

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

**THIS IS SEGMENT 16 COVERING CHAPTER 18 FROM THE MD-11 TO L-1011-500.**

**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

### WRITTEN CORRESPONDENCE:

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

## SEGMENT 16 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 Retaining out of date rescue information can negatively affect the user's operability and outcome of emergencies.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>
18	MD-11	ALL	Updated existing file.
18	MD-80	ALL	Updated existing file.
18	MD-90	ALL	Updated existing file.
18	L1011-1	ALL	Updated existing file.
18	L1011-500	ALL	Updated existing file.

NOTE: All Boeing aircraft files are updated based on the latest ARFF information and all of these aircraft, regardless of age, are still being used and making aviation contributions in various functions besides CRAF, such as cargo, and freight.

**NOTE**

Chapter 18 contains emergency rescue and mishap response information for the following aircraft:

**DC-3  
DC-6  
DC-7  
DC-8  
DC-9  
DC-10  
MD-11  
MD-80  
MD-90  
L-1011-1  
L-1011-500  
707  
717  
720  
727  
737  
747  
757  
767  
777**



# AIRCRAFT DIMENSIONS

# MD-11

## MD-11 ALL MODELS

\* SPAN AT WING TIP DIMENSION POINT  
= 165' 7" (50.5 M) WITH FUEL

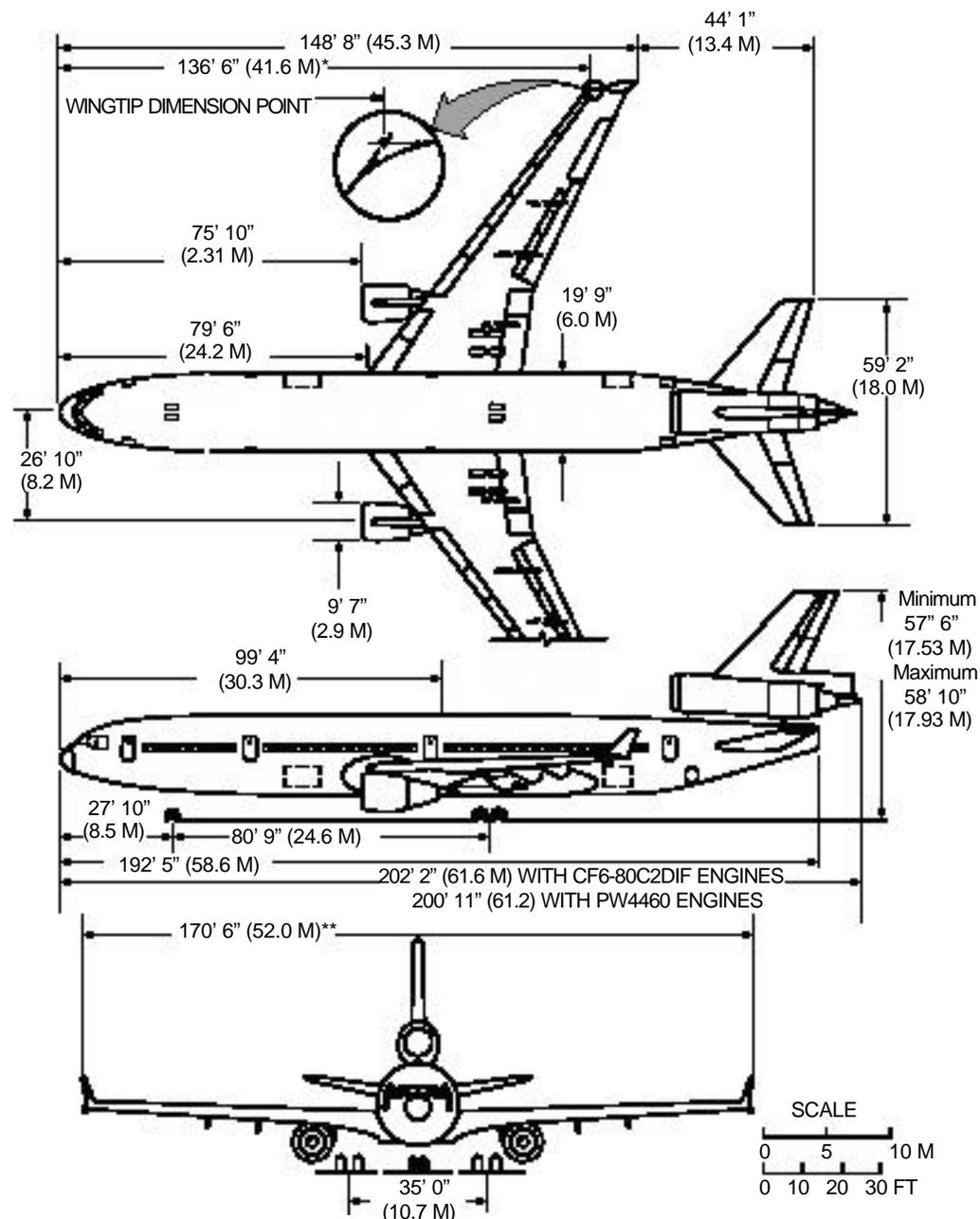
\*\* MAXIMUM SPAN WITH FUEL/ NOMINAL  
SPAN WITHOUT FUEL  
= 169' 10" (51.8 M)

## GENERAL INFORMATION FOR ALL MODELS

1. The MD-11 Series and variants: is a medium/long range DC-10 follow on. Seating for 323 two class passengers and a maximum of 410. Two crew flightdeck. Crew door and three passenger doors each side, all eight of which open sliding inward and upward. Two freight holds in lower deck, forward and aft of wing, and one bulk cargo compartment in rear fuselage. Power plant is three Pratt & Whitney PW4460 turbofans or three General Electric CF6-80C2D1F turbofans.
2. MD-11-Combi is a cargo/passenger version. Seating for 168 to 240 passengers and 4 to 10 pallets. Common configuration 214.
3. MD-11CF is a convertible freighter. Main deck cargo door at front on port side.
4. MD-11F is a all-freighter version.
5. MD-11C&D are tentatively planned for increased capacity.

## 6. AIRCRAFT STRUCTURE

Composites used in virtually all control surfaces, engine inlets and cowlings, and wing/fuselage fillets; wing has two-spar structural box with chordwise ribs and skins with spanwise stiffeners; upper winglet of ribs, spars and stiffened aluminum alloy skin with carbonfibre trailing edge; lower winglet carbon-fibre; inboard ailerons have metal structure with composites skin; outboard ailerons all composites; inboard flaps composites-skinned metal; outboard flaps all-composites; spoilers aluminum honeycomb and composites skin; tailplane has CFRP trailing edge; and elevators CFRP.

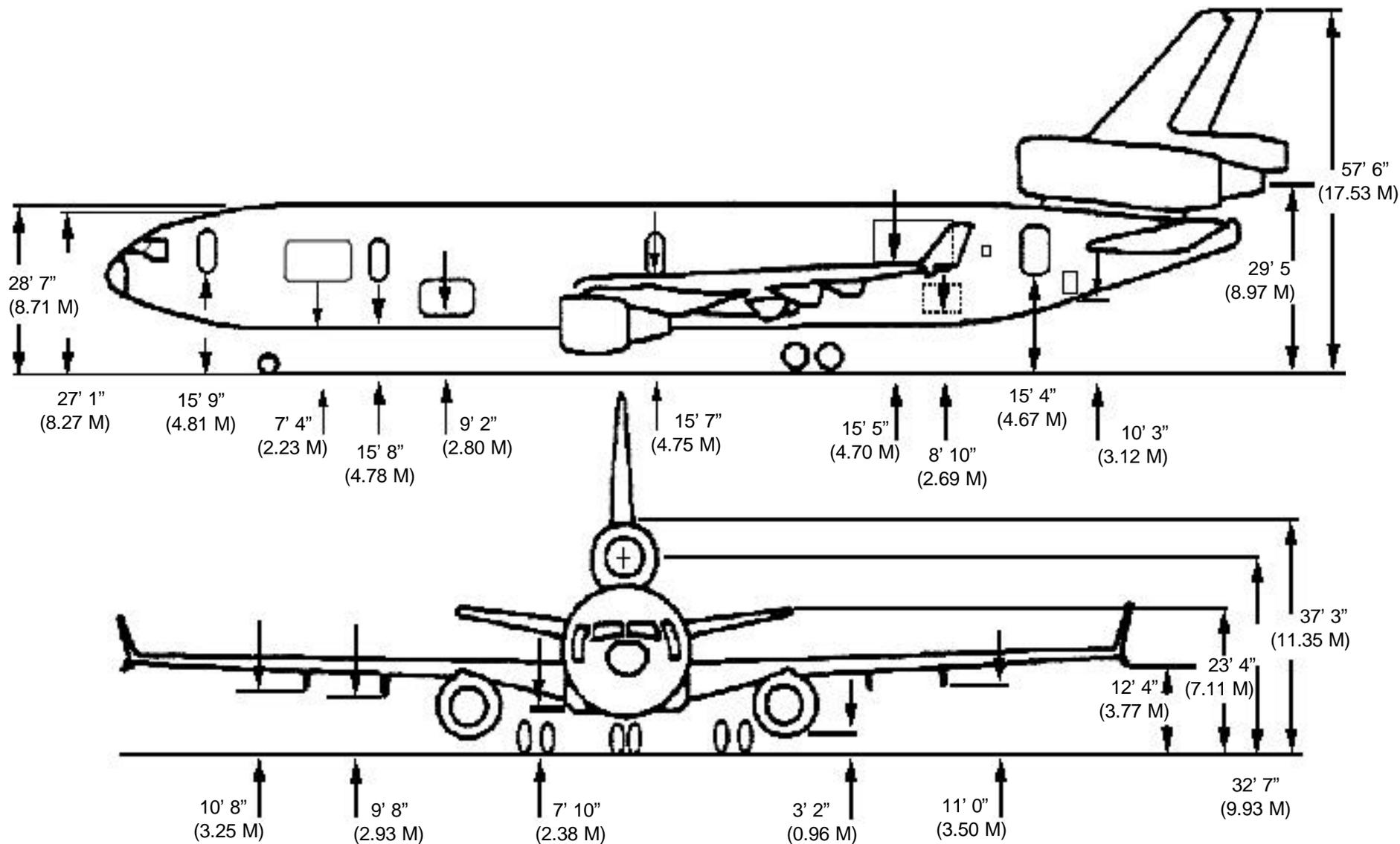


# AIRCRAFT VERTICAL MEASUREMENTS

MD-11

**NOTE:**

Flat level runway for ground clearances. Vertical measurements are at the minimum.



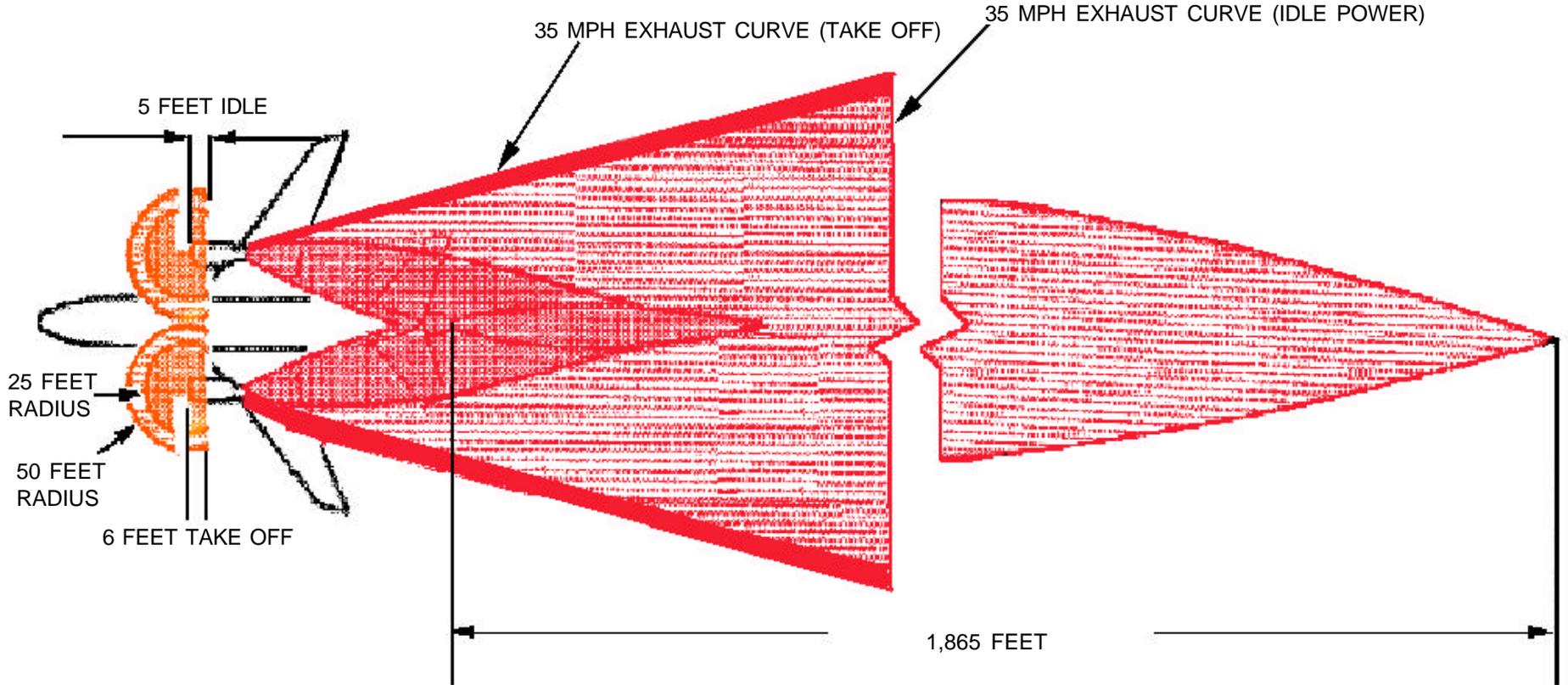
# ENGINE DANGER AREAS

## JET INTAKE AND BLAST DISTANCES

**NOTE:**

Cross winds will have considerable effect of contours.

-  INTAKE DANGER AREA
-  IDLE DANGER AREA
-  TAKE OFF EXHAUST DANGER AREA

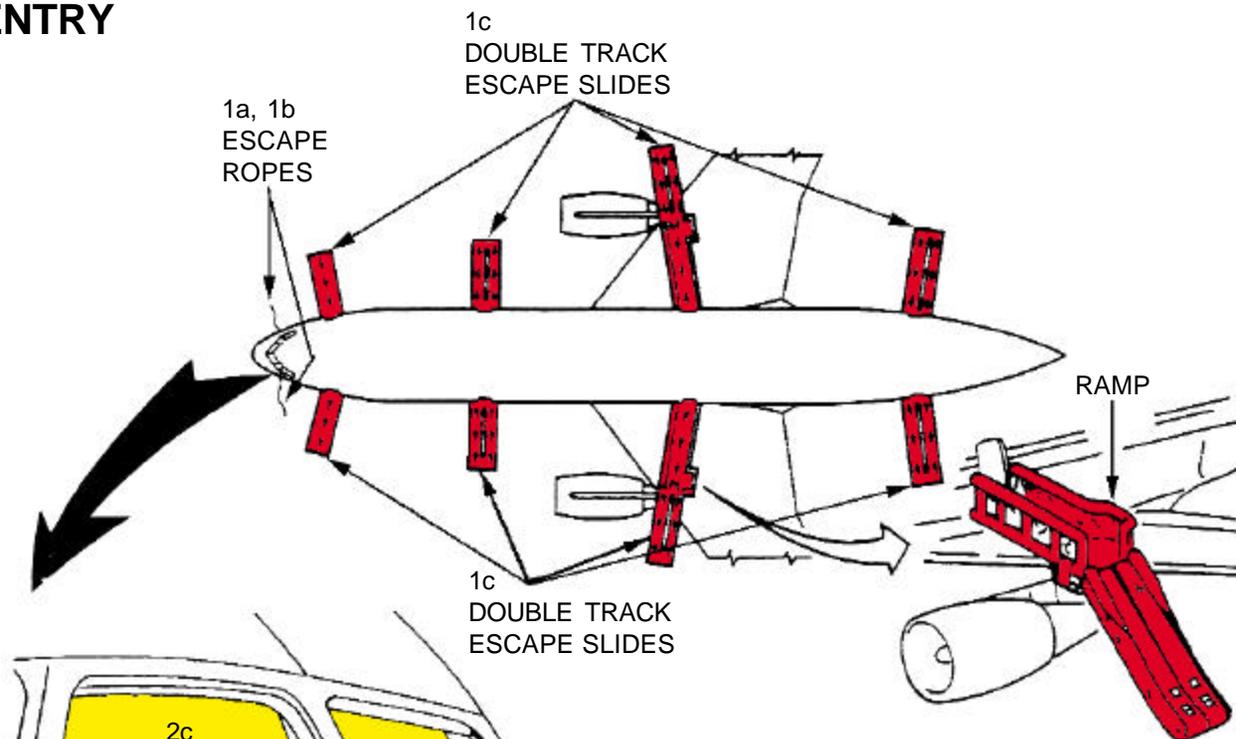


# AIRCRAFT EVACUATION ROUTES AND CLEARVIEW WINDOW ENTRY

MD-11

## 1. EVACUATION ROUTES

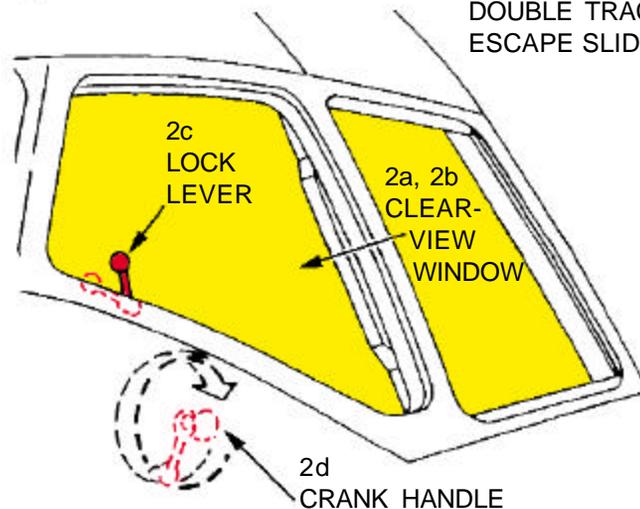
- Escape ropes are located in the flight compartment.
- Ropes are extended outside of flight compartment windows opposite the pilot and co-pilot.
- Escape slides are located at eight locations. (See graphic.)
- Flight crewmembers activate the escape slides for rapid passenger egress. Ramps are extensions of the escape slides for over the wings.
- Doors opened from the outside will not activate the escape slides, but caution must be exercised to prevent injury to rescue crews. Communication with the flight crew will be necessary, if possible.



## 2. CLEARVIEW WINDOW ENTRY

To gain access into flight compartment:

- Chill clearview window panes with CO<sub>2</sub>.
- Break window panes with heavy fire ax or suitable device.
- Depress lock lever and push lever aft.
- Push crank handle outboard and turn clockwise to move window aft.



# ENGINE NACELLE AND FAN COWL ACCESS DOORS

MD-11

## PRATT & WHITNEY ENGINES ONLY

### 1. THRUST REVERSER DOORS

- Open fan cowl doors.
- For wing engines, unlock and release aft door latches.
- For tail engine, unlock aft door latch by inserting 3/8 inch (9mm) square drive into fitting in left door. Turn counterclockwise until resistance is felt.
- Unlock and release forward door latches.
- Open latch access doors at lower center area of doors.
- Unlock and release forward and aft tension latches at bottom of doors.
- Unlock and release center tension latches.
- Connect hydraulic pump to door opening actuator.
- Fully open doors using pump.
- Release hold-open rods and attach to engine brackets.
- Lower doors with pump until supported by rods.

### 2. WING FAN COWL DOORS

- Press latch triggers, pull handle down releasing tension latches.
- Lift and support doors at lower edge.
- Extend hold-open rods to fully locked position.
- Retract knobs of hold open rods and engage hooks on support fittings.

### 3. TAIL FAN COWL DOORS

- Connect hydraulic pump to door opening actuator.
- Fully open doors using pump.
- Release hold-open rods and attach to engine brackets.
- Lower doors with pump until supported by rods.

## GENERAL ELECTRIC ENGINES ONLY

### 4. FAN REVERSER

- Open cowl door.
- Open blowout and lower latch access panel doors on bottom of reverser.
- Release forward mounting ring latches on each side of reverser.
- Press trigger on door tension latch handle to release handle.
- Pull handle to fully unlatched position.
- Disengage latch hook from U-bolt.
- Connect hydraulic hand pump to quick disconnect fitting on fan reverser. Pump reverser half open.

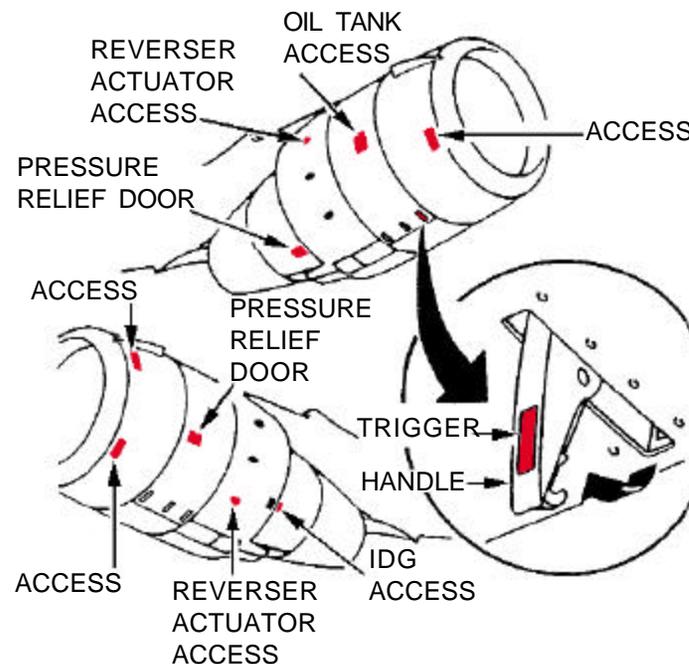
### 5. FAN AND CORE COWL DOORS

#### NOTE:

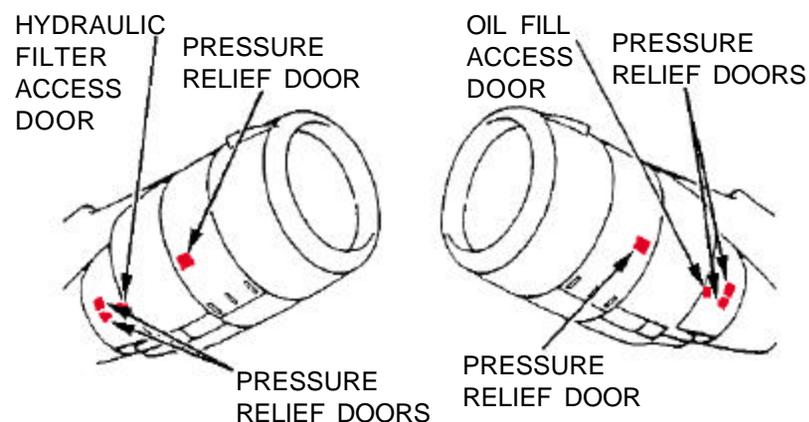
Fan cowl and fan reverser must be opened prior to opening core cowl.

- Press trigger on door tension latch handle to release handle.
- Pull handle to fully unlatched position.
- Disengage latch hook from U-bolt.
- Raise door to open position and engage hold-open rods with engine fittings.

## PRATT AND WHITNEY ENGINE



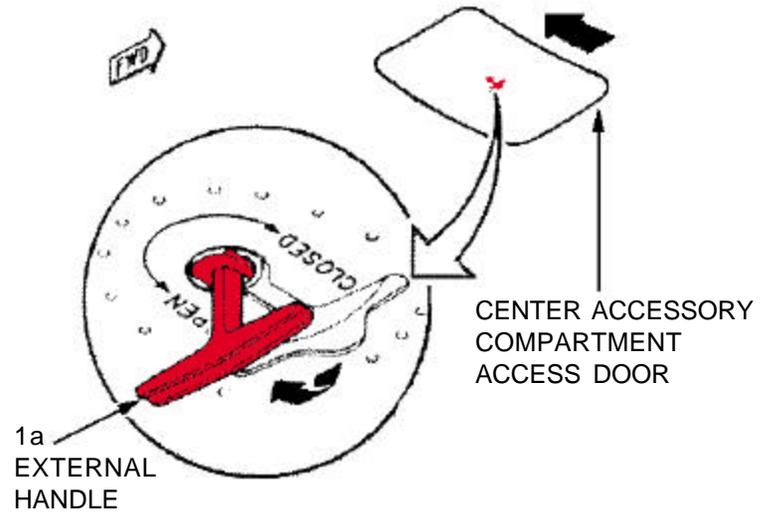
## GENERAL ELECTRIC ENGINE



# AIRCRAFT ACCESS DOORS

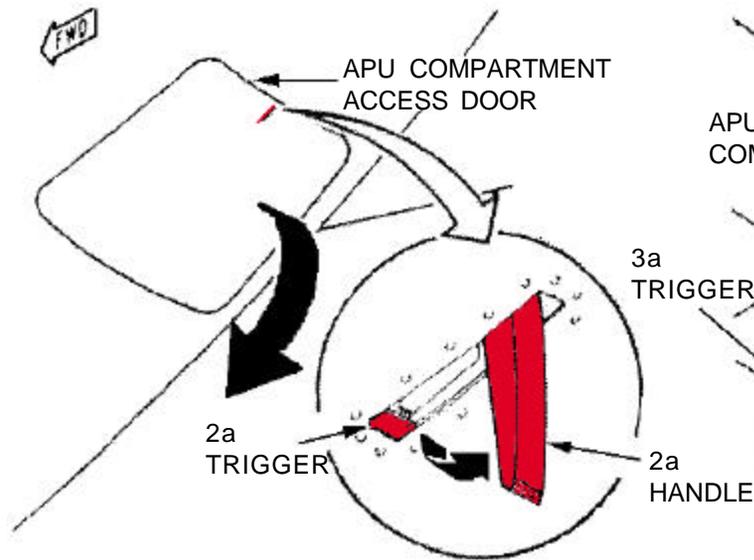
## 1. CENTER ACCESSORY COMPARTMENT DOOR

- a. Pull down external handle and rotate in direction indicated by placarding on door.
- b. Stow handle and slide door to right side of fuselage.



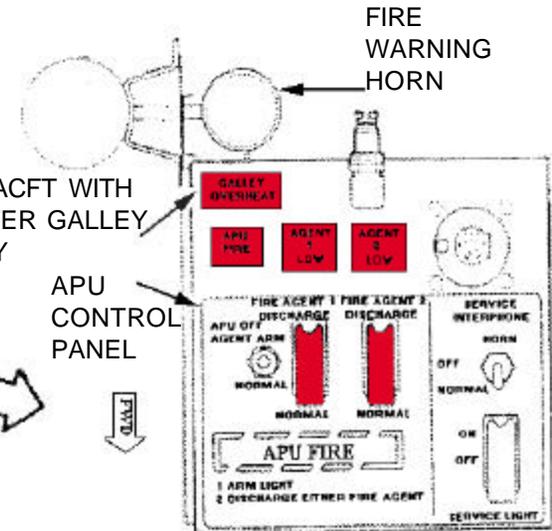
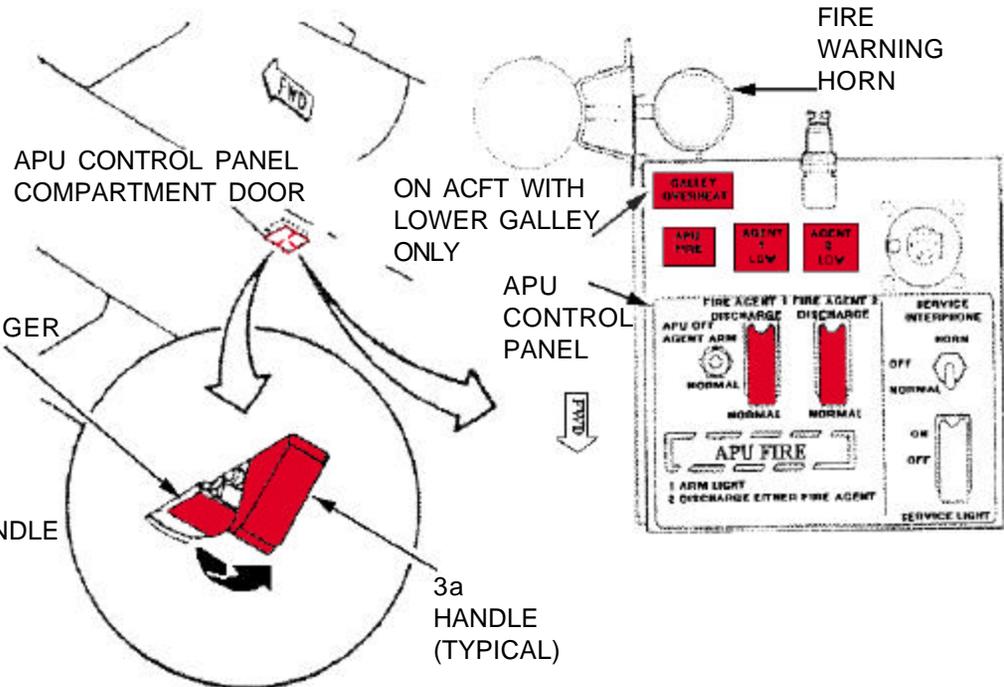
## 2. APU ACCESS DOOR

- a. Press trigger to release handle.
- b. Support door after unlatching.
- c. Door opens down.

