1400 FT

**IDLE THRUST:**  
 INTAKE  
 9 FT RADIUS  
 BLAST  
 136 MPH AT 28 FT  
 68 MPH AT 95 FT  
 TEMPERATURE  
 125 DEGREES AT 22 FT  
 100 DEGREES AT 50 FT

**TEMPERATURE:**  
 200 DEGREES AT 65 FT  
 150 DEGREES AT 95 FT  
 100 DEGREES AT 202 FT



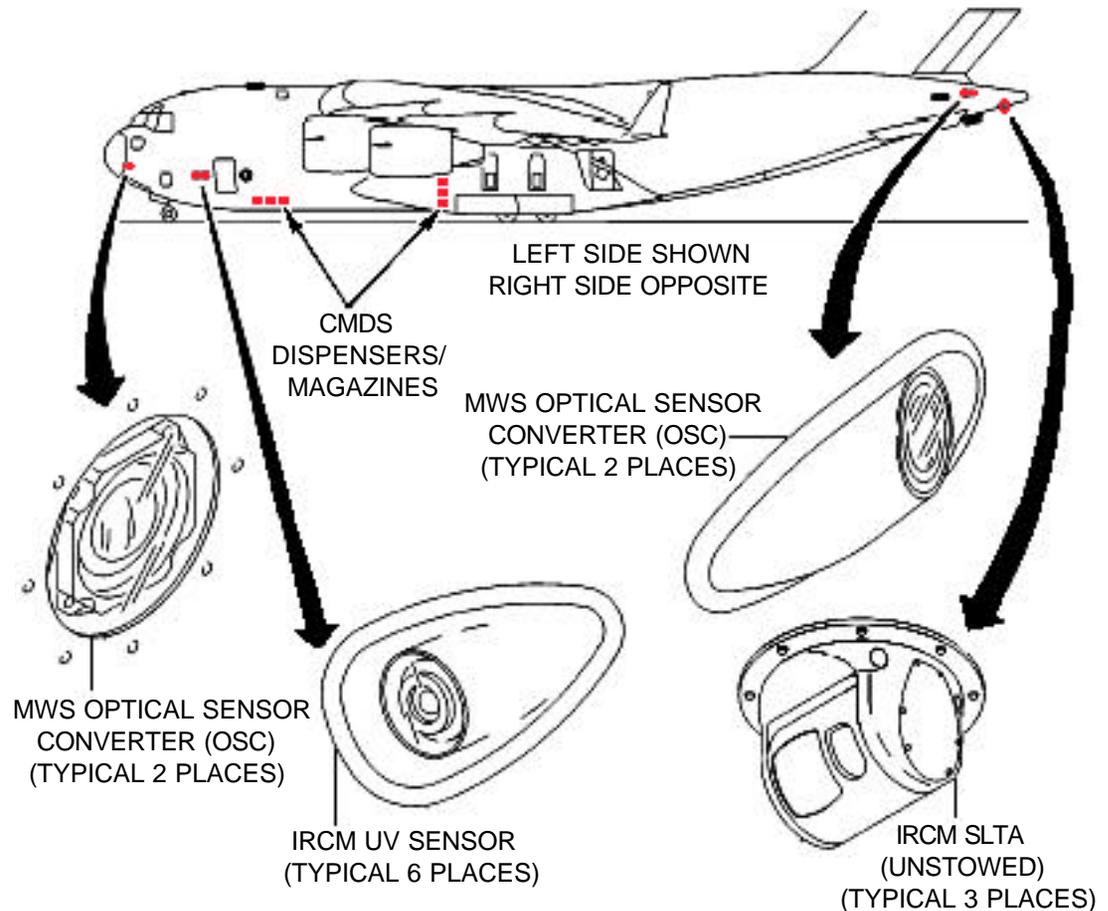
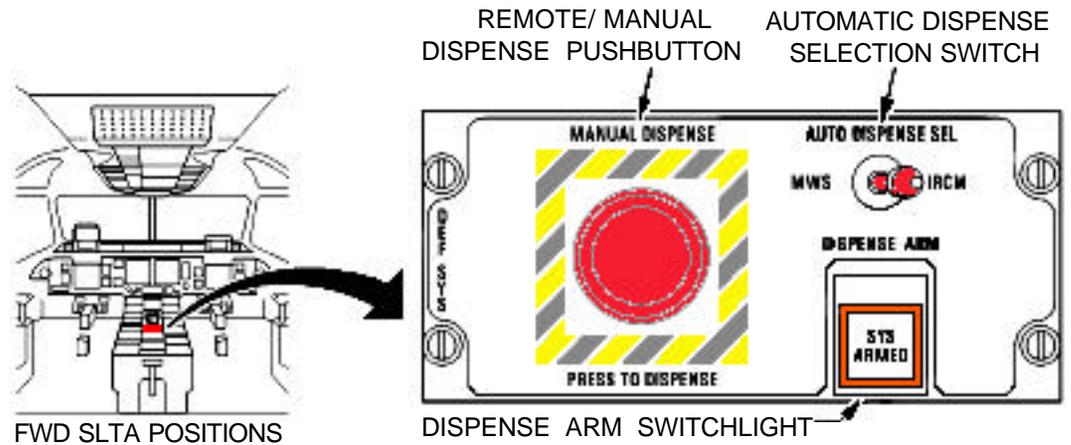
## COUNTERMEASURES SYSTEM DANGERS

The Countermeasures Dispensing System (CMDS) provides an integrated, reprogrammable, computer controlled capability for dispensing expendables. The system is capable of programmed automatic response to incoming threats in conjunction with the Missile Warning System (MWS) and Infrared Countermeasures (IRCM), or of manual dispensing. The CMDS consists of 12 dispensers for flares, 3 safety switches, 6 sequencers (one for every two dispensers), a remote dispense switch, a DISPENSE ARM switch, 1 Control Display Unit (CDU), 1 programmer, and a preprogrammed Mission Data File (MDF).

The AN/AAQ-24(V)12 IRCM System is a high power directional Infrared (IR) jammer. The system provides threat acquisition, tracking, and jamming of missiles from ejection through post-burnout or until threats can no longer be detected. The system can also interface with the CMDS to dispense flares. The system consists of a Control Indicator Unit, annunciators for missile threats and system faults, a Signal Processor, six sensors, one (or three) Small Laser Transmitter Assembly(ies), (SLTA) a Transformer Rectifier, and a maintenance override switch.

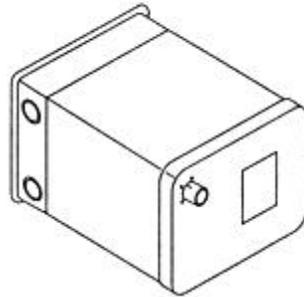
### WARNING

- The laser is invisible. It can injure eyes or skin within 187 feet (Laser Hazard Zone, pg C-17A.7). The eye hazard distance is significantly increased through binoculars, telescopes, telephoto lenses, etc. The laser can ignite paper, plastics, and dried foliage within 20 feet. Although the laser does not ignite fuel or hydraulic fluid within 20 feet, these liquids may ignite from burning paper, etc. within this zone.
- Do not touch the IRCM UV sensor windows. The sensors can be very hot during system activation and for an extended period thereafter. The sensors have an anti-icing capability that is active when the CIU mode control knob is in any position other than OFF. There is also a IRCM sensor located near the maintenance ditching hatch.
- The Optical Sensor Converter (OSC) and SLTA contains hazardous materials. Stay clear of SLTA as they may start rotating. Do not touch dust particles or residue from a damaged OSC and SLTA.

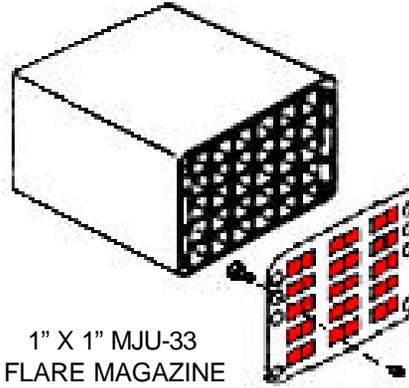


# COUNTERMEASURE DISPENSING SYSTEM

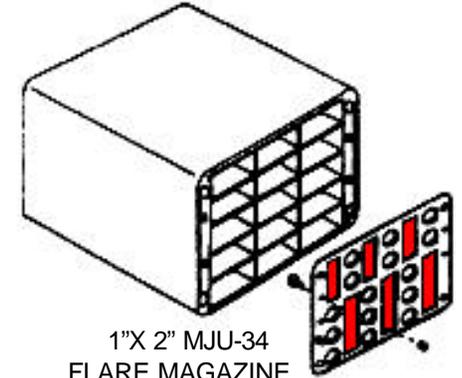
**NOTE:**  
 The C-17A aircraft Countermeasure Dispensing System is comprised of 12 separate dispensers (6 on each side) and 4 sensors (2 forward and 2 aft). Flares can be launched from either the auto or manual mode. When dispensers are loaded, they present a square or rectangular view. When dispensers are not loaded, they are covered with a 1.25" carbon epoxy covering. Dispensers have electrically actuated pyrotechnic squibs. The flares are mechanically dispensed from a magazine inside the dispenser.



TYPICAL DISPENSER FOR ALL FLARE SIZES



1" X 1" MJU-33  
 FLARE MAGAZINE  
 (30 LOADED FLARES)



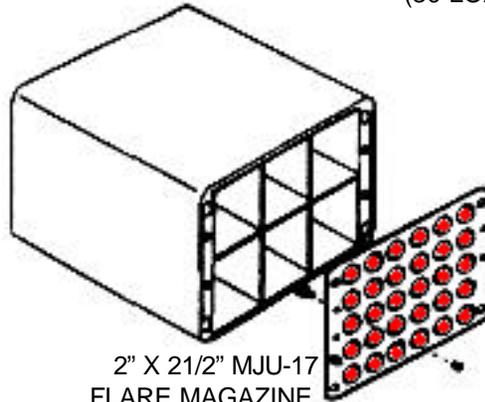
1" X 2" MJU-34  
 FLARE MAGAZINE  
 (15 LOADED FLARES)

**WARNING**

Dispensers, when actuated at close range, can present a serious danger to personnel. Best approach should be from the side if the integrity of the dispensers, magazines, or flares is compromised.

**WARNING**

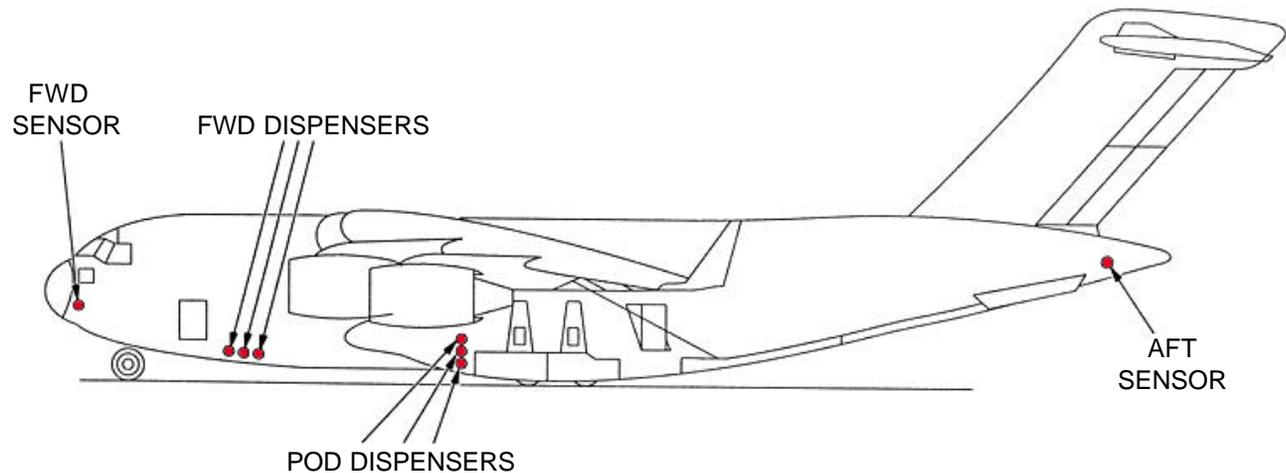
Do not disassemble the spectral filter assembly in the Optical Sensor converter (OSC). In the event of damage to the optical element in an OSC - producing dust, take precautions (respirator, goggles, gloves) to avoid inhalation, ingestion, or contact with skin and eyes. Each OSC contains nickelous sulfate hexahydrate, a probable human carcinogen. Harmful if swallowed, inhaled, or absorbed through the skin. Causes irritation, nausea, and vomiting.



2" X 21/2" MJU-17  
 FLARE MAGAZINE  
 (6 LOADED FLARES)

**NOTE:**

Each type of magazine consists of a composition block, with receptacles for countermeasures flare cartridges and a retainer plate.



# COUNTERMEASURES SYSTEM SAFETY SWITCHES LOCATIONS

## 1. SAFETY SWITCHES LOCATIONS

### NOTE:

Observe the general condition of the aircraft as you approach it. If maintenance or other support activity is in progress, coordinate with ground support personnel, if available, to determine aircraft status besides the obvious.

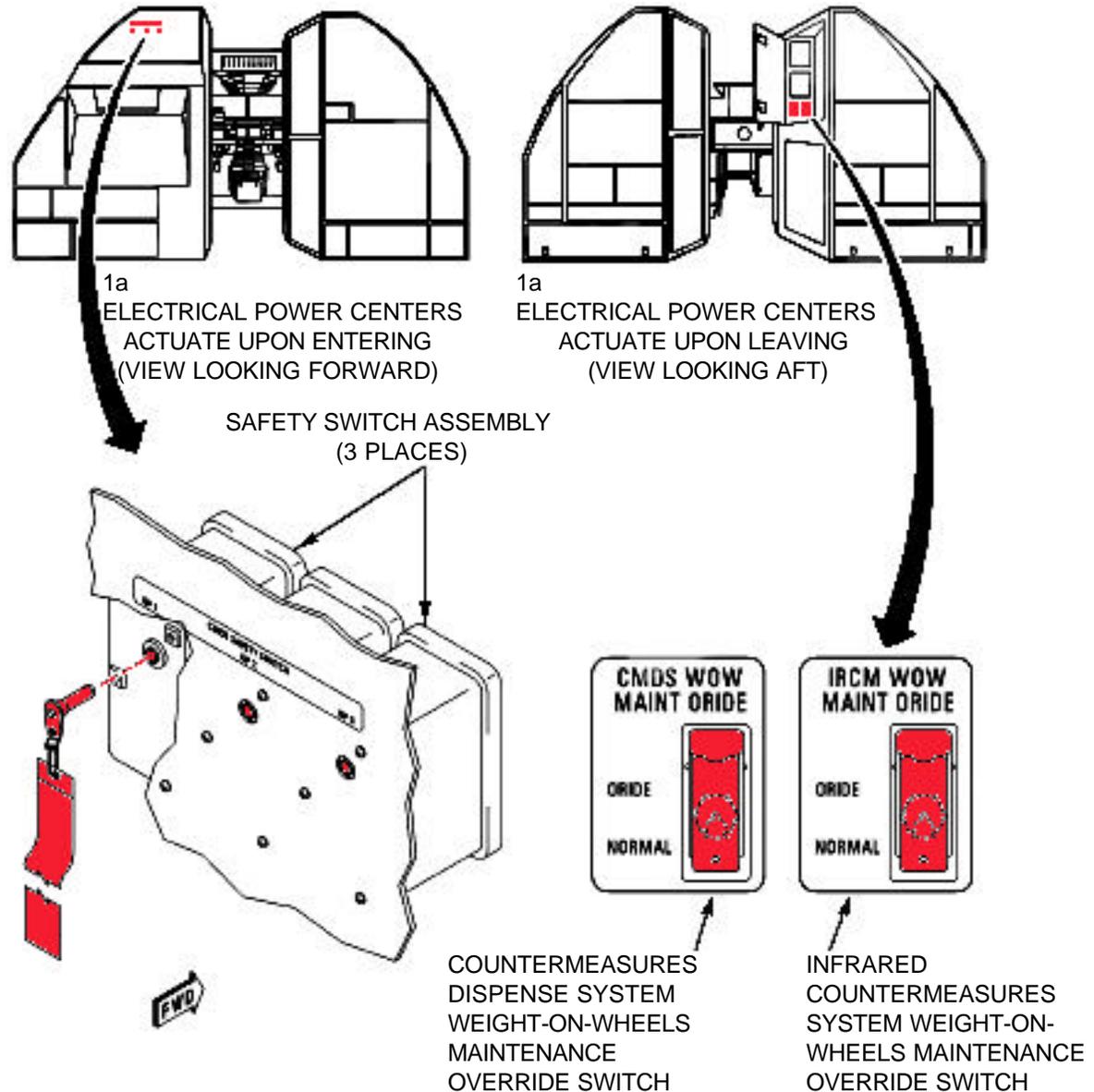
### WARNING

- Beware of dangers prior to approaching within the laser unprotected eye/skin hazard area. See pages C-17A.7 and 8. Failure to fully install safety switch pins or place CMDS WOW MAINT ORIDE switch, which controls only flare launches, to the NORMAL position and could result in unintended jettison of payloads.
- Stay clear of the SLTA(s) as they will rotate periodically when the IRCM system is powered and performs autoboesight test to insure pointing accuracy of the turrets. The IRCM WOW MAINT ORIDE switch in the NORMAL position will keep the turret head in a stowed position during this procedure, the turret will still rotate (and laser will fire inwardly) whenever the system is ON (i.e. whenever a UDM/MUDM is installed in the CIU and the CIU MODE switch is in any position other than OFF). This occurs about every 15 minutes.

### NOTE:

Complete "safing" of the system would include ensuring the CIU's MODE switch is OFF, no smartcard installed, and circuit breakers pulled.

- Safety the countermeasure systems, if required, by inserting 3 safety pins in the forward electrical power centers upper left side upon entering and placing the two system switches in the NORMAL position upper right side, located on the flightdeck bulkhead before leaving the flightdeck.



# LASER ZONES

## 1. LASER SAFETY ZONE

- a. The IRCM System uses a Class IV Laser which can cause injuries to eyes and skin. The eye-safe and skin-safe distances are shown in the Table (Hazard Distance Summary for the IRCM Laser). Refer to the appropriate standards for necessary precautions when activating the IRCM Class IV Laser.

**NOTE:**

The eye-safe distances increase when viewing the laser through binoculars or telescopes.

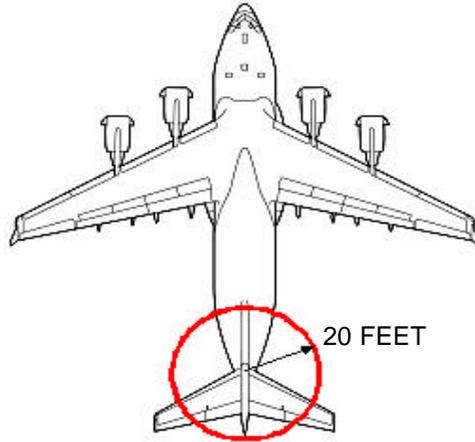
## 2. IGNITION HAZARD ZONE

- a. The IRCM System uses a Class IV Laser. Flammable materials with auto-ignition temperatures lower than JP-8 (i.e. 210°C, 410°F) such as paper, fabric, plastics and dried foliage may present a hazard within these zones. Although it has been shown that the laser alone should not ignite flammable liquids (i.e. hydraulic fluids, JP-4, JP-5, JP-8 and n-Hexane) these liquids could still be ignited by other combustible materials in the area should they be ignited by the laser. The severity of injuries to personnel may also be higher than those within the Laser Safety Zone. Refer to the appropriate standards for necessary precautions when activating the IRCM Class IV Laser.

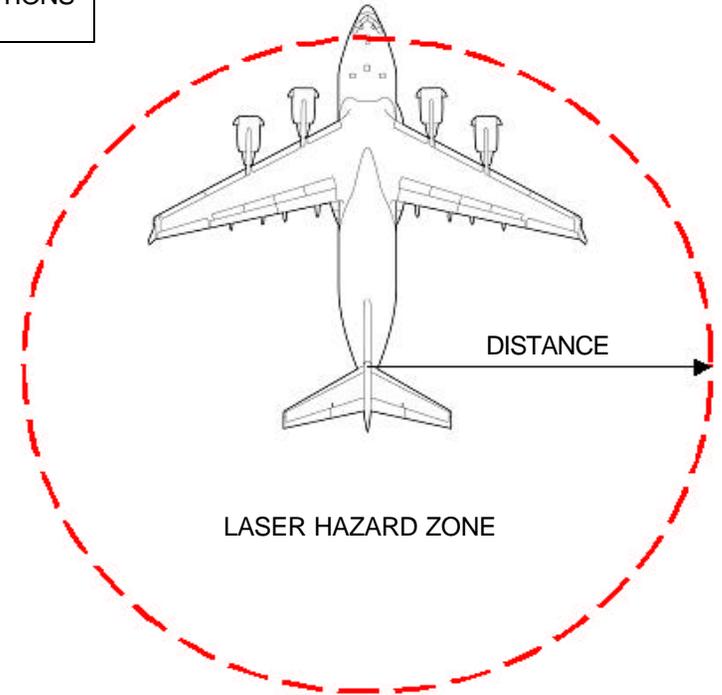
**NOTE:**

The distances defined in the table to the right will define the Laser Hazard Zone. Distances are measured on the ground from directly below the Aft SLTA, as shown. The 20-foot distance shown does not consider the height of the SLTA.

SINGLE SLTA CONFIGURATIONS  
(Not to Scale)



IGNITION HAZARD ZONE



LASER HAZARD ZONE

HAZARD DISTANCE SUMMARY FOR IRCM LASER TABLE

Wavelength	Hazard Type	Exposure Duration (sec)	Unaided Viewing (meters) [ft]	7 x 50 mm Binocular (meters) [ft]	8 cm Binocular (meters) [ft]	12 cm Telescope (meters) [ft]
<b>Multiple (Single SLTA)</b>	Intra-Beam Viewing NOHD	10	40 [132]	185 [607]	296 [971]	445 [1,460]
	Skin NSHD	10	40 [132]	N/A	N/A	N/A
<b>Multiple (Two of Three SLTAs)</b>	Intra-Beam Viewing NOHD	10	57 [187]	263 [863]	420 [1,378]	629 [2,064]
	Skin NSHD	10	57 [187]	N/A	N/A	N/A
	NOHD - Nominal Optical Hazard Distance					
	NSHD - Nominal Skin Hazard Distance					



# AIRFRAME MATERIALS

-  a. Aluminum Alloy
-  b. Carbon/Epoxy
-  c. Carbon/Kevlar/Epoxy
-  d. Glass Fiber Reinforced Plastic
-  e. Kevlar/Foam Core
-  f. Kevlar/Nomex
-  g. Carbon/Nomex

## NOTE:

Many interior nonstructural parts (e.g., liners, troop seats) are also made of composite materials.

## NOTE:

There are 4 flap track fairings for each wing using Kevlar/Nomex.

## NOTE:

The fuselage and wing are constructed primarily of aluminum alloy material. However, aluminum, lithium, titanium, steel, and composite materials are used wherever there are cost-effective advantages in weight, fatigue life, or corrosion resistance.

## NOTE:

As many as 20 "must cost" structural changes have taken place since production of P-1. A significant change is the center portion of the horizontal stabilizer that has been changed from aluminum (pictured at right) to graphite epoxy to carbon epoxy (see page C-17A.3). The cargo door and main landing gear pods now include composite materials. The slats are a mixture of aluminum and titanium.