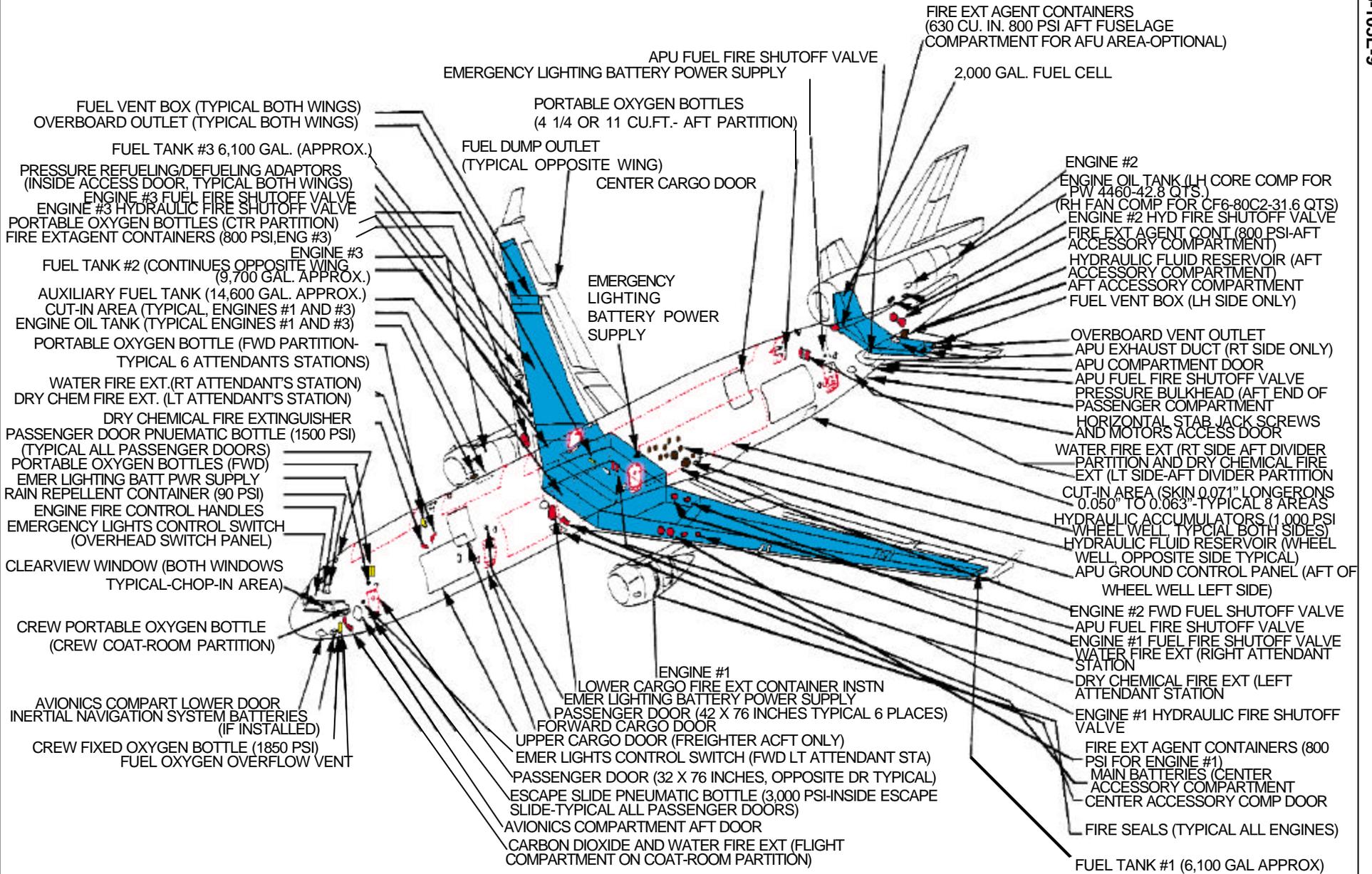


## 3. APU GROUND CONTROL PANEL COMPARTMENT DOOR

- a. Press three (3) triggers on door to release three handles.
- b. Door opens down.



# AIRCRAFT FLAMMABLE MATERIAL LOCATIONS



## SPECIAL TOOLS/EQUIPMENT

Power Rescue Saw

35 Foot Ladder

¼ Inch Drive Tool

## AIRCRAFT ENTRY

**WARNING**

When emergency mode is used to open any passenger door, door will automatically move to full open position.

1. OPERATION OF ALL 8 DOORS  
NORMAL MODE-ELECTRICAL
  - a. Pull door control handle out of recess to disarm escape slide.
  - b. Move door control switch to open and hold.
  - c. When door is fully open, release switch.

## IF DOOR DOES NOT OPEN:

2. EMERGENCY MODE-PNEUMATIC  
(ALL 8 DOORS)
  - a. Pull door control handle out of fuselage.
  - b. Rotate emergency override lever from safe position to emergency position and hold.
  - c. Rotate door control handle to emergency position (see dotted PULL handle).

## IF DOOR STILL DOES NOT OPEN:

- d. Push door inward as far as possible and hold
- e. Use any available means to pry door upward.

**WARNING**

Door with slide attached is very heavy. Required lifting force may exceed 400 pounds.

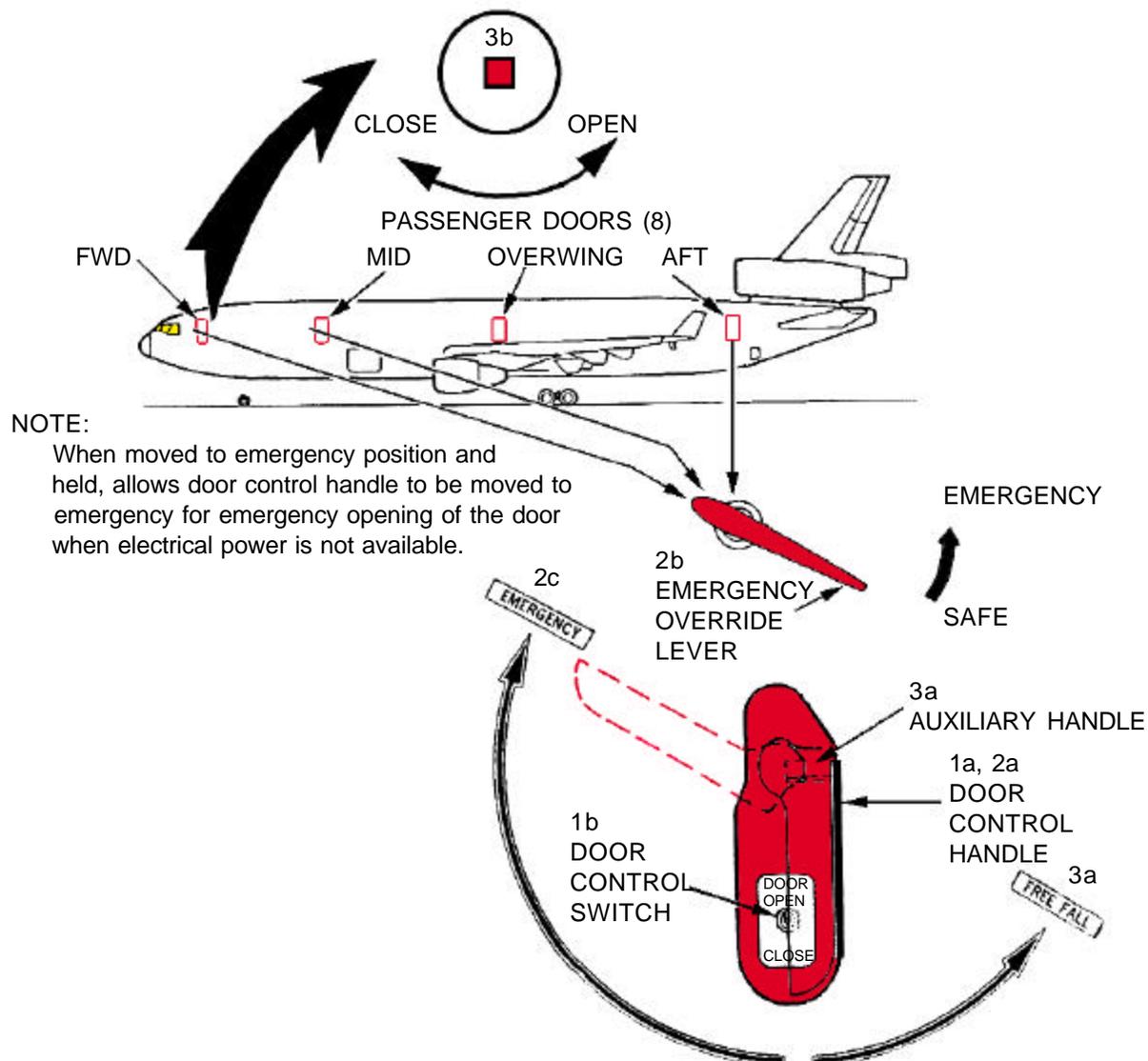
3. AUXILIARY MODE USING 1/4-INCH  
DRIVE FITTING (Applicable for forward left fuselage door only.)
  - a. Pull handle out, rotate to free fall position and hold.
  - b. Insert 1/4-inch drive into socket and rotate as indicated until door is open.

**CAUTION**

Torque applied in excess of 100 inch pounds or 500 RMPs may result in damage.

- c. Release door control handle to neutral position.

MD-11

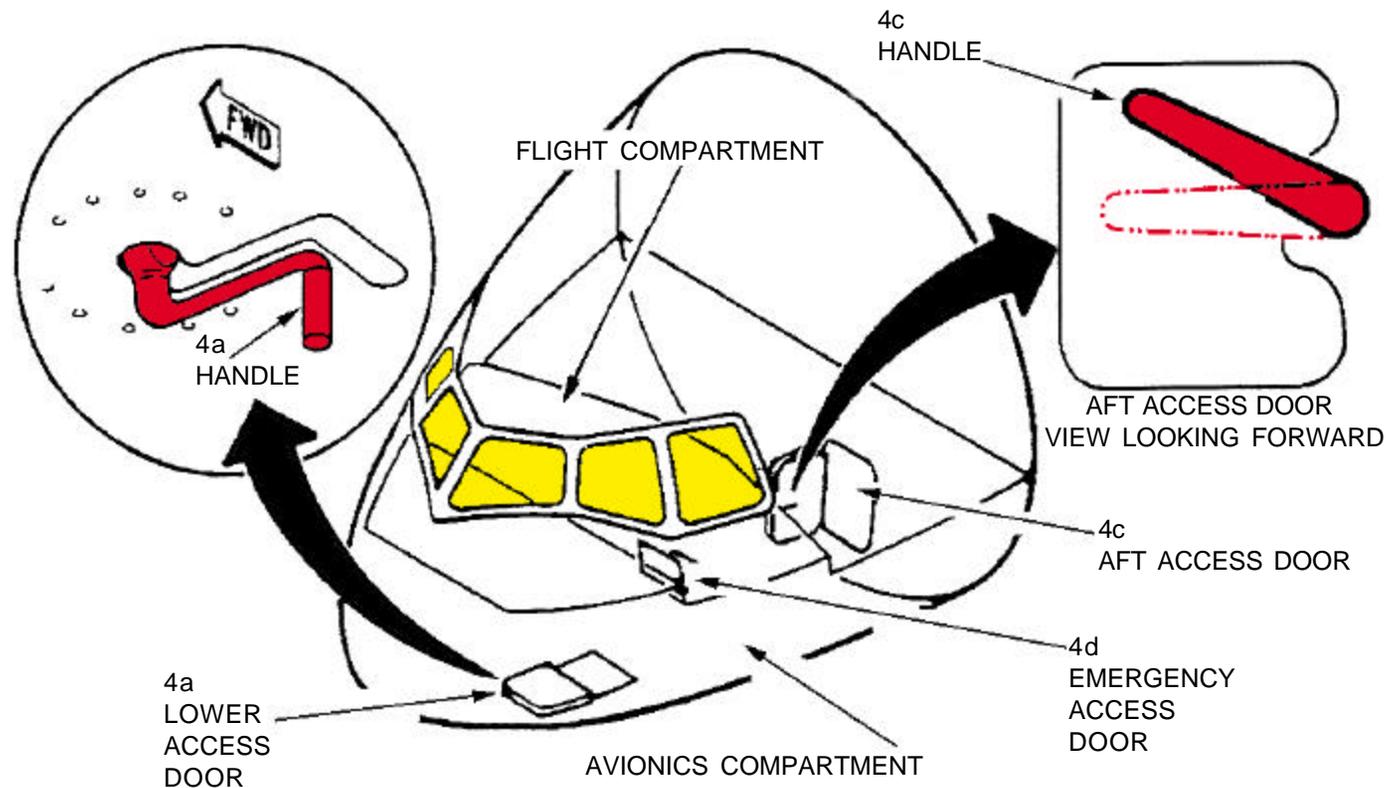


# AIRCRAFT ENTRY-Continued

MD-11

## 4. FLIGHT COMPARTMENT ENTRY THROUGH THE AVIONICS COMPARTMENT

- a. To open the avionics compartment lower access door, pull down and turn outer handle counterclockwise.
- b. Stow handle and slide door forward.
- c. To open avionics compartment aft access door, turn handle up (clockwise) and push door.
- d. To open avionics compartment emergency access door, push to open into flight compartment.



# AIRCRAFT ENTRY-Continued

## 5. EXTERNAL CARGO DOOR OPERATION WITH POWER AVAILABLE

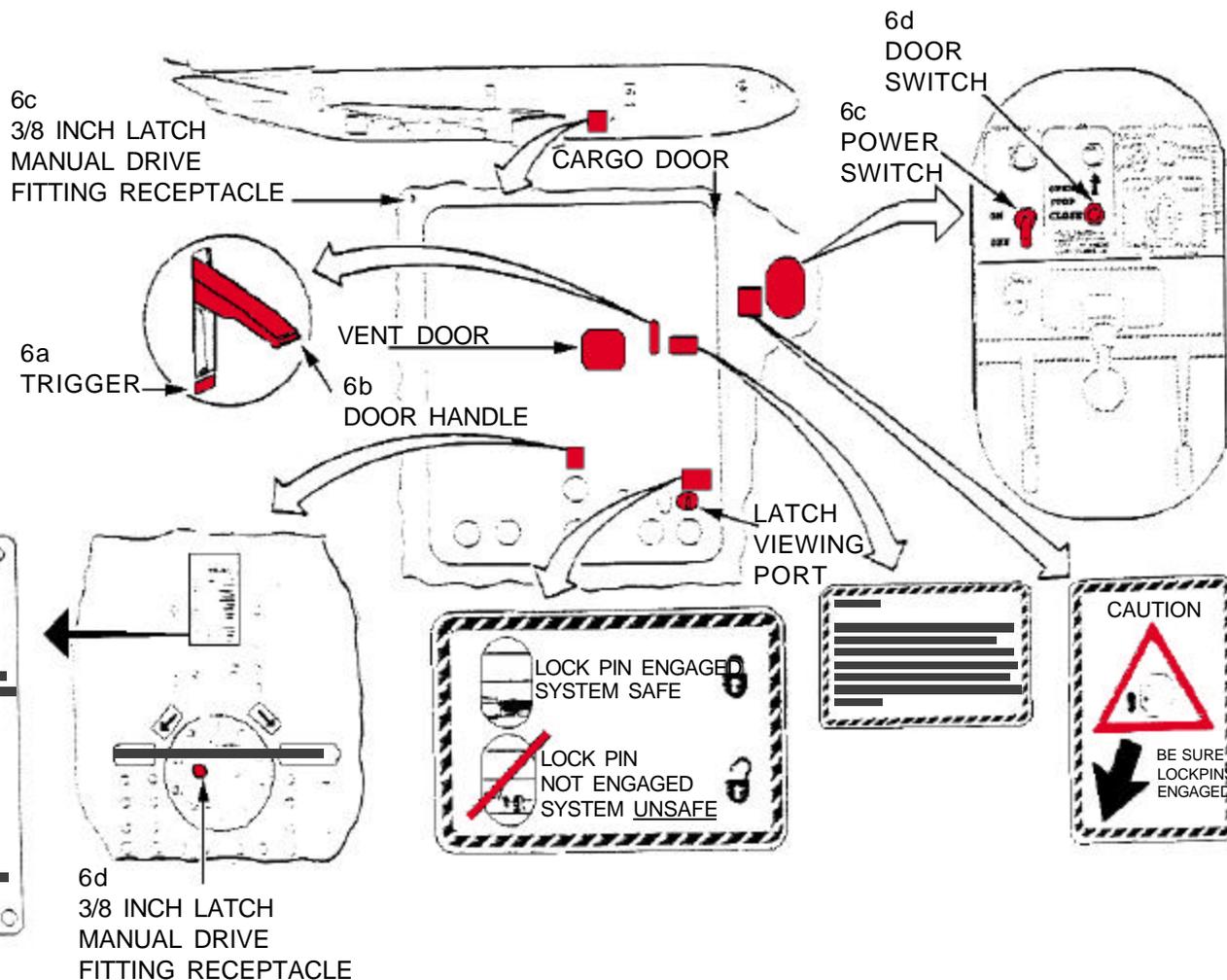
- a. Press trigger to release handle.
- b. Pull handle out and up.
- c. Place door power switch on.
- d. Place door switch to open.

### WARNING

To prevent door from springing open, manually crank door actuator to the fully closed position prior to manually unlatching.

## 6. EXTERNAL CARGO DOOR OPERATION WITH MANUAL MODE-NO POWER

- a. Press trigger to release handle.
- b. Pull handle out and up.
- c. Insert drive tool in latch manual drive fitting and turn drive tool toward unlock position until latches are open.
- d. Insert drive tool in door manual drive fitting and turn clockwise until door is open.



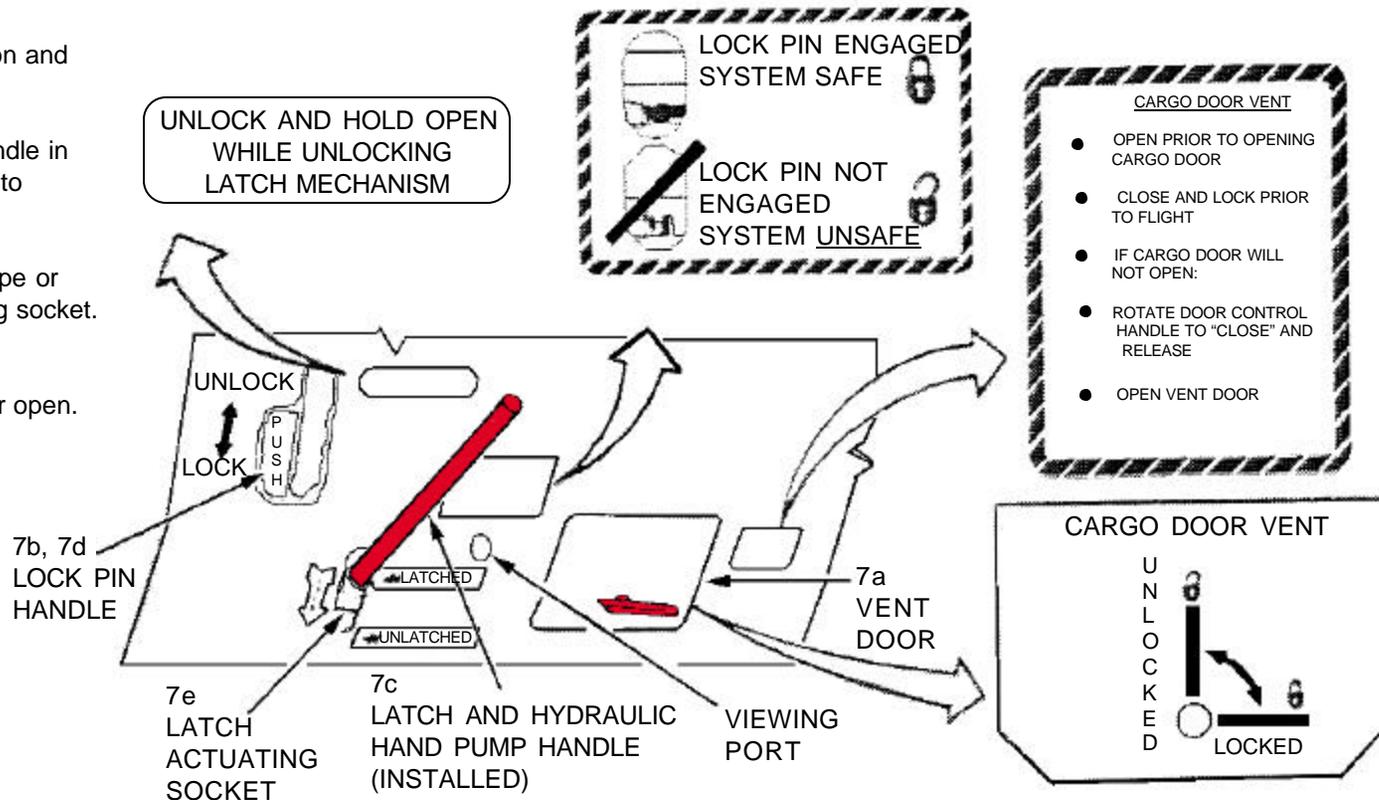
# AIRCRAFT ENTRY-Continued

## 7. UPPER CARGO DOOR INTERNAL OPERATION CONVERTIBLE FREIGHTER AIRCRAFT ONLY

**NOTE:**

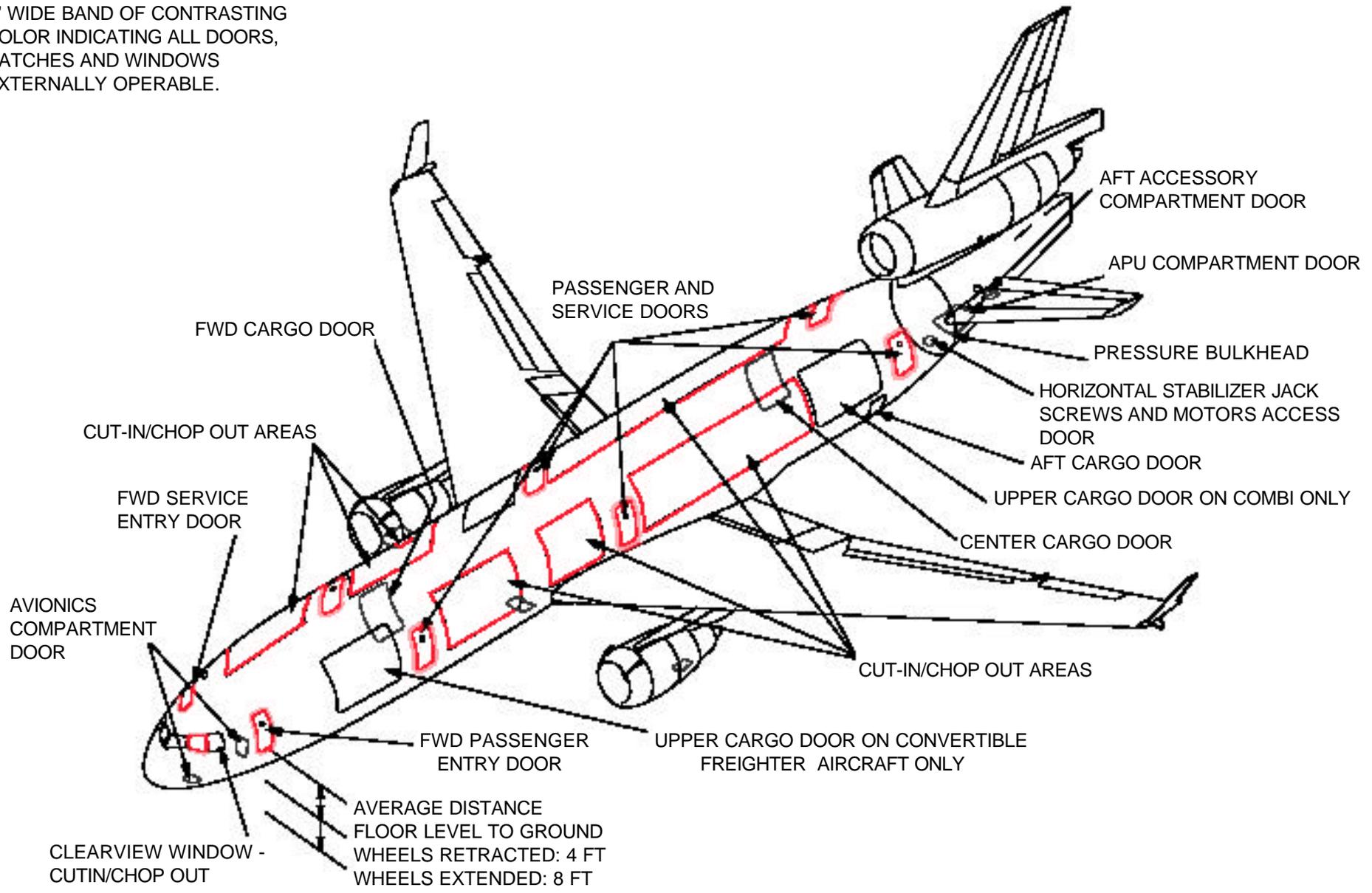
If installed, pip pin must be removed from locktube to allow unlocking of lockpin handle.

- a. To open manually, rotate vent door handle to unlock position.
- b. Pull lockpin handle up to unlock position and hold.
- c. Insert pipe or hydraulic hand pump handle in latch actuating socket and push down to unlatched position.
- d. Release lockpin handle and remove pipe or hand pump handle from latch actuating socket.
- e. Place cable loop or hook through latch actuating socket to manually hoist door open.



# EMERGENCY RESCUE ACCESS

2" WIDE BAND OF CONTRASTING COLOR INDICATING ALL DOORS, HATCHES AND WINDOWS EXTERNALLY OPERABLE.



FWD CARGO DOOR

CUT-IN/CHOP OUT AREAS

FWD SERVICE ENTRY DOOR

AVIONICS COMPARTMENT DOOR

FWD PASSENGER ENTRY DOOR

CLEARVIEW WINDOW - CUTIN/CHOP OUT

AVERAGE DISTANCE FLOOR LEVEL TO GROUND  
WHEELS RETRACTED: 4 FT  
WHEELS EXTENDED: 8 FT

PASSENGER AND SERVICE DOORS

UPPER CARGO DOOR ON CONVERTIBLE FREIGHTER AIRCRAFT ONLY

CENTER CARGO DOOR

UPPER CARGO DOOR ON COMBI ONLY

AFT CARGO DOOR

HORIZONTAL STABILIZER JACK SCREWS AND MOTORS ACCESS DOOR

PRESSURE BULKHEAD

APU COMPARTMENT DOOR

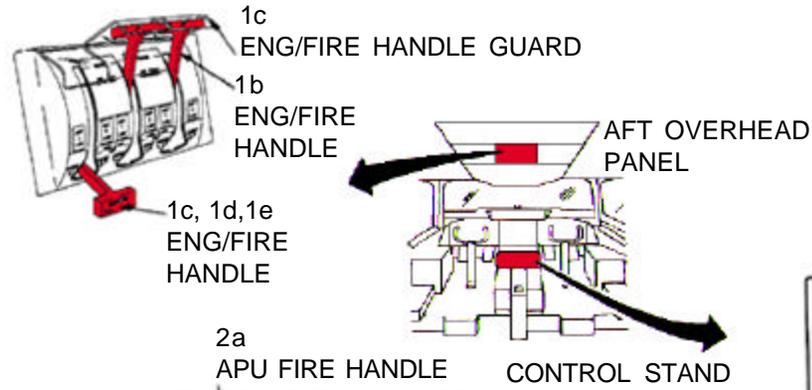
AFT ACCESSORY COMPARTMENT DOOR

CUT-IN/CHOP OUT AREAS

# ENGINE/APU SHUTDOWN AND AIRCREW EXTRACTION

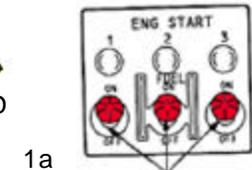
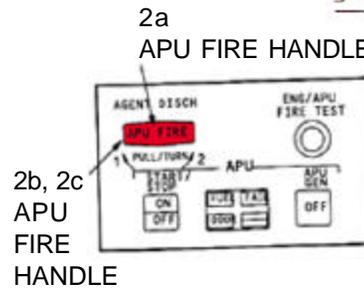
## 1. ENGINE SHUTDOWN

- Place the engine fire switches, located on the control stand, to OFF (DOWN) position.
- If light(s) in fuel lever(s), located on the control stand, or "ENG/FIRE" handle(s), located on the aft overhead panel, are illuminated: lift "ENG/FIRE" handle guard(s).
- Pull "ENG/FIRE" handle(s) down and forward.
- While holding forward pressure on handle, turn handle clockwise and hold.
- After ten second delay, turn handle counterclockwise.



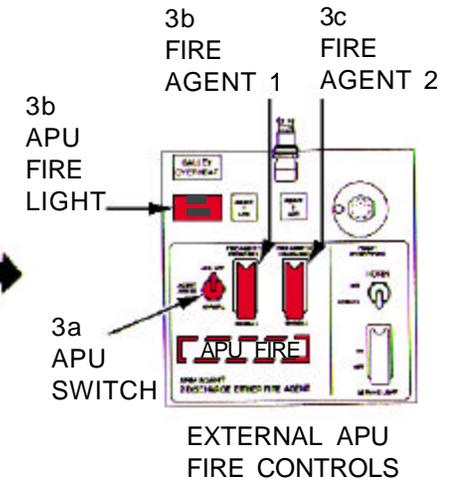
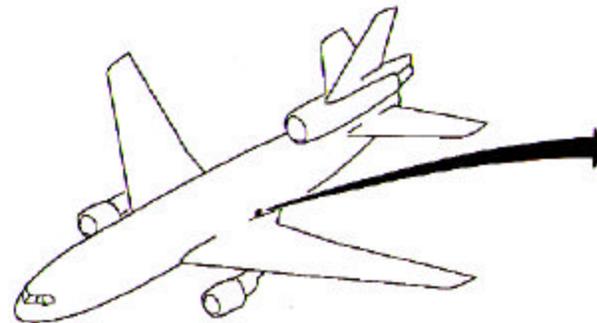
## 2. INTERNAL APU FIRE SHUTDOWN

- Pull APU fire handle, located on aft overhead panel, outward.
- If 'APU FIRE" light is illuminated: rotate "APU FIRE" handle clockwise.
- After ten second delay, rotate "APU FIRE" handle counterclockwise.



## 3. EXTERNAL APU FIRE SHUTDOWN

- Turn APU switch to OFF (UP) position.
- If APU fire light illuminates: place fire agent 1 switch to "DISCHARGE" (UP) position.
- After ten second delay, place fire agent 2 switch to "DISCHARGE" (UP) position.



## 4. AIRCREW EXTRACTION

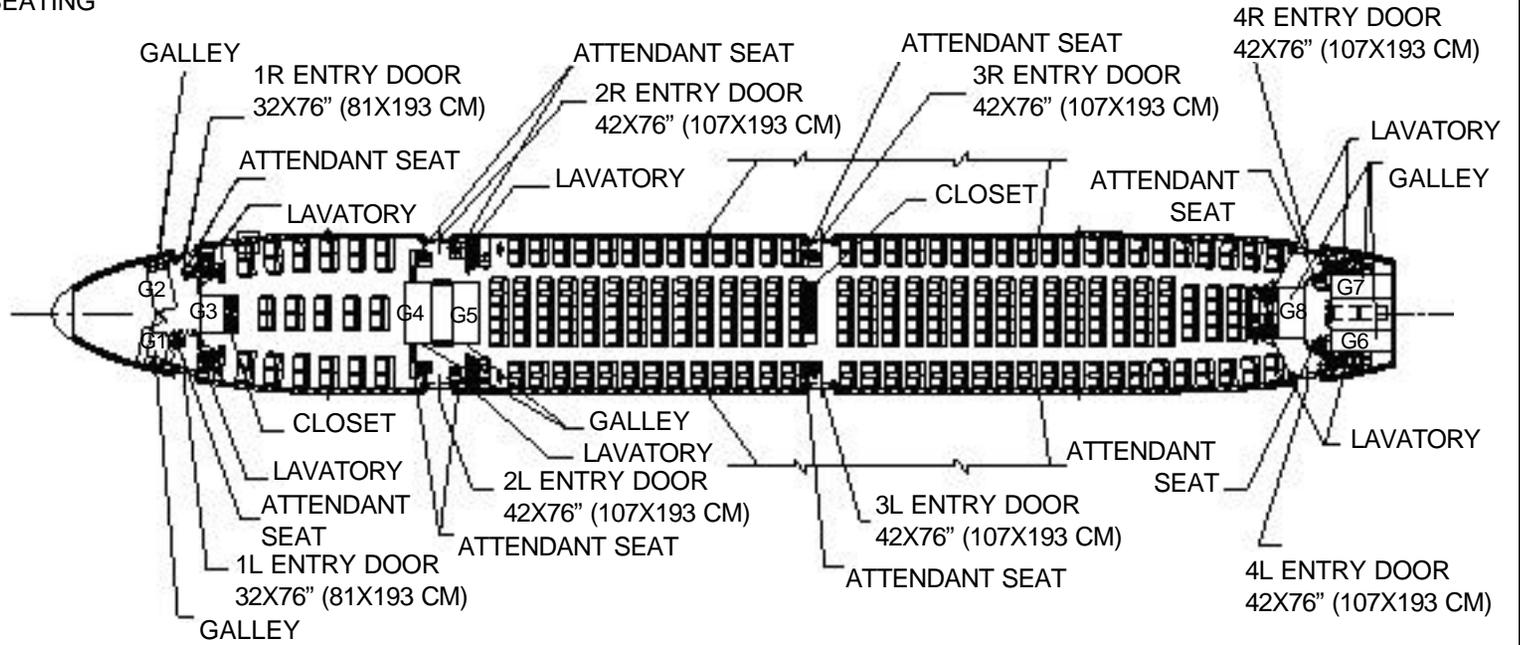
- Rotate quick disconnect knob on lap belt and remove shoulder harness.
- Pull seat manual release handle to adjust seat to a recline position in removing crewmembers.
- Attendant seats are equipped with shoulder harness and lap belt.
- Passenger seats are equipped with lap belts only.

# CABIN CONFIGURATION

# MD-11

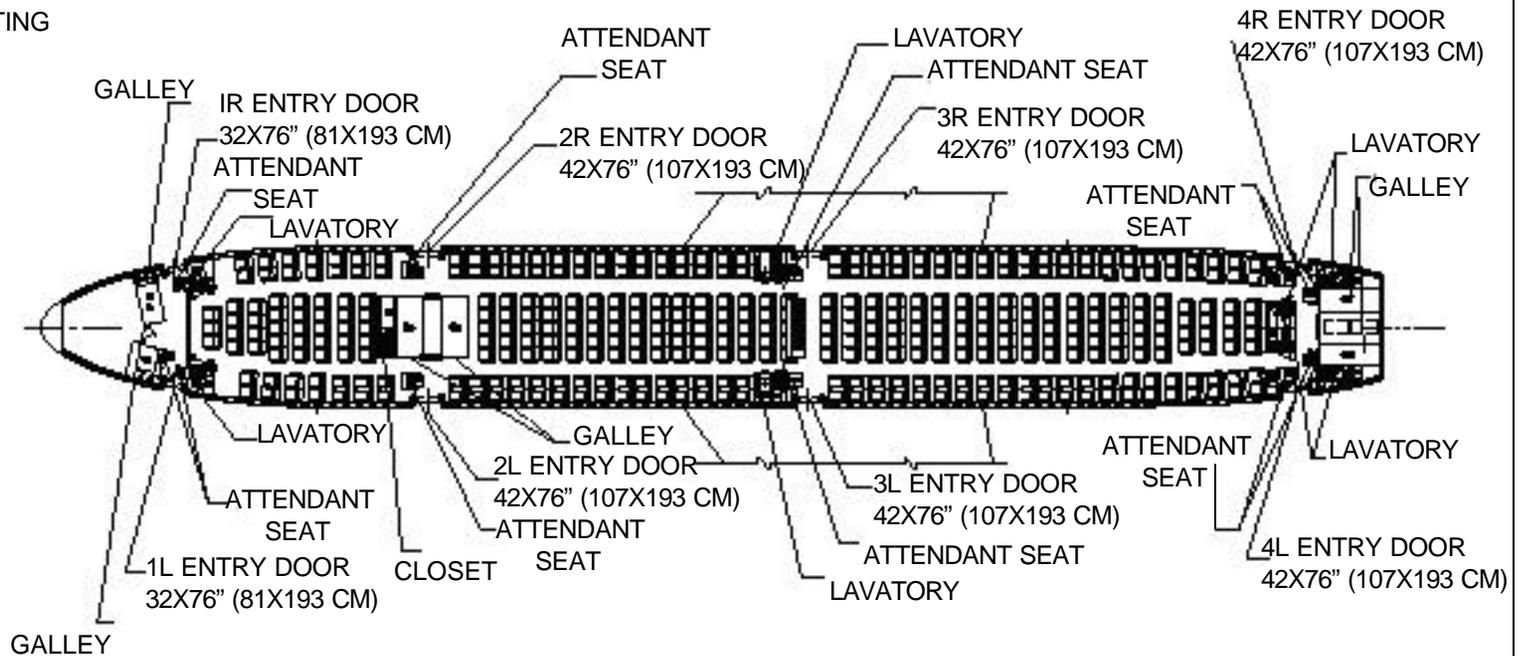
## MD-11 SERIES MIXED CLASS SEATING

323 PASSENGERS  
34 6-ABREAST FIRST CLASS  
289 9-ABREAST COACH



## MD-11 SERIES ECONOMY SEATING

379 PASSENGERS 9-ABREAST

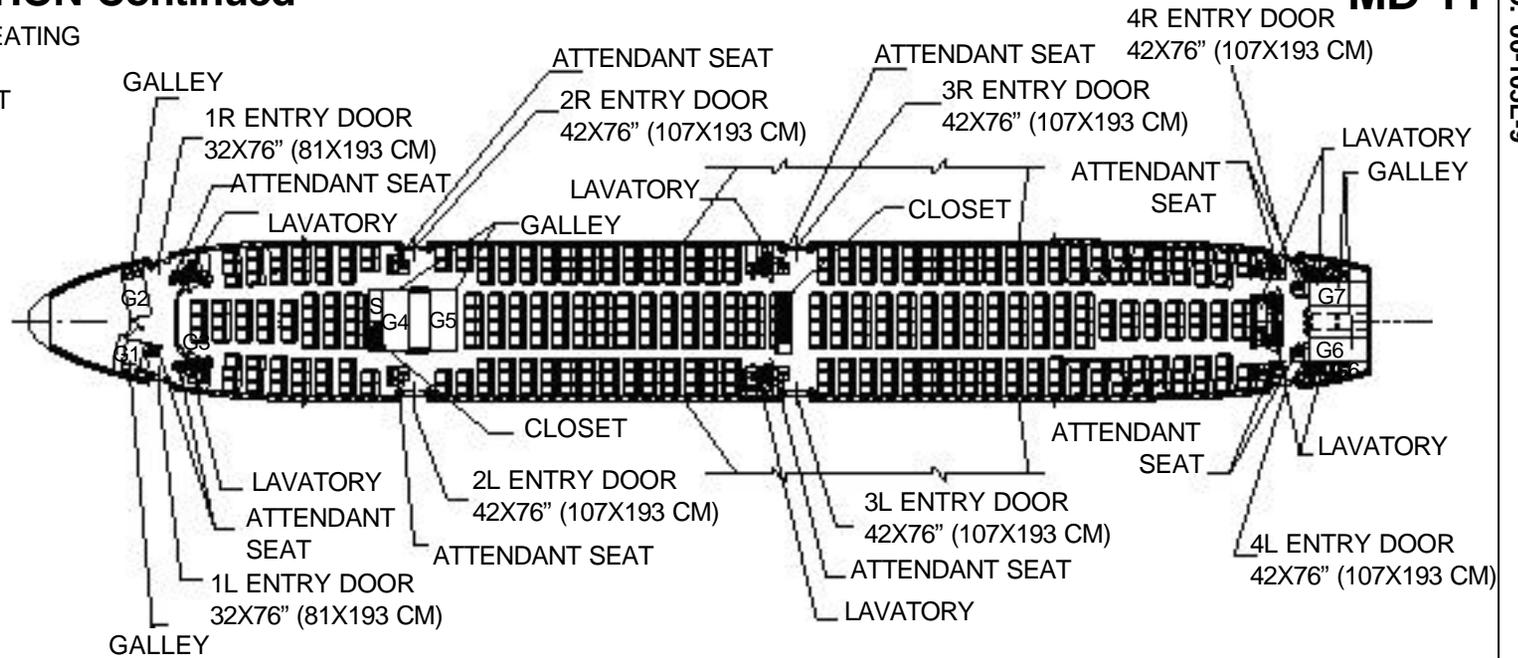


# CABIN CONFIGURATION-Continued

# MD-11

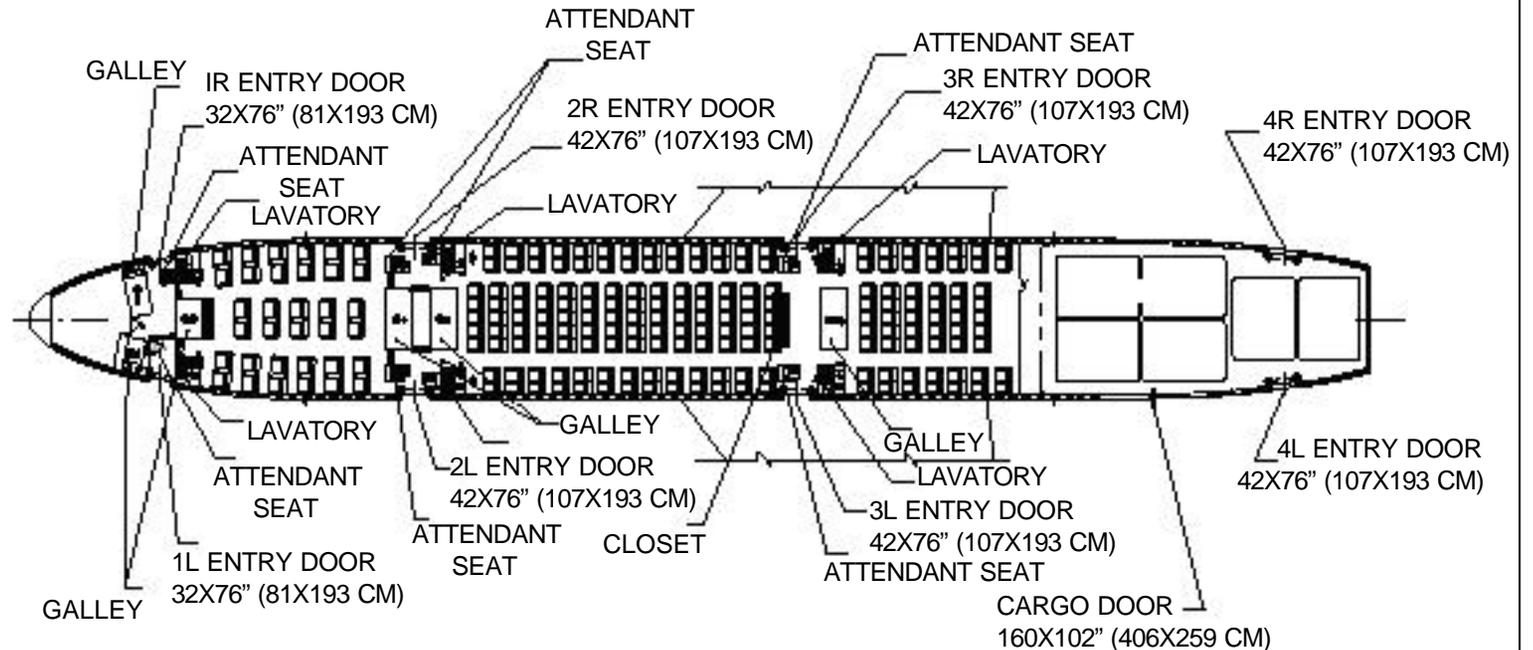
MD-11 SERIES HIGH DENSITY SEATING

410 PASSENGERS - 10-ABREAST



MD-11 COMBI SERIES  
MIXED CLASS SEATING

214 PASSENGERS  
34 6-ABREAST FIRST CLASS  
180 9-ABREAST COACH

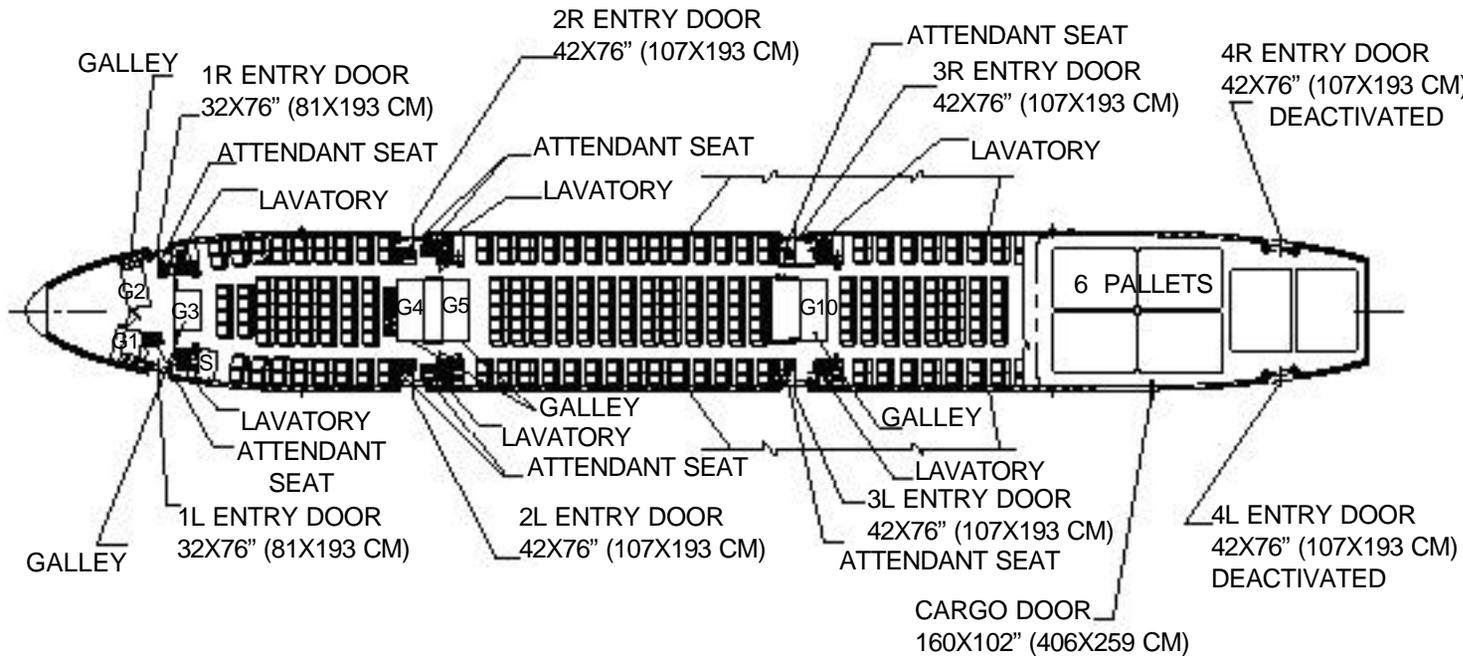


# CABIN CONFIGURATION-Continued

# MD-11

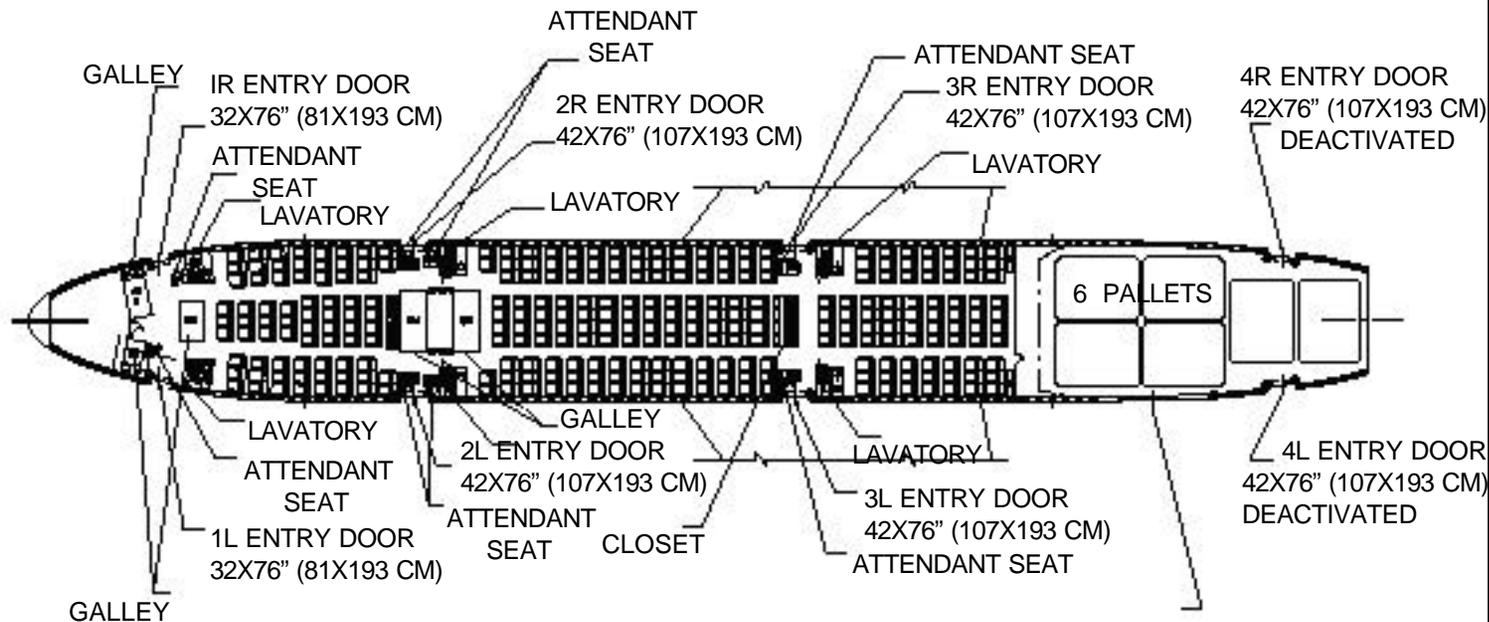
MD-11 COMBI SERIES  
ECONOMY SEATING

261 PASSENGERS 9-ABREAST



MD-11 COMBI SERIES  
HIGH DENSITY SEATING

290 PASSENGERS 10-ABREAST

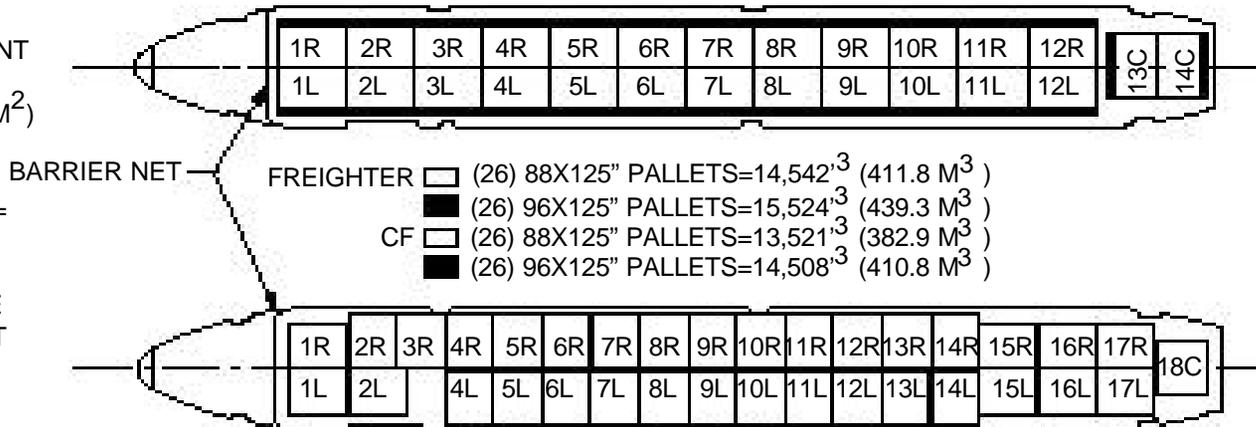


# CARGO CONFIGURATION

MD-11F/CF  
 MAIN CARGO LOADED COMPARTMENT  
 LENGTH=144'4" (44.0 M)  
 FLAT FLOOR AREA=2,614.5' <sup>2</sup>(242.9 M<sup>2</sup>)  
 BULK VOLUME=22,048' <sup>3</sup>\* (624.3 M<sup>3</sup>)

FREIGHTER □(34) 88X108" PALLETS=  
 15,537' <sup>3</sup>(440.0 M<sup>3</sup>)

\* BULK VOLUME IS WATER VOLUME  
 OF CABIN BETWEEN BARRIER NET  
 AND AFT BULKHEAD

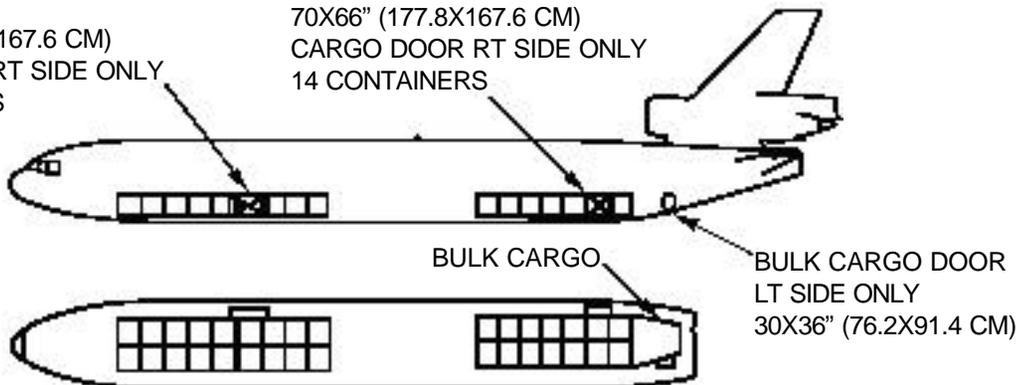


FREIGHTER □ (26) 88X125" PALLETS=14,542' <sup>3</sup> (411.8 M<sup>3</sup>)  
 ■ (26) 96X125" PALLETS=15,524' <sup>3</sup> (439.3 M<sup>3</sup>)  
 CF □ (26) 88X125" PALLETS=13,521' <sup>3</sup> (382.9 M<sup>3</sup>)  
 ■ (26) 96X125" PALLETS=14,508' <sup>3</sup> (410.8 M<sup>3</sup>)

32 LD3 CONTAINERS 5,056' <sup>3</sup> (143.17 M<sup>3</sup>)  
 BULK CARGO 510' <sup>3</sup> (14.44 M<sup>3</sup>)

104X66" (264.2X167.6 CM)  
 CARGO DOOR RT SIDE ONLY  
 18 CONTAINERS

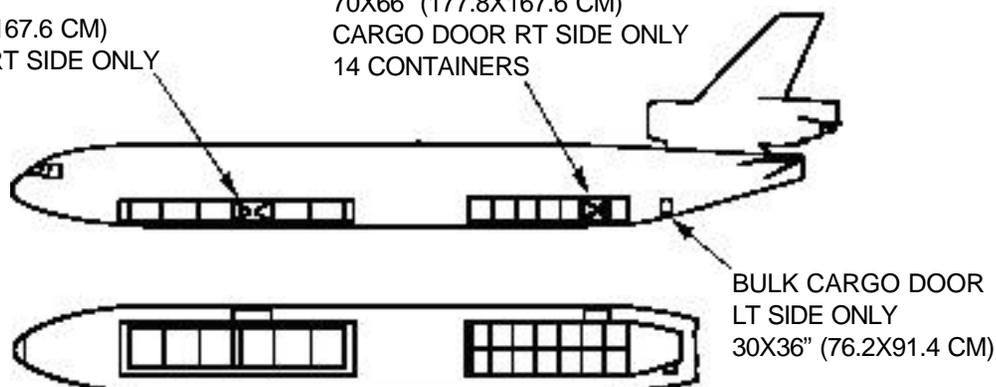
70X66" (177.8X167.6 CM)  
 CARGO DOOR RT SIDE ONLY  
 14 CONTAINERS



6-96 BY 125 PALLETS 2,667' <sup>3</sup> (75.52 M<sup>3</sup>)  
 OR  
 6-88 BY 125 PALLETS 2,268' <sup>3</sup> (64.20 M<sup>3</sup>)  
 14 LD3 CONTAINERS 2,212' <sup>3</sup> (62.58 M<sup>3</sup>)  
 BULK CARGO 510' <sup>3</sup> (14.44 M<sup>3</sup>)