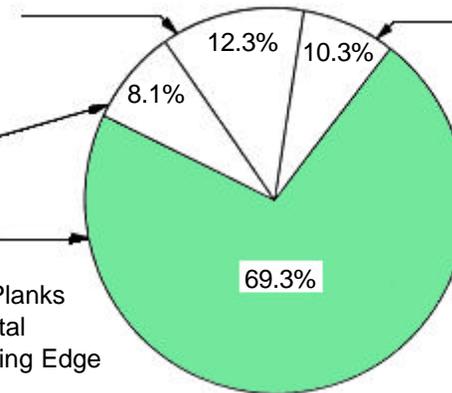
## STEEL/SUPERALLOYS

- Landing Gear
- Core Exhaust & Thrust Reverser

## COMPOSITES

## ALUMINUM ALLOY

- Cargo Ramp & Door
- Fuselage Shell & Floor Planks
- Wing, Vertical & Horizontal Stabilizer Boxes, & Leading Edge Structure



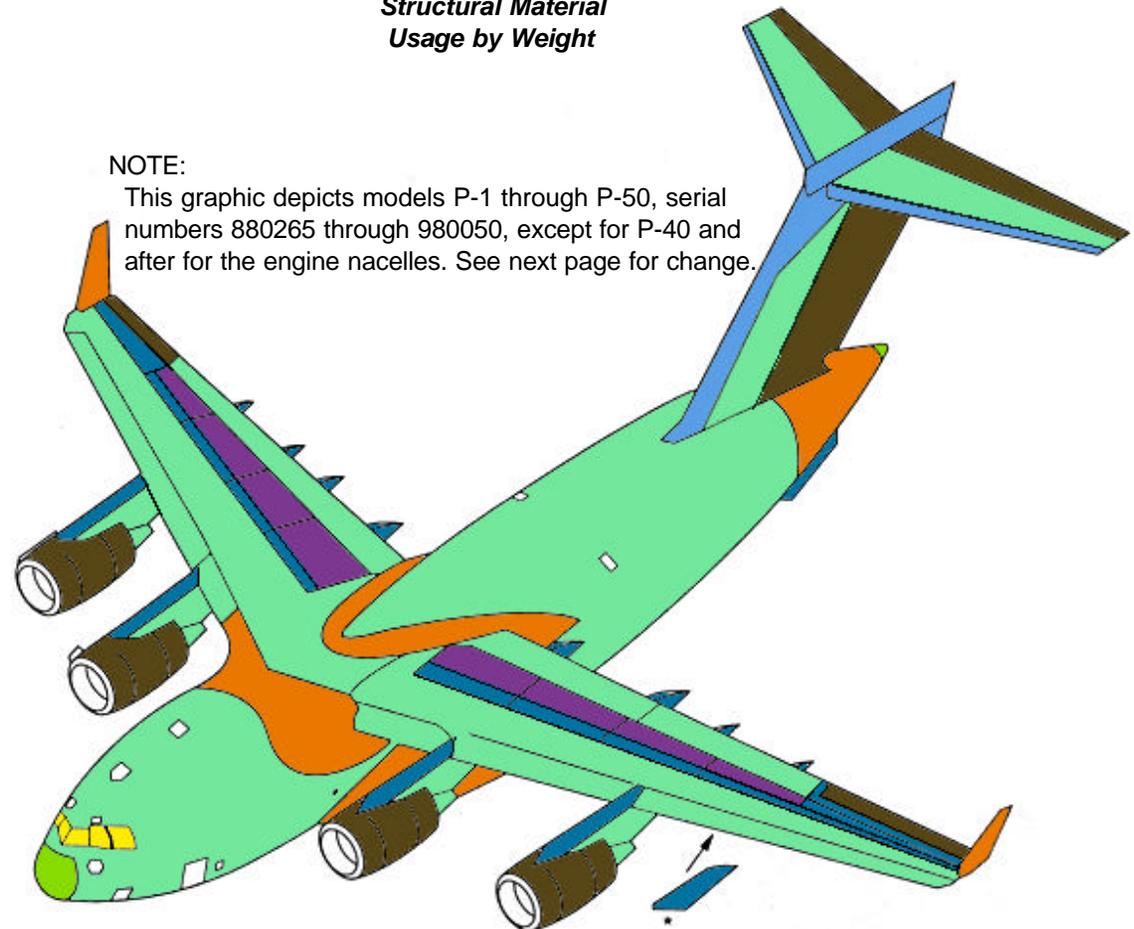
## TITANIUM

- Fuselage Tear-Stopppers
- Slat Tracks
- Firewalls
- Fasteners
- Hydraulic Tubing
- Pylon Lower Spar Cap & Web
- Core Exhaust & Thrust Reverser
- Horizontal Stabilizer Pivot Structure

**Structural Material Usage by Weight**

## NOTE:

This graphic depicts models P-1 through P-50, serial numbers 880265 through 980050, except for P-40 and after for the engine nacelles. See next page for change.



# AIRFRAME MATERIALS

- a. Aluminum Alloy
- b. Carbon/Epoxy & Syncore
- c. Carbon/Epoxy
- d. Fiberglass/Epoxy & Fiberglass Core
- e. Fiberglass/Epoxy, Kevlar Epoxy & Nomex
- f. Carbon & Nomex
- g. Carbon/Bismaleimide & Phenolic

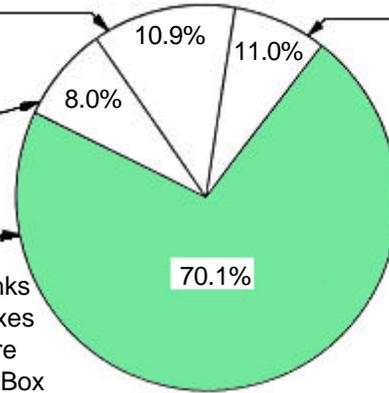
**STEEL/SUPERALLOYS**

- Landing Gear
- Core Thrust Reverser

**COMPOSITES**

**ALUMINUM ALLOY**

- Cargo Ramp & Door
- Fuselage Shell & Floor Planks
- Wing /Vertical Stabilizer Boxes
- Wing Leading Edge Structure
- Horizontal Stabilizer Center Box
- Outboard Box Ribs



**Structural Material Usage by Weight**

**TITANIUM**

- Fuselage Tear - Stoppers
- Slat Tracks, Slat Skins (partial)
- Firewalls
- Fasteners
- Hydraulic Tubing
- Pylon Lower Spar Cap and Web
- Fan Thrust Reverser
- Horizontal Stabilizer Pivot Structure
- Flap Skin (partial) and Trailing Edge
- Hinge Fittings - Control Surfaces and Forward Feg
- Flex Angle - Wing Lower Skin to
- Fuselage Spindles - Cargo Door & Ramp
- Straps - Wing Upper Cover to Pylon Stub

**NOTE:**

The fuselage and wing are constructed primarily of aluminum alloy material. Titanium, steel, and composite materials are used wherever there are cost-effective advantages in weight, fatigue life, or corrosion resistance. Many interior nonstructural parts (e.g., liners, troop seats) are also made of composite materials.

**NOTE:**

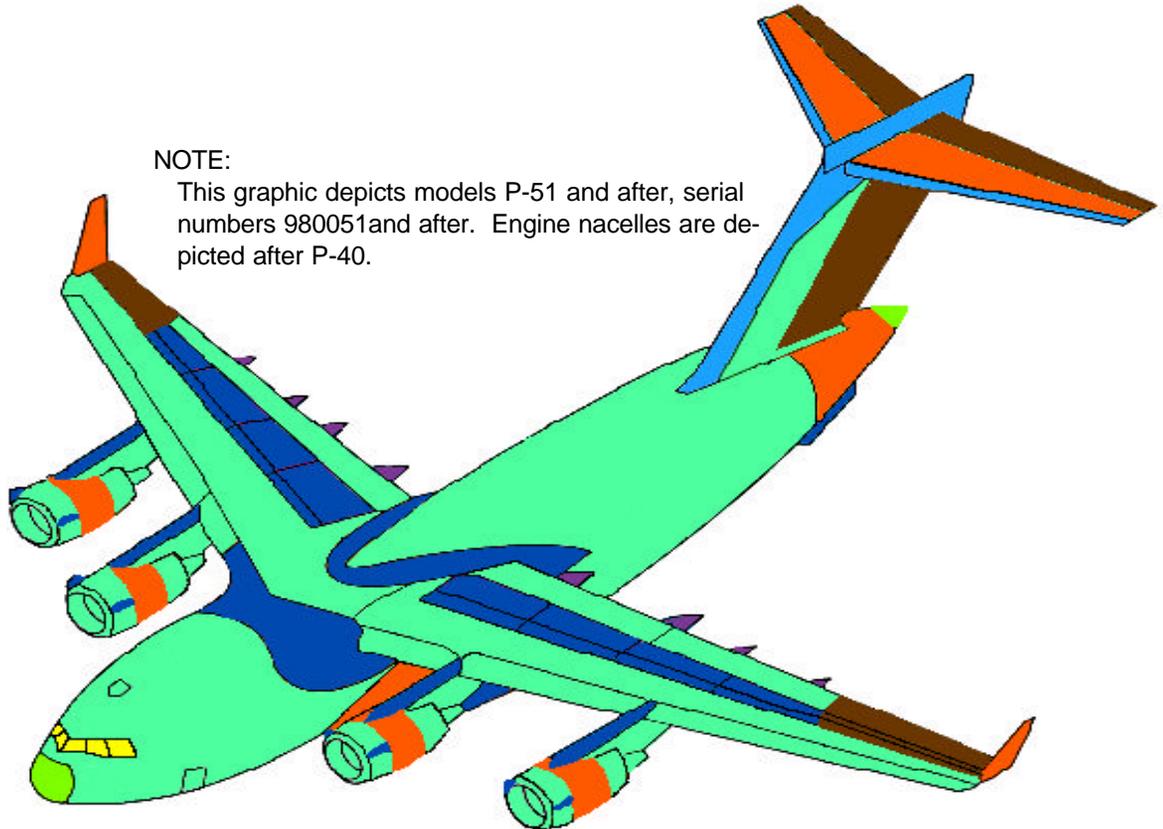
The horizontal stabilizer torque box is being installed on later production models and will not be a retrofit for earlier models. P-1 thru P-50, on page C-17A.2, has aluminum skins, spars and ribs. P-51 and after, on this page, will have graphite/epoxy skins, spars and aluminum ribs. The material is AS4 fibers and 3501-6 epoxy. The landing gear on all models is 300M steel.

**NOTE:**

The engine nacelles after P-40 have aluminum on the forward and aft sections. The center is carbon/epoxy. This change is reflected in the graphic.

**NOTE:**

This graphic depicts models P-51 and after, serial numbers 980051 and after. Engine nacelles are depicted after P-40.



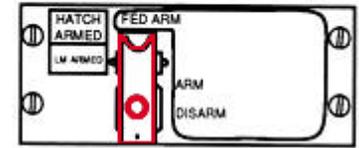
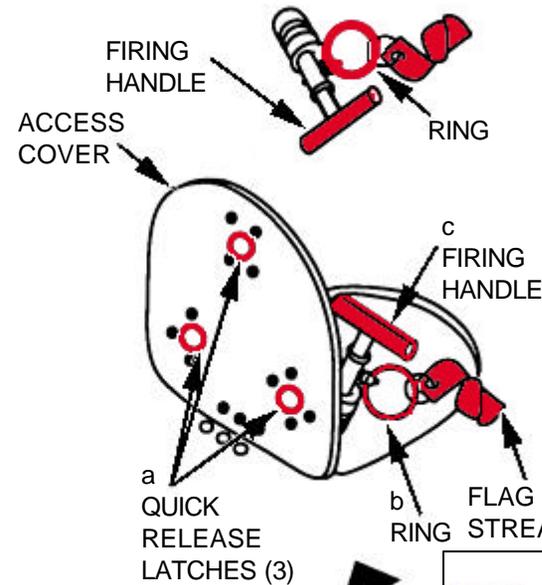
# FLOTATION EQUIPMENT DEPLOYMENT SYSTEM (FEDS)

**NOTE:**

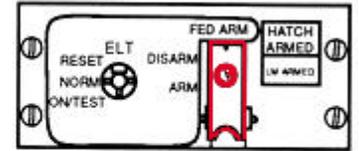
- FEDS is a ditching egress system incorporating four pyrotechnically produced hatch openings. Containerized life rafts are automatically ejected from three of the openings (forward: left and right; aft - right). Each raft automatically inflates after ejection and remains attached to the aircraft with a tether.
- FEDS hatches are not to be used for external entry, and are not emergency cut-in areas.
- The external FEDS initiator handle is located on the upper fuselage, left side, forward of the wing root. To activate FEDS with the external initiator handle.

- Release access cover quick release latches (3 places) and open cover.
- Pull ring to remove initiator safety pin.
- Turn handle 90 degrees and pull.
- Place attached kevlar covers over cut edges for personnel evacuation.

FEDS INITIATOR (TYPICAL)



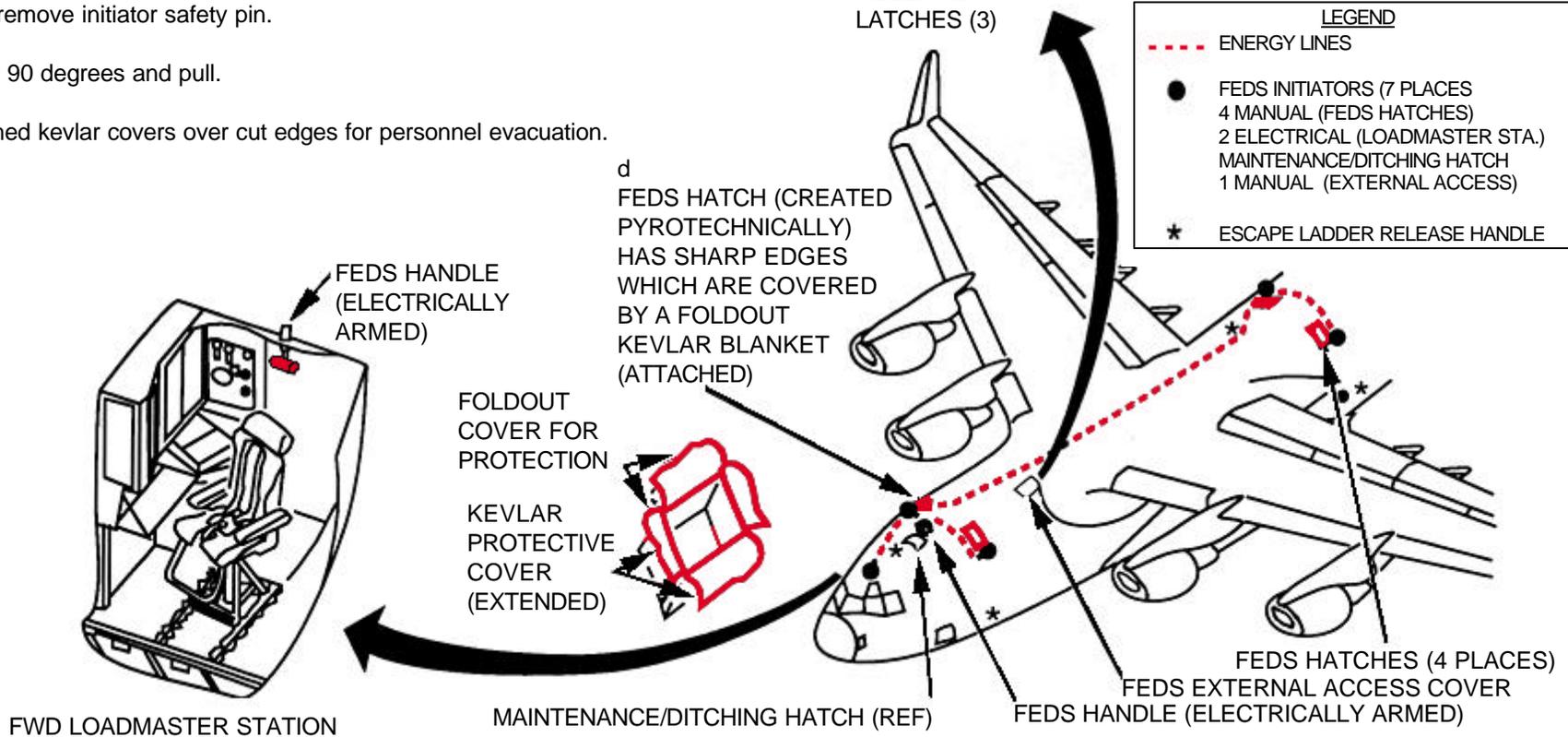
FEDS ARM SWITCH  
FWD LOADMASTER SWITCH



FEDS ARM SWITCH  
PILOT'S OVERHEAD PANEL

**LEGEND**

- ENERGY LINES
- FEDS INITIATORS (7 PLACES  
4 MANUAL (FEDS HATCHES)  
2 ELECTRICAL (LOADMASTER STA.)  
MAINTENANCE/DITCHING HATCH  
1 MANUAL (EXTERNAL ACCESS))
- \* ESCAPE LADDER RELEASE HANDLE



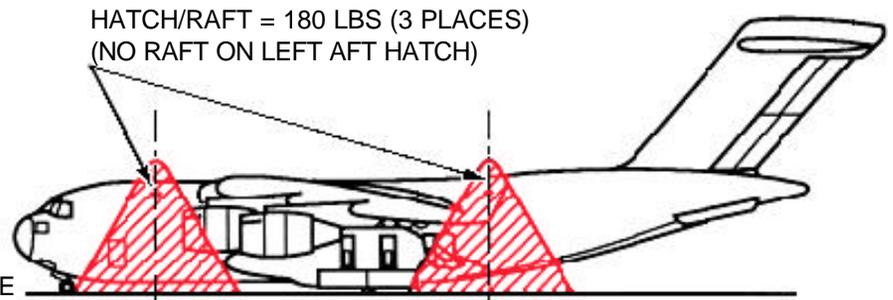
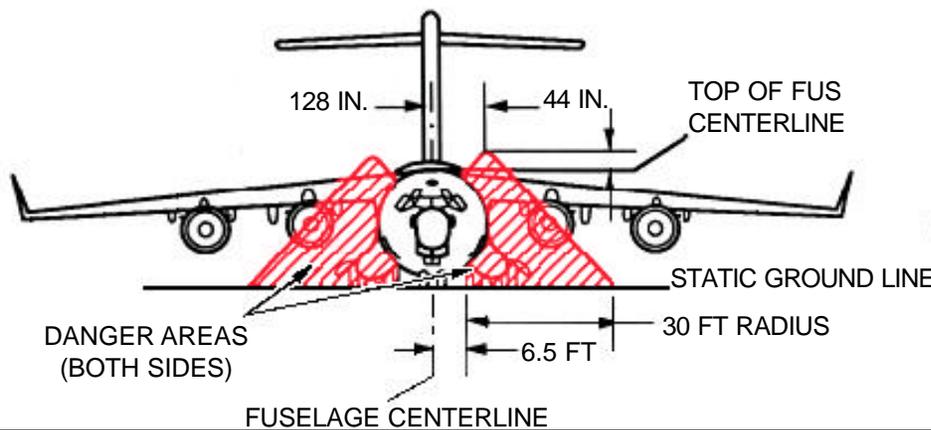
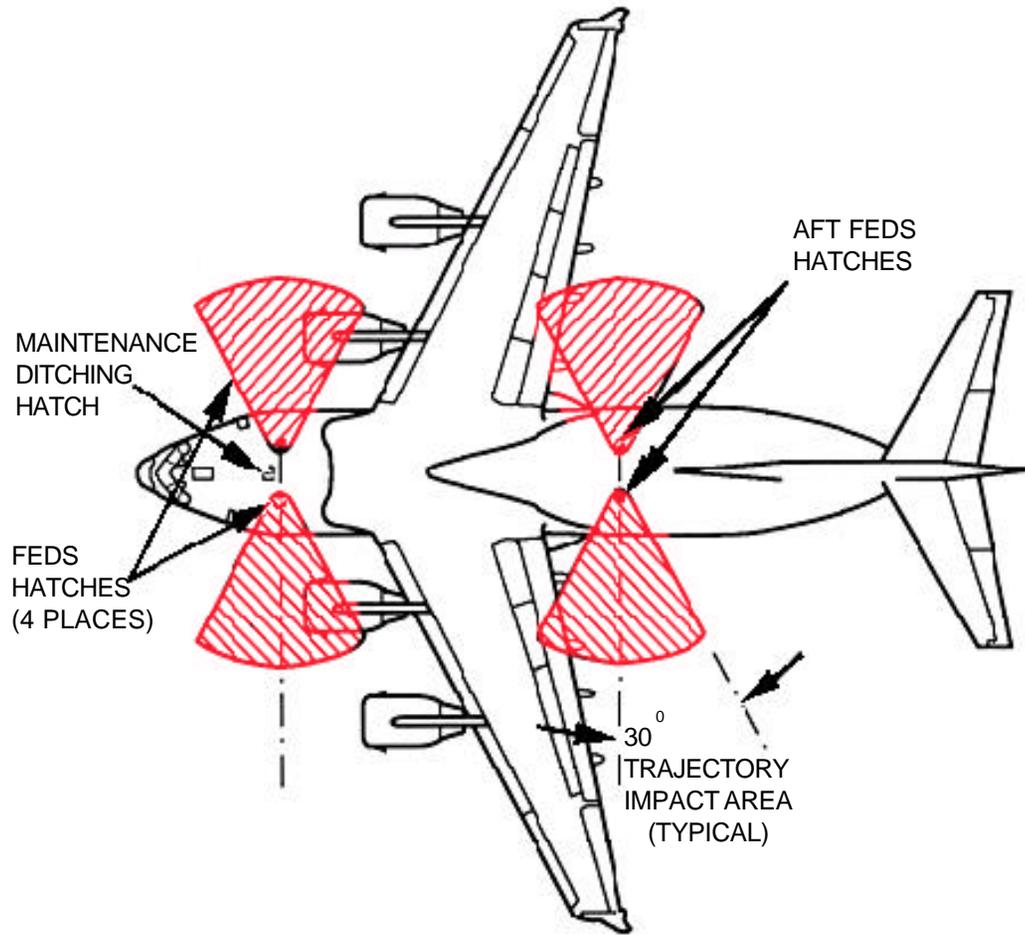
# FEDS HAZARD AREA

**WARNING**

To avoid possible injury or death, rescue personnel should remain clear of FEDS hatch impact areas depicted as shaded areas in all views.

**NOTE:**

- When hatch is jettisoned, a raft is attached by a 36 foot line on three of the four hatches. In a water ditching situation, the raft line will detach as aircraft submerges.
- The raft container being a loose item, after separation, is not accounted for.

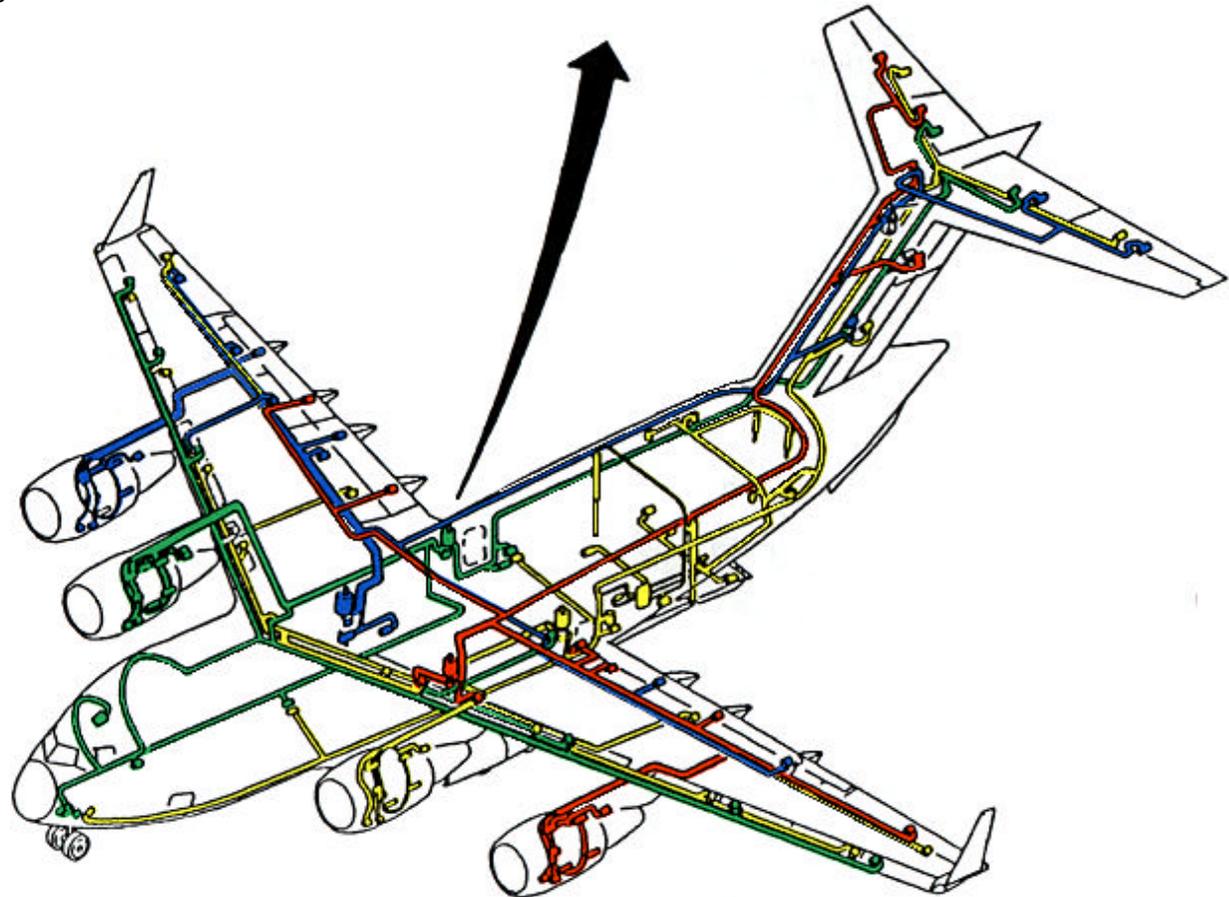
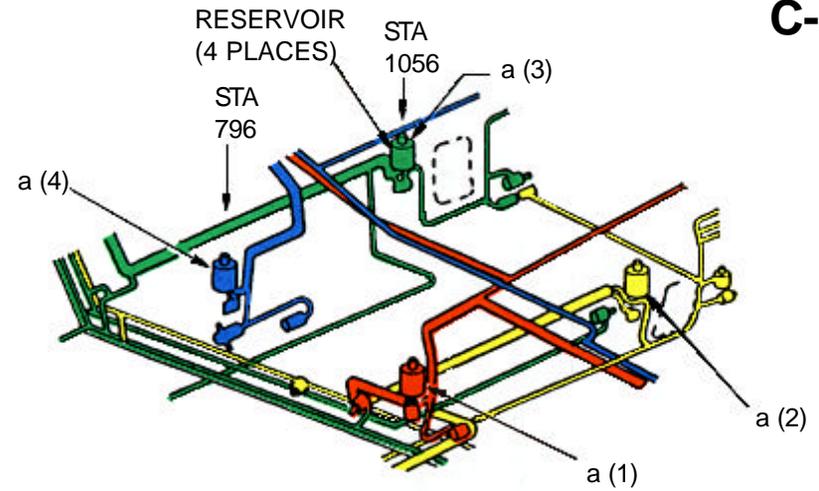


# AIRCRAFT HYDRAULIC SYSTEMS

## NOTE:

Hydraulic power supply consists of four independent continuously operating 4000 psi pressurized systems. Four individual hydraulic systems network the aircraft as indicated.