104X66" (264.2X167.6 CM)  
 CARGO DOOR RT SIDE ONLY  
 6 PALLETS

70X66" (177.8X167.6 CM)  
 CARGO DOOR RT SIDE ONLY  
 14 CONTAINERS

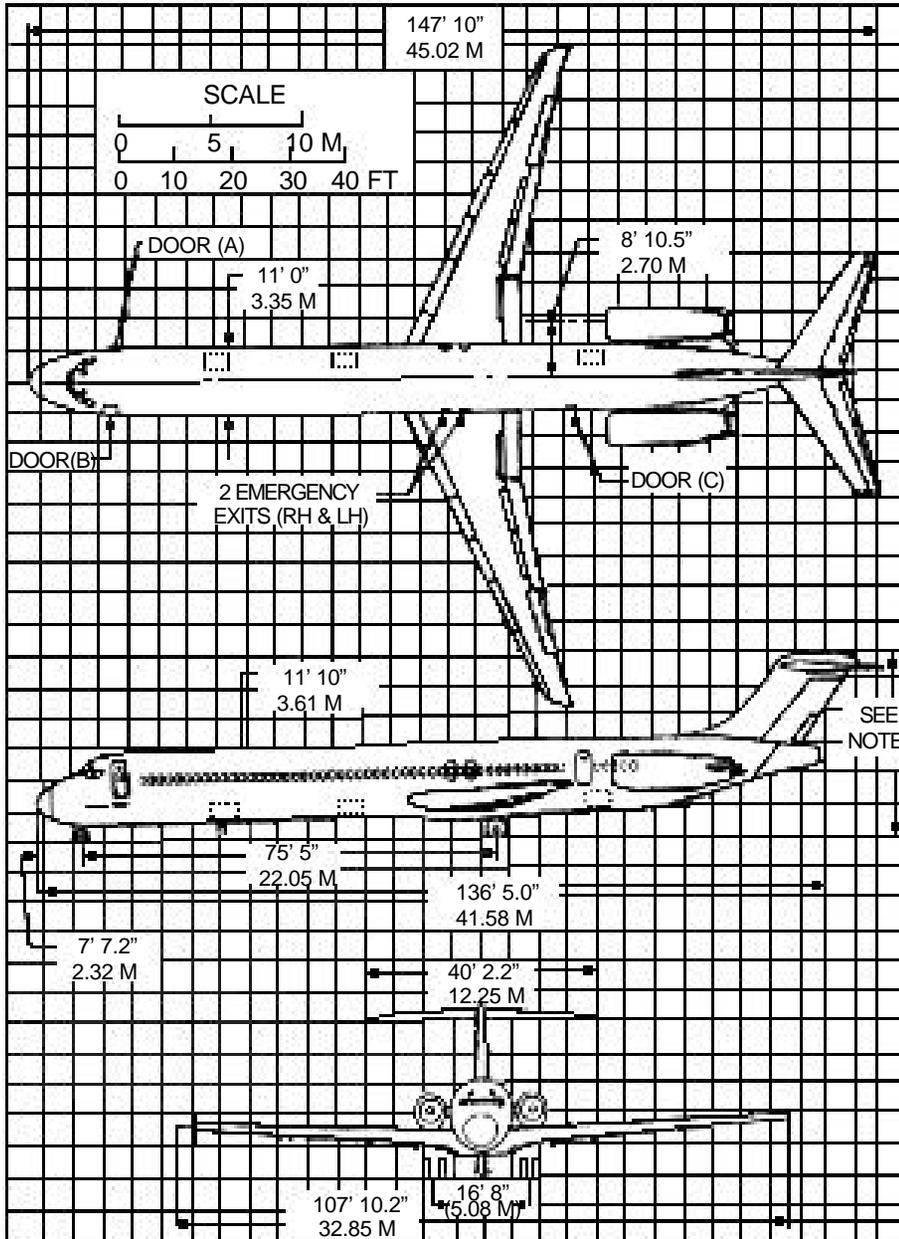


# AIRCRAFT PAINT SCHEME

MD-80

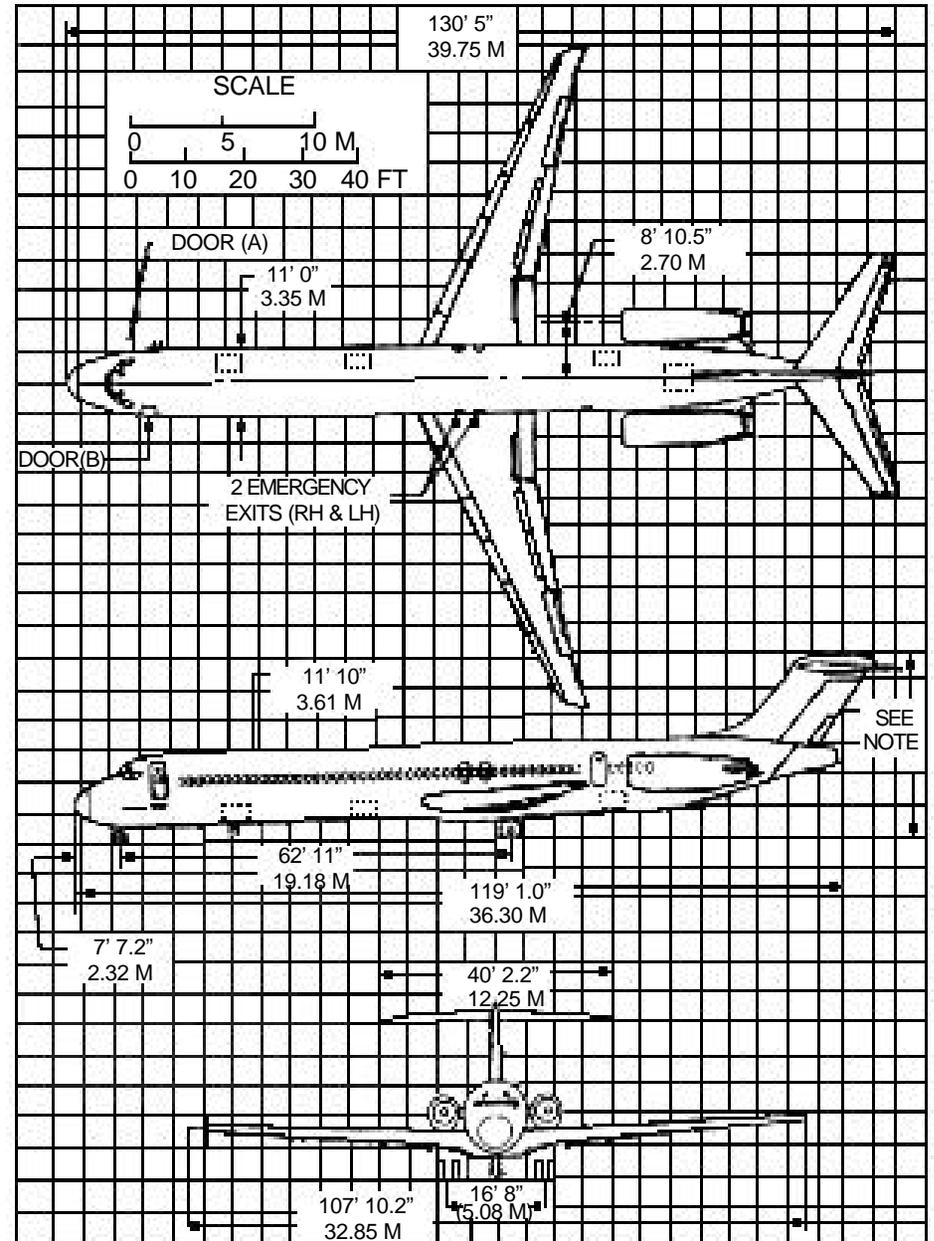


# AIRCRAFT DIMENSIONS



MD-81-82-83-88 LONG FUSELAGE VARIANTS

NOTE: MAX HEIGHT 30' 2" (9.2 M) MIN 29' 7" (9 M)



MD-87 SHORT FUSELAGE VARIANT

NOTE: MAX HEIGHT 28' 1" (8.6 M) MIN 30' 4" (9.2 M)

# AIRCRAFT SKIN PENETRATION POINTS AND GENERAL INFORMATION

## ALL MD-80 SERIES AND VARIANTS

1. MD-80 is formerly known as the DC-9 Super 80 or a higher capacity variant of the DC-9. The MD-90 is also a variant, but will be discussed in the next section.
2. MD-81 is the basic version with improved engines and fuel consumption. Seating for 172 passengers.
3. MD-82 increases pay load, range, hot and high performance. Seating for 172 passengers.
4. MD-83 extends range. Seating for 172 passengers.
5. MD-87 is a short fuselage variant, improved performance package targeting foreign sales. Seating for 139 passengers. Has optional front and rear cargo compartment auxiliary fuel tanks each holding 565 US gallons.
6. MD-88 combines JT8D-219 power plant, EFIS cockpit displays, flight management system, on board windshear detection system and increased structural composites. Seating for 142 passengers with a redesigned cabin interior (14 first class/128 couch) with five-abreast and wider aisle.
7. MD-80ADV is an advanced variant of basic model.
8. MD-80T is a Trunkliner made in China.
9. MD-80 Executive Jets are corporate and executive versions of the MD-83 and MD-87 offered. Typical seating for 20 people.
10. MD-80, 81, 83, and 88 are externally similar.
11. Military variants are the C-9 Nightingale for the USAF and C-9B Skytrain II for the NAVY.

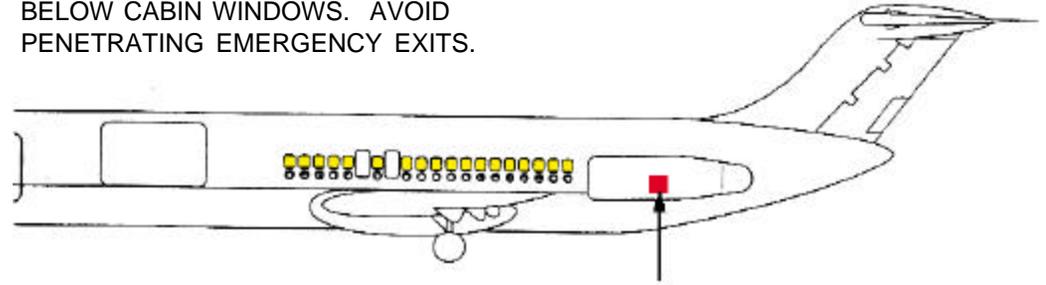
### NOTE:

#### AIRCRAFT STRUCTURE

All metal wing spars, glassfibre trailing edges on wings, ailerons, flaps, elevators, and rudder, and detachable wingtips. Most of cabin floor made of balsa or Nomex core sandwich. Engine pylons by Calcor and fuselage panels by Alenia.

## SKIN PENETRATION POINTS

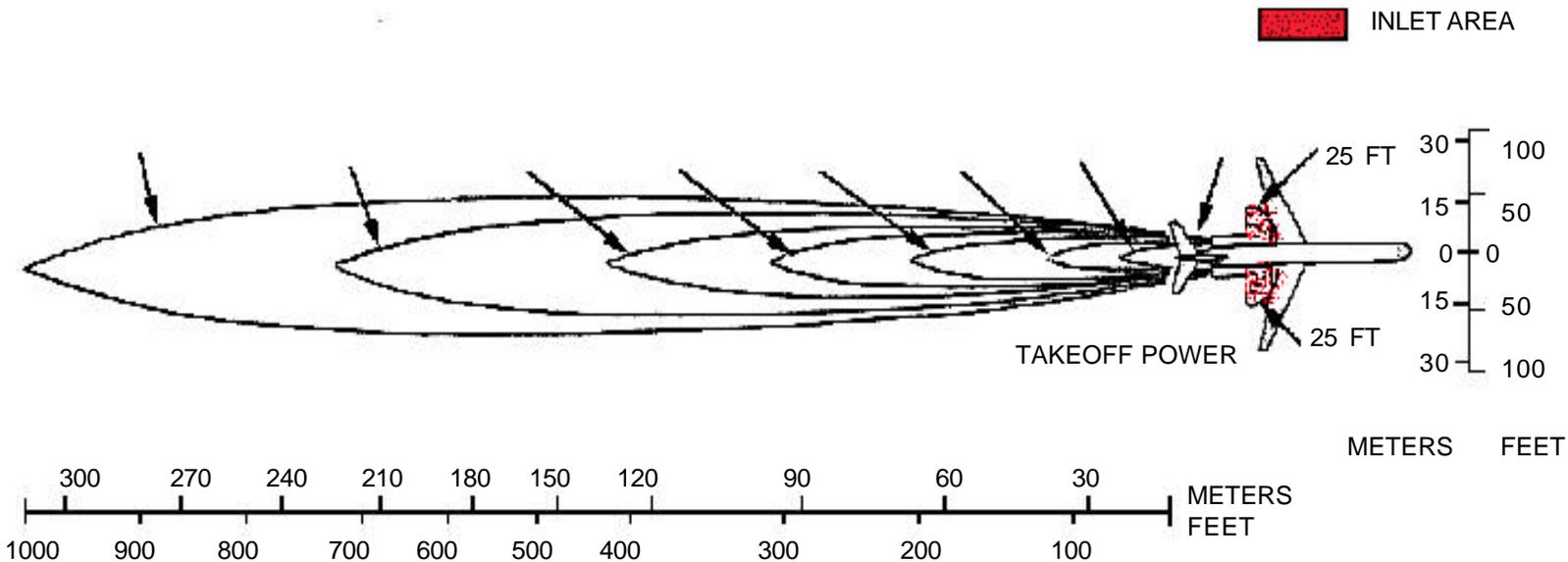
FUSELAGE (BOTH SIDES)  
PENETRATE APPROXIMATELY 4 INCHES  
BELOW CABIN WINDOWS. AVOID  
PENETRATING EMERGENCY EXITS.



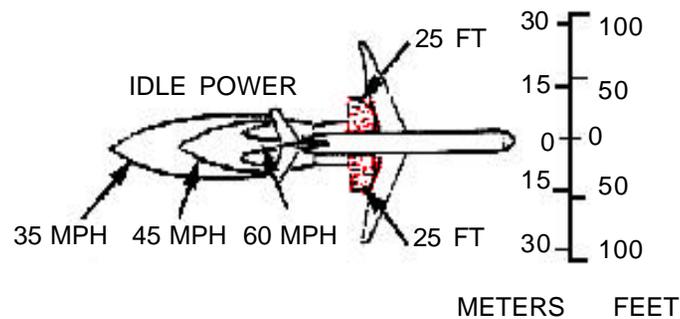
ENGINE NACELLES (BOTH SIDES)  
PENETRATE MID-SECTION OF ENGINE  
BELOW ENGINE CENTERLINE

# ENGINE DANGER AREAS

## JET INTAKE AND BLAST DISTANCES



AXIAL DISTANCE BEHIND AIRCRAFT



DISTANCE FROM AIRCRAFT

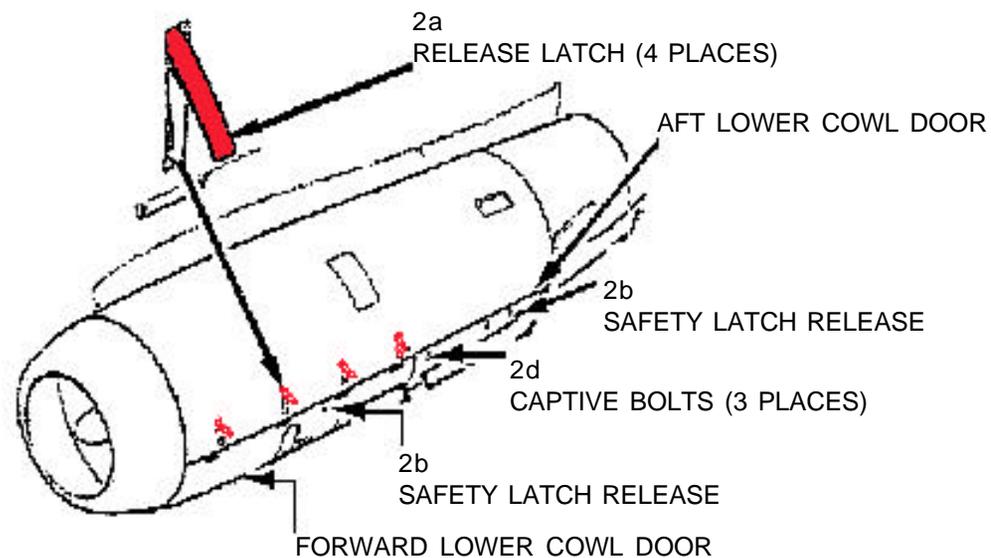
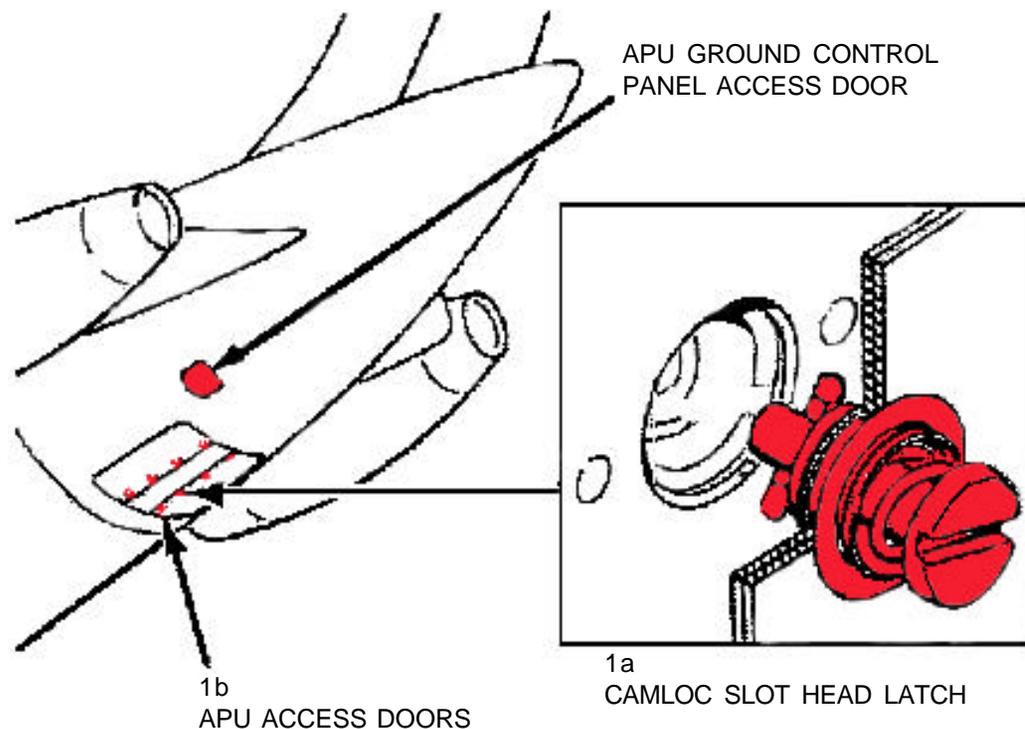
# ENGINE DANGER AREAS

APU ACCESS DOORS AND ENGINE  
NACELLE LOWER COWL DOOR

## WARNING

Use extreme caution when opening access areas where fire is evident.

1. APU ACCESS DOORS
  - a. Insert screwdriver or similar tool into slot of camlock fasteners.
  - b. Turn fasteners to the left to open.
  - c. Pull down access doors.
2. ENGINE NACELLE LOWER COWL DOOR
  - a. Release four (4) latches on upper cowl door.
  - b. Push in safety latch release while holding door up with one hand.
  - c. Lower door to full open position.
  - d. Remove three (3) captive bolts on aft lower cowl door.
  - e. Push in safety latch release while door is up with one hand.
  - f. Lower door to full open position.



## SPECIAL TOOLS/EQUIPMENT

Power Rescue Saw  
12 Foot Ladder  
Fire Drill II

MD-80

## AIRCRAFT ENTRY

## 1. NORMAL ENTRY

**CAUTION**

When doors are opened from outside, slide chutes automatically deploy.

- Pull handle, located on left forward entry door, out: rotate counterclockwise and pull door outward.
- Pull stairway handle, located forward left bottom side of fuselage, outward, press the open button to extend stairway.
- Pull handle, located on right forward service door, out, rotate clockwise and pull door outward.

## 2. EMERGENCY ENTRY

**WARNING**

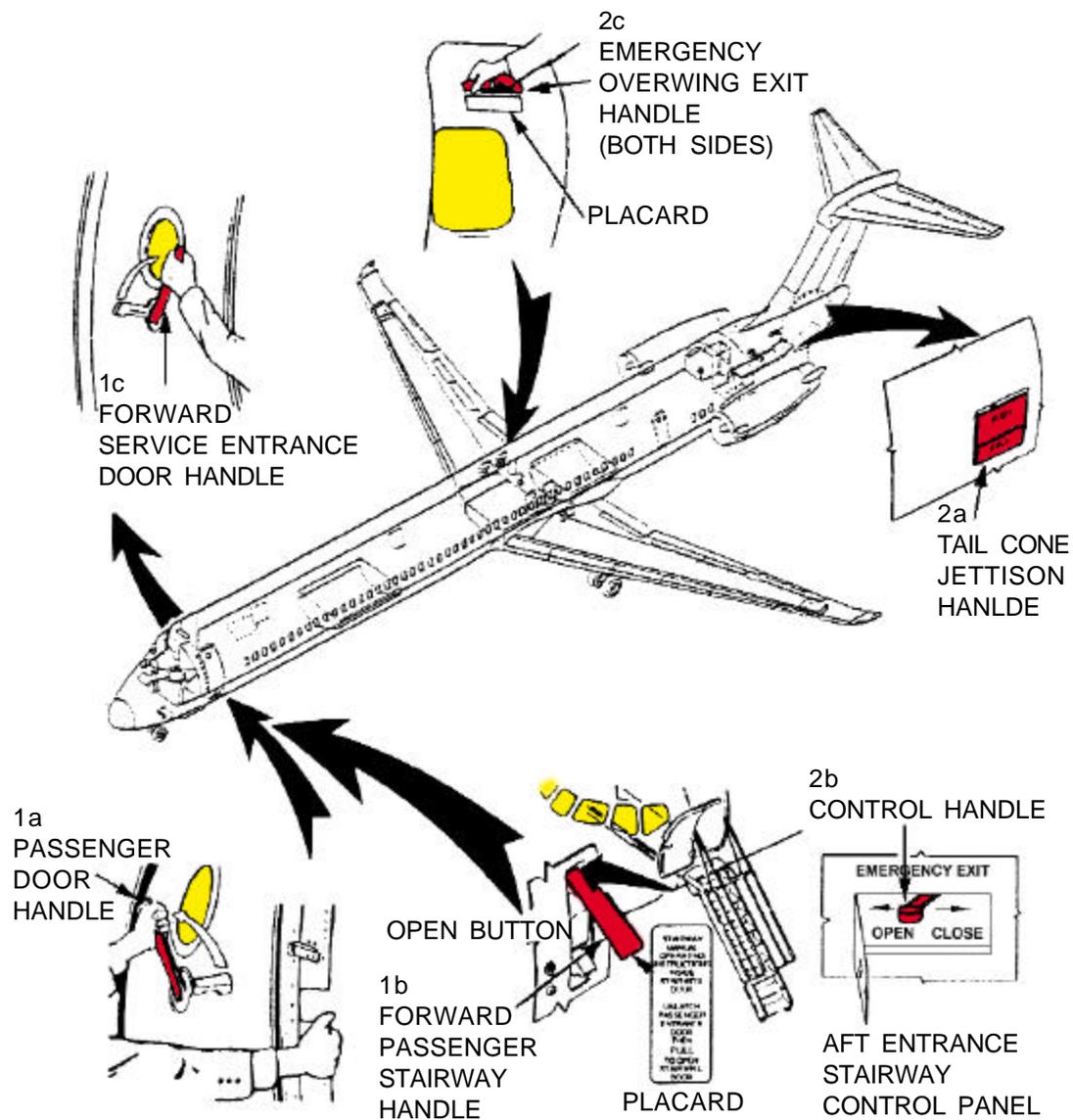
Caution must be exercised when releasing tail cone. Keep personnel clear. Tail cone free falls when released from aircraft.

- 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.
- Open rear stairway control panel, located on aft left exterior fuselage, push control handle to forward OPEN position to release stairway.

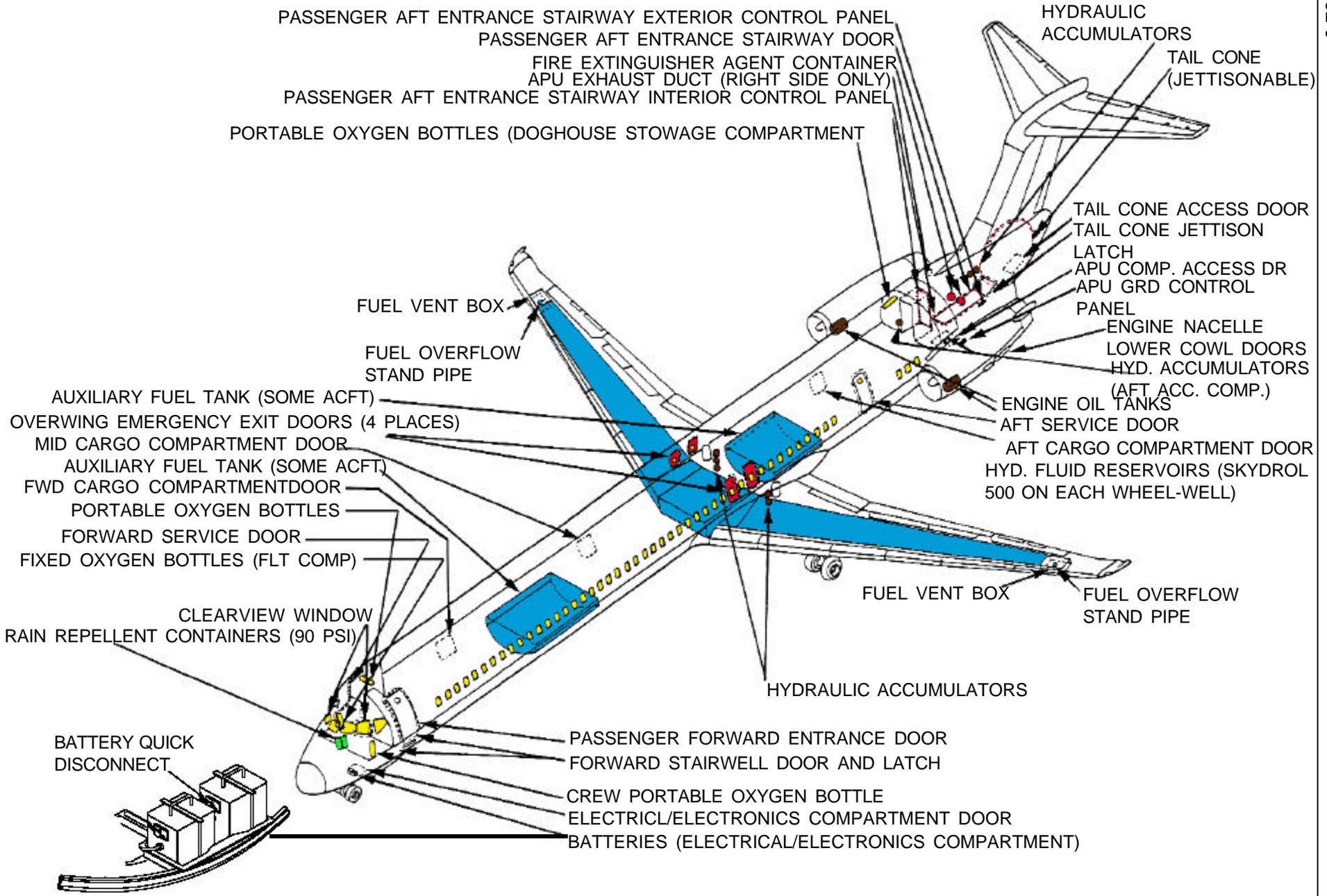
**CAUTION**

Stairway free falls to down position. Insure area is cleared of all personnel.

- Push overwing exit door handle release, two doors are located over each wing, pull handle to unlatch door, push in and lift up forcibly.

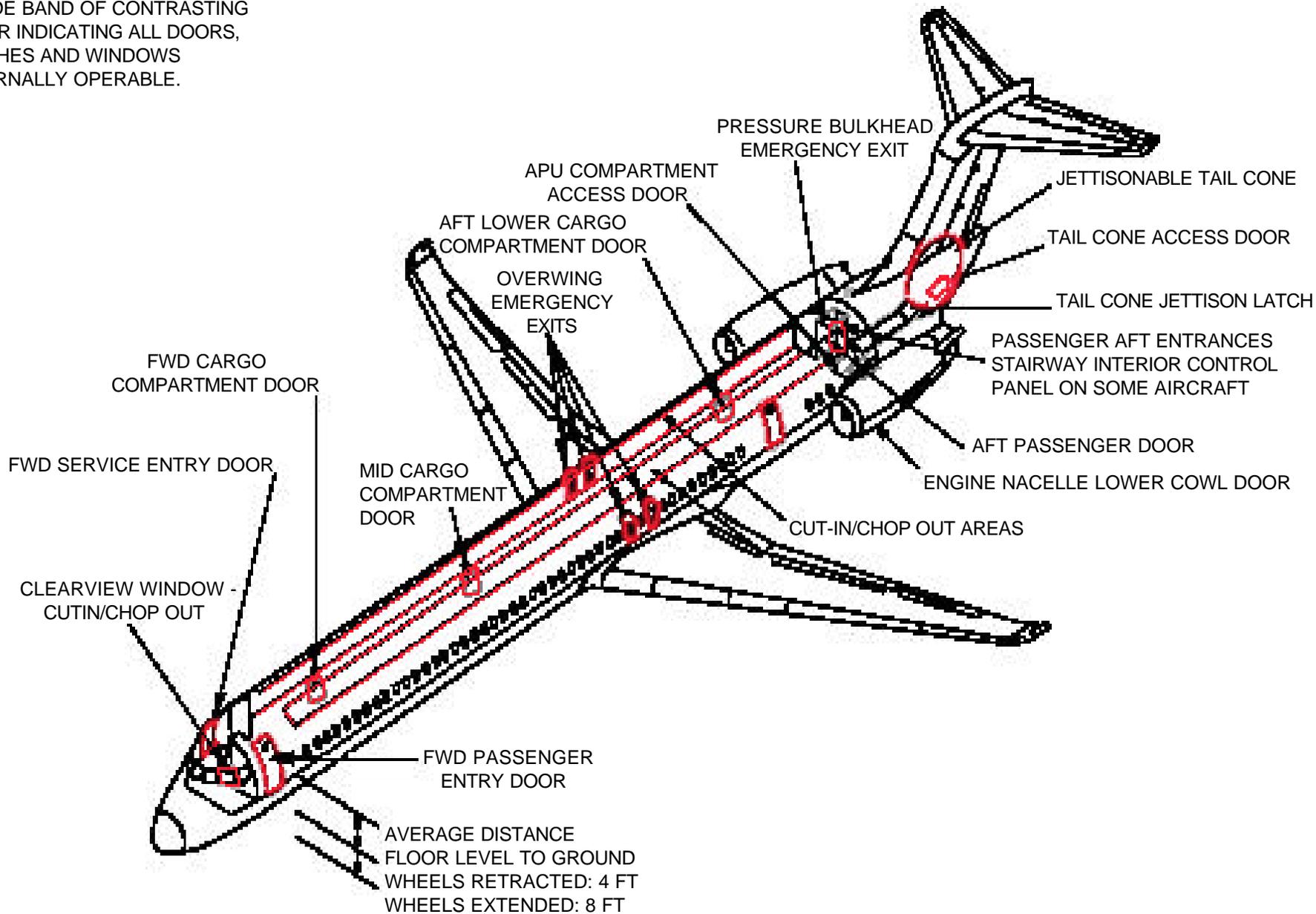


# AIRCRAFT FLAMMABLE MATERIAL LOCATIONS



# EMERGENCY RESCUE ACCESS

2" WIDE BAND OF CONTRASTING COLOR INDICATING ALL DOORS, HATCHES AND WINDOWS EXTERNALLY OPERABLE.



# ENGINE/APU SHUTDOWN AND AIRCREW EXTRACTION

## 1. ENGINE/APU SHUTDOWN

- Place fuel control levers, located on pilot's center console, to aft and OFF position.
- Retard throttles, located on pilot's center console, to IDLE CUTOFF position.
- Place battery switch, located on center over-head panel, to OFF position.

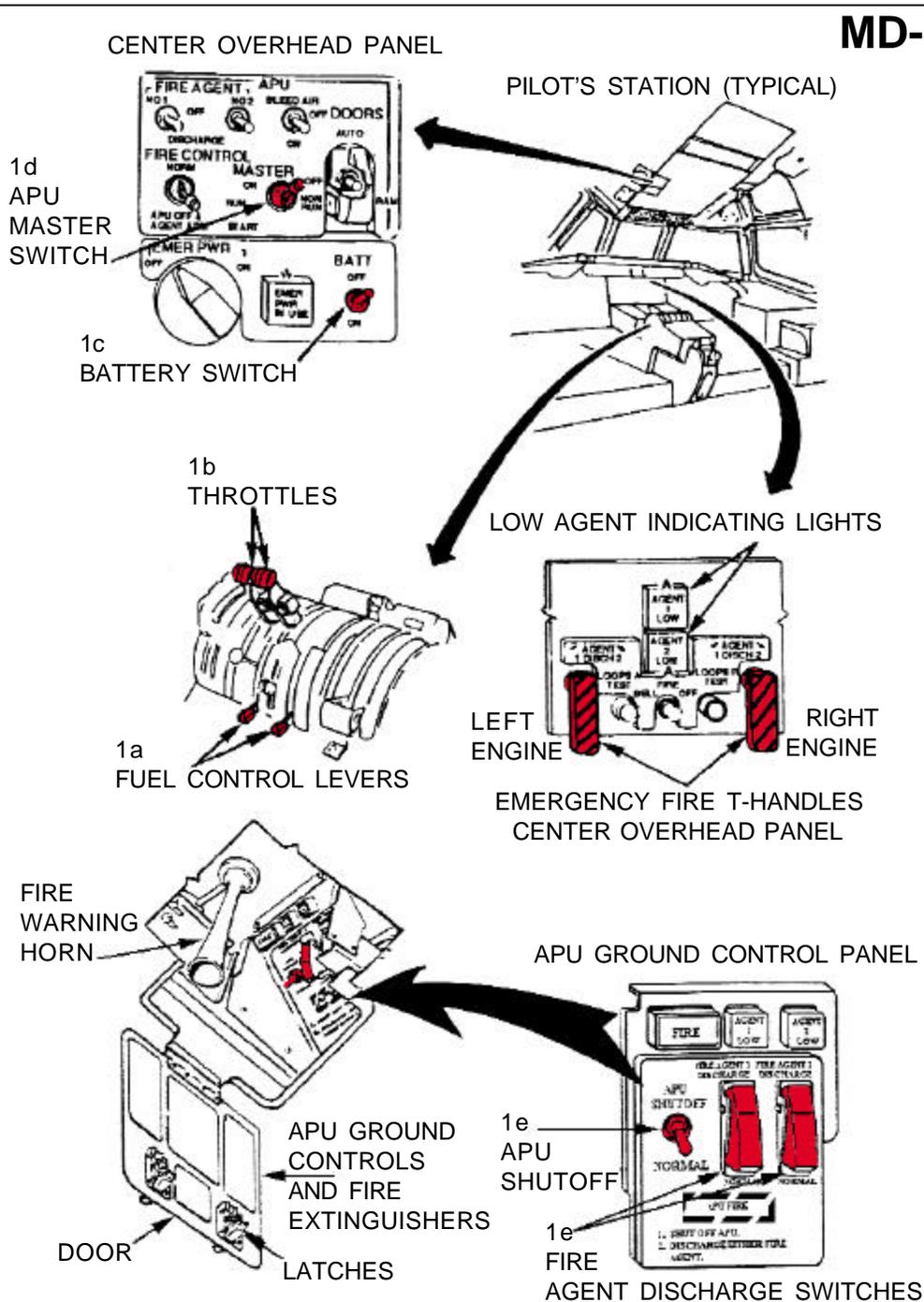
### NOTE:

If engines fail to shutdown, pull emergency fire T-handles out, located on pilot's center forward panel.

- Place APU master switch, located on center overhead panel, to OFF position.
- On the APU ground control panel, located to left of APU access doors on the tailcone, open door by pushing two latches. Place APU master switch to the APU shutoff (up) position. If "Fire" light is illuminated ...place discharge fire switch (up) position to release fire agent 1. Wait 10 seconds to use fire agent 2, if applicable.

## 2. AIRCREW EXTRACTION

- Unlatch lap belt and remove shoulder harness from crewmember.
- If seat tracks are not damaged during crash landing, use adjustable seat controls to retract seat to aft position. Pilot's controls are on right side of seat while co-pilot's are on the left.
- Flight crew cabin seats are equipped with lap belts and shoulder harnesses.
- Passenger seats are only equipped with lap belts.

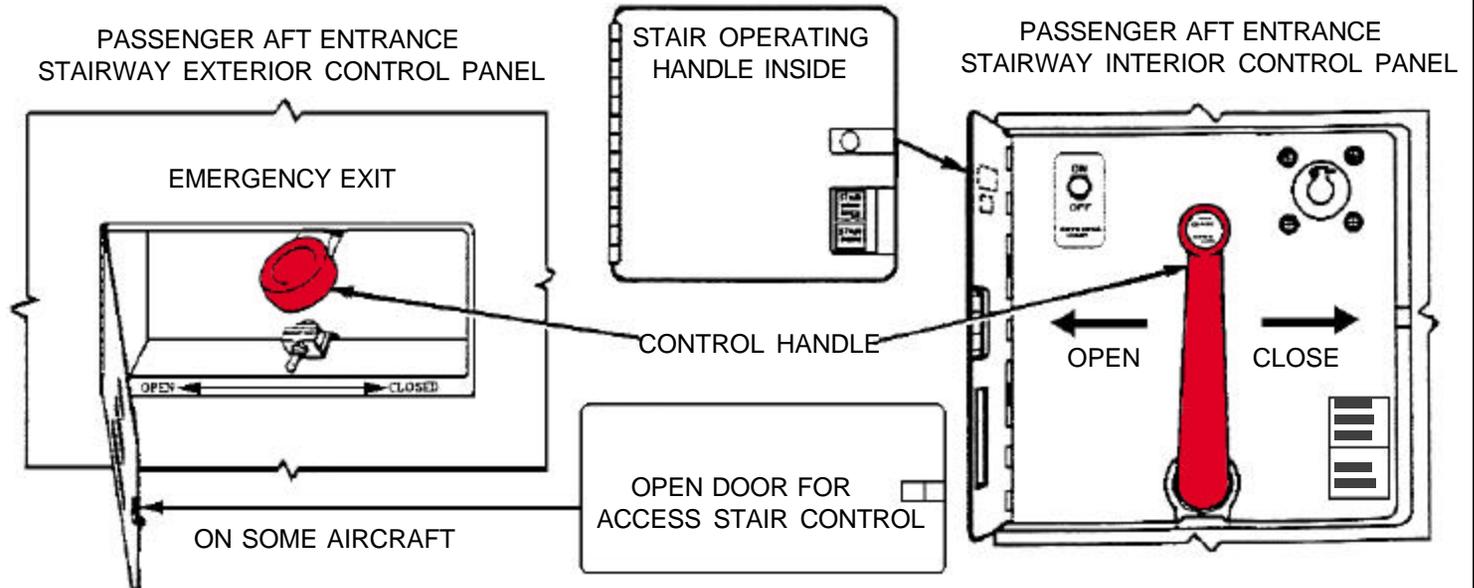
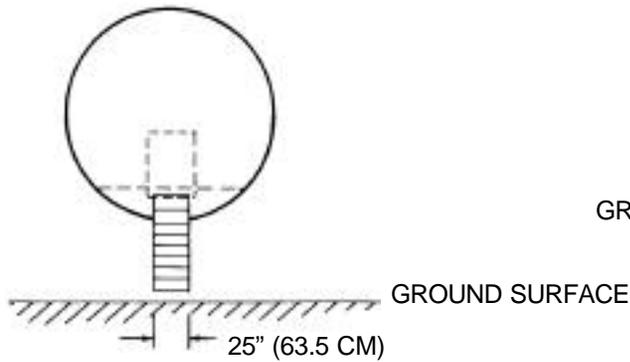
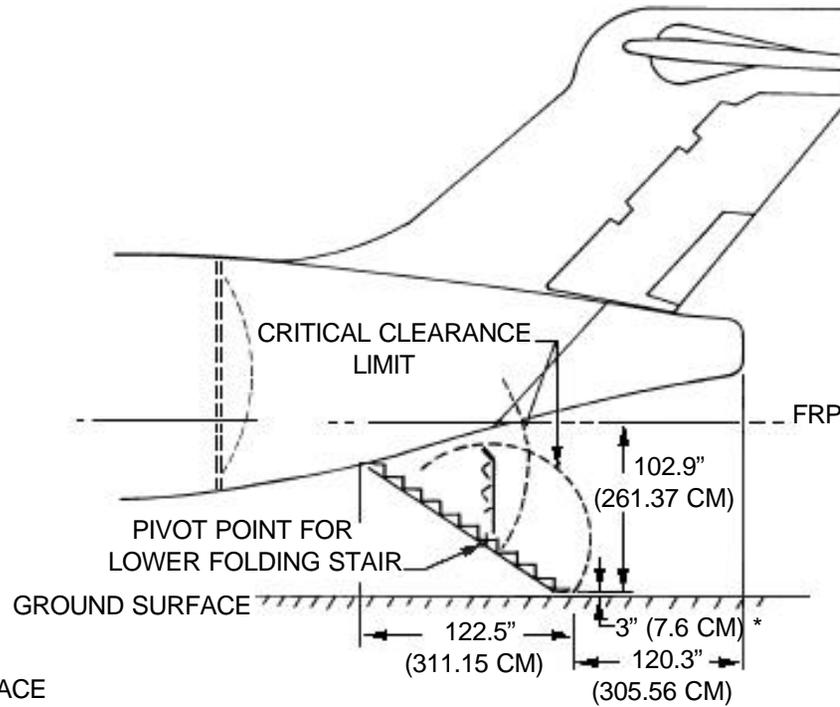


# AIRCRAFT EMERGENCY EXITS

## AFT PASSENGER DOOR STAIRWAY INTERIOR AND EXTERIOR CONTROLS

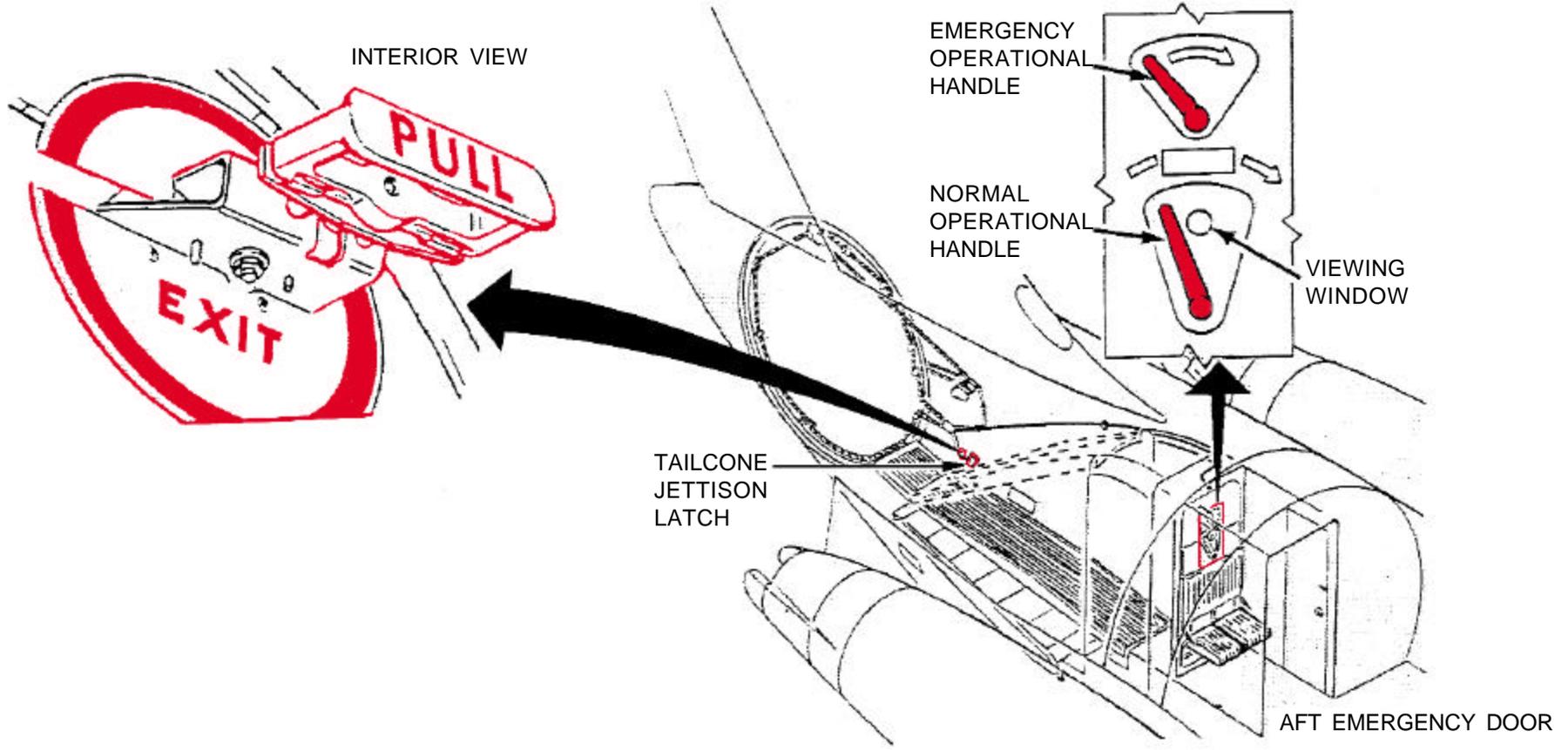
### NOTE:

- For manual stairway operation, hold interior or exterior control handle in open position. Stairway will free fall open.
- Interior control handle is removed on some aircraft making the stairway inoperable from the inside.



# AIRCRAFT EMERGENCY EXITS-Continued

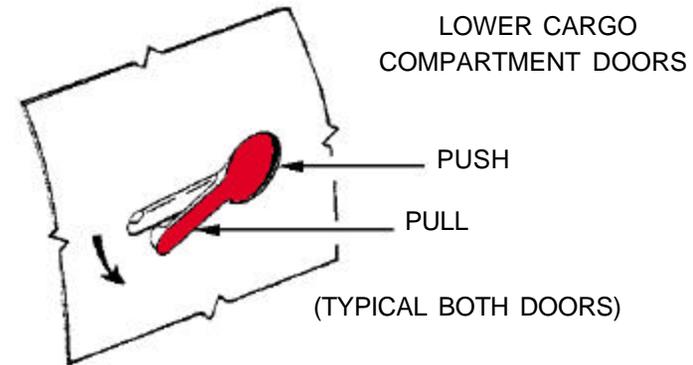
AFT EMERGENCY DOOR AND TAILCONE JETTISON



# AIRCRAFT EMERGENCY ACCESS

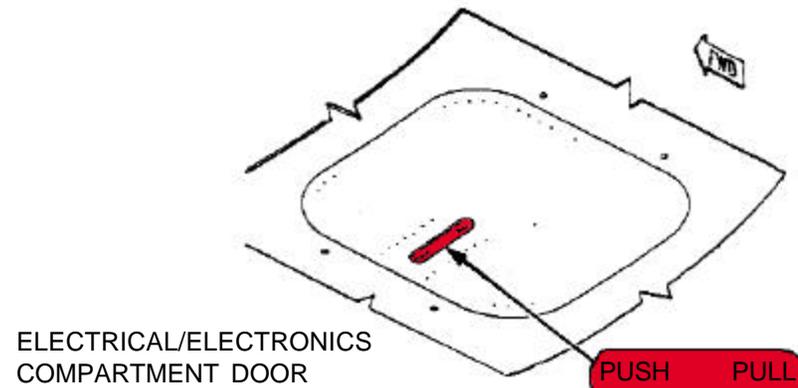
## 1. LOWER CARGO COMPARTMENT DOORS

- Push circular section of door handle inward to raise the handle.
- Rotate door handle counterclockwise to unlatch door.
- Push door upward into cargo compartment.



## 2. ELECTRICAL/ELECTRONIC COMPARTMENT DOOR

- Push right side of handle inward and pull left side of handle down to unlatch door.
- Push door inward and to the left to open.

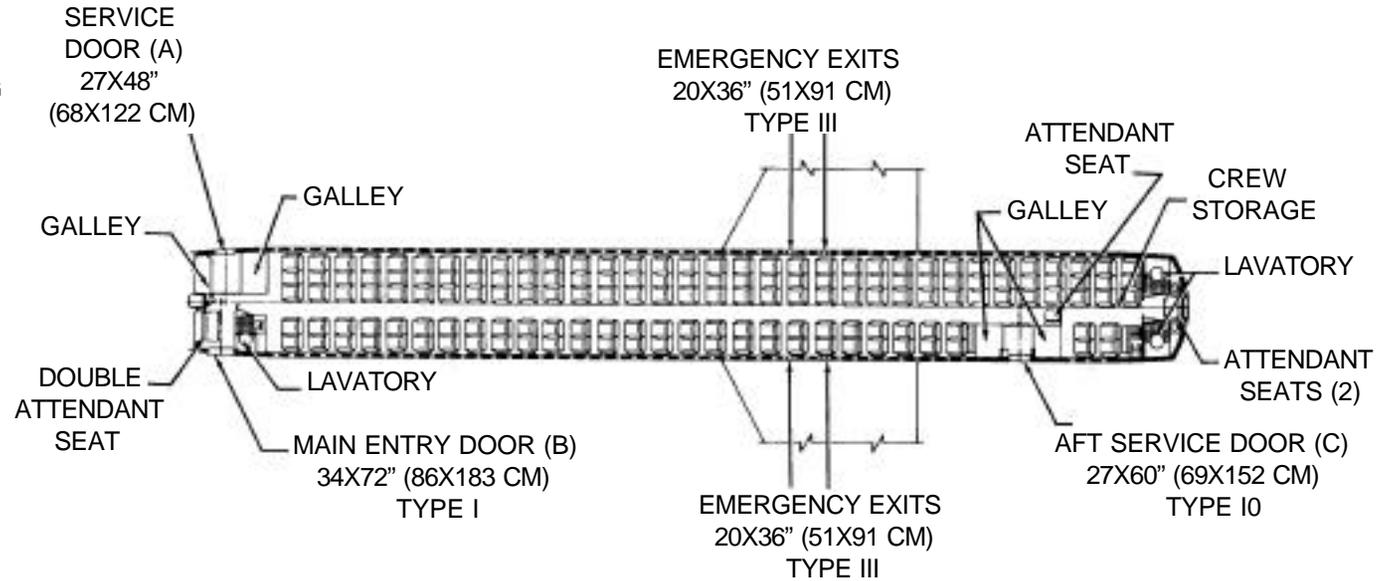
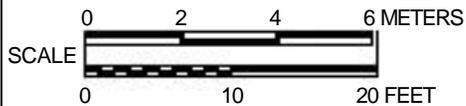


# CABIN CONFIGURATION

MD-81/-82/-83/-88

155 PASSENGERS, 5-ABREAST SEATING  
 100 SEATS ON 32" (81.2 CM) PITCH  
 50 SEATS ON 33" (83.8 CM) PITCH  
 5 SEATS ON 34" (86.4 CM) PITCH

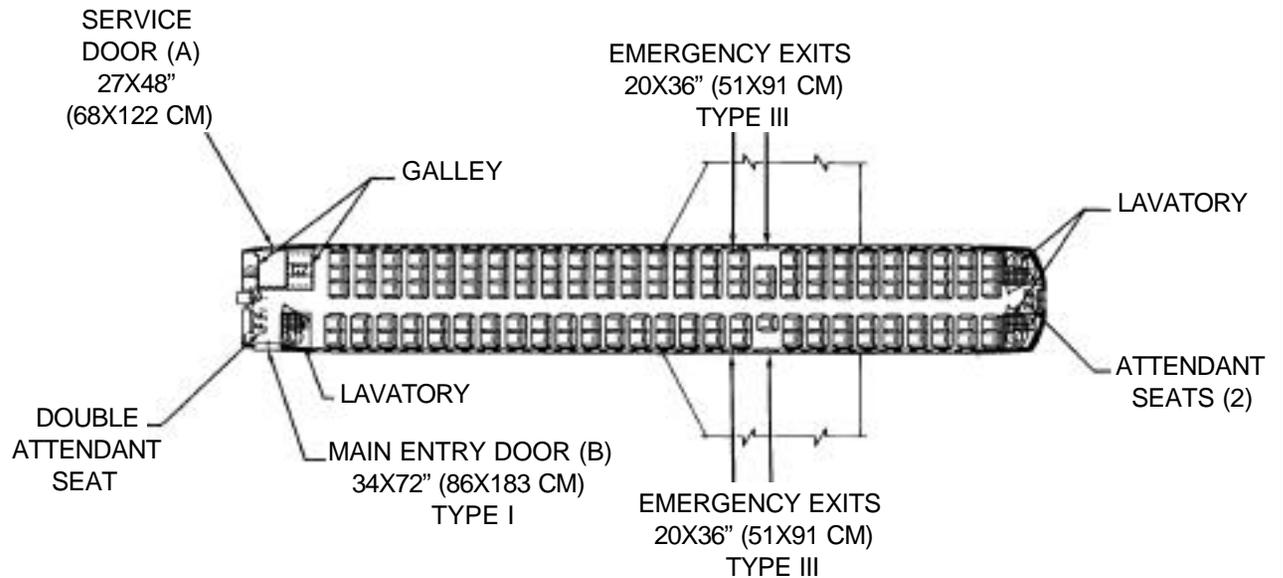
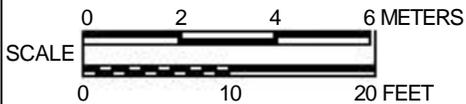
NOTE:  
 Maximum of 172 Passengers, 5-Abreast seating available.



MD-87

130 PASSENGERS, 5-ABREAST SEATING  
 43 SEATS ON 31" (78.7 CM) PITCH  
 34 SEATS ON 32" (81.3 CM) PITCH  
 47 SEATS ON 33" (83.8 CM) PITCH  
 6 SEATS ON 34" (86.4 CM) PITCH

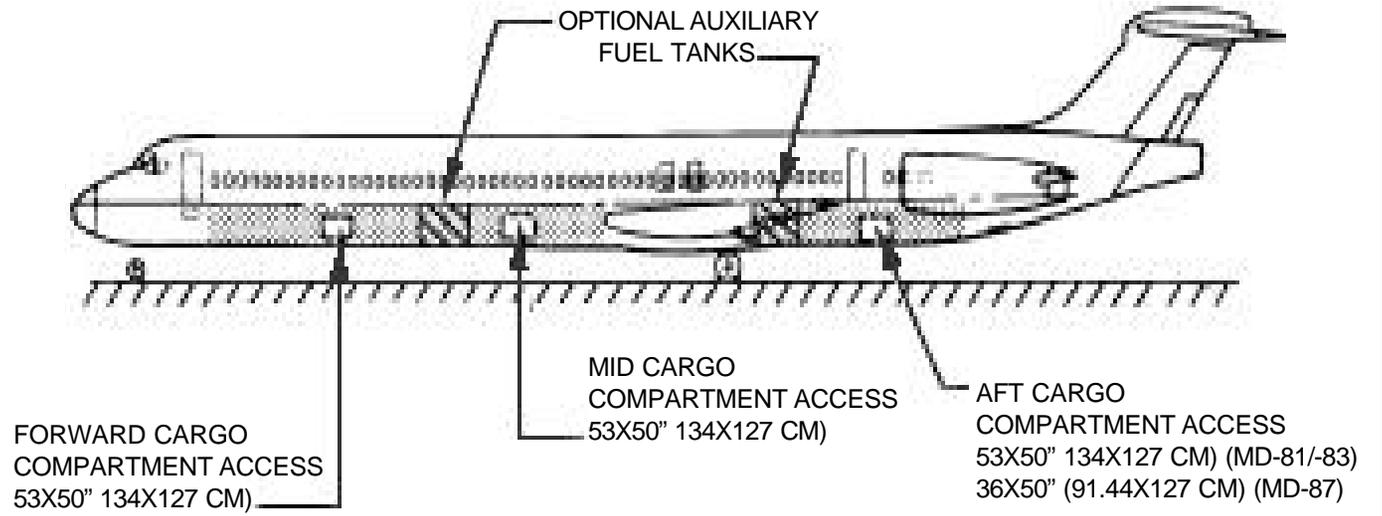
NOTE:  
 Maximum of 139 Passengers, 5-Abreast seating available.