- a. Each of the four system reservoirs have specific hydraulic fluid quantities:
- (1) System 1 - 11.1 gallons.
  - (2) System 2 - 18.5 gallons.
  - (3) System 3 - 13.5 gallons.
  - (4) System 4 - 11.1 gallons.
- b. Four main system reservoirs are mounted above aircraft centerline at stations 796.0 and 1056.1, two reservoirs on each side.



## LEGEND

- HYDRAULIC SYSTEM NO. 1
- HYDRAULIC SYSTEM NO. 2
- HYDRAULIC SYSTEM NO. 3
- HYDRAULIC SYSTEM NO. 4

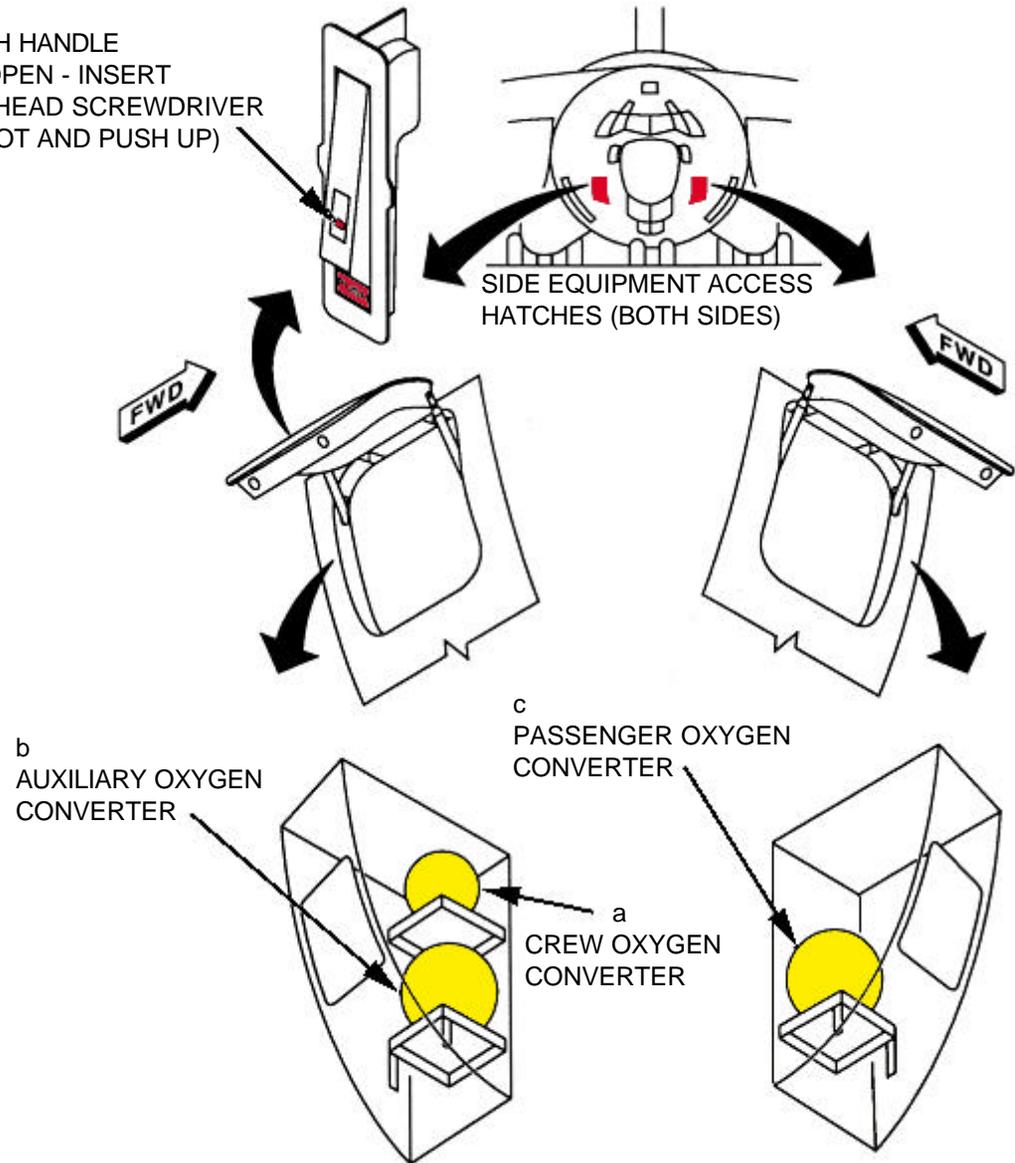
# AIRCRAFT OXYGEN SYSTEM LOCATIONS

## NOTE:

The aircraft oxygen system consists of three separate oxygen converters located approximately eight feet above ground level.

- The crew oxygen system consists of one 25 liter converter located in the right nose compartment. (Minus 87-0025, 88-0265, and 88-0266.)
- The auxiliary converter (75 liters) is also located in the right nose compartment directly below the crew converter.
- The passenger converter (75 liters) is located in the left nose compartment opposite the crew converter. Access is similar to crew and the auxiliary converter inside a protective shroud. (Minus 87-0025, 88-0265, and 88-0266.)

LATCH HANDLE  
(TO OPEN - INSERT  
FLATHEAD SCREWDRIVER  
IN SLOT AND PUSH UP)



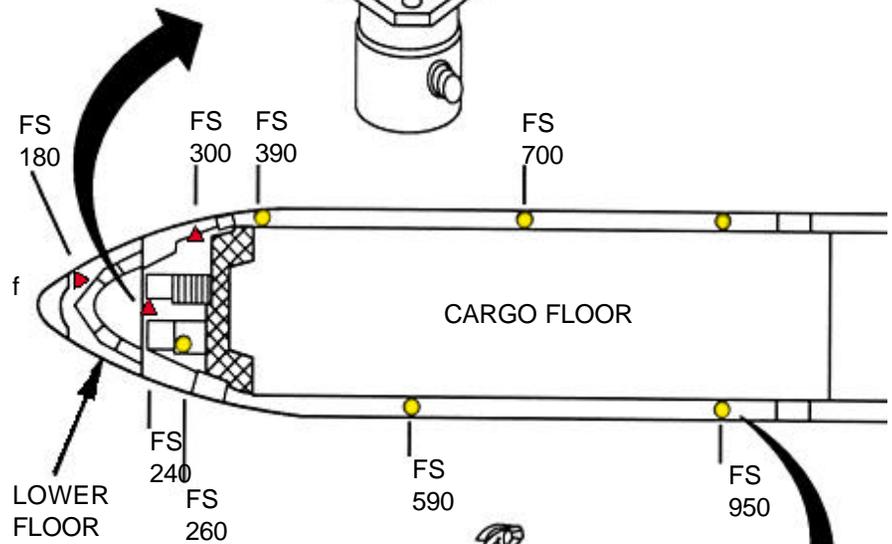
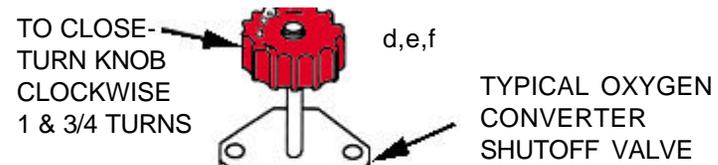
# AIRCRAFT OXYGEN SYSTEM LOCATIONS-Continued

- d. The auxiliary oxygen system manual shutoff valve is located at the forward loadmaster station, FS 300.
- e. The passenger converter manual shutoff valve is located forward of the galley at FS 400.
- f. The crew oxygen converter manual shutoff valve is located on the co-pilot's console at FS 180.

# AIRCRAFT PORTABLE OXYGEN SYSTEM LOCATIONS

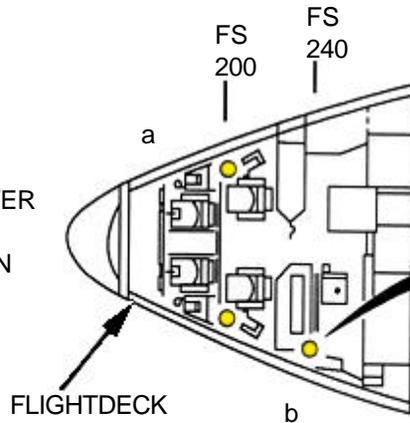
Nine portable oxygen bottle units are installed as follows:

- a. Two in the flightdeck, left and right side FS 200.
- b. One in the crew rest area, left side, FS 240.
- c. One in the lavatory, FS 260. Five in the cargo compartment, right side, FS 390, left side, FS 590, right side, FS 700, left and right side FS 950. Locations are approximate.

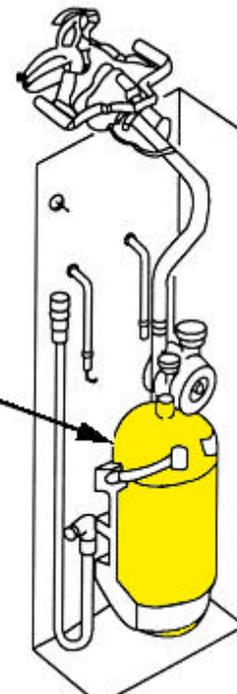


**LEGEND**

- ▲ OXYGEN CONVERTER SHUTOFF VALVE
- PORTABLE OXYGEN BOTTLE



c  
MA-1 BOTTLE (TYPICAL)



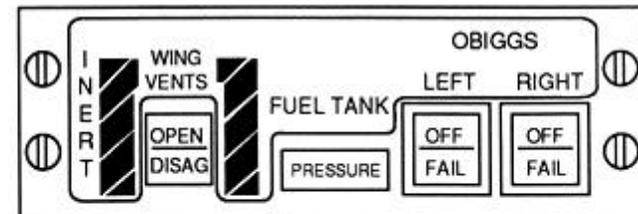
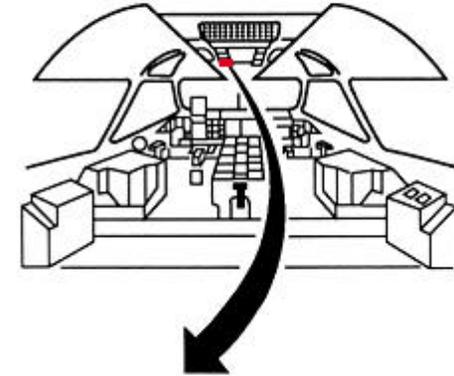
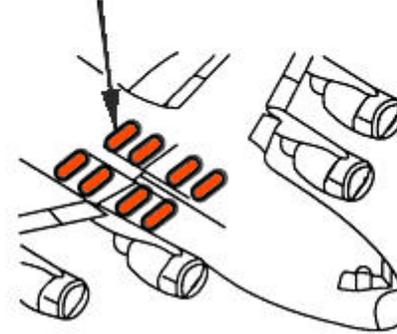
# ONBOARD INERT GAS GENERATING SYSTEM (OBIGGS)

## NOTE:

OBIGGS generates Nitrogen Enriched Air (NEA) for use in the fuel tanks. The NEA is used to keep fuel vapors in the fuel tank wing (ullage) areas inert (below the ignition point) during all phases of operation except refueling. The OBIGGS functions automatically.

- OBIGGS switch controls are located on the overhead panel within the flight compartment for flight activity. Ground operation of this system is controlled through a panel located on the maintenance monitor system located near the forward loadmaster station.
- a. Two identical half systems consisting of two sets ( 4 cylinders each) are located under the cargo floor at station 708.5. Each cylinder is isolated by check valves and has a thermal fuse, burst disc and storage relief valve which will open if system pressure is exceeded.
- b. The OBIGGS inert panel is located on the pilot's overhead panel. Shutting both inboard engines down will eliminate No. 2 and No. 3 hydraulic pressure to compressor motors causing automatic OBIGGS system shutdown. Additionally, the inert panel FAIL lights will illuminate.

a  
NITROGEN CYLINDER



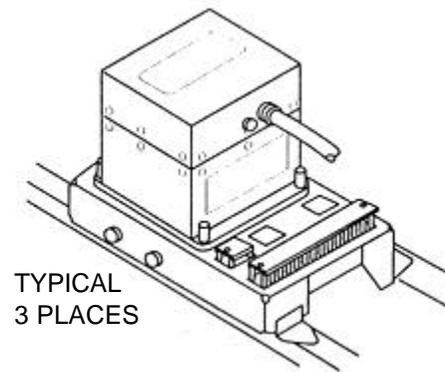
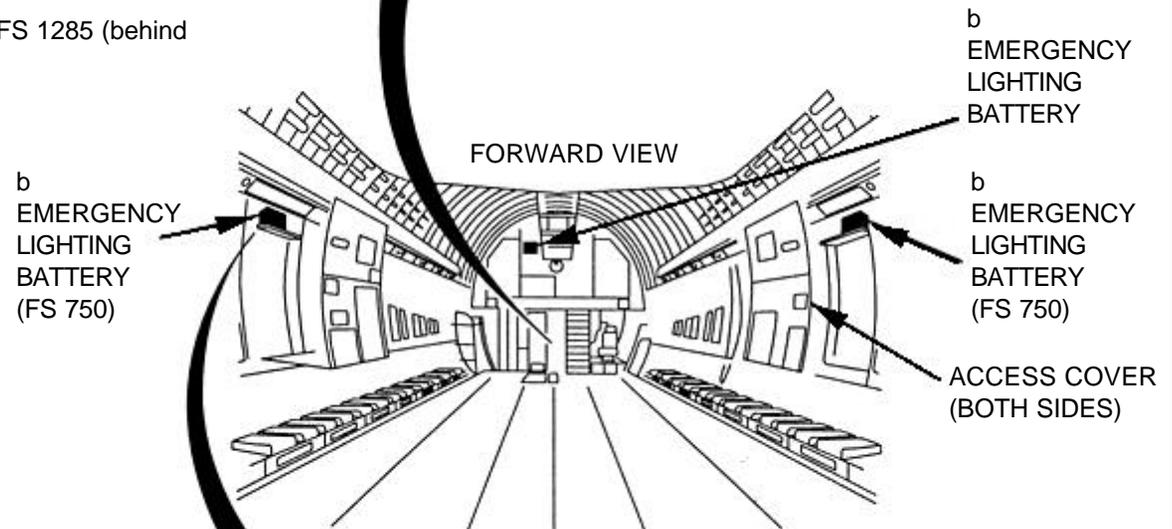
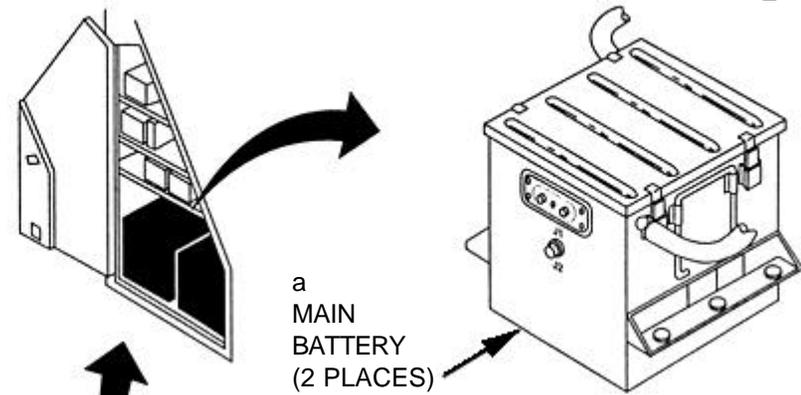
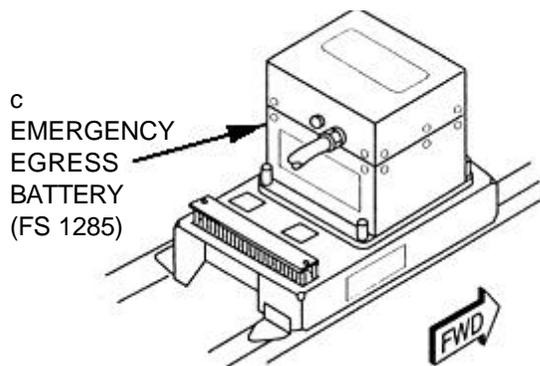
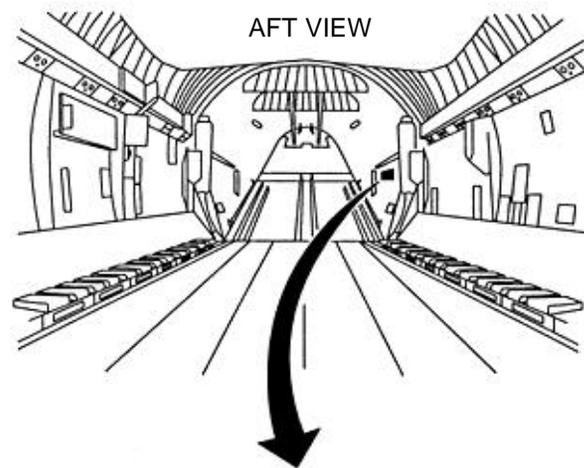
b  
OBIGGS INERT PANEL

# AIRCRAFT BATTERY LOCATIONS

## CAUTION

To avoid possible injury, rescue personnel should remain clear of FEDS hatch lighting batteries located on the forward bulkhead near the catwalk and on the right and left side of the cargo compartment at FS 750 (behind panel).

- Aircraft main batteries are located under the flightdeck entrance stairwell in lower portion of storage cabinet.
- Emergency lighting batteries are located on the forward bulkhead near the catwalk and on the right and left side of the cargo compartment at FS 750.
- Emergency egress battery is located aft of the left troop at FS 1285 (behind panel).



SPECIAL TOOLS/EQUIPMENT  
35 Ft Extension Ladder, "A" Frame Ladder,  
No. 2 Phillips Screwdriver for Oxygen Access,  
Power Rescue Saw, Portable Lights, Fire Drill II

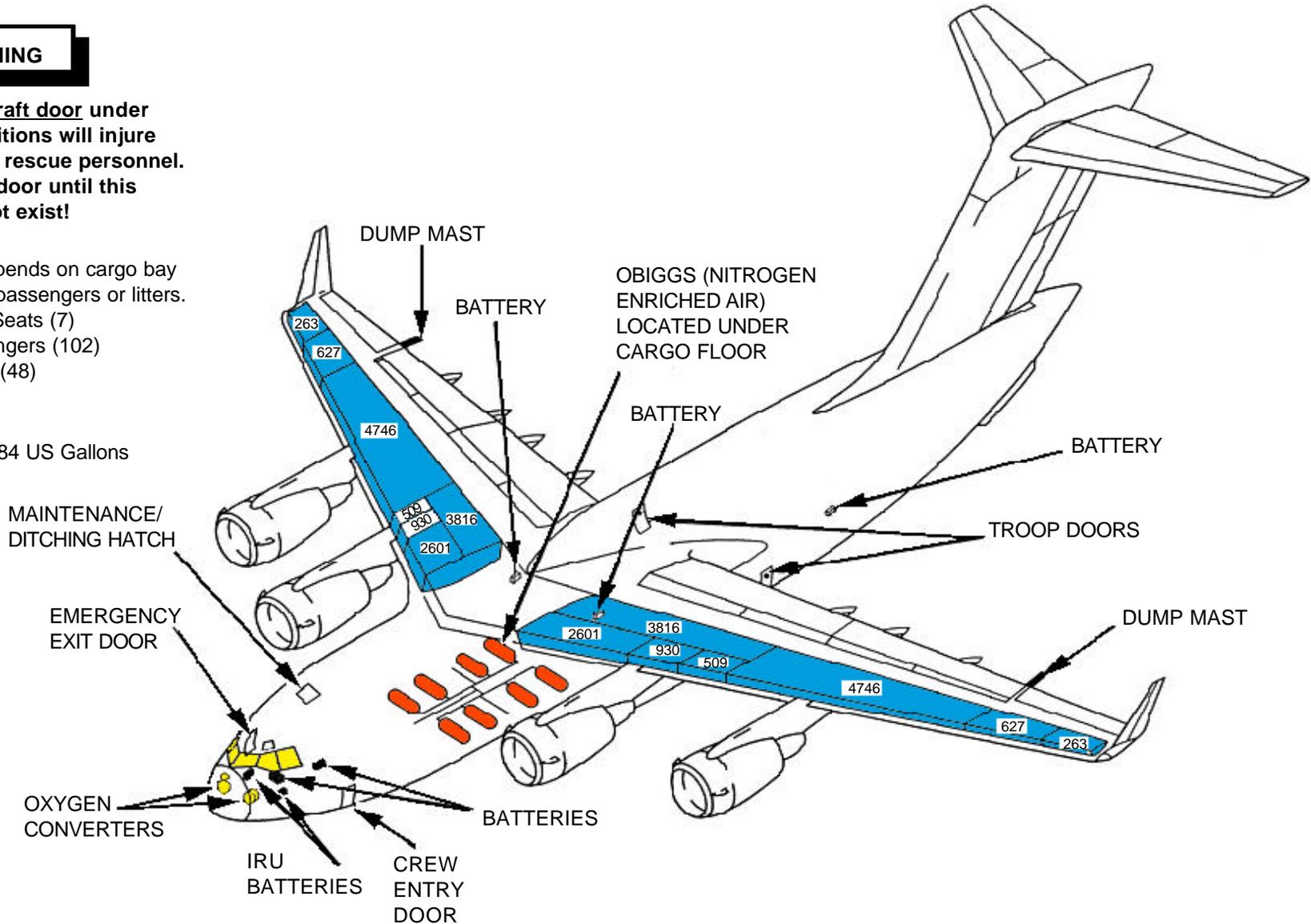
AIRCRAFT ENTRY

**WARNING**

**Opening any aircraft door under pressurized conditions will injure or cause death to rescue personnel. Do not open any door until this condition does not exist!**

NOTE:  
Seat capacity depends on cargo bay configuration for passengers or litters.  
Maximum Crew Seats (7)  
Maximum Passengers (102)  
Maximum Litters (48)

NOTE:  
Fuel Information  
Total Fuel : 29,984 US Gallons  
Fuel Type: JP-8



# AIRCRAFT ENTRY-Continued

## 1. CREW ENTRY DOOR

### WARNING

DO NOT open any door to this aircraft until it has been depressurized. Any attempt to open a door can result in injury or death to personnel attempting to do so. Door(s) will blow outward under pressure when unlocked or jimmied.

### NOTE:

The crew entry door is located on the left side of the aircraft forward of the wing.

### a. EXTERNAL OPERATION

- (1) Push small flap door next to door locking handle. Pull out door locking handle to retract locking pins.
- (2) Depress release lever, located next to door unlatching handle, and simultaneously pull out on unlatching handle until the release lever engages the detent to lift door over stops.
- (3) Pull down on door with locking handle until retractable lower step sets on ground.

### NOTE:

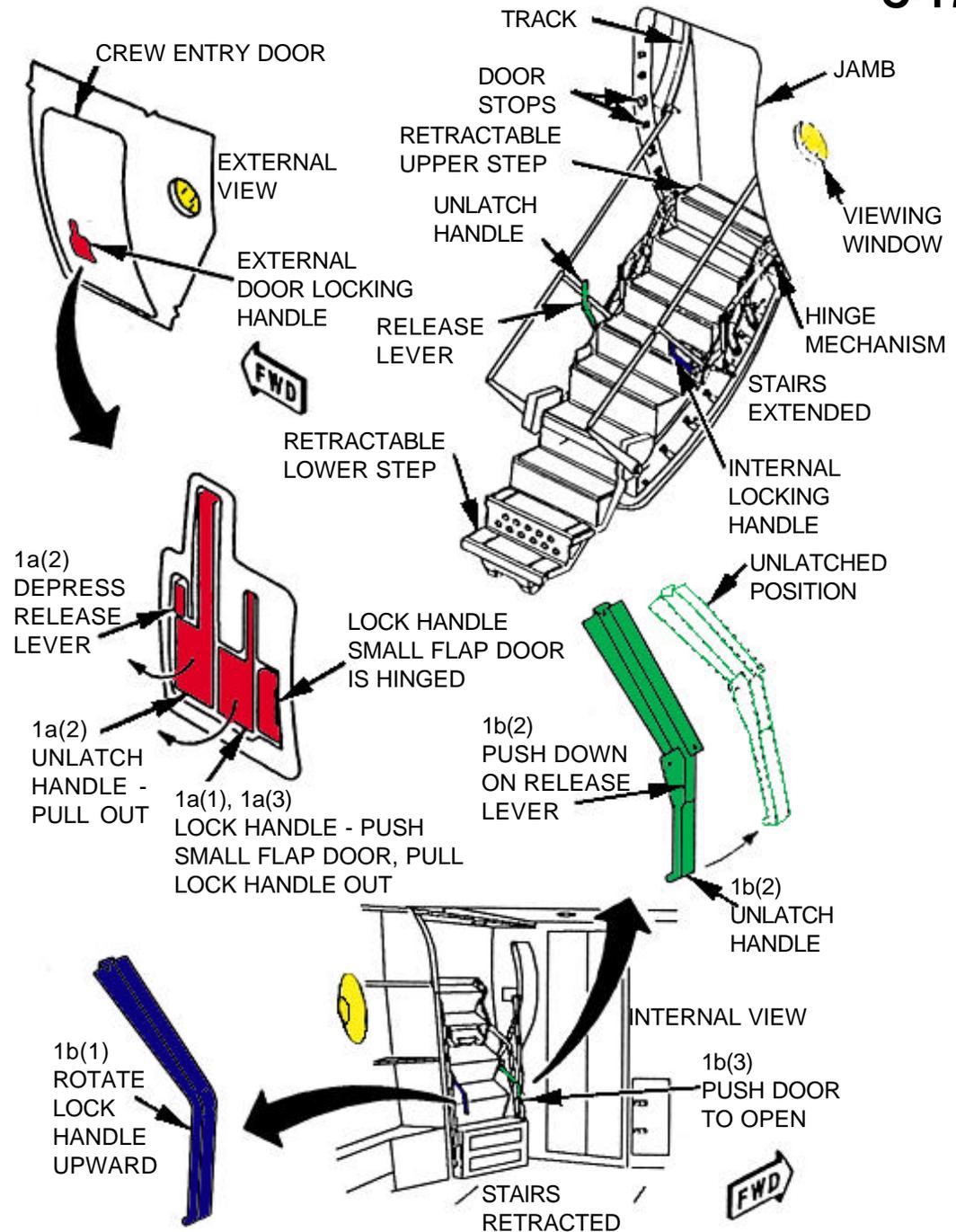
Door is counterbalanced to prevent free fall.

### b. INTERNAL OPERATION

### WARNING

To prevent personnel injury or damage to the door, visually clear the outside area using the viewing window adjacent to the door.

- (1) The blue door lock handle is located adjacent to left door railing. Raise lock handle upward to unlock door.
- (2) The green door latch handle is located adjacent to right door railing. Depress the thumb release and lift the latch handle to full up to lift door off stops.
- (3) Push door open. Door will open by its own weight. To extend steps, push up and out on handrails.



# AIRCRAFT ENTRY-Continued

## 1c. MODIFIED CREW ENTRY DOOR EXTERNAL OPERATION

### NOTE:

The C-17 fleet underwent a modification to the crew entry door. The fleet is 100% completed. This modification affects the external unlocking and opening of the crew entry door by the use of a new larger inside release lever and outside lock handle secured by a new flap door located at the bottom portion of the crew entry door. Also the door, inside handles, and handrails have been changed.

### WARNING

Coordinate with the flight deck to verify that pressure is zero, outflow valve is full open, and an additional exit is open prior to opening crew entry door. Failure to comply could cause personnel injury/damage to the aircraft. Do not stand in front of crew entry door.

### NOTE:

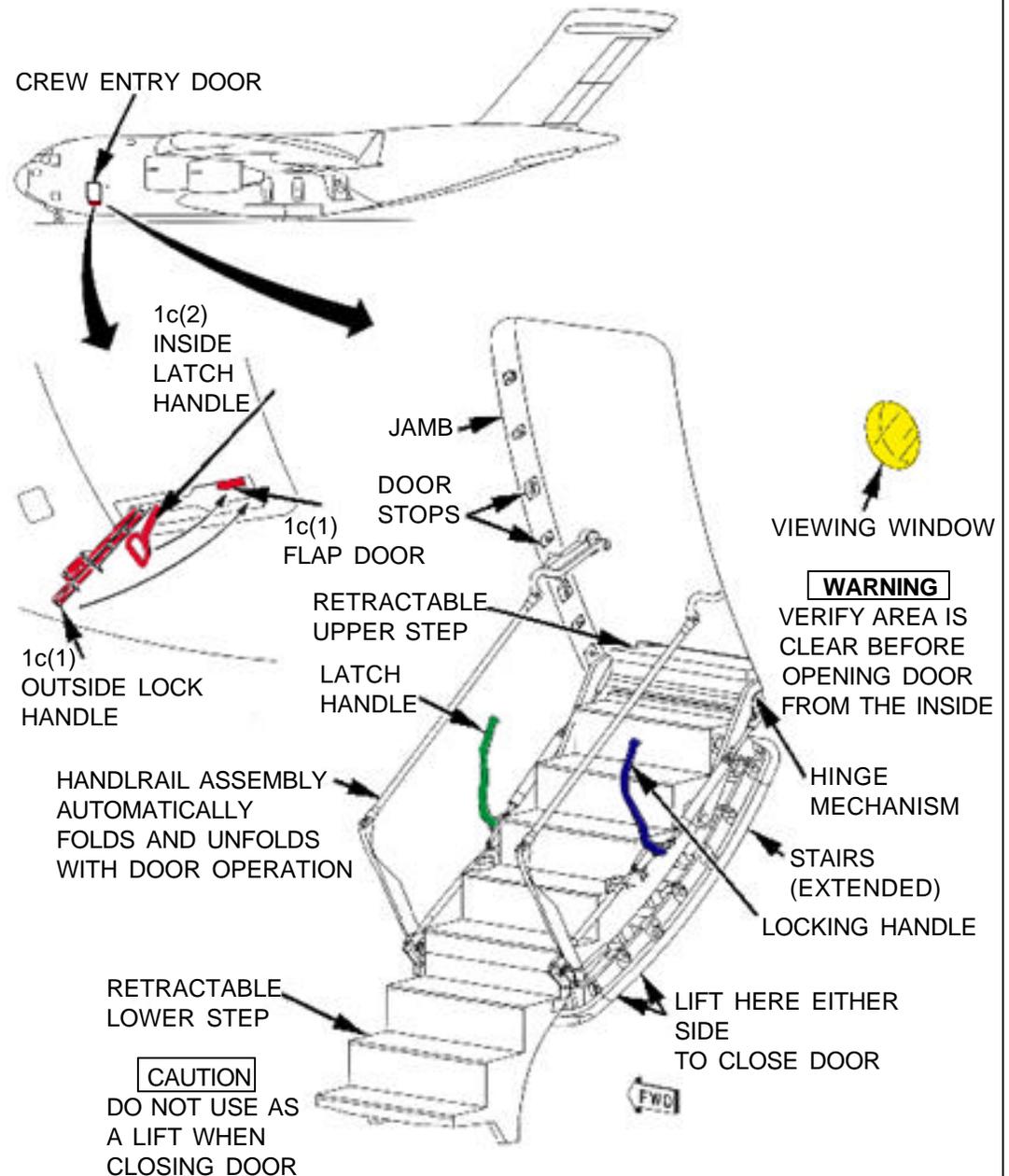
The crew entry door is located on the left side of the aircraft forward of the wing.

- (1) To unlock - Push flap door and pull up on outside lock handle.
- (2) To unlatch - Push the release lever and pull out on the inside latch handle.

### CAUTION

Do not apply a load on the crew door when the retractable lower step is not supported. It is permissible for a crewmember to enplane/deplane using the crew door to position a support. No weight restrictions apply. Failure to comply may cause damage to the aircraft.

- (3) Pull down on the door until the steps rest on the ground. Door opens outward from the top. Door is hinged at the bottom and counterbalanced to enable one person to open or close the door.



### WARNING

VERIFY AREA IS CLEAR BEFORE OPENING DOOR FROM THE INSIDE

### CAUTION

DO NOT USE AS A LIFT WHEN CLOSING DOOR

# AIRCRAFT ENTRY-Continued

## 2. FLIGHTDECK ACCESS DOOR

### NOTE:

A flightdeck access door is located above the flightdeck stairwell leading from the cargo compartment into the flightdeck area.

- a. If the access door is in the closed position, pull down on latch release and push door upward and secure against access door handrail retainer.

## 3. TROOP DOOR

### NOTE:

A troop door is located on the left and right side of the aircraft aft of the wing roof. The doors are 43 inches wide by 80 inches high and weigh approximately 195 pounds each. The doors are counter balanced to assist in opening and closing.

### a. EXTERNAL OPERATION

- (1) Open troop door control access cover, located under door window, by pressing the two push buttons to quickly release the cover latches.

### NOTE:

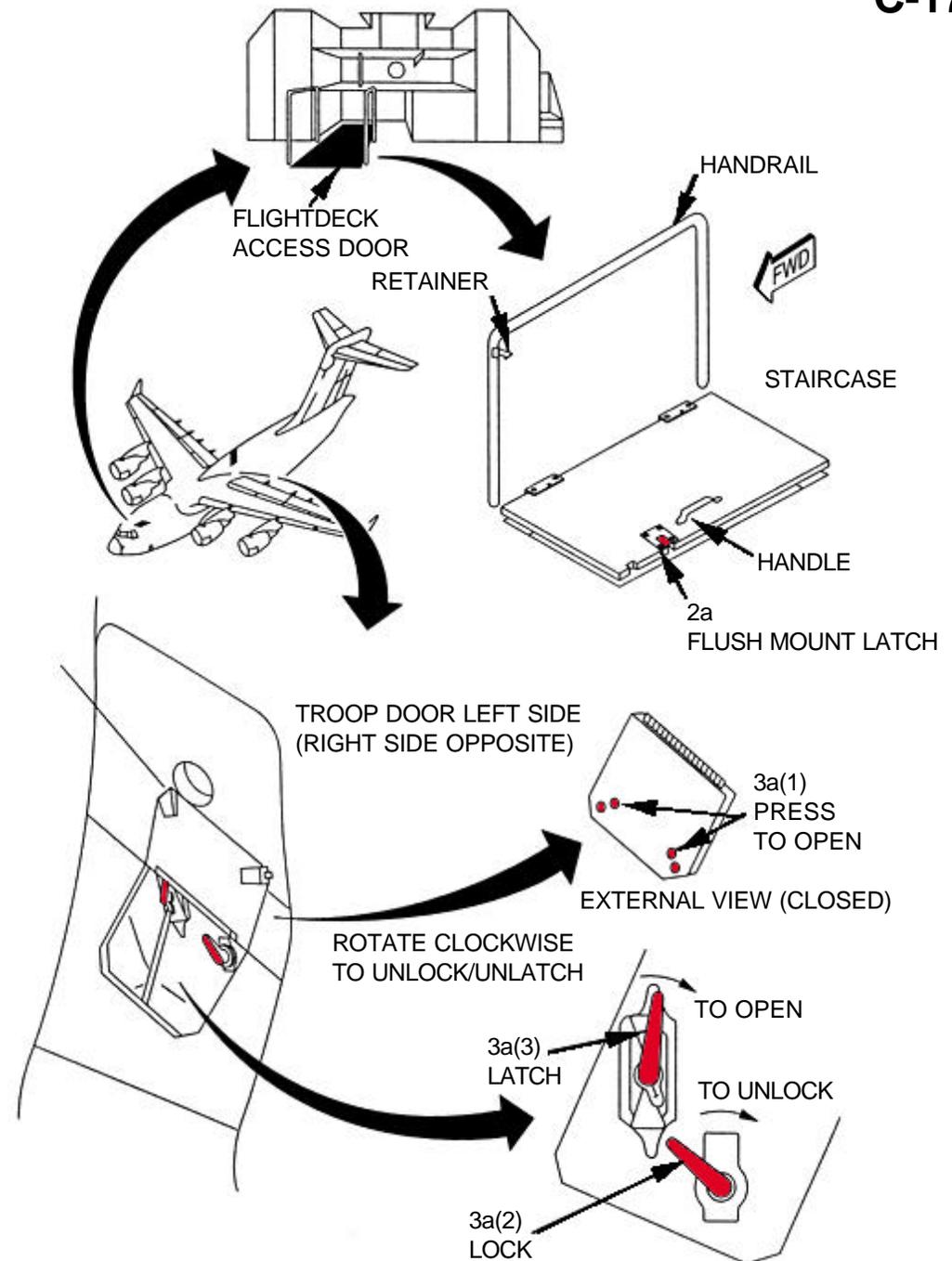
On the left side of the aircraft outside handles rotate clockwise to unlock and unlatch.

### NOTE:

On the right side of the aircraft outside handles rotate counterclockwise to unlock and unlatch.

- (2) Rotate locking handle, the lower right smaller handle, to the unlock position.

- (3) Rotate latching handle, the upper left larger handle, to the unlock position.



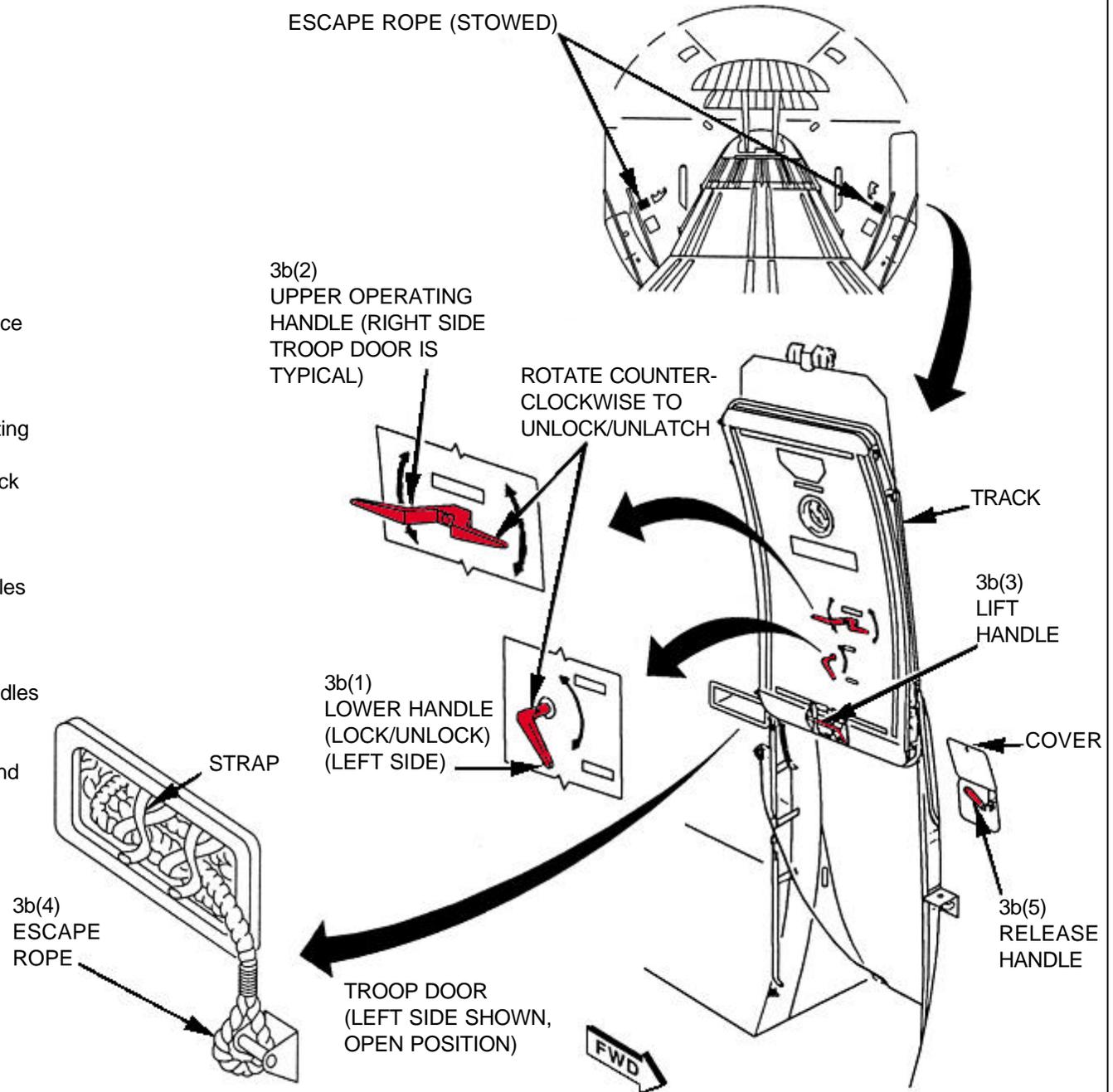
# AIRCRAFT ENTRY-Continued

## 3b. INTERNAL OPERATION

- (1) To open: Rotate the lock/unlock handle counterclockwise, lower small handle in center of door, to unlock position.
- (2) Rotate operating handle, located above lock/unlock handle, and raise door until the door is held in the uplock.
- (3) Use lift handle to raise door.
- (4) Pull escape rope from container and place outside door frame for egress.
- (5) To close: Push up on door, pull release handle, lower door. Depress the operating handle release pushbutton and rotate operating handle. Rotate the lock/unlock handle clockwise to lock the door.

### NOTES:

- On the left side of the aircraft inside handles rotate counterclockwise to unlock and unlatch.
- On the right side of the aircraft inside handles rotate clockwise to unlock and unlatch.
- Normal height from troop door sill to ground is approximately 5' 3".



# AIRCRAFT ENTRY-Continued

## 4. FORWARD EMERGENCY ESCAPE DOOR

### NOTE:

The forward emergency escape door is located on right side of aircraft opposite crew entry door.

### a. EXTERNAL OPERATION

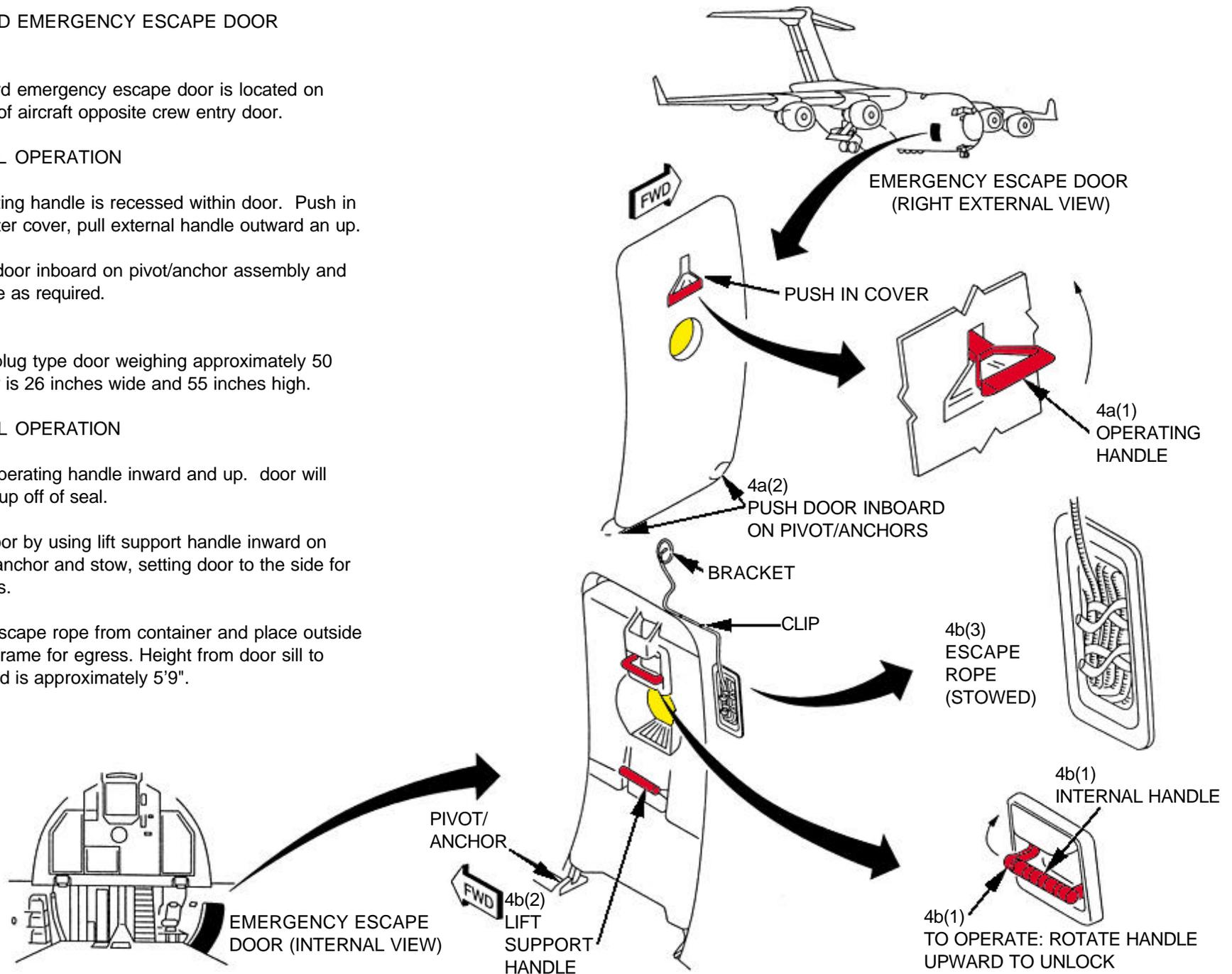
- (1) Operating handle is recessed within door. Push in on center cover, pull external handle outward and up.
- (2) Push door inboard on pivot/anchor assembly and remove as required.

### NOTE:

This is a plug type door weighing approximately 50 lbs. Door is 26 inches wide and 55 inches high.

### b. INTERNAL OPERATION

- (1) Pull operating handle inward and up. door will raise up off of seal.
- (2) Lift door by using lift support handle inward on pivot/anchor and stow, setting door to the side for egress.
- (3) Pull escape rope from container and place outside door frame for egress. Height from door sill to ground is approximately 5'9".



# AIRCRAFT ENTRY-Continued

## 5. CARGO RAMP BLOWDOWN SYSTEM

### NOTE:

The ramp blowdown system is used to rapidly open the ramp and provide area lighting for aero-medical evacuation. The ramp blowdown system is deployed from either the forward or aft loadmaster's control panel, left side. Each control consists of two red guarded switches.

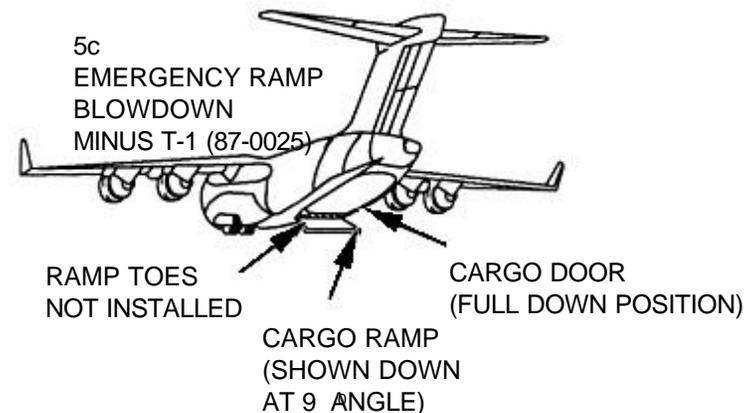
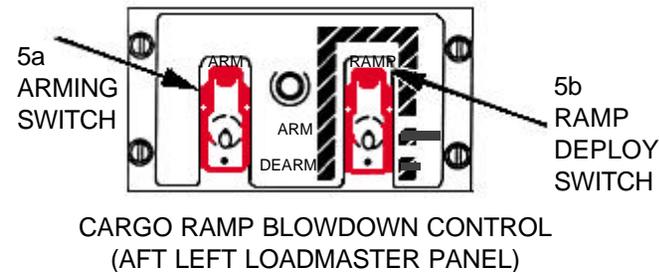
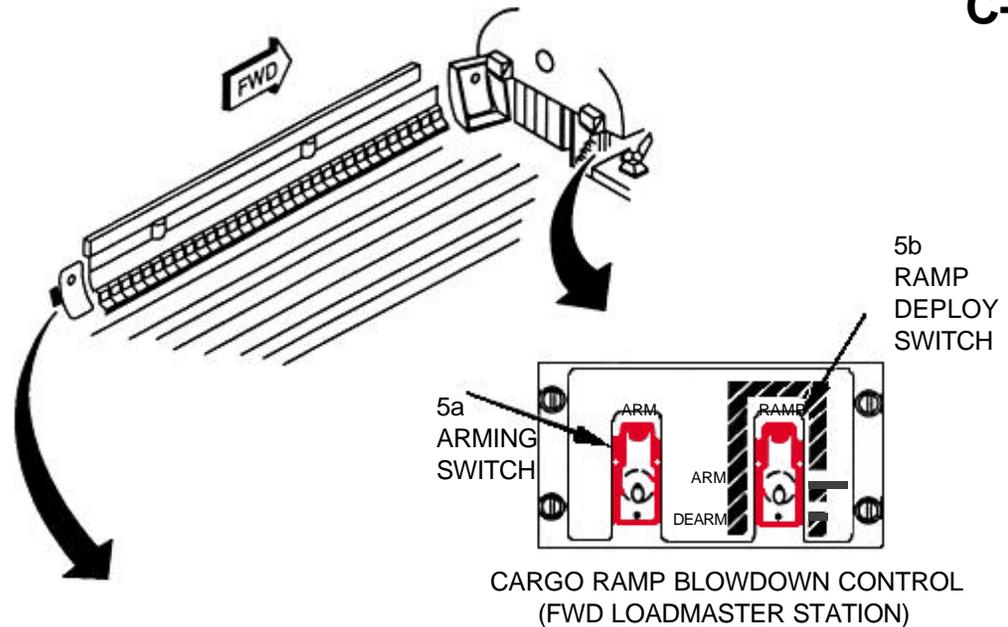
- To initiate Blowdown sequence, raise the red guard and place arming switch to the armed position and hold.
- Raise red guard on ramp deploy activator, place and hold switch in deploy position until ramp deploys.
- The cargo ramp will automatically deploy to the full down position. Emergency cargo ramp lights will illuminate to aid in evacuating the aircraft.