# CARGO CONFIGURATION

MD-80 SERIES  
LOWER BULK CARGO COMPARTMENTS

MD-80



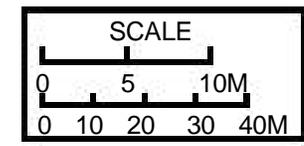
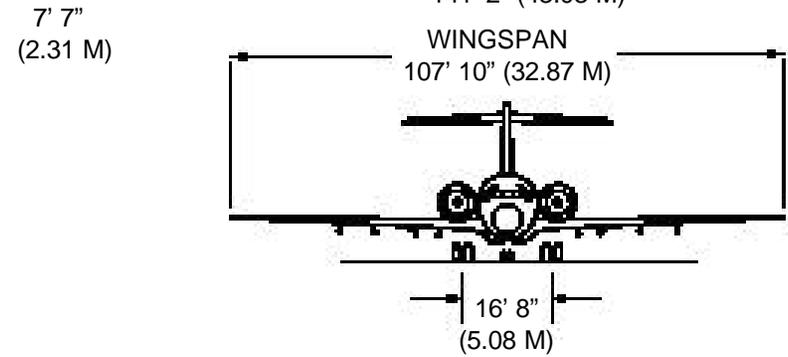
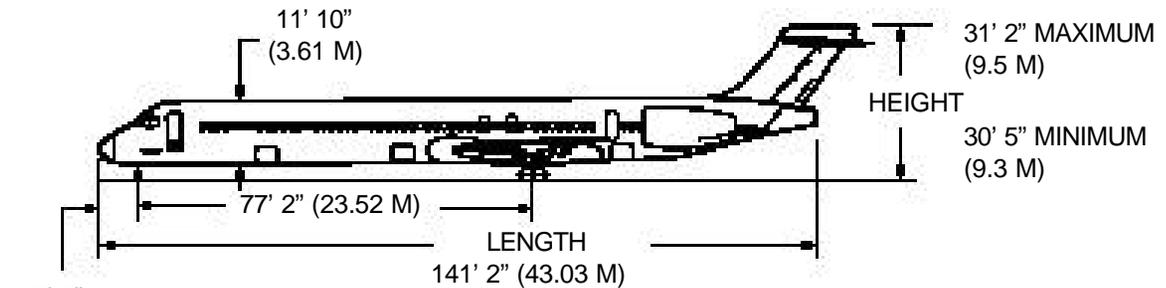
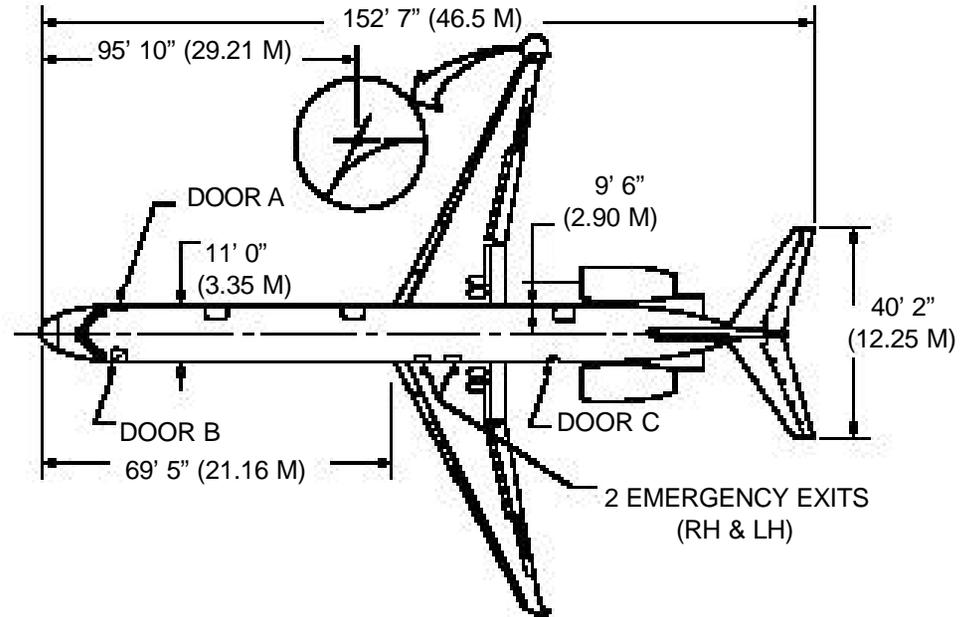
# AIRCRAFT PAINT SCHEME

MD-90



# AIRCRAFT DIMENSIONS

# MD-90



# AIRCRAFT SKIN PENETRATION POINTS AND GENERAL INFORMATION

MD-90

## MD-90 SERIES AND VARIANTS:

1. MD-90 is a stretched MD-80 follow on, powered by IAE V2300 turbofans.
2. MD-90-30 has a MD-80 fuselage lengthened by 4 ft. 9 in. ahead of the wing; same enlarged tail surfaces as MD-87; powered elevators. Seating for 153 two-class passengers, 5 abreast: maximum 172 passengers limited by exit doors and hatches; two IAE V2525-D5 turbofans.
3. MD-90-30T: Trunkliner made in China.
4. MD-90-50 is an extended version of MD-90-30 for 153 passengers; two IAE V2528-D5 turbofans.
5. MD-90-55 is similar to MD-90-50 but with an extra pair of doors in forward fuselage section to allow maximum 187 charter class passengers.
6. MD-95 is a short version variant as the MD-87. Seating 124 all tourist or 12 first class/ 93 tourist or 80 business class/15 tourist configurations. Two Pratt & Whitney JTD-200 or Rolls-Royce Tay turbofans.

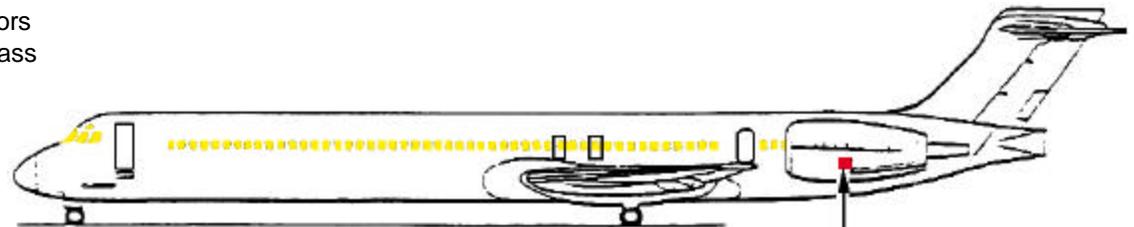
## NOTE:

### AIRCRAFT STRUCTURE

(Same structure as late MD-80.) All metal wing spars, glassfibre trailing edges on wings, ailerons, flaps, elevators, rudder, and detachable wing tips. Most of cabin floor made of balsa or Nomex core sandwich. Engine pylons by Calcor and fuselage panels by Alenia.

## SKIN PENETRATION POINTS

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

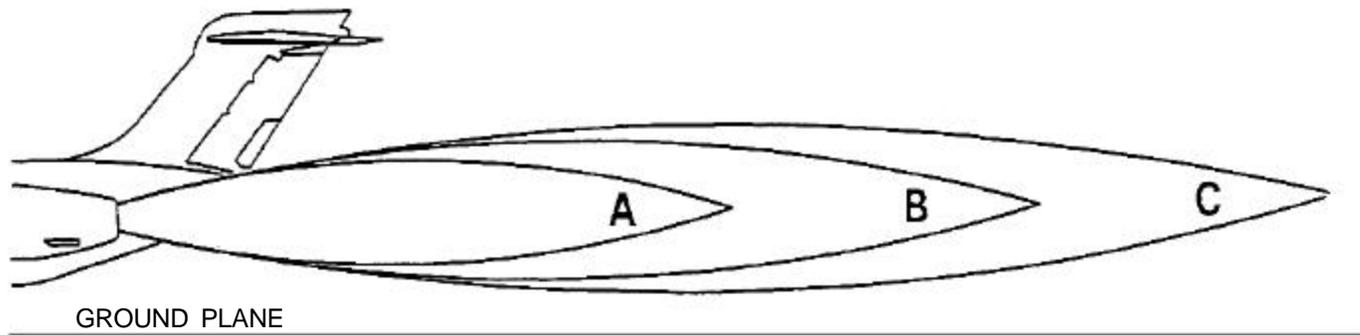
# ENGINE DANGER AREAS

## JET INTAKE AND BLAST DISTANCES

**NOTE:**

- These contours are to be used as guidelines only since the operational environment varies greatly - operational varies greatly-operated safety aspects are the responsibility of the user/planner.
- All velocity values are statute miles per hour.
- Cross winds will have considerable effect on contours.
- Sea level static-standard day-zero ramp gradient.

		AFT LIMIT OF ZONE		
		A	B	C
WIND VELOCITY (STATUTE MPH)		300	100	60
TAKEOFF POWER	FEET	31	178	375
	METERS	11	54	114
BREAKAWAY POWER	FEET	NA	35	78
	METERS	NA	11	24
IDLE POWER	FEET	NA	30	50
	METERS	NA	9	15



# AIRCRAFT DANGER AREAS

## TAILCONE JETTISON/SLIDE DEPLOYMENT

NOTE:

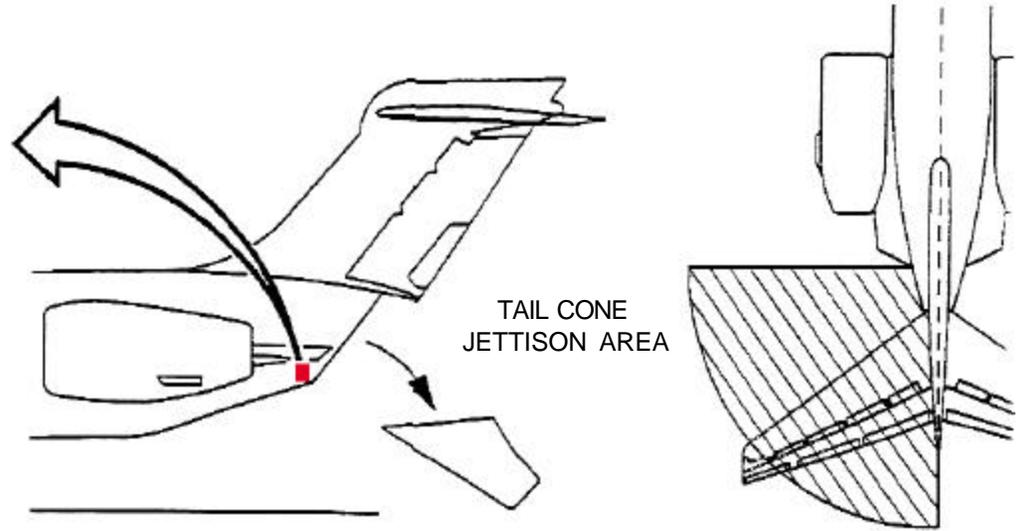
- Handle is 10 feet (3 meters) above ground.
- Slide inflates automatically.

EMERGENCY  
EXIT

FOR TAIL CONE  
JETTISON  
PUSH DOOR  
PULL HANDLE



INSIDE LOCK CABLE  
MUST BE RE-INSTALLED  
IF HANDLE IS PULLED

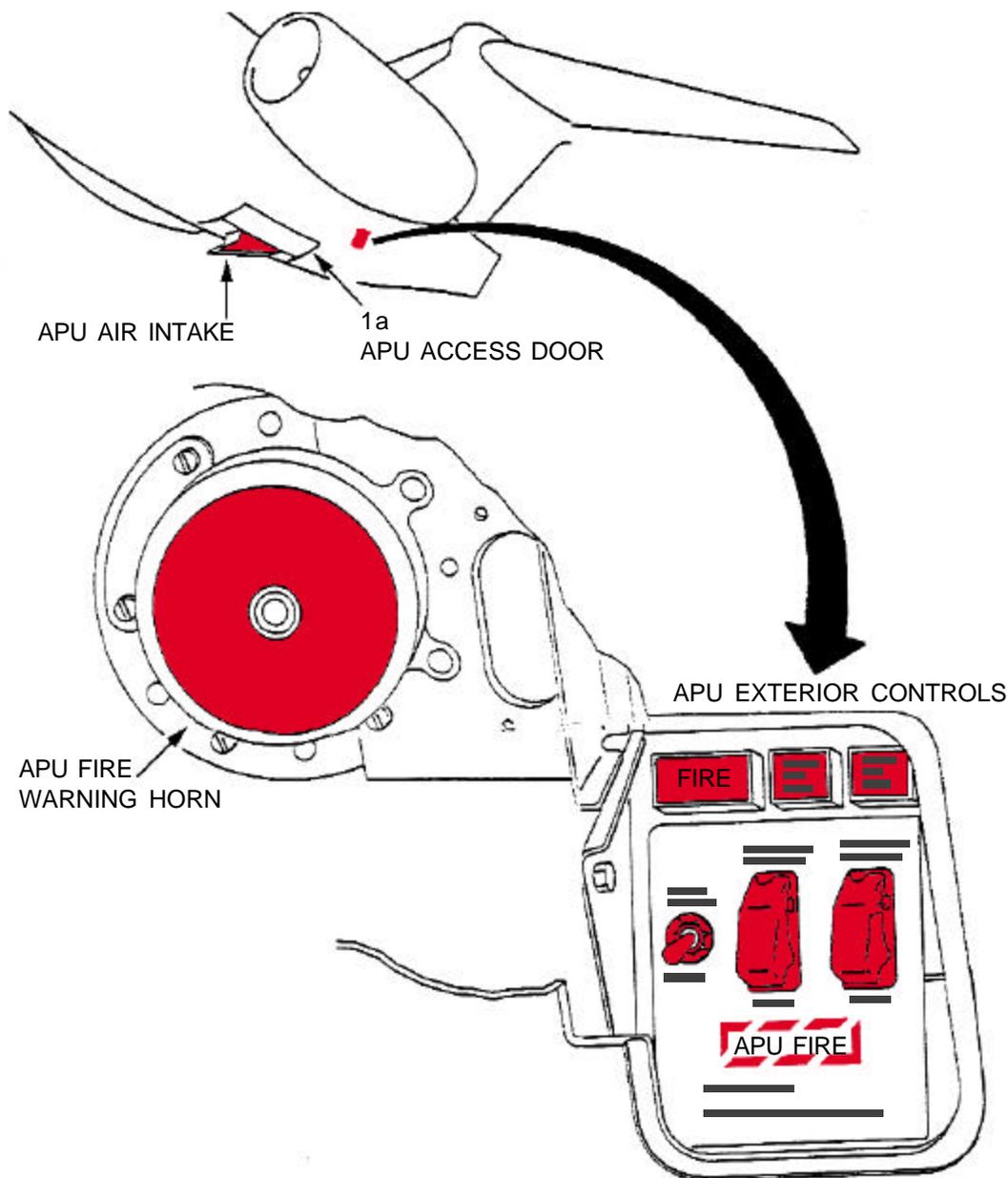


APU ACCESS DOORS AND APU EXTERIOR CONTROLS

**WARNING**

Use extreme caution when opening access areas where fire is evident.

1. APU ACCESS DOORS
  - a. Insert screw driver or similar tool into slot of cam-lock fasteners.
  - b. Turn fasteners to the left to open.
  - c. Pull down access doors.
2. APU EXTERIOR CONTROLS
  - a. Shut off APU by pressing the APU SHUT OFF/NORMAL switch UP.
  - b. If FIRE warning light is illuminated indicating APU fire, flip toggle switch cover up, select FIRE AGENT 1 switch and press UP to discharge fire agent.
  - c. If FIRE light remains illuminated, repeat step a by selecting FIRE AGENT 2 switch. FIRE light will go out if fire is extinguished.
  - d. If fire is not extinguished, access APU through air intake, skin penetration, or other means available.



**SPECIAL TOOLS/EQUIPMENT**  
 Power Rescue Saw  
 35 Foot Ladder  
 Fire Drill II

**TOTAL FUEL CAPACITY:**  
 5,840 GALLONS  
 (FUEL IN WINGS ONLY)

**MD-90**

**AIRCRAFT ENTRY**

**1. NORMAL/EMERGENCY ENTRY**

- a. **OVERWING ESCAPE HATCHES**, both sides, 4 places. To open, pull exterior handle, push inward at bottom and lift upward.

**WARNING**

When doors are opened from outside, slide chutes automatically deploy. An opening door could injure rescue personnel.

- b. **LEFT FORWARD PASSENGER/SERVICE DOOR** (Only left door has stair.) To open, using a ladder, (1) pull door handle out, (2) rotate counterclockwise, (3) push front door edge in, (4) pulling rear edge out and (5) swing door forward.
- c. **LEFT FORWARD PASSENGER/SERVICE DOOR** (Deploying stairs.) (1) Pull door handle out and open slightly, (2) unlatch stair door by turning and holding battery switch "ON", press and (3) hold "down" button until stair fully extends, and (4) open door fully.
- d. **RIGHT FORWARD EMERGENCY EXIT DOOR** To open, pull handle down, located top center of door, and door lowers to open position.

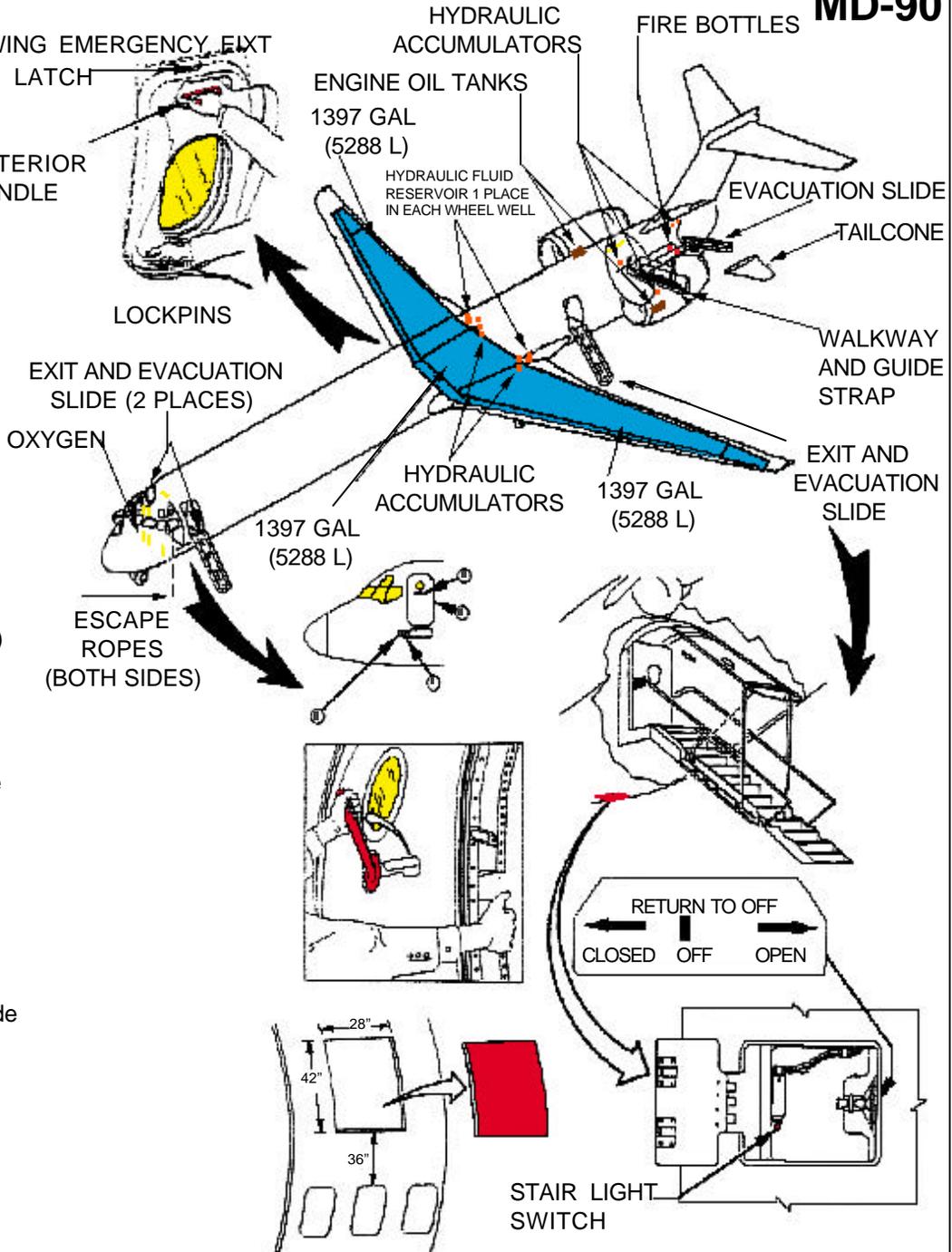
**NOTE:**

Doors are hinged at bottom edge.

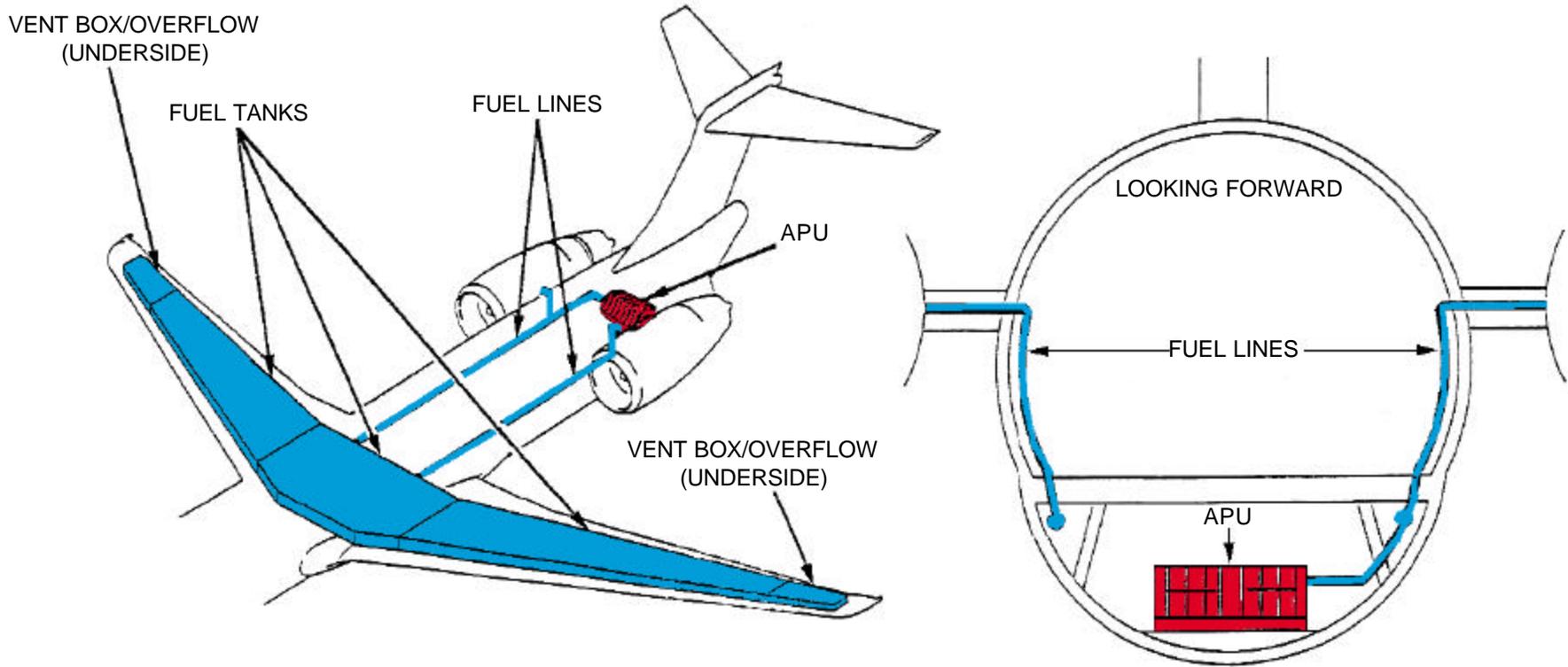
- e. **PASSENGER AFT ENTRANCE DOOR AND STAIR** Hold handle in "OPEN" position until stair is lowered. If aircraft hydraulic pressure is "OFF", manually pull stair to maximum travel. Accumulator will provide initial movement.

**2. CUT-IN**

- a. Cut 36" above any window with a cut out of 42" by 28" as a last resort to evacuate smoke and passengers.