### WARNING

- To prevent personnel injury and damage to equipment, ensure that personnel and equipment are clear prior to operating ramp.
- When initiating ramp blowdown, the cargo door may be locked in the down position. If cargo is centered loaded in the down position. If cargo is center loaded on cargo ramp, evacuate litter personnel down either side of ramp. Cargo ramp toes will have been removed to facilitate evacuation of medical personnel.

### NOTE:

The cargo door in the closed position allows for a vertical opening of 66 inches at centerline to 78 inches at outer edges.



# AIRCRAFT ENTRY-Continued

## 6. EMERGENCY CUT-IN

### NOTE:

Emergency cut-in areas are provided for use if doors and hatches become jammed or inaccessible. Clearly marked areas on each side of the aircraft indicate proper locations for entry by cutting through the aircraft skin. Cut-in areas are located:

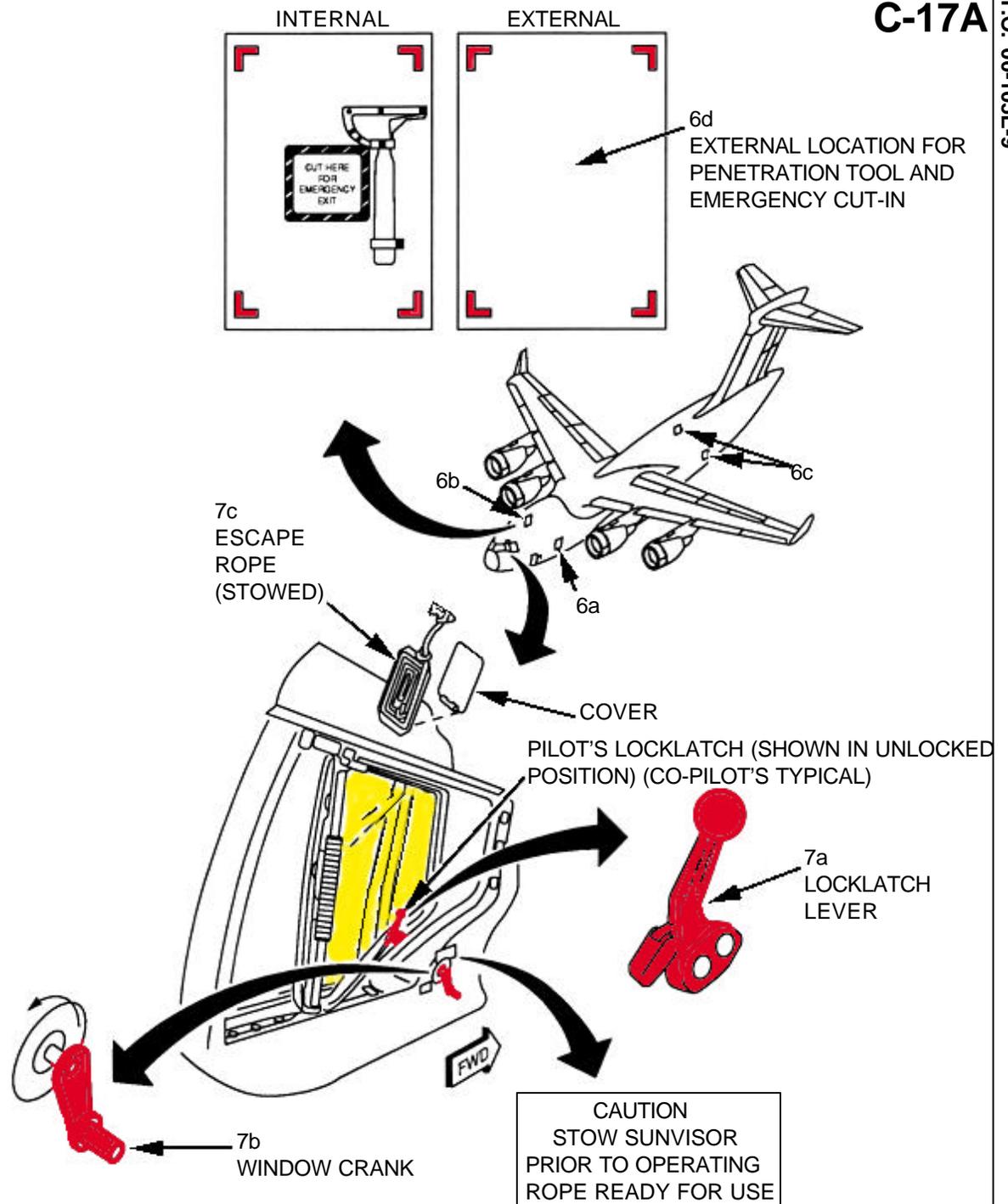
- Aft of crew entry door on left side of the aircraft.
- Aft of forward emergency escape door on right side of the aircraft.
- Aft of troop door above the juncture of the cargo ramp and cargo door on the left and right sides of the aircraft.
- Aircraft skin penetration points are limited to the center portion of the cut-in areas only.

## 7. SLIDING CLEARVIEW COCKPIT WINDOWS.

### CAUTION

To prevent obstructing egress, stow the sun visor prior to operating the clearview windows.

- Both clearview windows are operated by depressing the lock latch lever located forward of the sliding window sill, and rotating the lever aft to unlock window.
- To open the window, push in window crank handle to engage, and rotate handle. (Pilot's counter-clockwise, Copilot's clockwise)
- An escape rope is provided above each pilot's clearview window.



# AIRCRAFT ENTRY-Continued

## 8. MAINTENANCE/DITCHING HATCH

### NOTE:

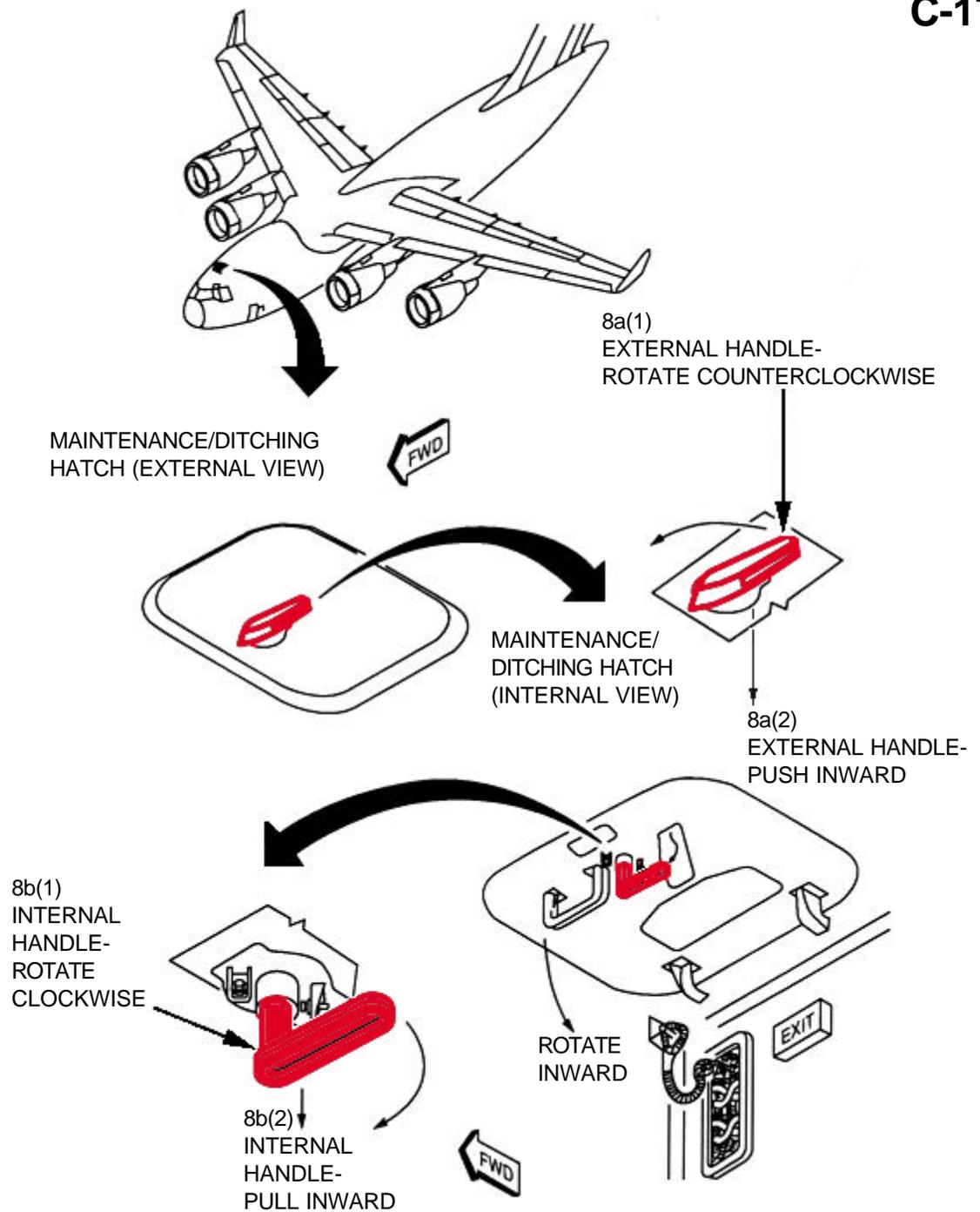
The maintenance/ditching hatch, located at top centerline in the crew bunk area, is a 26 inch X 26 inch manually operated plug type hatch that also serves as an egress for exterior maintenance of the aircraft. Internal access to this hatch is from the crew rest area, up the crew bunk area ladder, and to the aft end of the bunk area where another short rigid ladder aids in egress through the open hatch. Descent is made down the side of the aircraft by use of an escape rope.

### a. EXTERNAL OPERATION

- (1) Rotate handle counterclockwise to open position.
- (2) Push inward to overcome hinge spring pressure and open hatch.

### b. INTERNAL OPERATION

- (1) Rotate handle clockwise to open position.
- (2) Push inward to overcome hinge spring pressure and open hatch.



# AIRCRAFT ENTRY-Continued

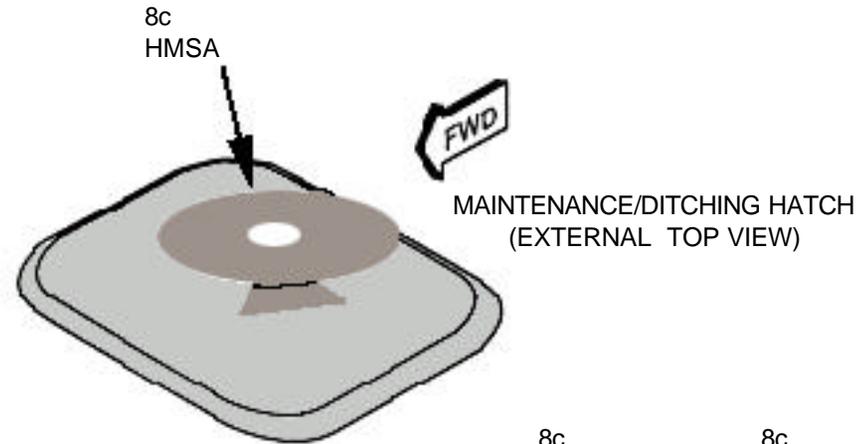
C-17A

## 8. MAINTENANCE/DITCHING HATCH - CONTINUED

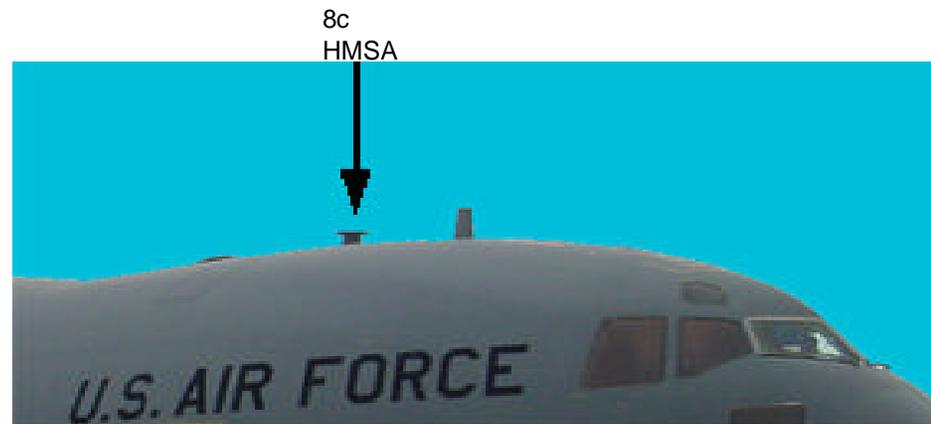
- c. **A Hatch Mounted Satellite Antenna (HMSA) may be installed in place of the maintenance/ditching hatch.** The modified hatch weighs approximately 40lbs, and is not hinged. The HMSA hatch cannot be opened from outside the aircraft. While the HMSA hatch is installed, the unmodified hatch is restrained in the open position. The HMSA is opened from inside the aircraft by rotating the unlatch/open handle to the open position to release the locking pins. The primary exit for crewmembers in the cockpit is through the clear-view windows or through a FEDS hatch. Crewmembers in the relief crew area will use the cargo area FEDS exits as their primary ditching exit. The HMSA should not be considered a usable/primary exit.

### WARNING

Because the HMSA is not hinged, the HMSA will fall directly into the aircraft when the pins are released. Clear the area beneath the hatch and the catwalk prior to opening. Do not attempt to open the HMSA without assistance.



MAINTENANCE/DITCHING HATCH (EXTERNAL LEFT VIEW)



MAINTENANCE/DITCHING HATCH (EXTERNAL RIGHT VIEW)

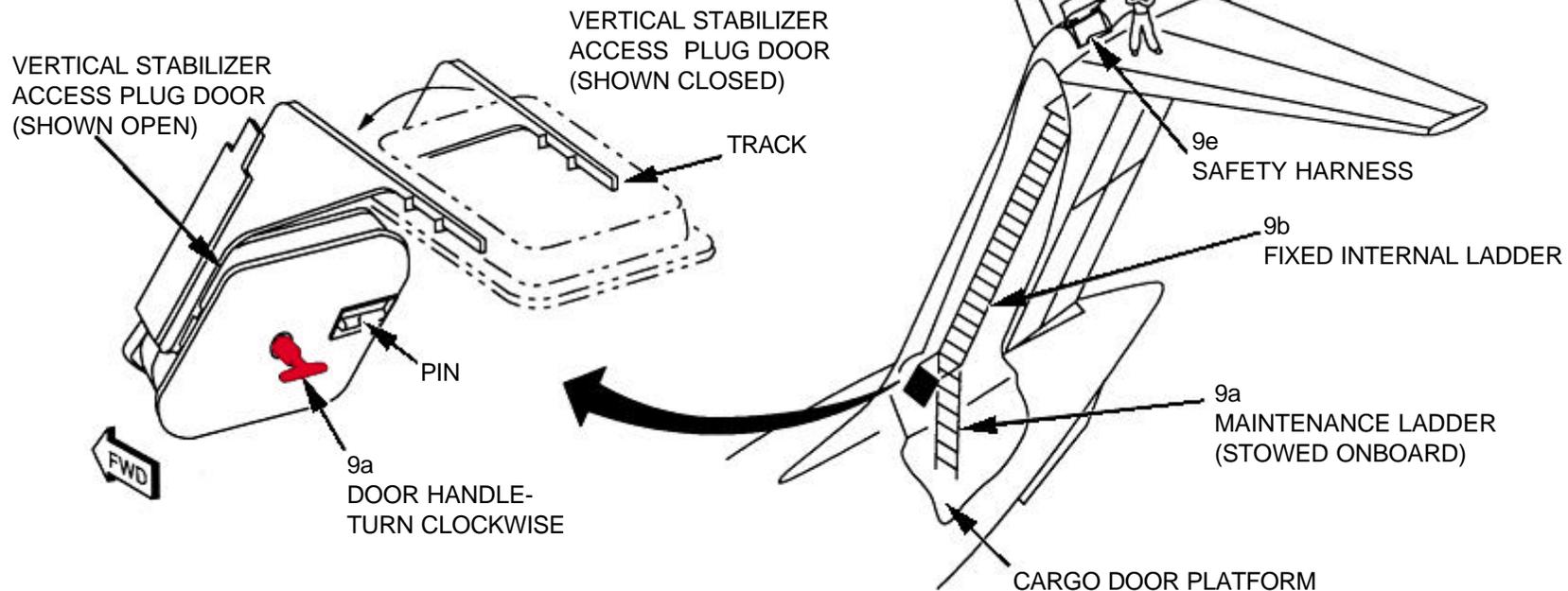
# AIRCRAFT ENTRY-Continued

## 9. VERTICAL AND HORIZONTAL STABILIZER DOORS

### NOTE:

Vertical stabilizer access is available through a plug type door located directly above the cargo door. It provides access to the vertical stabilizer and maintenance ladder leading to the upper horizontal stabilizer access doors. No external access is provided.

- Climb maintenance ladder and open vertical stabilizer access plug door by turning handle clockwise.
- Climb fixed ladder to horizontal stabilizer.
- The horizontal stabilizer access doors located on either side of the vertical stabilizer are opened from the inside.
- Each door is internally locked using four clasp type latches each.
- Use safety harness while on horizontal stabilizer.



# AIRCRAFT ENTRY-Continued

## 10. BELLY ACCESS SERVICE HATCH

### NOTE:

A belly access service hatch is provided for system maintenance under the aircraft cargo floor area.

### a. EXTERNAL OPERATION

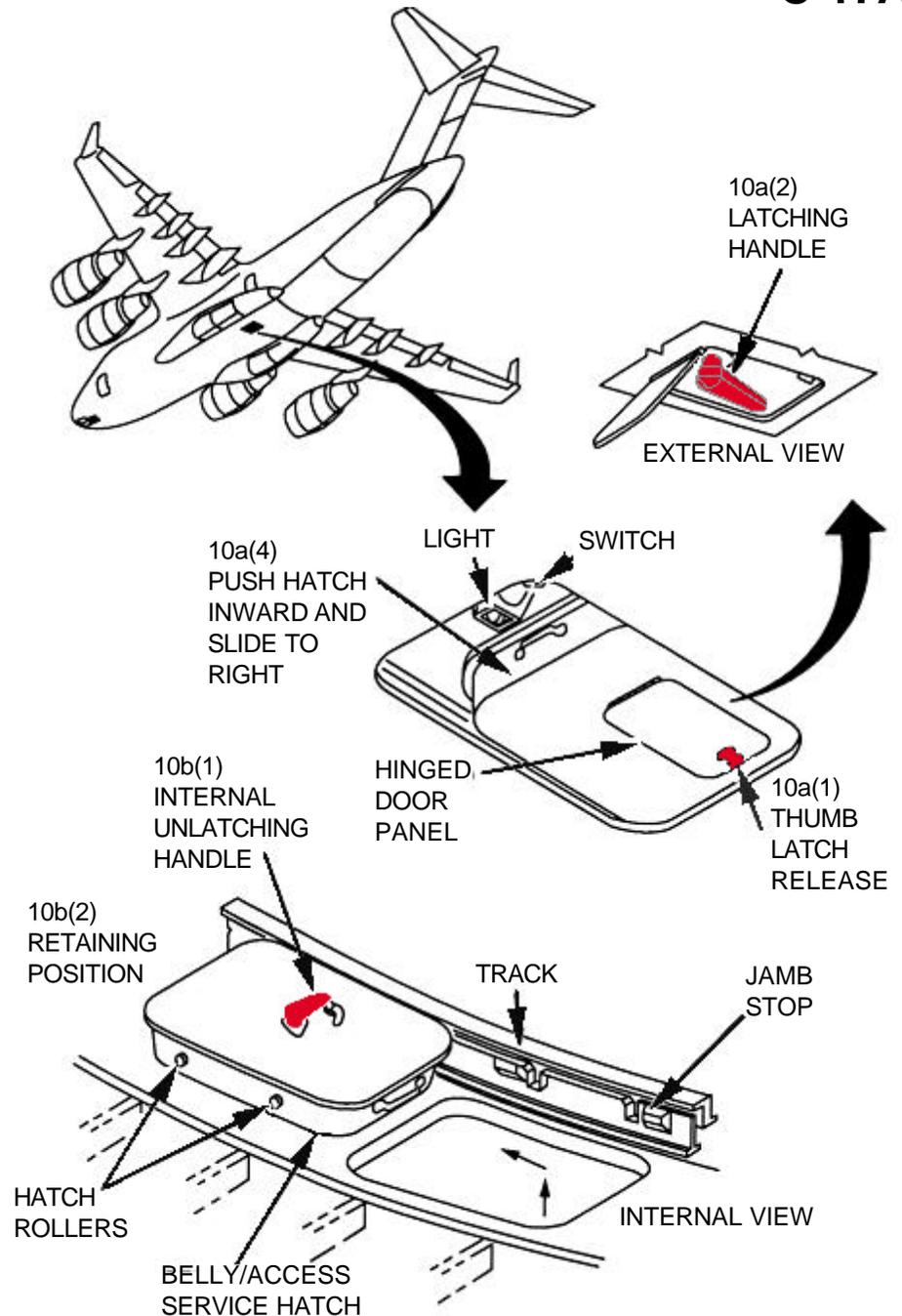
- (1) Open hatch control access cover by pressing thumb release latch.
- (2) Rotate latching handle (large handle) clockwise to unlatch position.
- (3) Close hatch cover before sliding hatch open to prevent jamming of the hatch.
- (4) Push hatch inward and slide to open position (toward right side of aircraft) ensuring hatch is retained open by spring catch.

### b. INTERNAL OPERATION

- (1) Rotate latching handle to unlatch position.
- (2) Pull hatch upward and slide open (toward right side of aircraft) ensuring hatch is retained open by spring catch.

### WARNING

- Do not enter the underfloor area until it is well ventilated. Injury or death to personnel may result. Nitrogen Enriched Air (NEA) in the Onboard Inert Gas Generating System (OBIGGS) storage system could leak into the underfloor environment creating a safety hazard.
- For emergency entry, Self Contained Breathing Apparatus (SCBA) is required.



# AIRCRAFT ENTRY-Continued

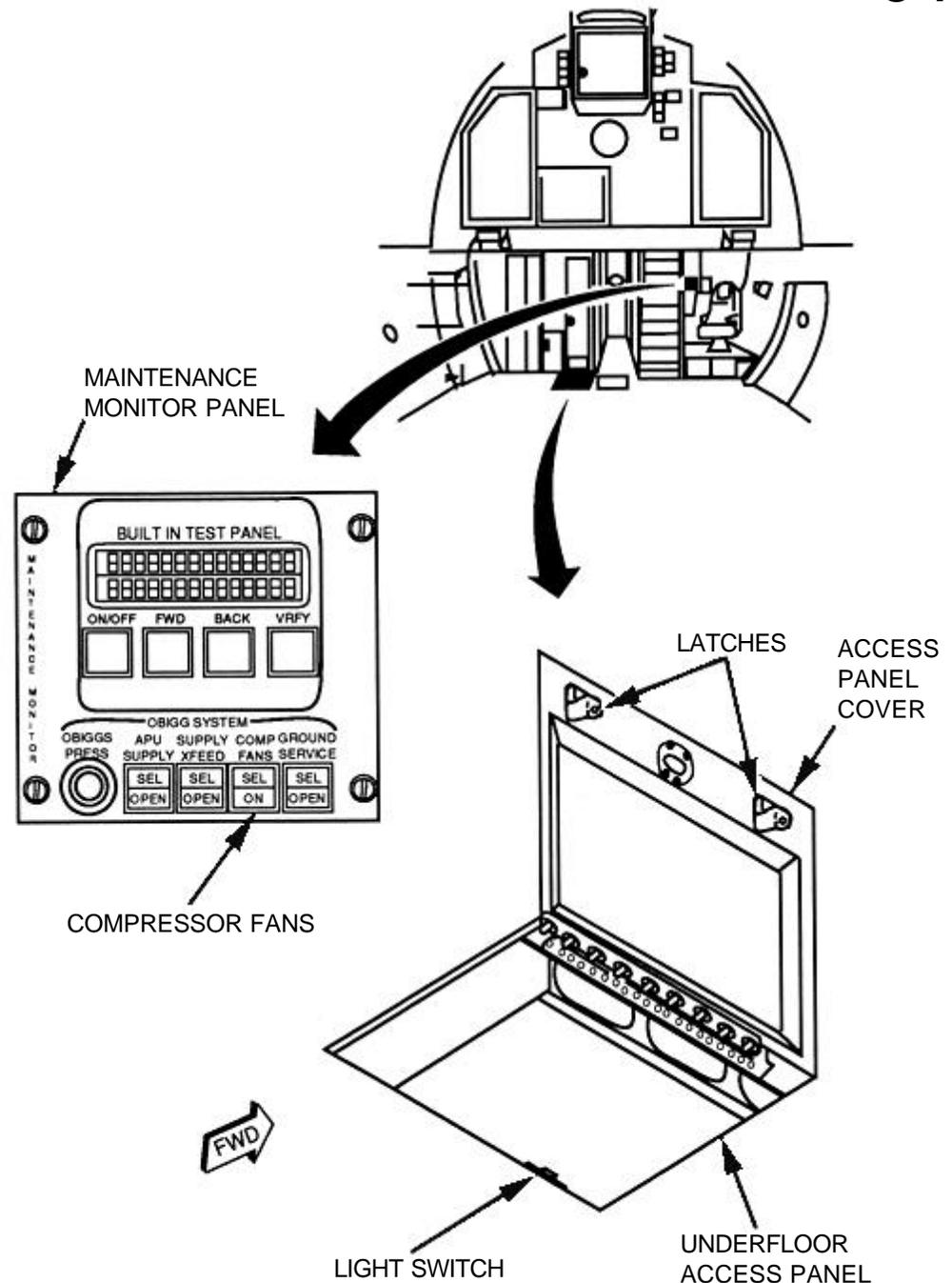
## 11. UNDERFLOOR ACCESS PANEL

### NOTE:

Access to the underfloor maintenance area is provided through an entry in the cargo floor. The underfloor access panel is normally in the down and closed position for flight. A panel latch is provided on the aft center ledge for opening. Once opened, the access panel will swing up 90 degrees and rest against the lavatory entrance door. No securing device is provided. An underfloor light switch is provided on the aft portion of the access entrance well.

### WARNING

- Do not enter the underfloor area until it is well ventilated. Injury or death to personnel may result. Nitrogen Enriched Air (NEA) in the Onboard Inert Gas Generating System (OBIGGS) storage system could leak into the underfloor environment creating a safety hazard.
- For emergency entry, Self Contained Breathing Apparatus (SCBA) is required.



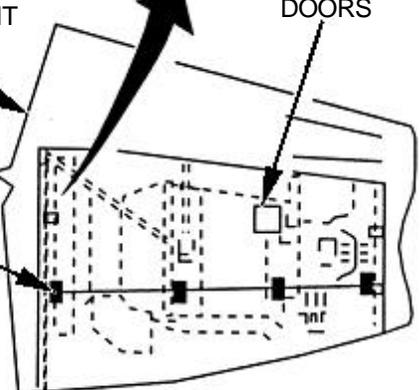
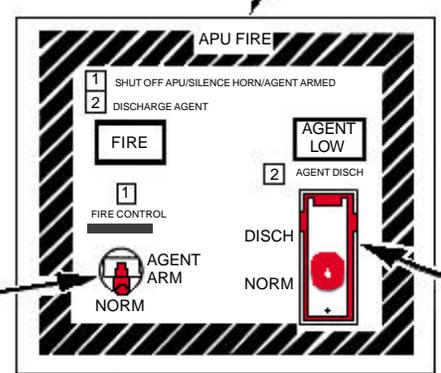
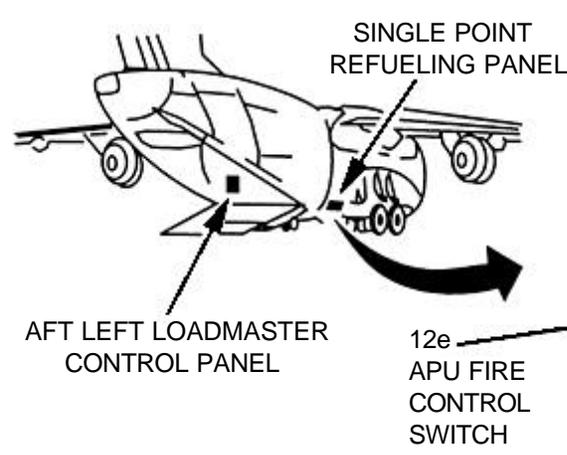
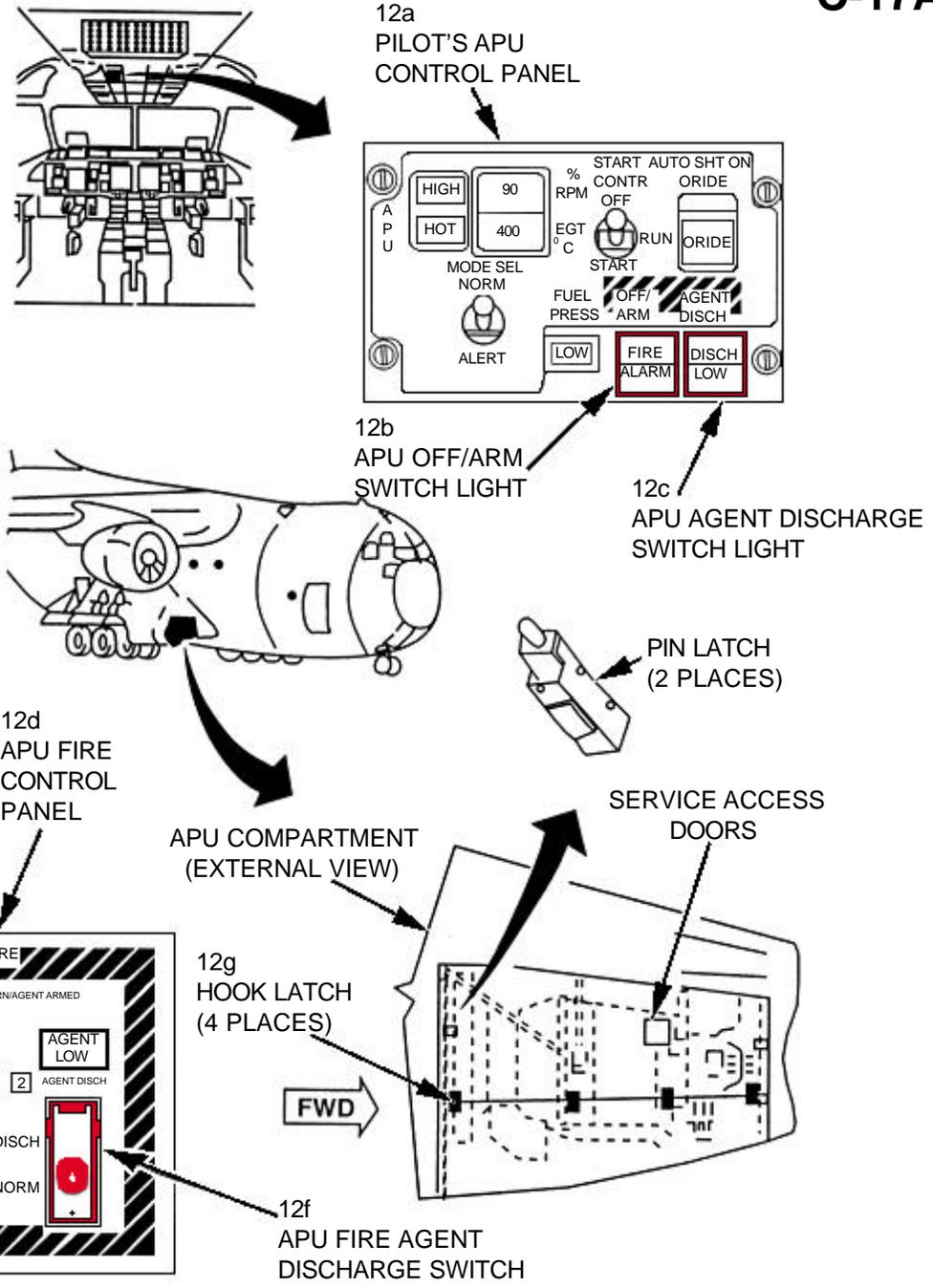
# AUXILIARY POWER UNIT SHUTDOWN

## 12. APU SHUTDOWN

**NOTE:**

Two clamshell type APU servicing doors are latched in place. A small APU inlet door provides access for servicing. A small APU inlet door provides access for servicing. No start/stop switch is located on the actual APU.

- The APU control panel is located on pilot overhead panel, left side.
- In case of fire, press APU OFF/ARM switchlight to shut off electrical, hydraulic, and fuel supply to APU.
- Press AGENT DISCH switchlight to discharge fire extinguishing agent.
- The two APU FIRE control panels are located on the single point refueling panel and the aft loadmaster's station, left side.
- In case of fire, place the fire control switch in the OFF/ SILENCE position and release to shut off the APU and arm the discharge switch.
- Lift the switchguard and place the AGENT DISCH switch in the DISCH position to discharge the fire extinguishing agent.
- To open full size service doors, release two thumb release pin latches and four hook latches.
  - Open the top panel to the full up position, then install the support strut.



AFT LEFT LOADMASTER CONTROL PANEL

12e APU FIRE CONTROL SWITCH

APU COMPARTMENT (EXTERNAL VIEW)

12g HOOK LATCH (4 PLACES)

12f APU FIRE AGENT DISCHARGE SWITCH

12a PILOT'S APU CONTROL PANEL

12b APU OFF/ARM SWITCH LIGHT

12c APU AGENT DISCHARGE SWITCH LIGHT

12d APU FIRE CONTROL PANEL

SERVICE ACCESS DOORS

# ENGINE EMERGENCY SHUTDOWN

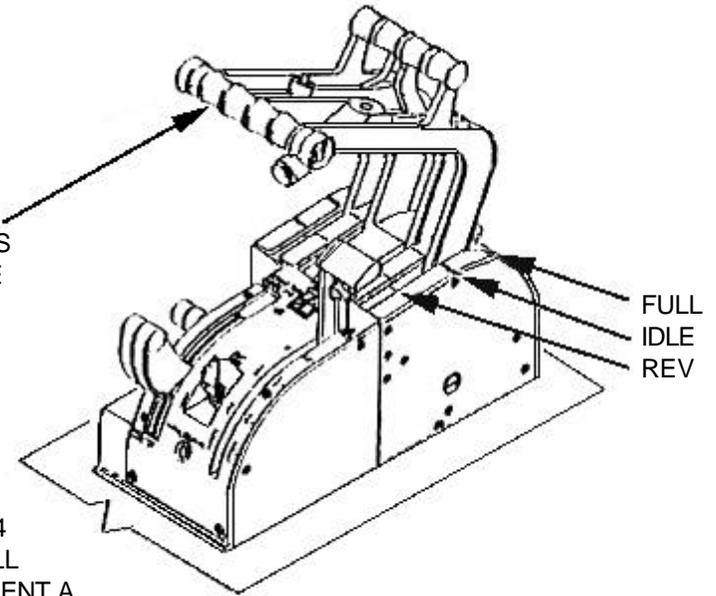
## 13. ENGINE EMERGENCY SHUTDOWN

CAUTION

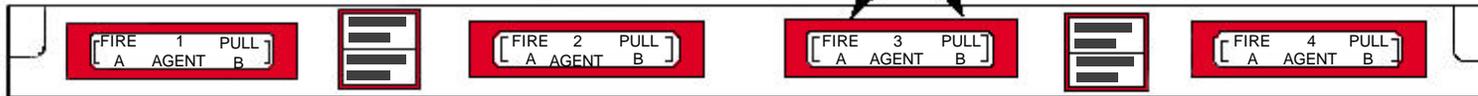
ROTATE T-HANDLES ONLY IN CASE OF ENGINE FIRE.  
 The extinguishing system is a two shot arrangement or a shared system. If agents A and B are selected for any one engine, the system for that wing will be depleted. Do not remove battery power prior to pulling FIRE T-HANDLES.

- a. Set throttles to idle position.
- b. Pull 4 FIRE T-HANDLES left, hold momentarily to release fire discharge agent A, turn FIRE T-HANDLES located on center portion of pilot instrument panel glare shield to shut off electrical, hydraulic, and fuel supply to engines.
- c. Turn FIRE T-HANDLES left, hold momentarily to release fire discharge agent A, turn FIRE T-HANDLES right to release agent B.
- d. Pull BATTERY DIRECT BUS FEED circuit breaker located on the overhead remote circuit breaker panel Row J, Column 17 to shut down emergency battery power.

13a  
 ENGINE THROTTLES  
 (DISPLAYED IN IDLE POSITION)

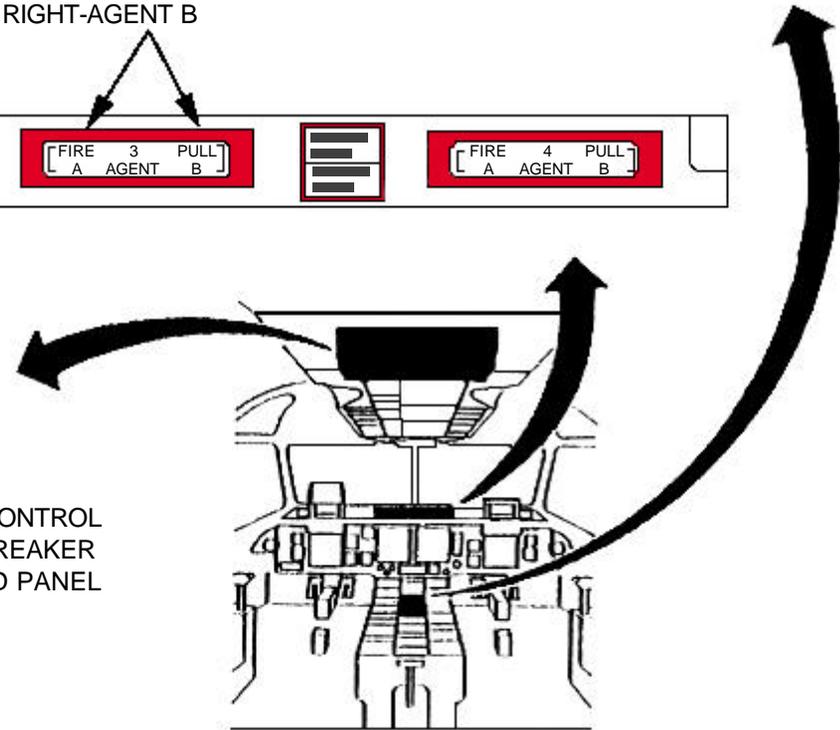


13b, 13c  
 ENGINE 1,2,3, AND 4  
 FIRE HANDLES (PULL  
 AND TURN, LEFT-AGENT A  
 RIGHT-AGENT B)



13d  
 PULL BATTERY DIRECT  
 BUS FEED CIRCUIT BREAKER

REMOTE CONTROL  
 CIRCUIT BREAKER  
 OVERHEAD PANEL



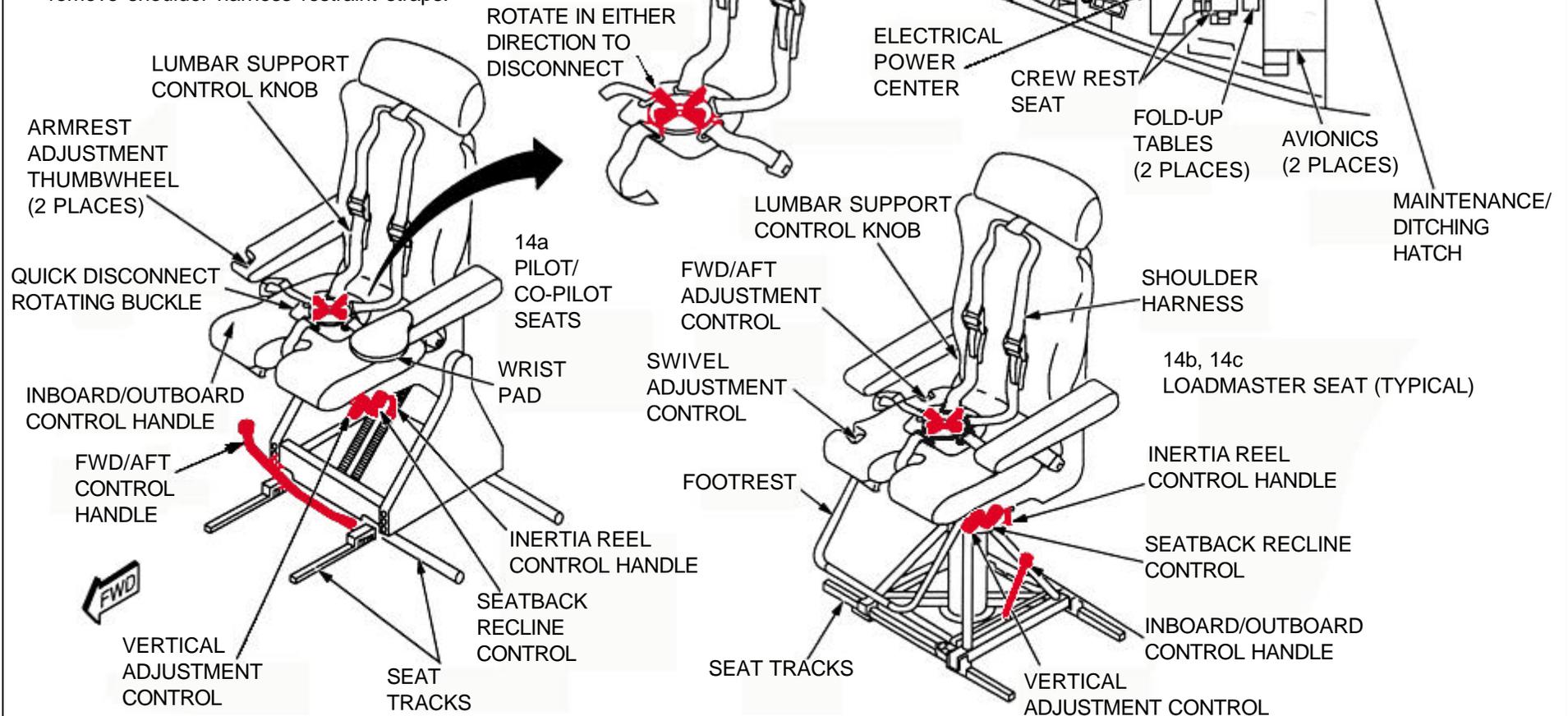
# AIRCREW EXTRACTION

## 14. AIRCREW EXTRACTION

**NOTE:**

Flightdeck seats do not rotate.

- a. Pilot/Copilot seats - Retract seats aft, push seats laterally outboard then release lap belts, and remove shoulder harness restraint straps.
- b. Additional crewmembers (2) - Seats located directly behind flight crewmembers - Raise inboard armrests, release lap belts, and remove shoulder harness restraint straps.
- c. Loadmaster seat - Turn to face aft, release seat belt, and remove shoulder harness restraint straps.

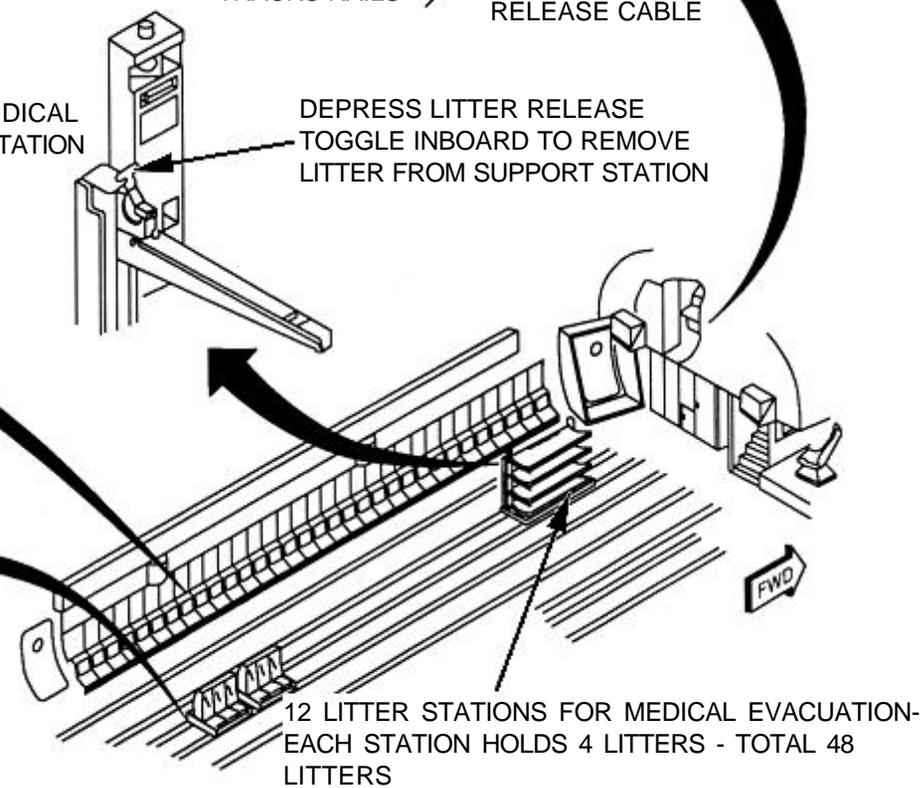
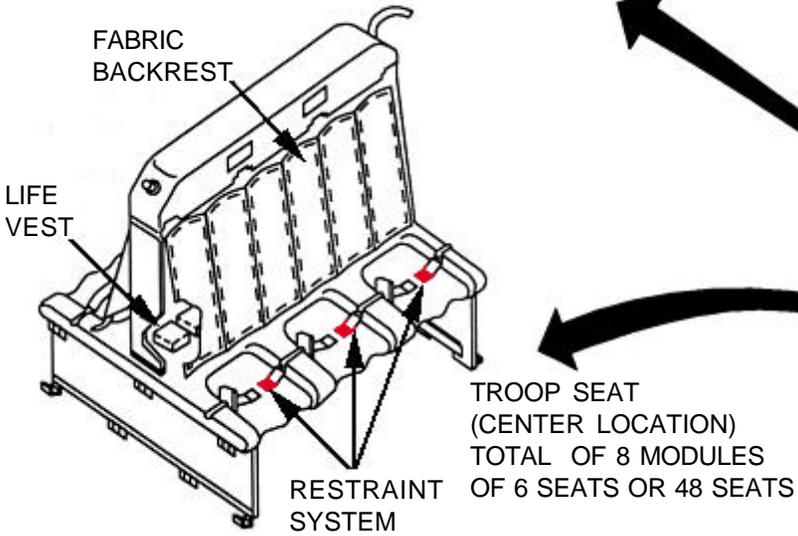
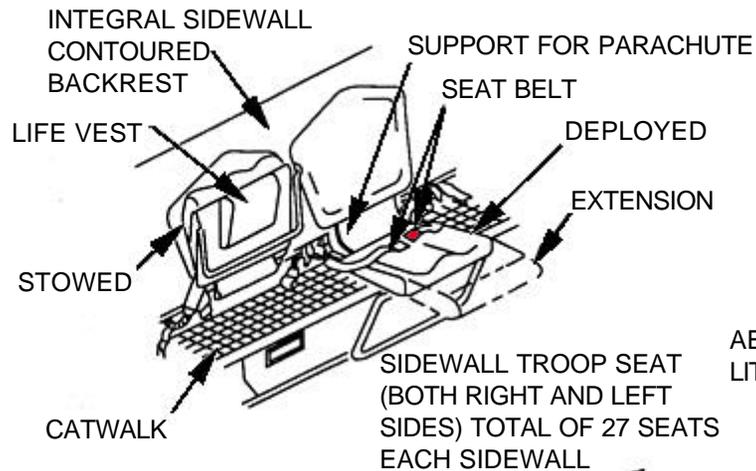
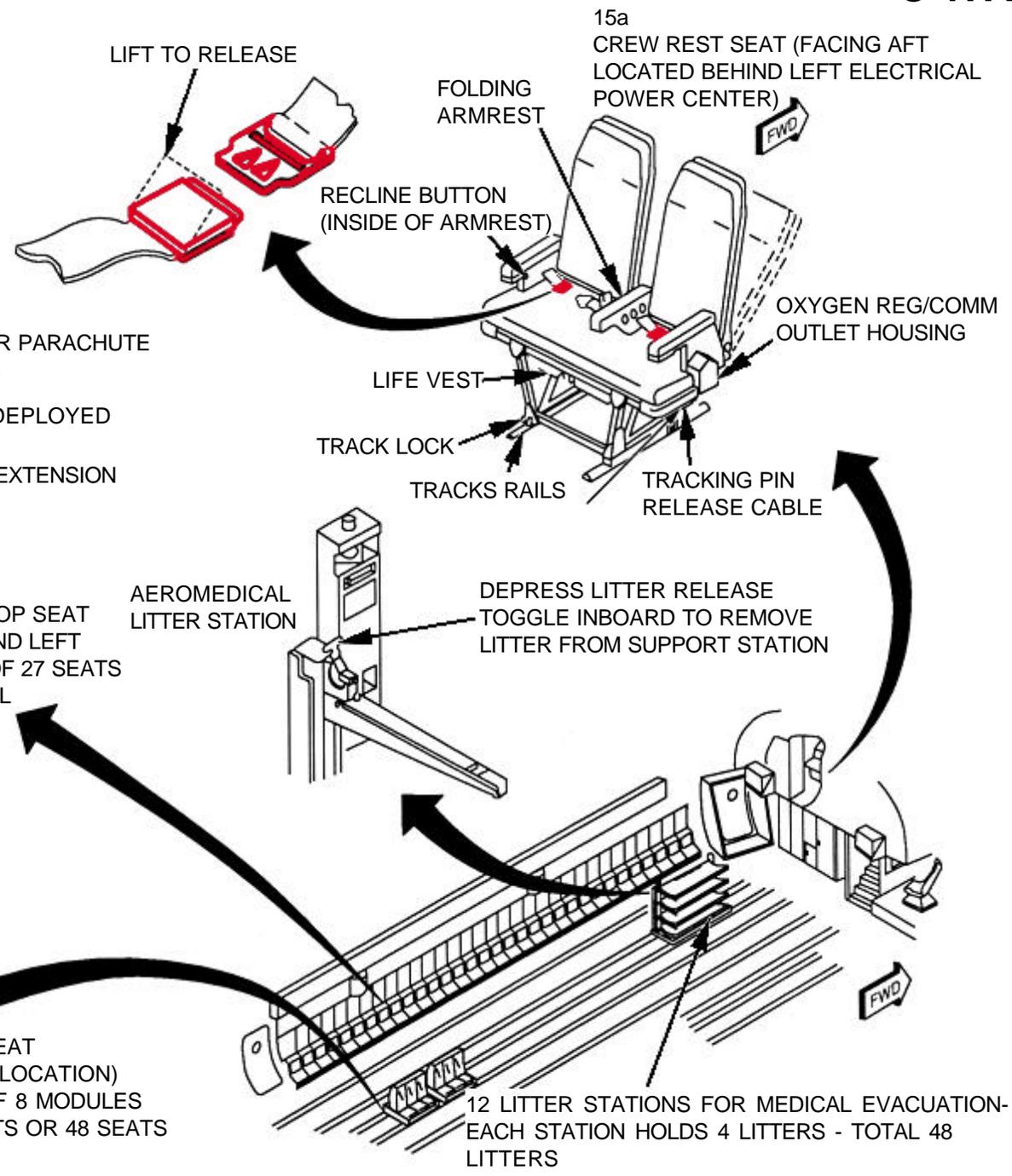


# AIRCREW EXTRACTION-Continued

## 15. CREW REST SEATS/TROOP SEATS/LITTERS (AEROMED SYSTEM) EXTRACTION

NOTE:  
Crew rest and troop seats are equipped with lap belts only.