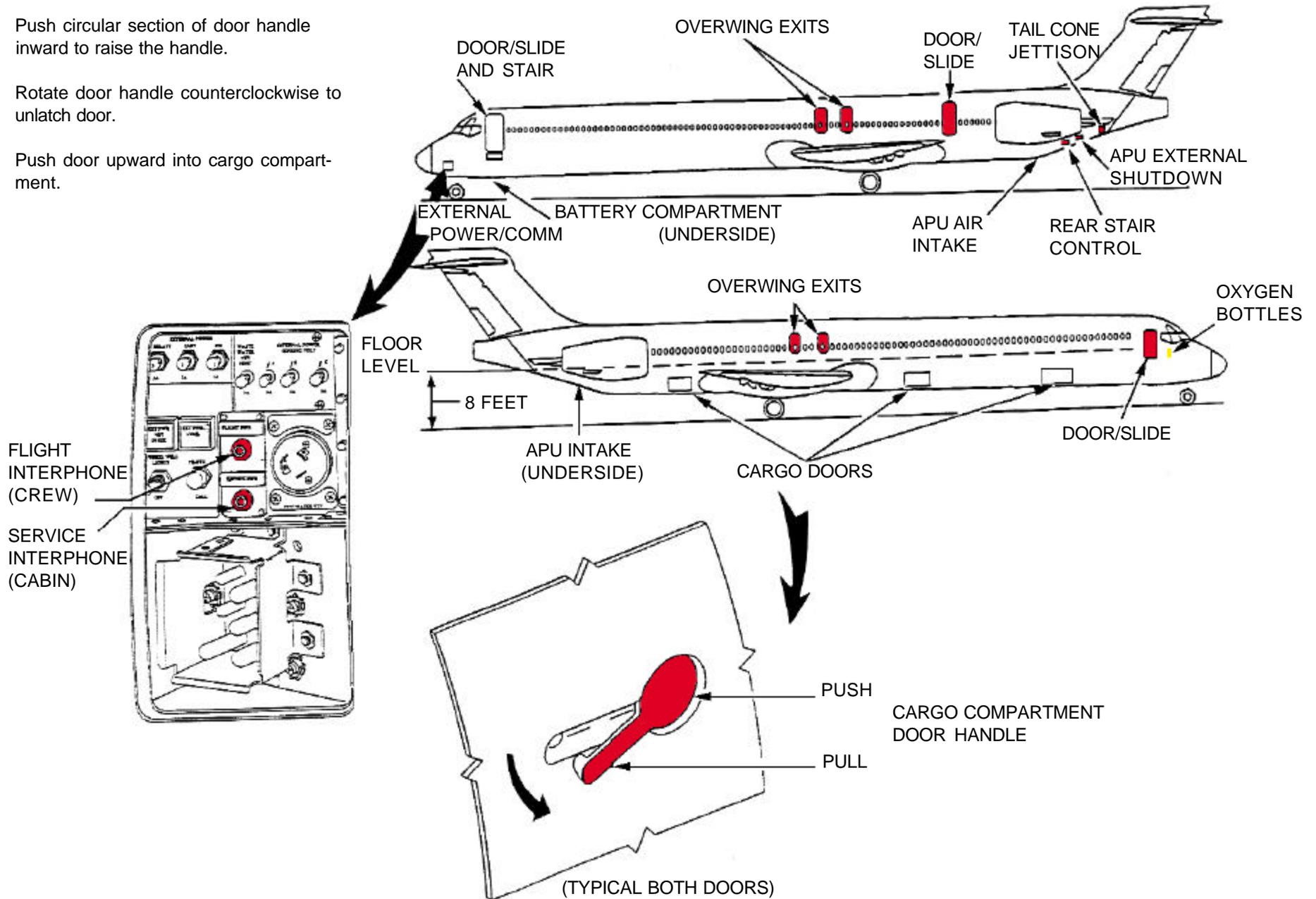
# AIRCRAFT FUEL AND APU SYSTEMS LOCATIONS



# AIRCRAFT EMERGENCY EGRESS

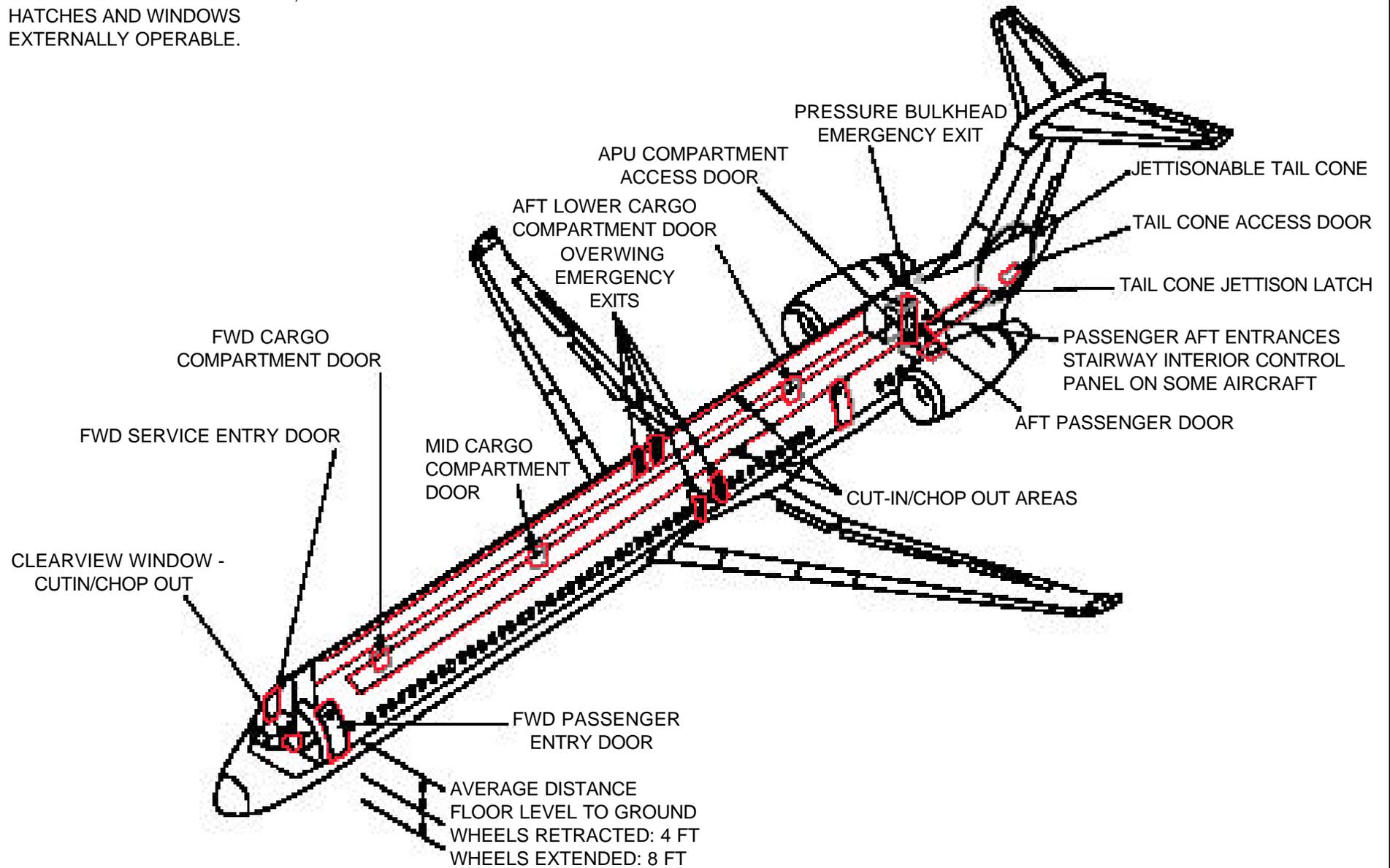
## 1. CARGO COMPARTMENT DOOR

- a. Push circular section of door handle inward to raise the handle.
- b. Rotate door handle counterclockwise to unlatch door.
- c. Push door upward into cargo compartment.



# EMERGENCY RESCUE ACCESS

2" WIDE BAND OF CONTRASTING COLOR INDICATING ALL DOORS, HATCHES AND WINDOWS EXTERNALLY OPERABLE.



# ENGINE/APU SHUTDOWN AND AIRCREW EXTRACTION

MD-90

## 1. ENGINE/APU SHUTDOWN

- Place fuel control levers, located on pilot's center console, to aft and OFF position.
- Retard throttles, located on pilot's center console, to IDLE CUTOFF position.
- Place battery switch, located on center overhead panel, to OFF position.

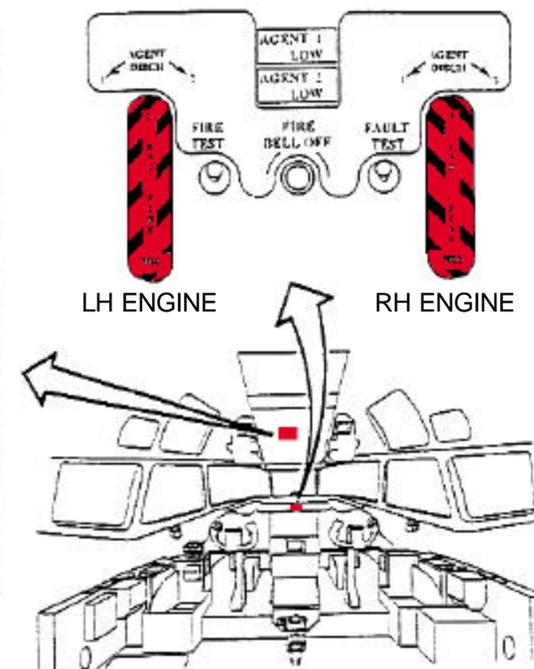
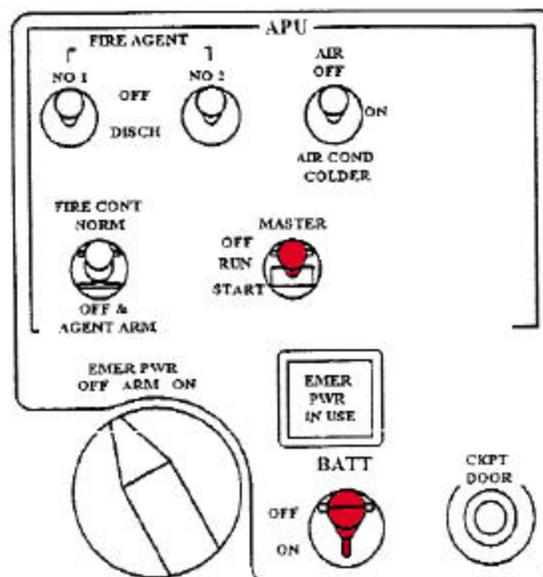
### NOTE:

If engines fail to shutdown, pull emergency fire T-handles out, located on pilot's center forward panel.

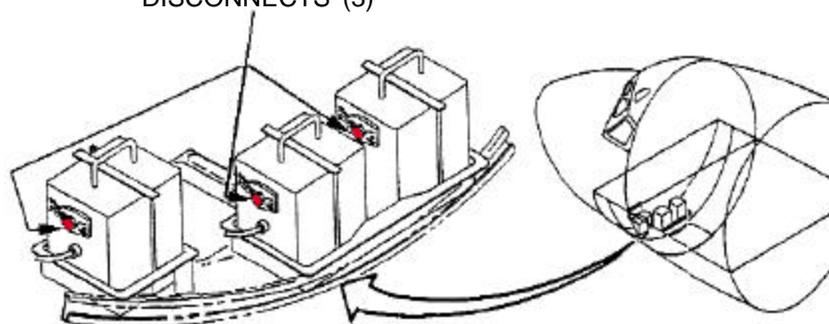
- Place APU master switch, located on center overhead panel, to OFF position.
- On the APU ground control panel, located to left of APU access doors on the tail cone, place APU master switch to the APU shutoff position. Discharge fire agent 1 and/ or 2 as applicable.

## 2. AIRCREW EXTRACTION

- Unlatch lap belt and remove shoulder harness from crewmember(s).
- If seat tracks are not damaged during crash landing, use adjustable seat controls to retract seat to aft position. Pilot's controls are on right side of seat while co-pilot's are on the left.
- Flight crew cabin seats are equipped with lap belts and shoulder harnesses.
- Passenger seats are only equipped with lap belts.



BATTERY QUICK DISCONNECTS (3)

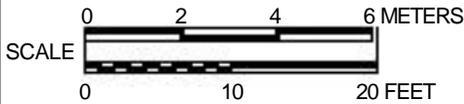


# CABIN CONFIGURATION

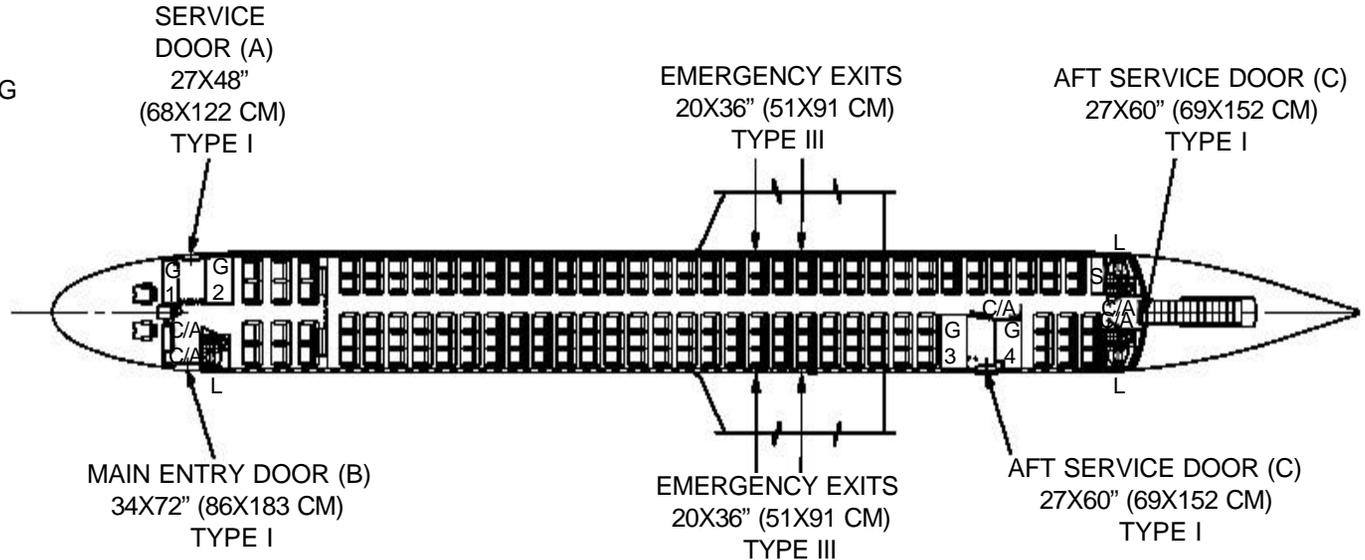
## MD-90-30/-30ER MIXED CLASS

158 PASSENGERS, 4/5-ABREAST SEATING  
 132 SEATS ON 31" (78.7 CM) PITCH  
 14 SEATS ON 32" (81.3 CM) PITCH  
 12 SEATS ON 36" (91.4 CM) PITCH

NOTE:  
 Maximum of 172 Passengers, 5-Abreast seating available.



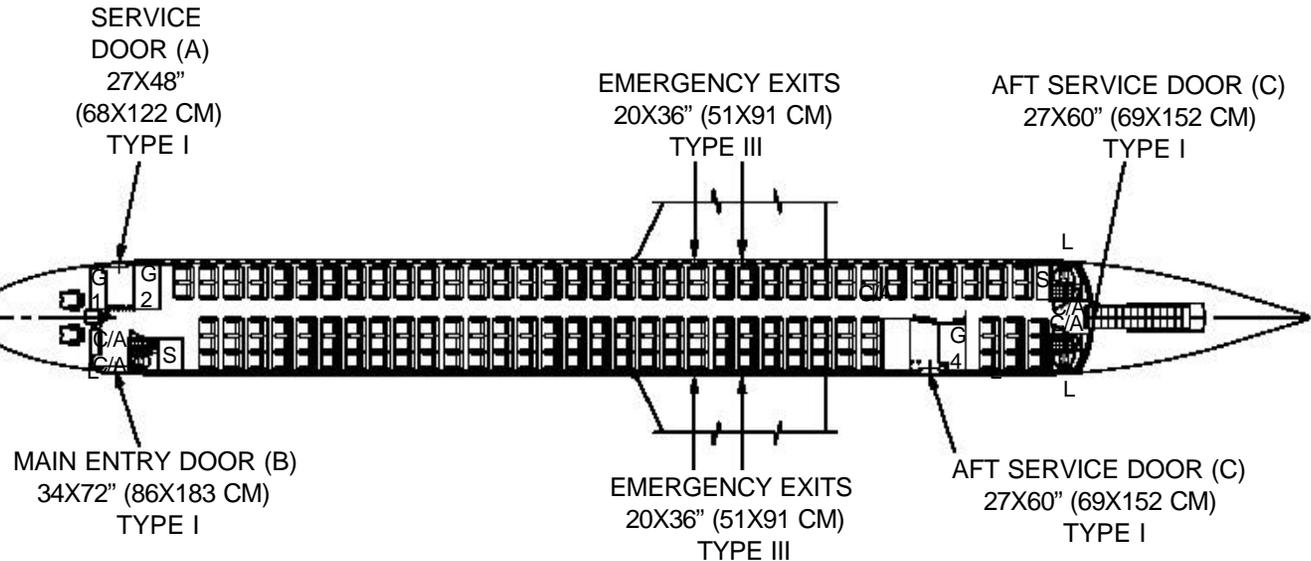
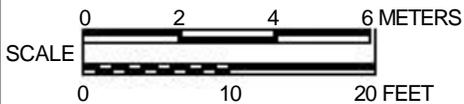
**SYMBOLS**  
 C/A CABIN ATTENDANT SEAT  
 G GALLEY  
 L LAVATORY  
 S STORAGE



## MD-90-30/-30ER ALL ECONOMY

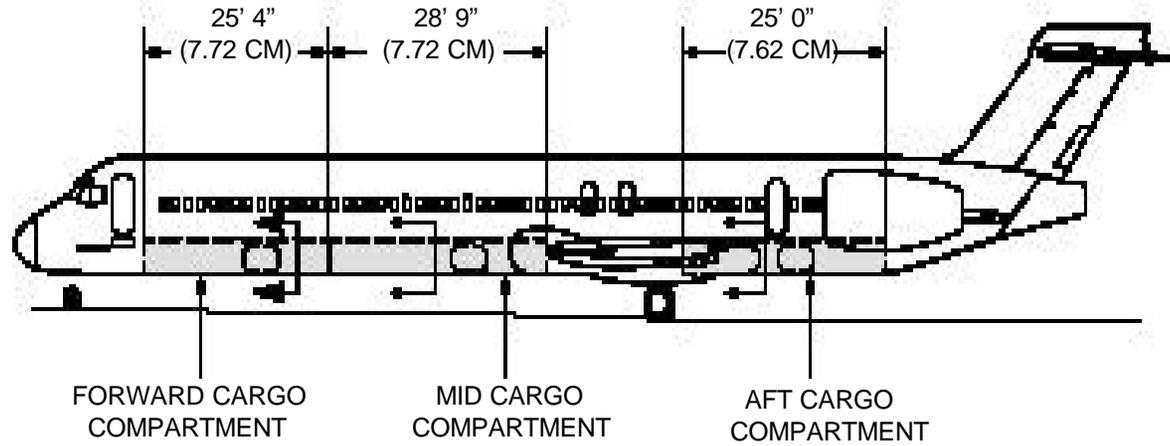
163 PASSENGERS, 5-ABREAST SEATING  
 144 SEATS ON 31" (78.7 CM) PITCH  
 19 SEATS ON 32" (81.3 CM) PITCH

NOTE:  
 Maximum of 139 Passengers, 5-Abreas seating available.



# CARGO CONFIGURATION

MD-90-30/-30ER SERIES  
LOWER BULK CARGO COMPARTMENTS



# AIRCRAFT PAINT SCHEME

L-1011-1

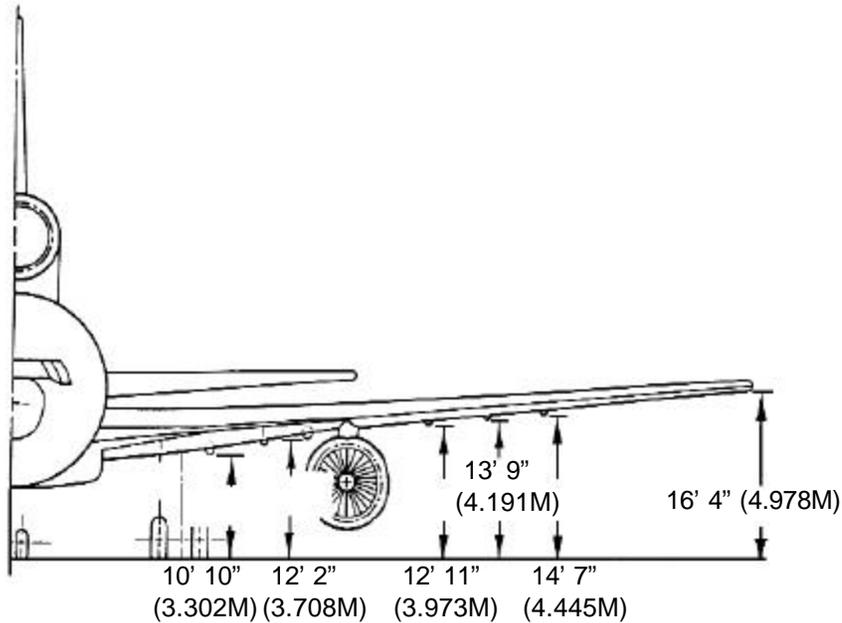
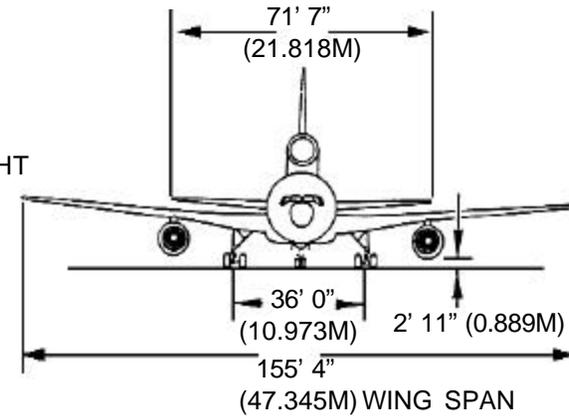
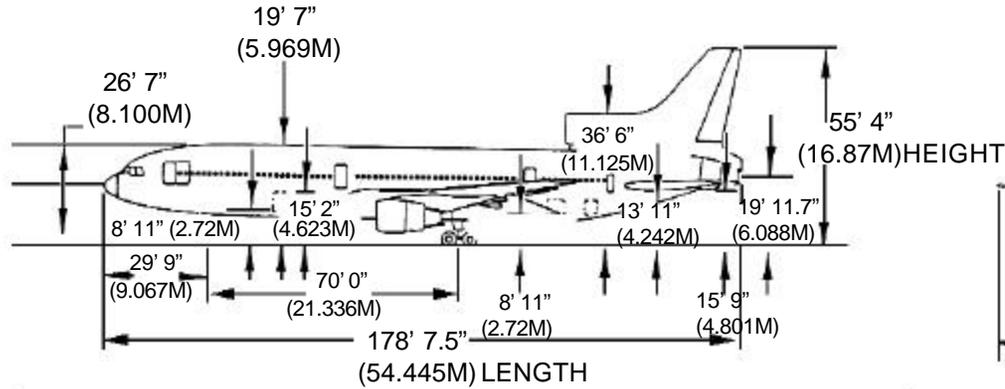


# AIRCRAFT DIMENSIONS AND GENERAL GROUND CLEARANCE

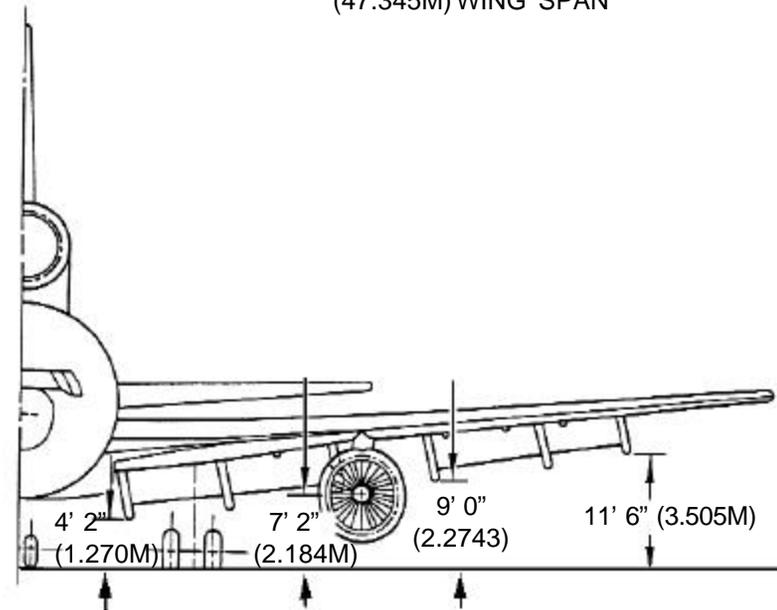
-1/-100/-200 SERIES

NOTE:

All heights are approximate.