- a. Crew rest area seats (2) - Release lap belts. Center armrests can be stowed to the up position to facilitate crewmembers removal.



# AIRCRAFT SKIN PENETRATION POINTS

**NOTE:**

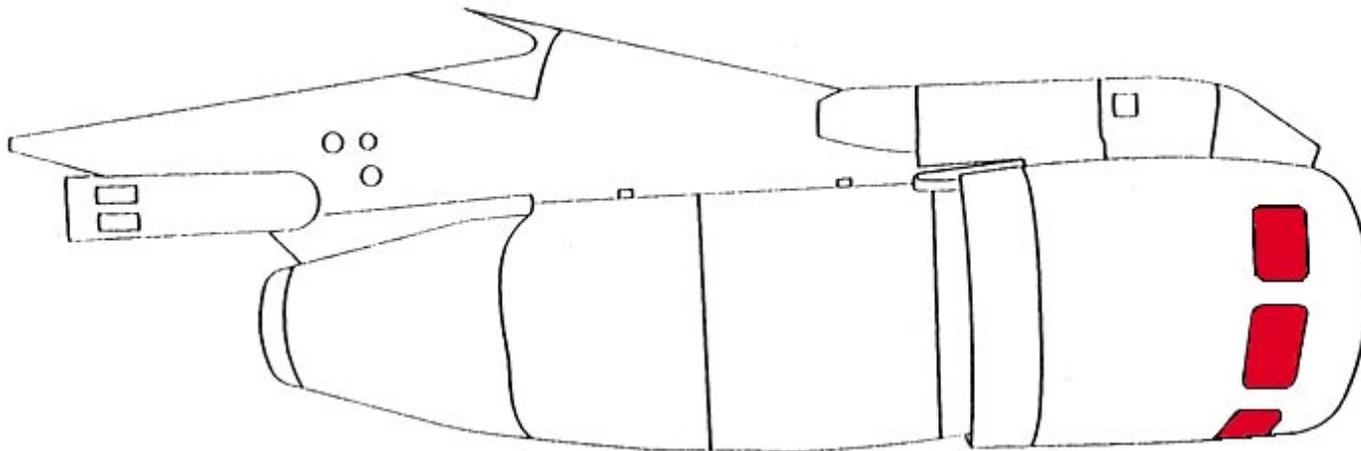
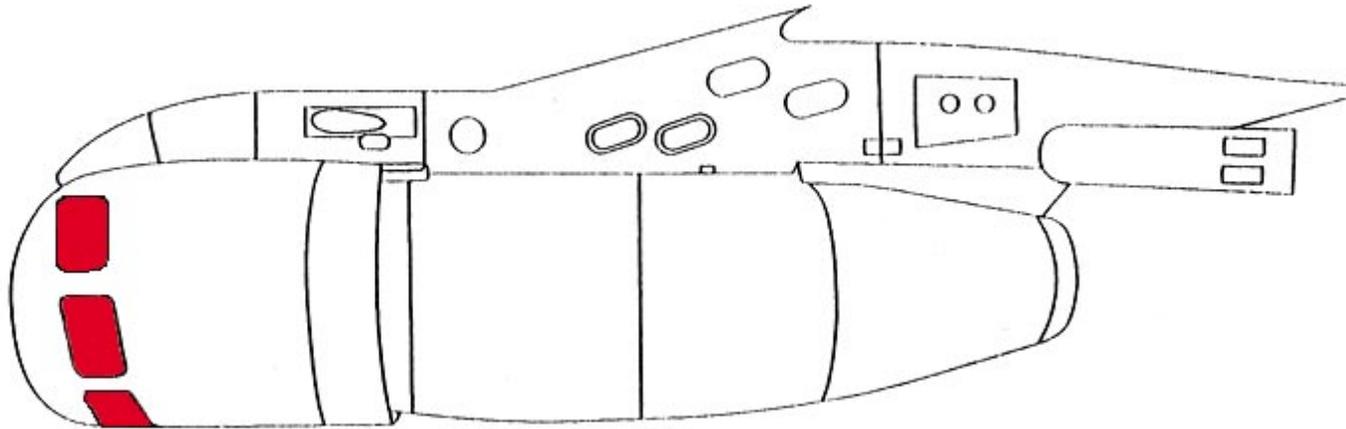
Penetration points for the aircraft engines (shown in red) are identical regardless of position on the aircraft. Penetrate the engine cowling at the points indicated.

**NOTE:****AIRCRAFT DIMENSIONS**

Length 152' 11"

Wing Span 145' 9"

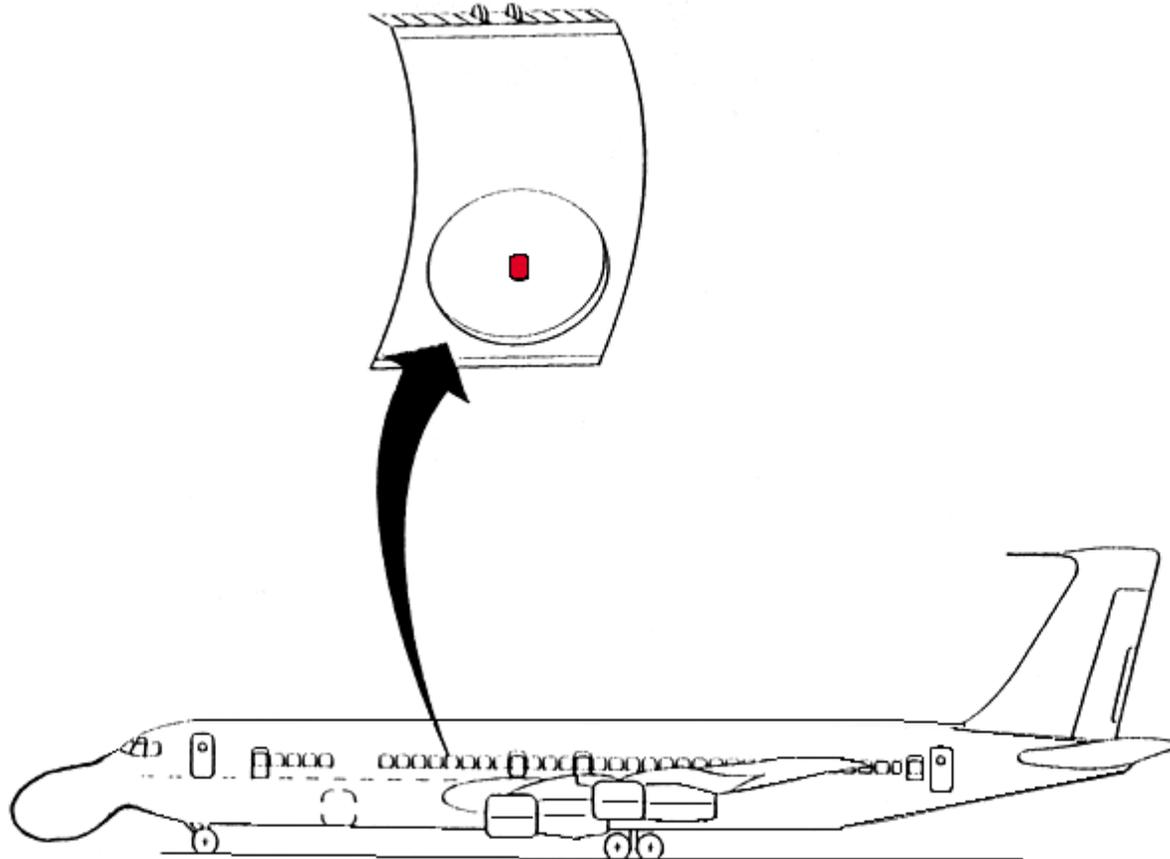
Height 42' 5"



# AIRCRAFT SKIN PENETRATION POINTS-Continued

NOTE:

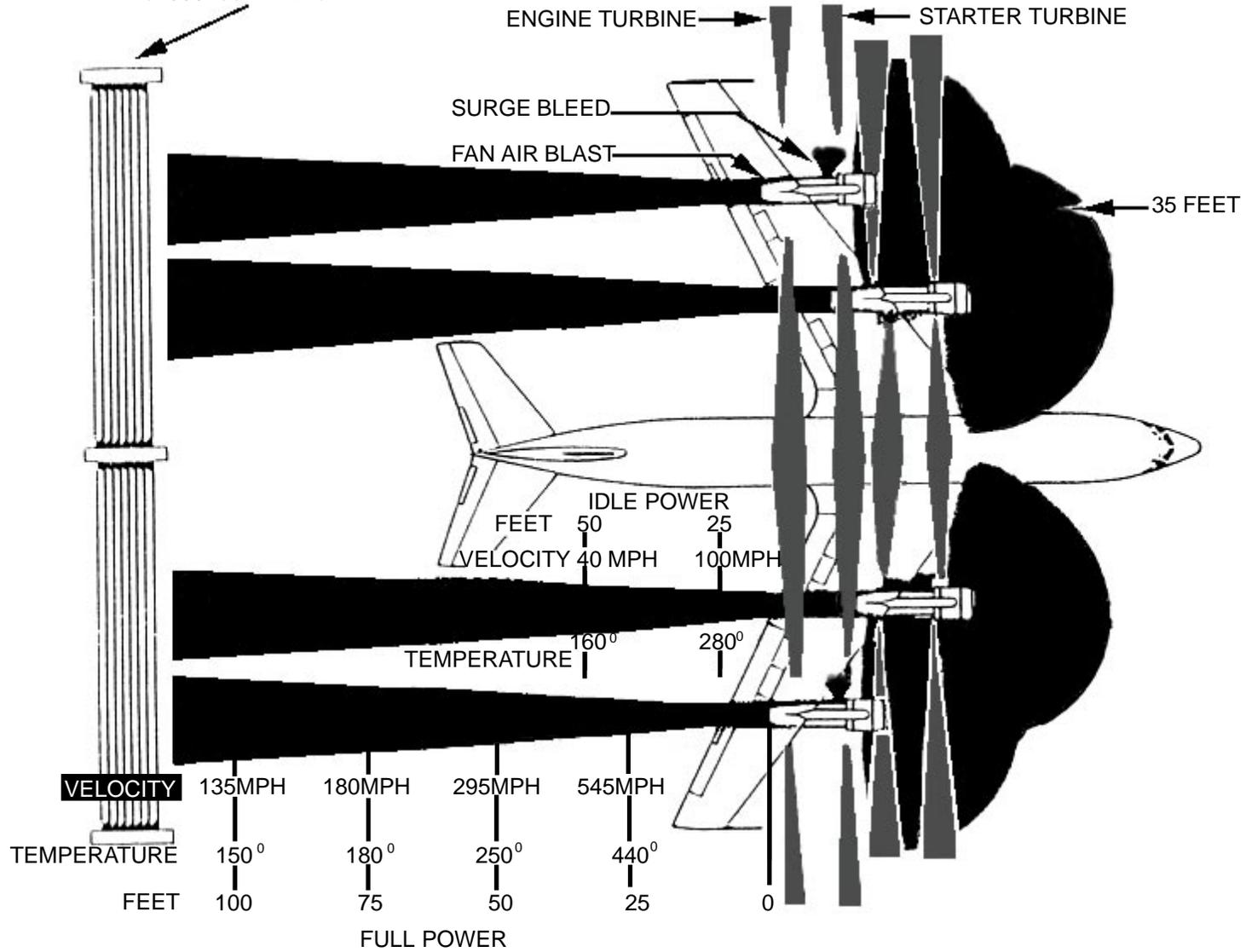
Penetrate through any of the passenger windows to access the aircraft cabin.



# AIRCRAFT HAZARDS

## ENGINE DANGER AREAS

**BLAST DEFLECTOR**  
 If not available, clear area behind aircraft for a distance of 500 feet minimum.



# AIRCRAFT HAZARDS-Continued

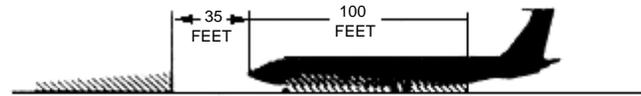
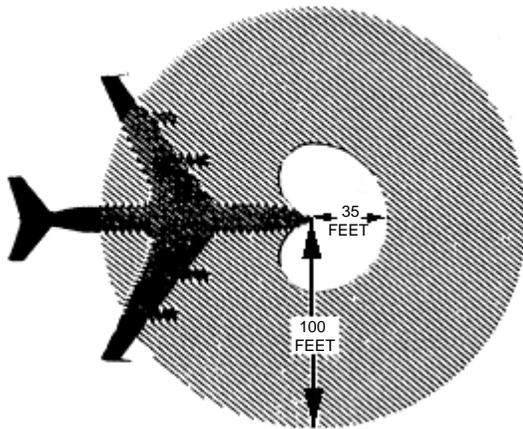
## RADIATION HAZARD AREAS

**NOTE:**

The radiation hazard area shown is around the weather radar antenna. Accidental entry into the hazard area does not result in injury. It is only through prolonged exposure that the possibility of danger exists.

 AREA HAZARDOUS TO PERSONNEL

 POSSIBLE FUEL IGNITION AREA



**SPECIAL TOOLS/EQUIPMENT**

- Power Rescue Saw
- 24 Ft Ladder
- Fire Drill II

**AIRCRAFT ENTRY ALL MODELS**

CREW: 5 PASSENGERS: 20 - 25  
CONFIGURATION MAY VARY

**1. NORMAL ENTRY**

- a. **FORWARD AND AFT ENTRY DOORS** - Pull external handle outward and rotate clockwise, then push inward on forward side of door, pull outward on aft side and swing door out and forward.
- b. **FORWARD AND AFT GALLEY DOORS** - Pull external handle outward and rotate clockwise, then push inward on forward side of door, pull outward on aft side and swing door out and forward.

**2. EMERGENCY ENTRY**

- a. Push in panel on emergency exit hatches, two each side above wing, and push hatches inward.

**CAUTION**

Emergency exit hatches must be handled with extreme care while pushing hatches inward.

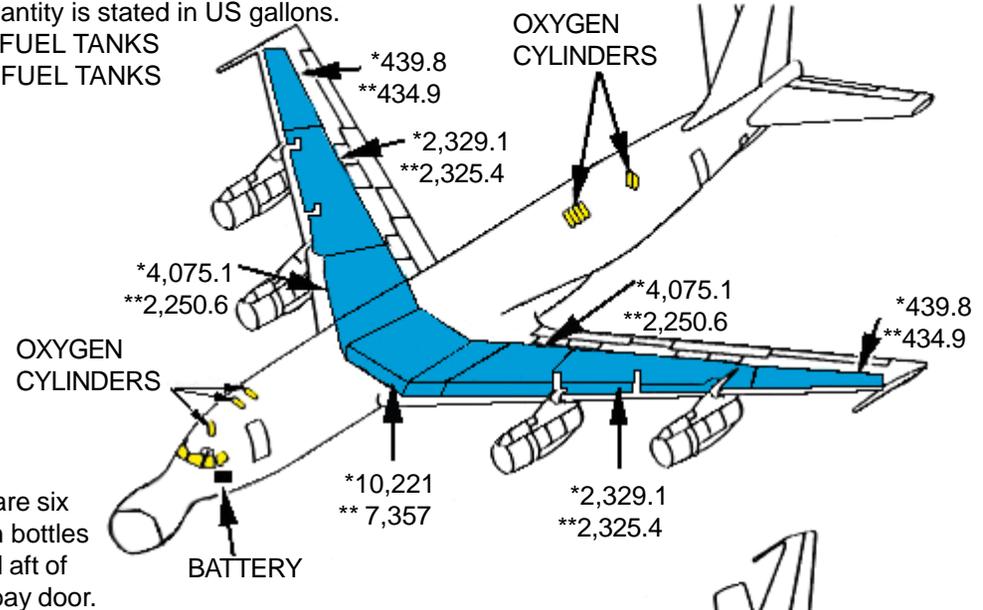
**3. CUT-IN**

- a. Cut-in emergency exit hatches located top forward center of fuselage over wings.

**NOTE:**

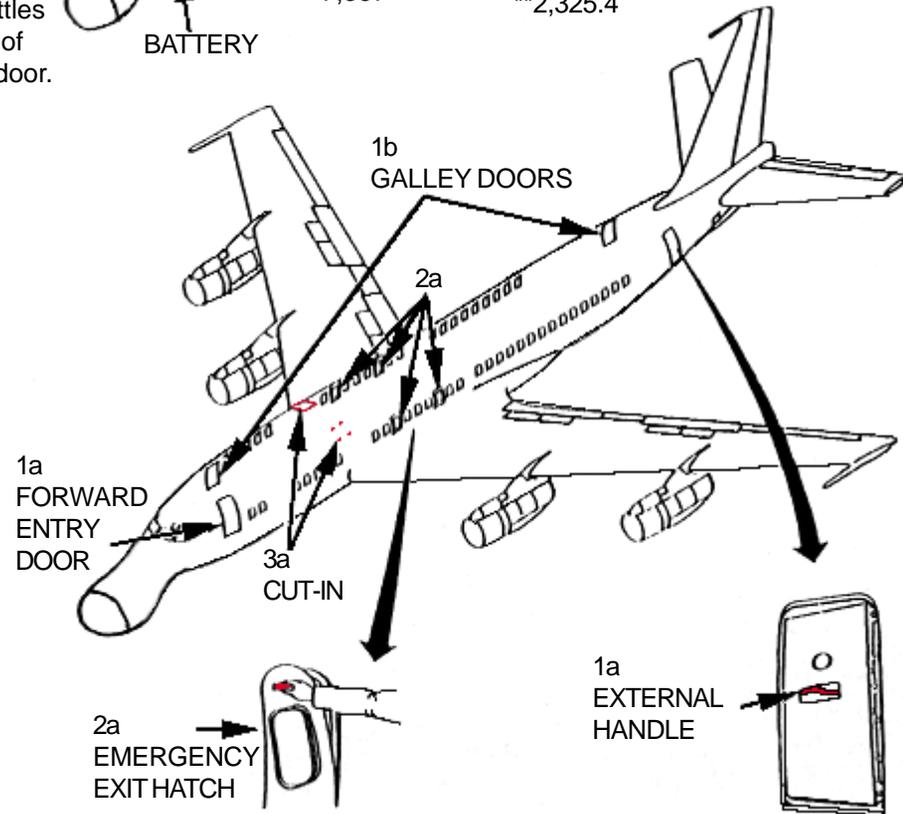
Fuel tank arrangement is similar to the VC-137. Quantity is stated in US gallons.

- \* VC-137C FUEL TANKS
- \*\* VC-137B FUEL TANKS



**NOTE:**

There are six oxygen bottles located aft of cargo bay door.

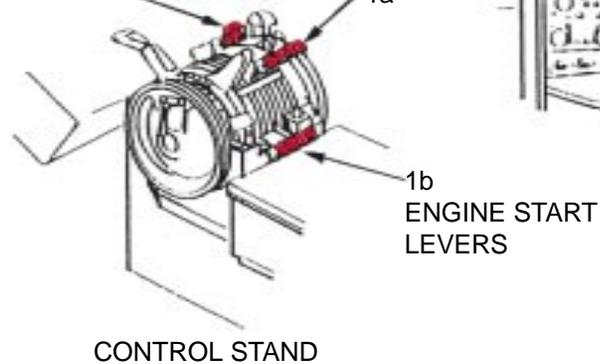


# ENGINE SHUTDOWN

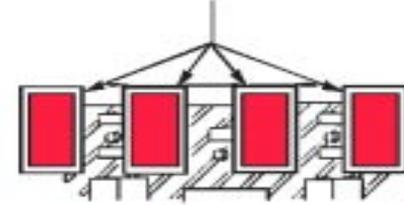
## 1. ENGINE SHUTDOWN

- Place engine thrust lever friction handle, located on control stand, to forward position, then retard engine thrust levers aft to IDLE position.
- Place engine start levers, located on lower portion of control stand, down to CUTOFF position.
- Pull fire emergency T-handles, located upper center of instrument panel, and place engine fuel shutoff valve switches, located on fuel system panel at engineer's station, to CLOSE position.
- Place battery switch, located on engineer's upper panel, to OFF position.

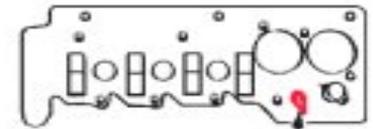
1a  
ENGINE THRUST  
LEVER FRICTION  
HANDLE



1c  
FIRE EMERGENCY  
T-HANDLES - PULL



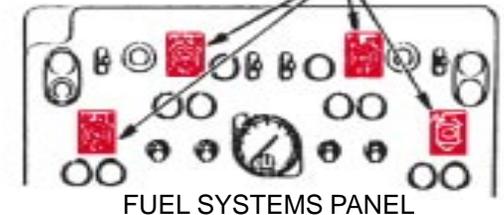
1d  
BATTERY SWITCH



FLIGHT ENGINEER'S  
LOWER PANEL



1c  
ENGINE FUEL  
SHUTOFF VALVE  
SWITCHES



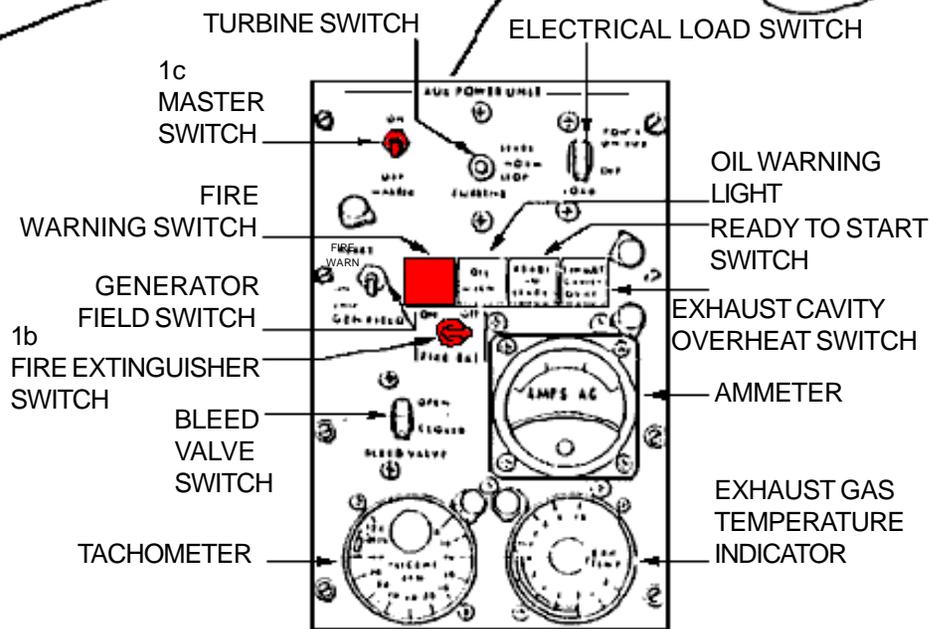
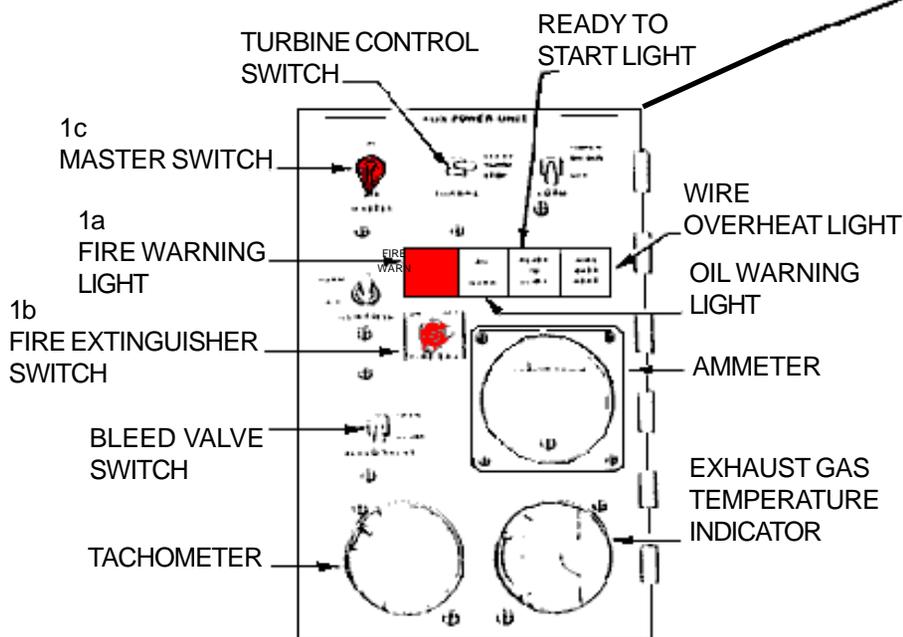
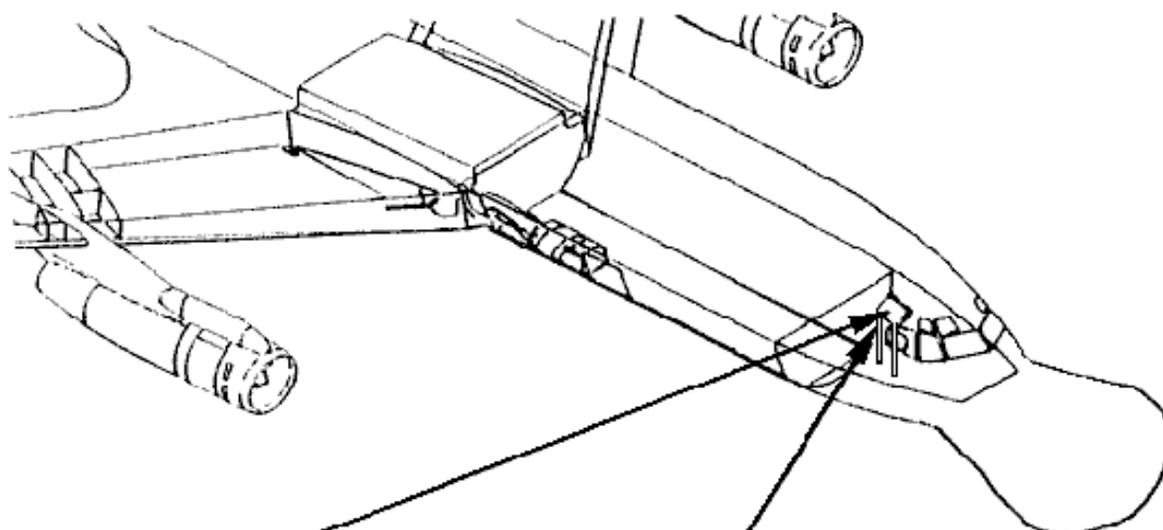
# APU SHUTDOWN

## 1. APU SHUTDOWN

### NOTE:

The following procedures are only used if an APU is equipped on the aircraft and an APU fire is apparent.

- a. If fire warning light is indicating APU fire, the APU can be shutdown from the navigator's control panel or the APU compartment in the aft cargo compartment.
- b. There are two designs at the navigator's panel. Both designs are illustrated. Place fire extinguisher switch, located at center of panel to OFF.
- c. Place master switch, located upper left on panel to OFF.



# AIRCREW EXTRACTION - SEATING AND POSITIONING

## 1. AIRCREW EXTRACTION

### NOTE:

Pilot's seat is shown, copilot's seat is identical except controls are on left side. A modification has equipped all seats with Koch inertia reels. This equipment does not change extraction methods.

### NOTE:

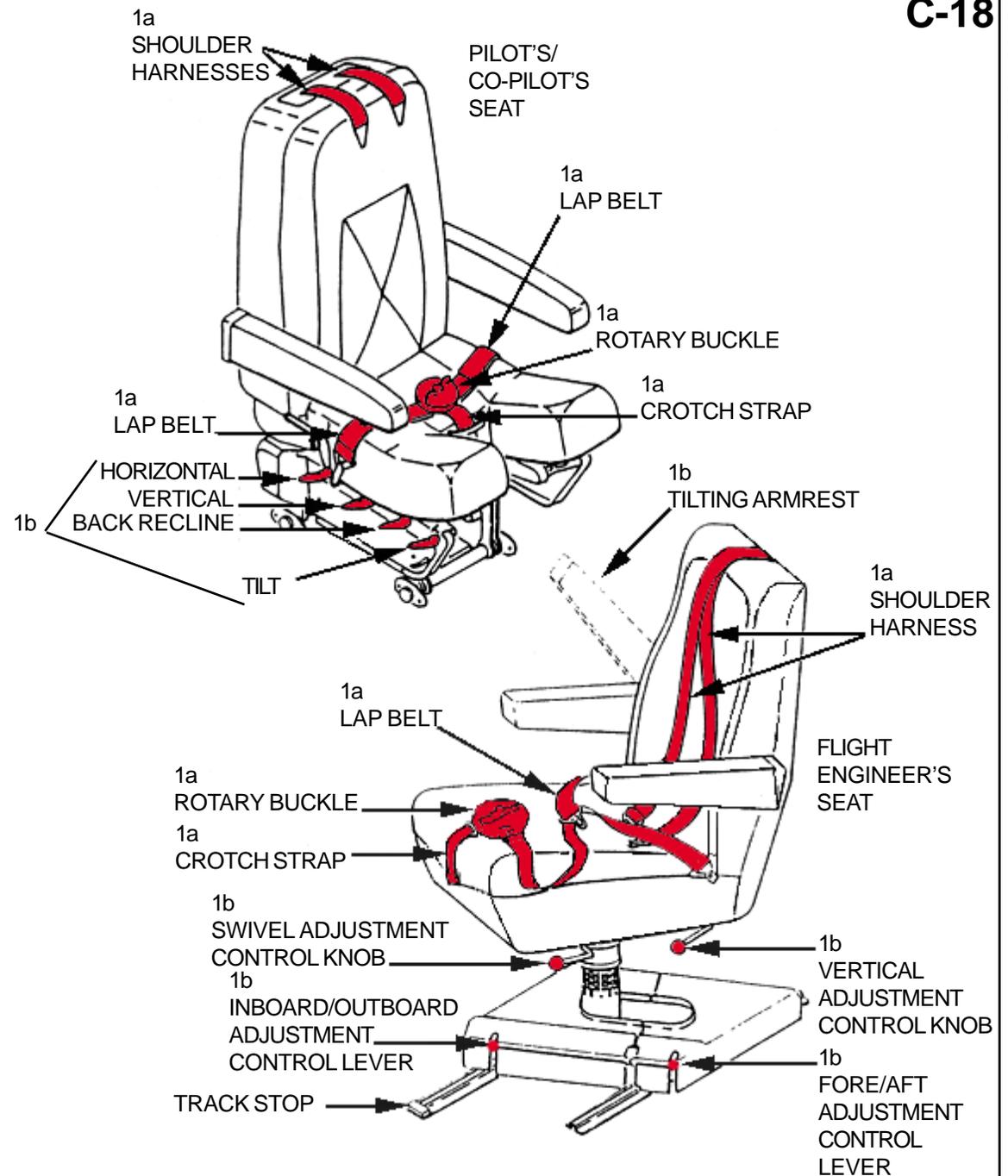
Flight engineer's seat will face within 30 degrees of forward for takeoff and landing.

- a. Release lap belt, crotch strap and remove shoulder harness from crew members by turning the rotary buckle in either direction.

### NOTE:

If seat tracks are not damaged during crash landing, use adjustable seat controls to retract seat to aft position.

- b. Adjust seats and tilt armrests for ease of extraction.
- c. Release lap belts from passengers.

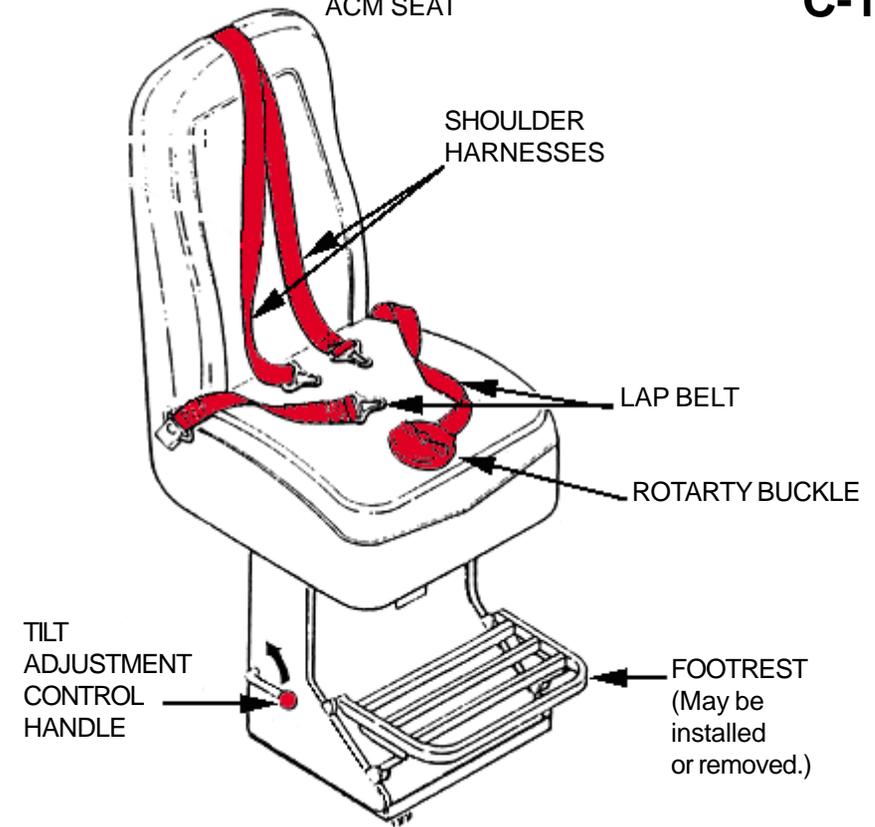
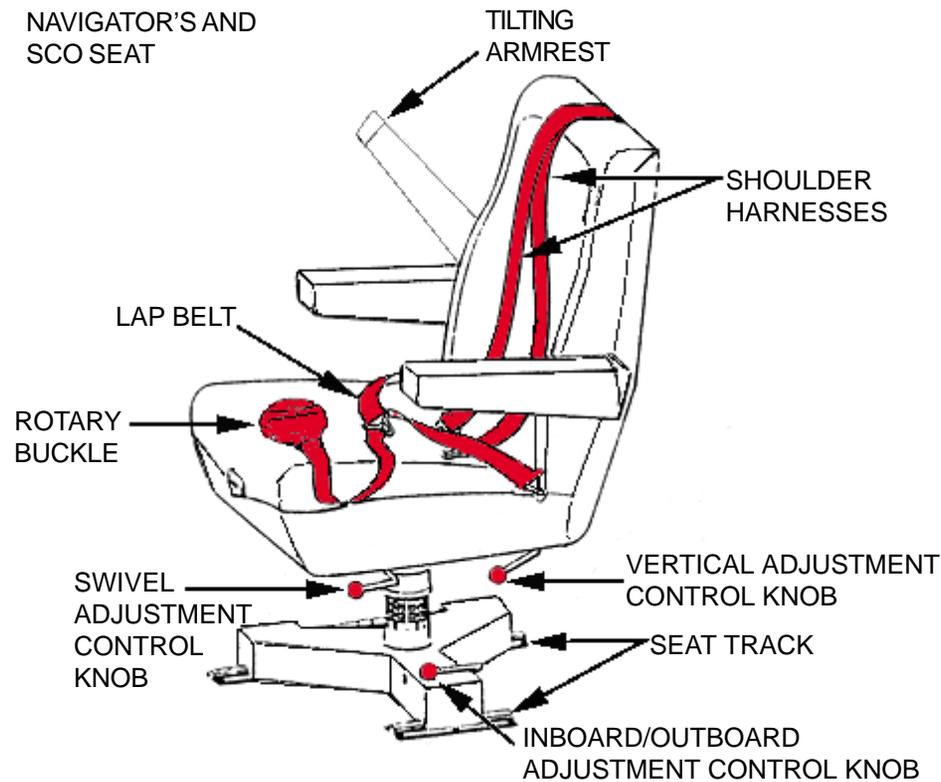


# AIRCREW EXTRACTION - SEATING AND POSITIONING-Continued

## NOTE:

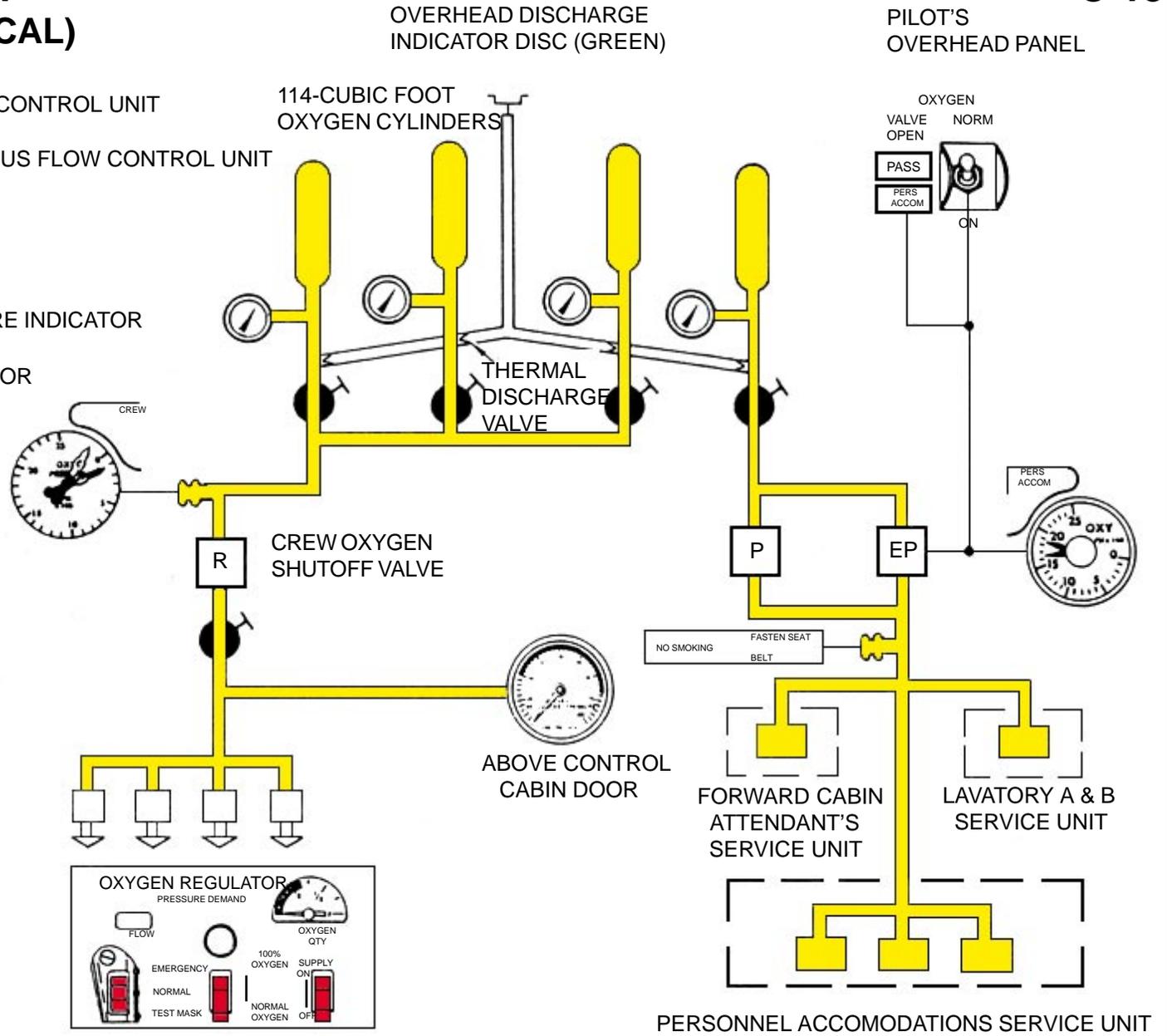
- Navigator/CSO seat will face within 30 degrees of forward for takeoff and landing.
- The ACM seat can be tilted forward 25 degrees and latched in either the full forward or full back position. The forward tilt is used only to gain access to the locking mechanism that secures the seat to the cabin floor.

ACM SEAT

NAVIGATOR'S AND  
SCO SEAT

# OXYGEN SYSTEM-CREW AND PERSONNEL (TYPICAL)

- P** PNEUMATIC CONTINUOUS FLOW CONTROL UNIT
- EP** ELECTRO PNEUMATIC CONTINUOUS FLOW CONTROL UNIT
- R** PRESSURE REDUCER
-  PRESSURE TRANSMITTER
-  OXYGEN CYLINDERS PRESSURE INDICATOR
-  PRESSURE DEMAND REGULATOR
-  SHUTOFF VALVE
- ELECTRICAL



FLIGHT CREW OXYGEN REGULATOR

# AIRCRAFT PAINT SCHEME

C-18D



# TEST BED CONFIGURATION FOR C-135 AIRCRAFT

**TAIL NUMBER: (C-18D) 81-0893 and 81-0895 CRUISE MISSILE MISSION CONTROL AIRCRAFT**

PASSENGER CAPACITY: 39.

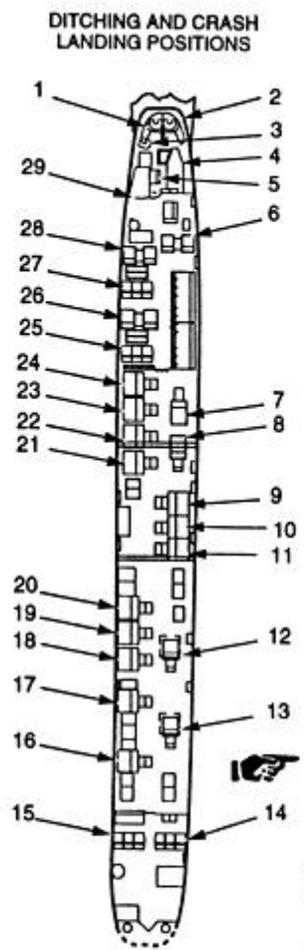
FUEL LOAD: 152.0 K. The fuel system will retain approximately 17,600 pounds of undumpable fuel.

ADDITIONAL OXYGEN BOTTLES: NO. The gaseous breathing oxygen is stored in ten 115cu.ft. oxygen cylinders. Six are located on the right side of the forward cargo area and four on the right side of the aft cargo area. This is true for all C-18s.

LOX CONVERTERS: NO.  
 NITROGEN BOTTLES: NO.  
 MODIFIED ESCAPE ROUTES: NO.  
 CHANGES FOR ENGINES/APU SHUTDOWN: NONE.

CHANGES IN ELECTRICAL/BATTERY POWER: The aircraft is equipped with a Class II Test Master Power Switch, located at the Flight Engineer's panel left side, which will disable all modification power without disturbing main aircraft power. See visual aid that is applicable to all C-18 models. Aircraft battery is located in right side of nose wheel well.

HINDRANCES/DIFFERENCES: This aircraft is extremely loaded with electronics. It is equipped with the aft entrance ladder in the aft baggage compartment.



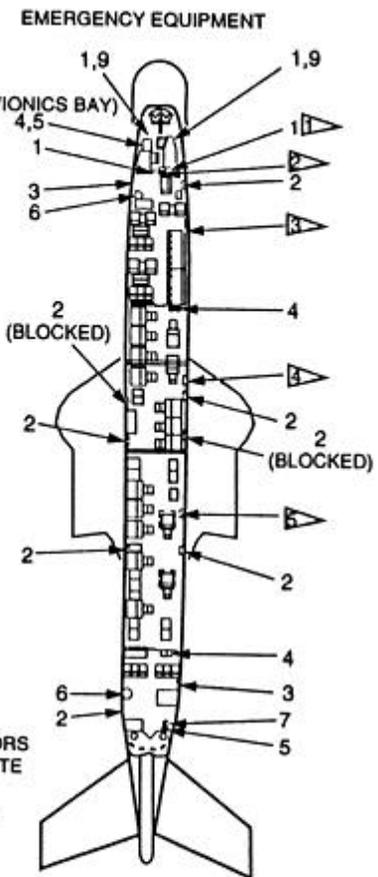
- 1 PILOT
- 2 COPILOT
- 3 OBSERVER
- 4 FLIGHT ENGINEER
- 5 NAVIGATOR
- 6 INFLIGHT CREW REST SEATS
- 7 DATA ANALYST NO. 1
- 8 DATA ANALYST NO. 2
- 9 TARGET HULK NO.1/AFSATCOM
- 10 TARGET HULK NO. 2
- 11 TARGET HULK NO. 3
- 12 TEEPEE OPERATOR
- 13 SYS ANALYST
- 14 INFLIGHT CREW REST SEATS
- 15 INFLIGHT CREW REST SEATS
- 16 RECORD/TIMING
- 17 COMM OPER
- 18 MISSION COORD
- 19 ANTENNA OPER
- 20 TELEMETRY OPER
- 21 RCC/FTS
- 22 RADAR OPER
- 23 TEST DIRECTOR
- 24 TEST CONDUCTOR
- 25 INFLIGHT CREW REST SEATS
- 26 INFLIGHT CREW REST SEATS
- 27 INFLIGHT CREW REST SEATS
- 28 INFLIGHT CREW REST SEATS
- 29 ADDITIONAL CREW SEATS

**WARNING**

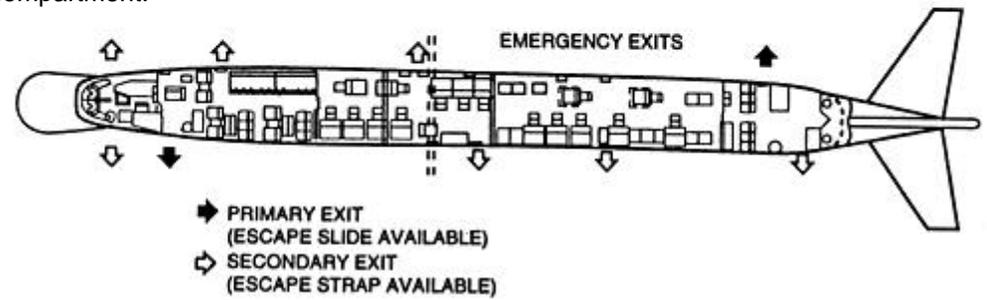
PMEE AND MCT CONSOLE OPERATORS IN SIDE-FACING SEATS SHALL ROTATE SEATS 90° TO FACE AFT AND LOCK SEATS DURING TAKEOFF, LANDING, CRASH LANDING, AND DITCHING.

**NOTE**

- Each work station is equipped with troop warning lights, and fixed oxygen outlet.
- 1 ▲ Cockpit pallet contains: fire extinguisher, smoke masks, crash axe, and oxygen bottle.
- 2 ▲ Fwd rest area pallet contains: fire extinguishers, oxygen bottle, fire fighter gloves, smoke mask, and first aid kit.
- 3 ▲ Deck vent area pallet contains: fire extinguishers, first aid kits, smoke masks, fire fighter gloves, and oxygen bottles.
- 4 ▲ Mid pallet contains: fire extinguisher, first aid kits, and oxygen bottles.
- 5 ▲ Aft pallet contains: fire extinguishers, first aid kits, smoke masks, fire fighter gloves, oxygen bottle, and crash axe.



1. ESCAPE ROPE
2. ESCAPE STRAP
3. ESCAPE SLIDE
4. PORTABLE OXYGEN BOTTLES
5. PORTABLE FIRE EXTINGUISHER
6. LIFE RAFT
7. EMERG HORN/LIGHT
8. FIRE FIGHTING GLOVES
9. OXYGEN MASK



- ➡ PRIMARY EXIT (ESCAPE SLIDE AVAILABLE)
- ⇄ SECONDARY EXIT (ESCAPE STRAP AVAILABLE)