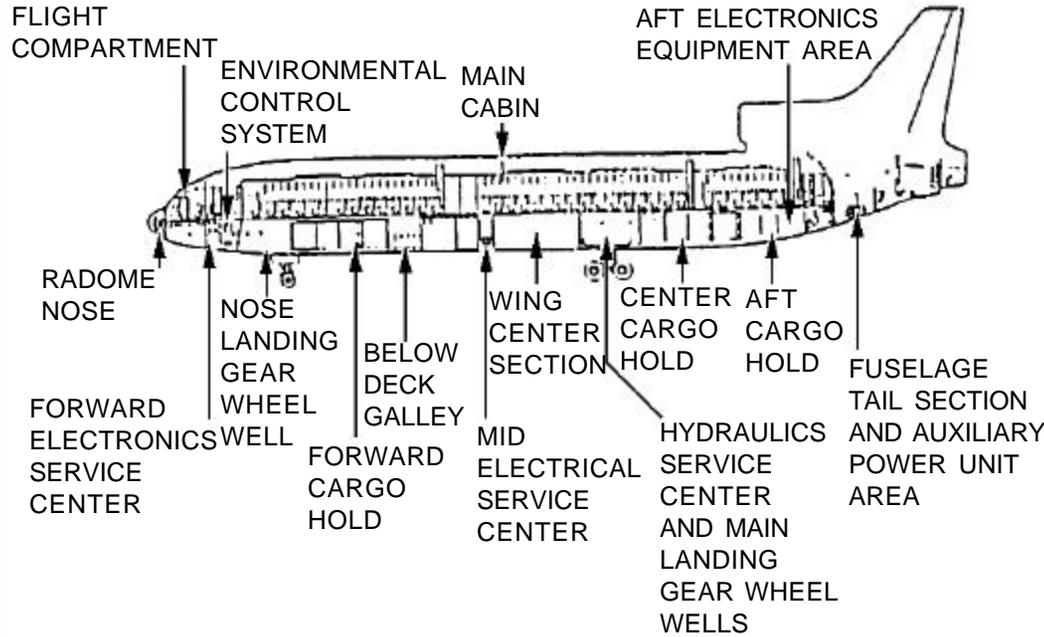
WING HEIGHT FROM GROUND



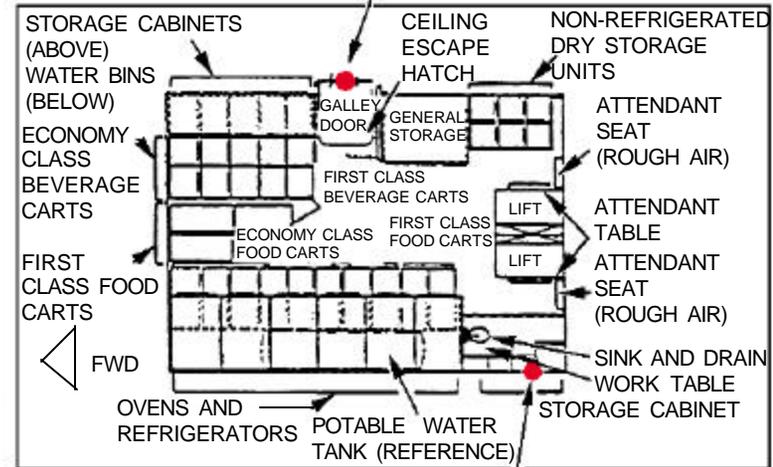
FLAP HEIGHT FROM GROUND

# AIRCRAFT SKIN PENETRATION POINTS

COMPARTMENT LOCATIONS  
INBOARD PROFILE



PENETRATION POINT  
FS 811, WL 150



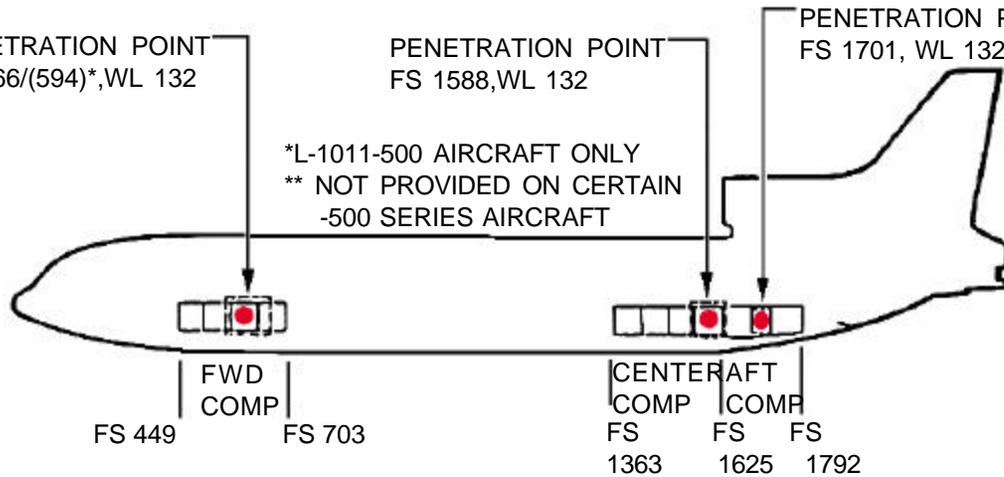
PENETRATION POINT UNDERFLOOR GALLEY  
FS 912, WL 156

PENETRATION POINT  
FS 666/(594)\*, WL 132

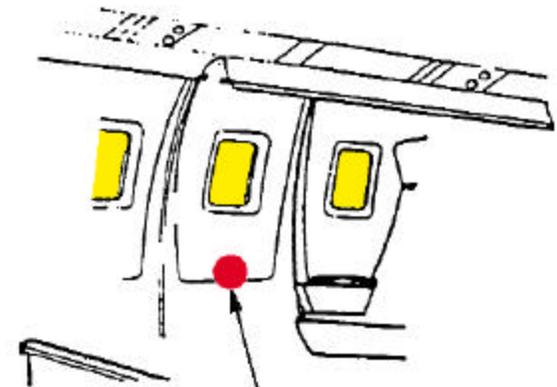
PENETRATION POINT  
FS 1588, WL 132

PENETRATION POINT  
FS 1701, WL 132\*\*

\*L-1011-500 AIRCRAFT ONLY  
\*\* NOT PROVIDED ON CERTAIN  
-500 SERIES AIRCRAFT



CARGO COMPARTMENT GENERAL ARRANGEMENT, WITH PENETRATION POINTS SHOWN



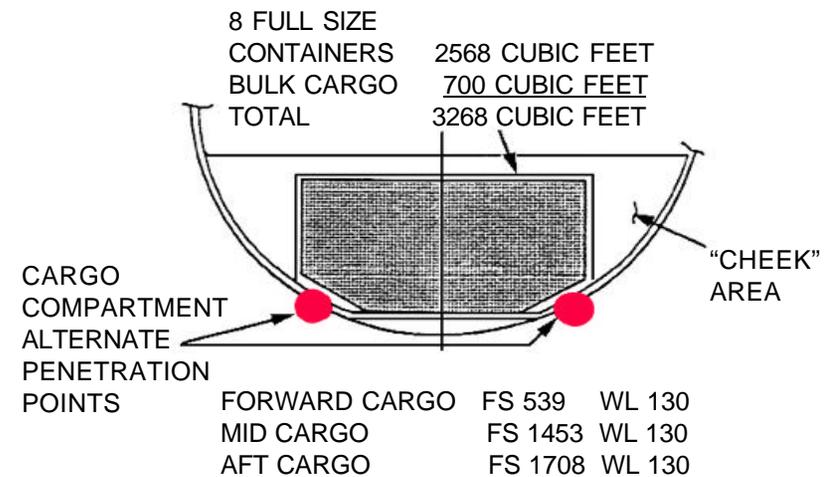
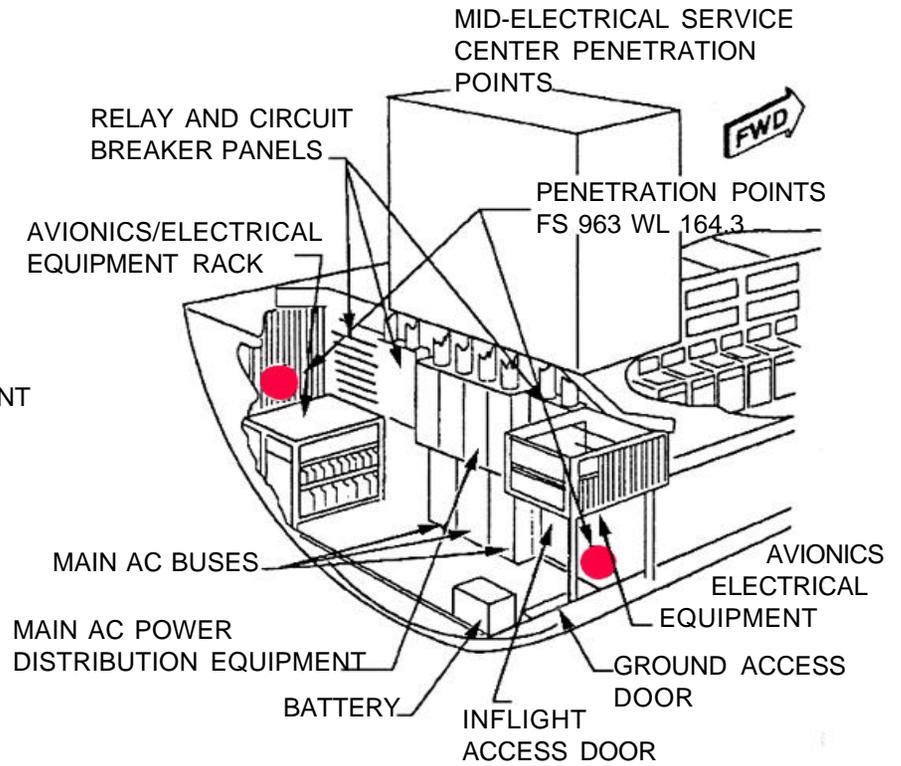
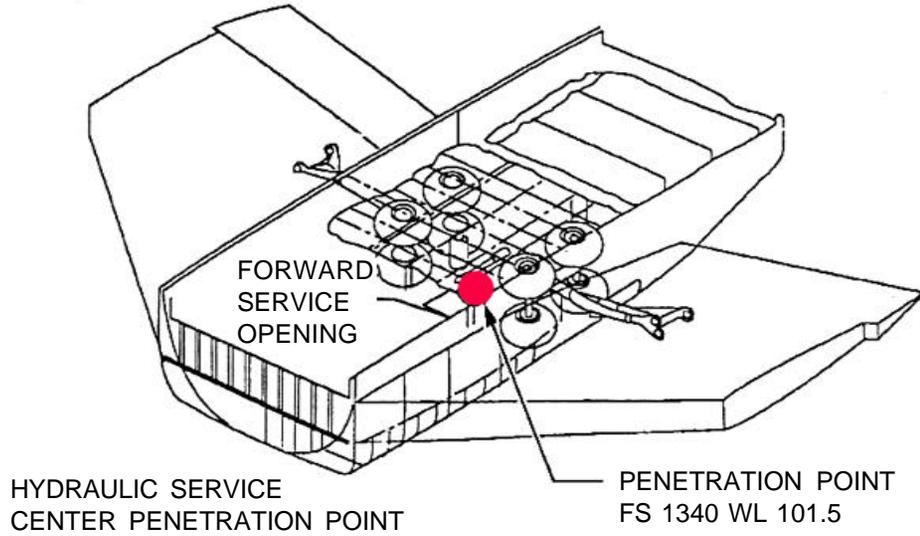
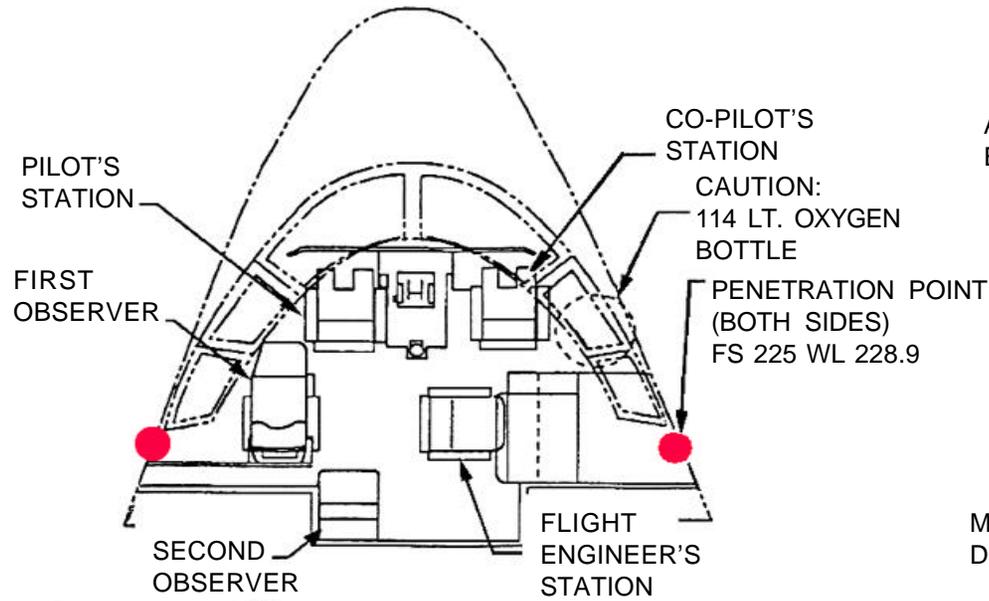
TYPICAL  
PENETRATION POINT

PASSENGER AREA PENETRATION POINTS  
(VIEW FROM INSIDE LOOKING OUTBOARD)

# AIRCRAFT SKIN PENETRATION POINTS-Continued

L-1011-1

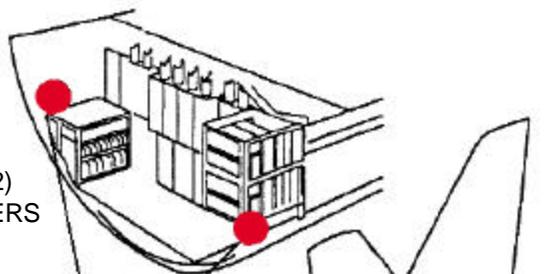
## FLIGHT COMPARTMENT



# AIRCRAFT SKIN PENETRATION POINTS-Continued

MID ELECTRICAL SERVICE CENTER (ACCESSIBLE IN FLIGHT)

- 1 ADF RECEIVER (WIRING FOR 2)
- 2 RADIO ALTIMETER TRANSCEIVERS
- SPACE FOR AIDS



PENETRATION POINT FS 1741 WL 130

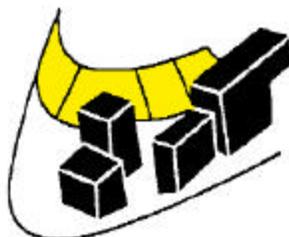
AFT ELECTRICAL SERVICE CENTER  
FLIGHT DATA RECORDER  
CREW VOICE RECORDER

PENETRATION POINT FS 963 WL 164.3

PENETRATION POINT FS 177.5 WL 137.2

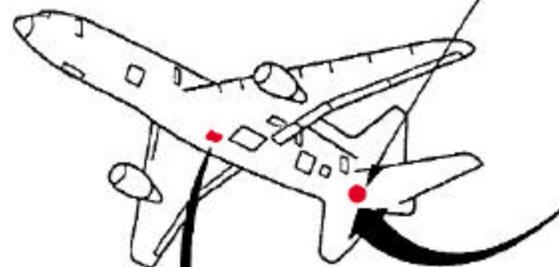
ELECTRICAL SERVICE CENTER LOCATIONS  
FWD ELECTRONICS (ACCESSIBLE IN FLIGHT)

- 2 VHF TRANSCEIVERS (PROVISION FOR A 3RD)
- SPACE FOR 2 HF TRANSCEIVERS
- DUEL CHANNEL SEL CAL DECODER
- 2 PASSENGER ADDRESS AMPLIFIERS
- 2 VOR RECEIVERS
- 2 DME INTERROGATOR UNITS
- 1 MARKER BEACON RECEIVER (PROVISIONS FOR A 2ND)
- 1 WEATHER TRANSCEIVER (PROVISIONS FOR A 2ND)
- 3 VERTICAL GYROS
- 2 DIRECTIONAL GYROS
- 2 ILS RECEIVERS
- 2 ATC TRANSPONDERS
- 2 HEADING COUPLERS
- PROVISIONS FOR 3 INERTIAL PLATFORMS (REPLACE GYROS)
- PARTIAL PROVISION FOR DUAL COLLISION AVOIDANCE EQUIPMENT
- PROVISIONS FOR 2 AREA NAVIGATION COMPUTERS
- 2 AIR DATA COMPUTERS



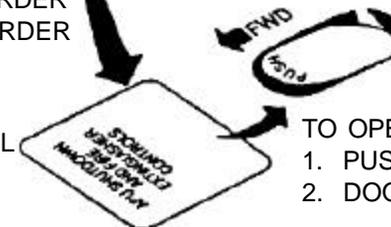
APU PENETRATION POINT AND EXTERIOR FIRE CONTROL PANEL

PENETRATION POINT FS 1930 WL 101.5



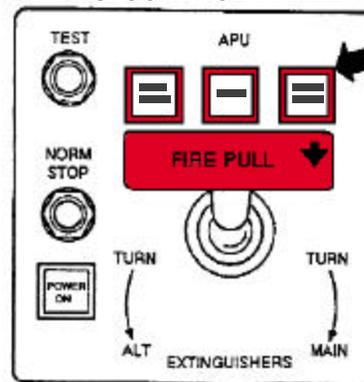
APU AREA

APU CONTROL PANEL DOOR



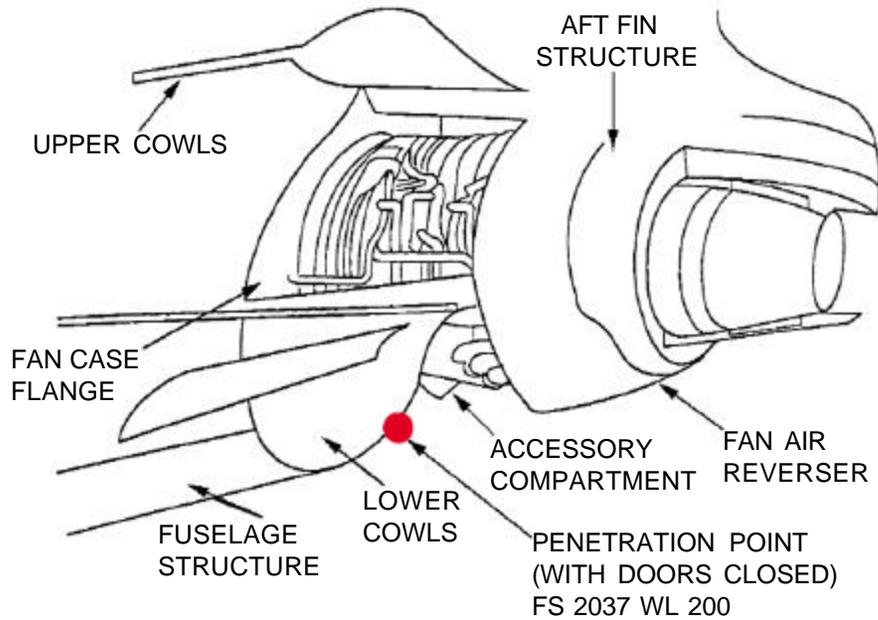
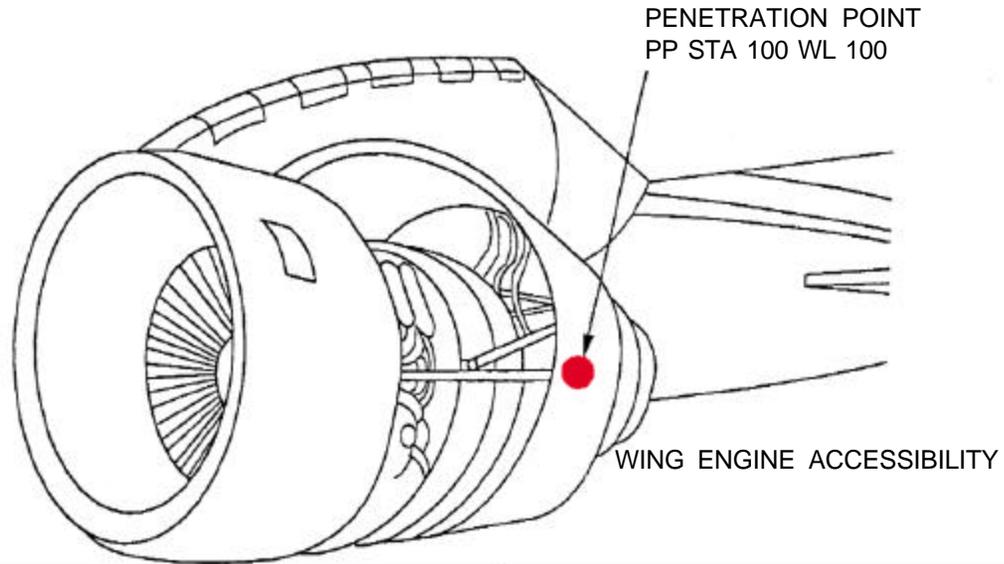
- TO OPEN DOOR
1. PUSH BUTTON UPWARD
  2. DOORS OPEN DOWNWARD

APU CONTROL PANEL

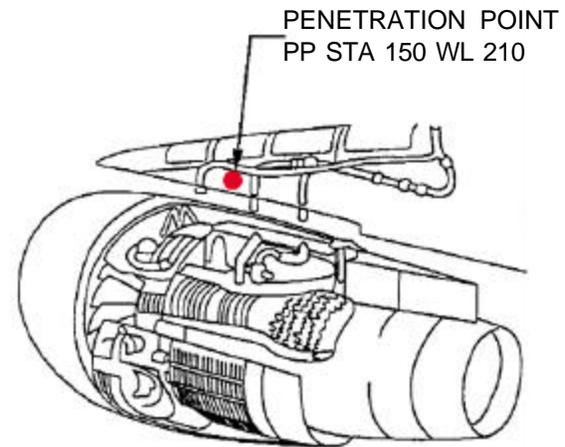


VIEWING LOOKING UP AND FORWARD

# AIRCRAFT SKIN PENETRATION POINTS-Continued



AFT ENGINE COWL PANEL PENETRATION POINT



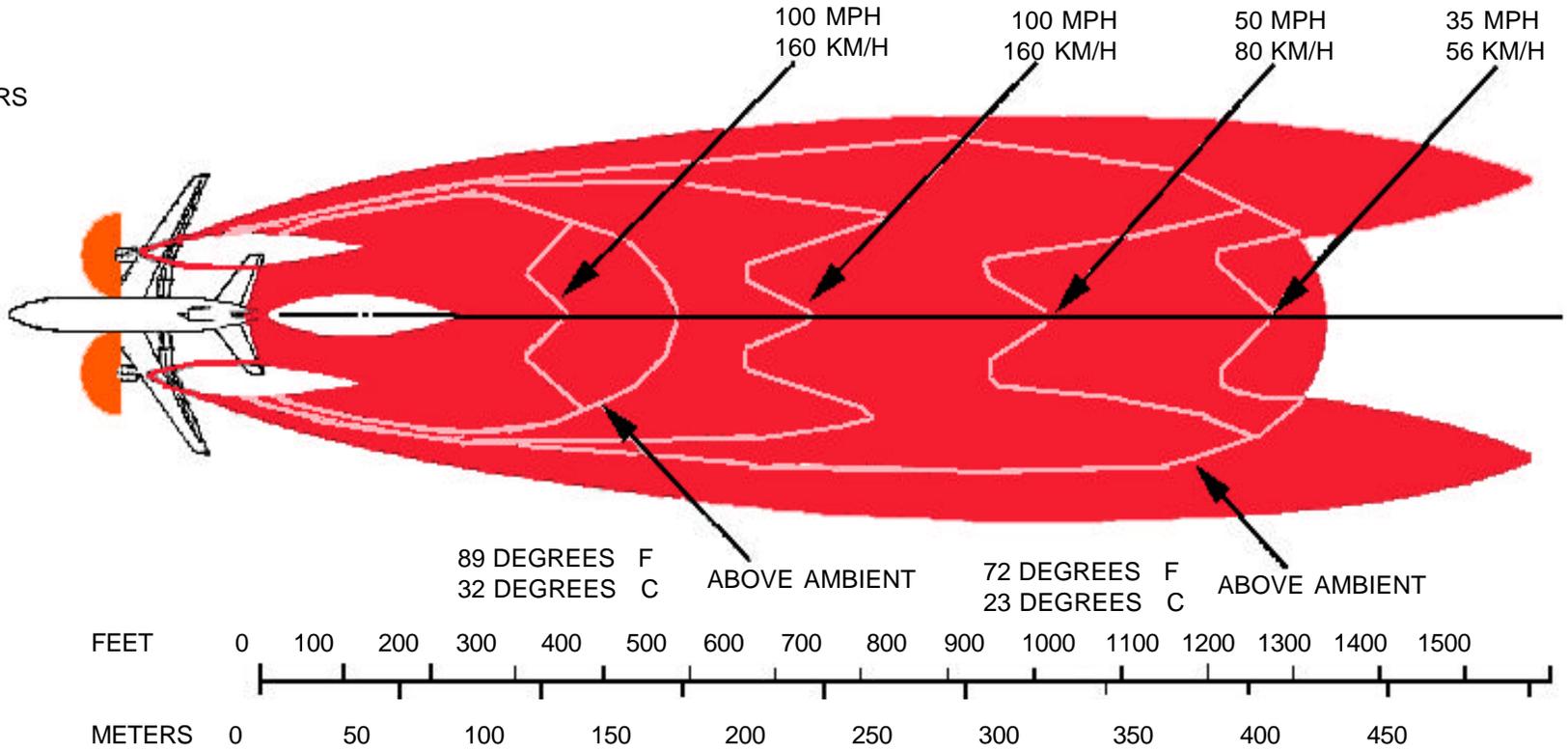
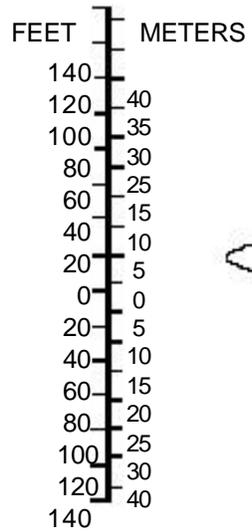
PYLON PENETRATION POINT

# AIRCRAFT HAZARDS

□ IDLE EXHAUST DANGER AREA

■ MAXIMUM POWER EXHAUST DANGER AREA

■ ENGINE INTAKE DANGER AREA



# AIRCRAFT HAZARDS-Continued

## FUEL TANK CAPACITIES AND QUANTITIES

FUEL CELL			JP-4	JP-8
	LBS	KGS	GALS	GALS
2L OUTBD	8,670	3,933	1,355	1,294
2L INBRD	16,980	7,702	2,653	2,534
1	53,970	24,480	8,433	8,055
*1A	9,000	4,090	1,406	1,343
3	53,970	24,480	8,433	8,055
*3A	9,000	4,090	1,406	1,343
2R INBRD	16,980	7,702	2,653	2,534
2R OUTBRD	8,670	3,933	1,355	1,294
	177,240	80,410	27,694	26,452

### NOTES:

L-1011-100/-200 are extended range (ER) versions with a center section fuel tank and RB-211-22B engines. The -200 series are used in "HOT & HIGH" areas where improved takeoff and performance is needed.

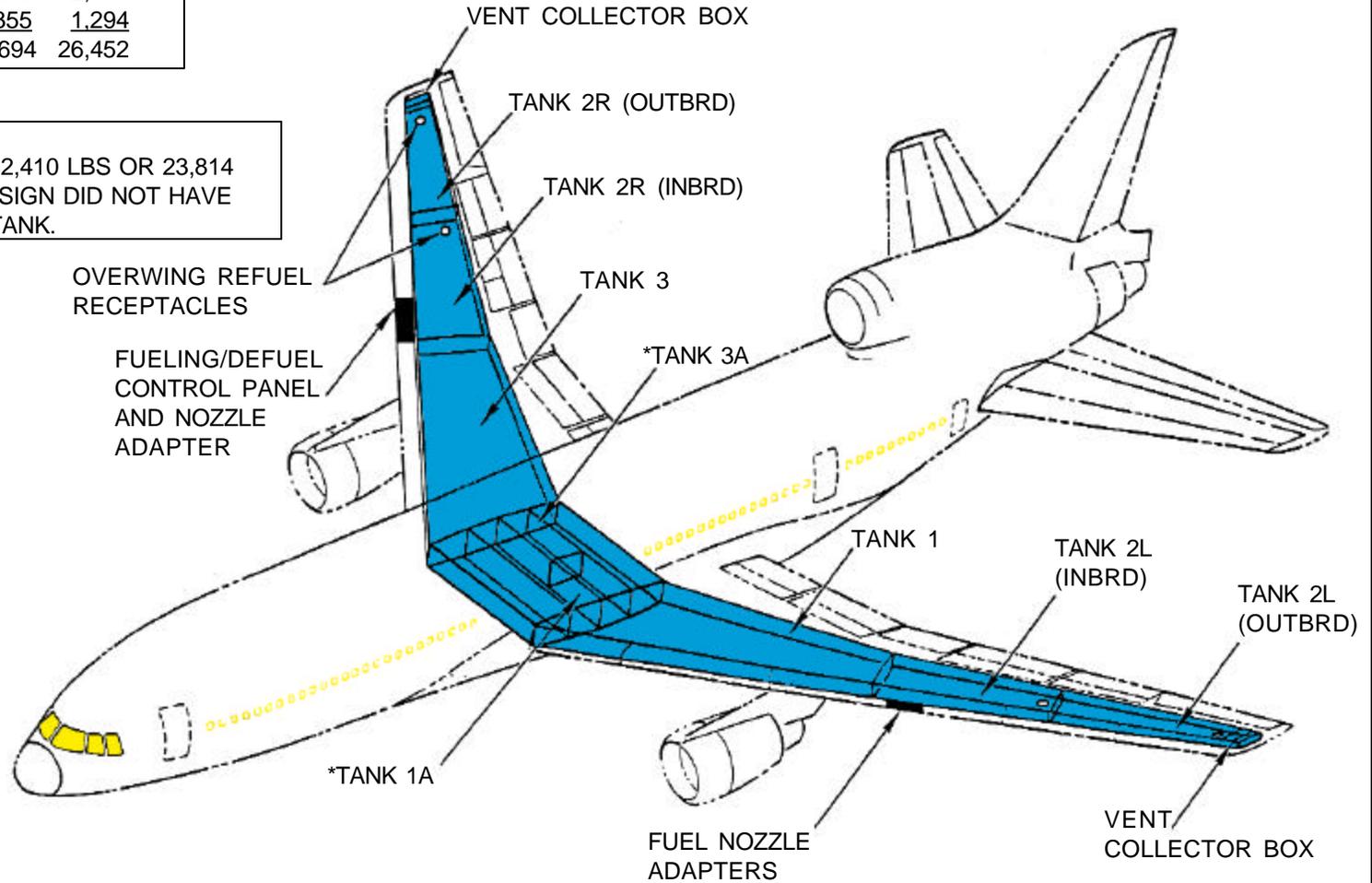
L-1011-250 ER (not illustrated) has RB211-524B turbofan engines.

Outward configurations are identical for all mentioned series aircraft.

\* NA L-1011-1

### NOTE:

L-1011-1 (BASIC DESIGN) 152,410 LBS OR 23,814 GALS USING JP-4. THIS DESIGN DID NOT HAVE A CENTER SECTION FUEL TANK.



**AIRCRAFT HAZARDS-Continued****EMERGENCY BRAKE RELEASE****CAUTION**

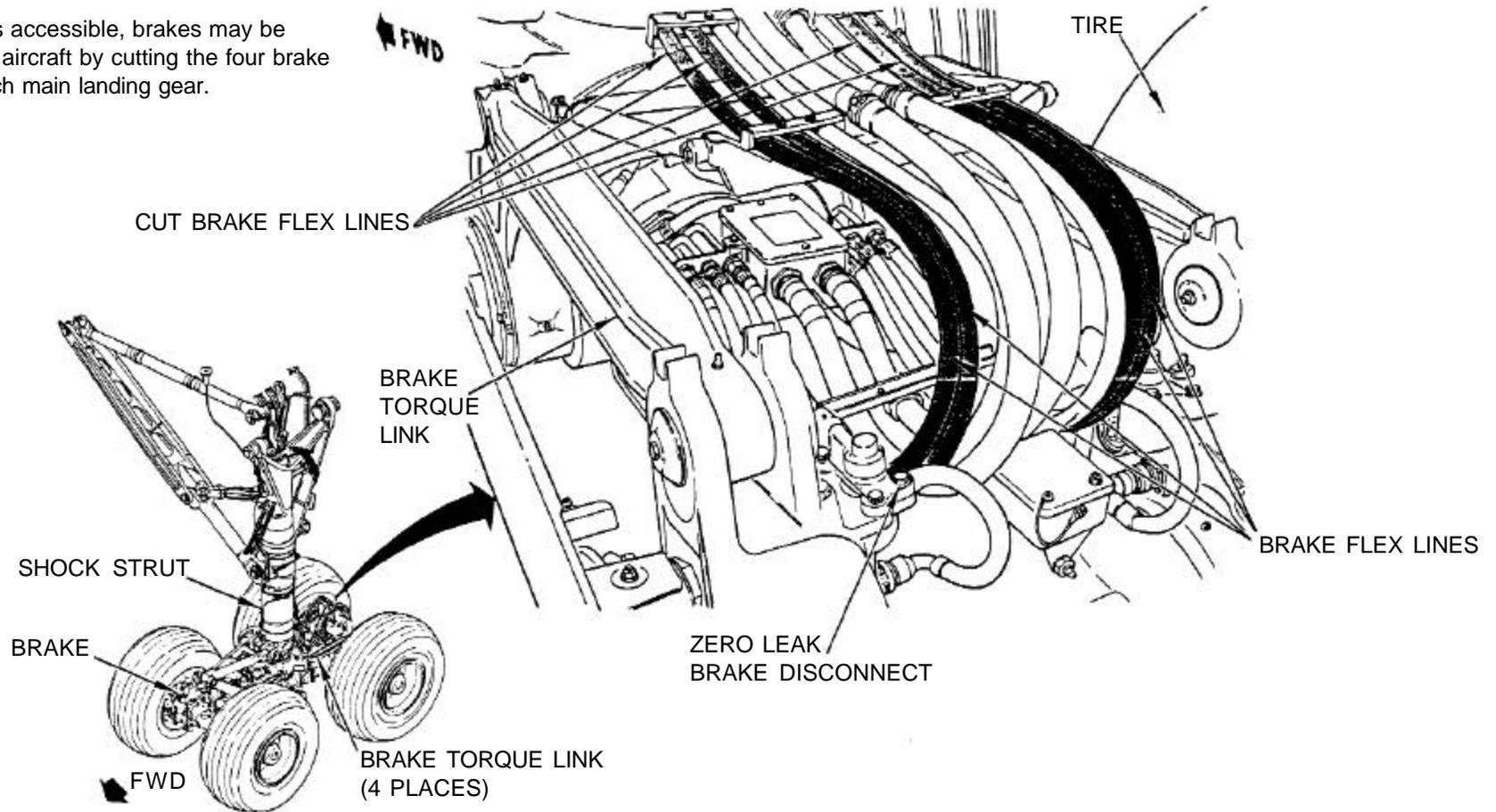
Parking brake pressure approximately 1500 PSI.  
Brake fluid will spray from lines as they are cut.

**CAUTION**

When brake flex lines are cut, aircraft may roll.

**NOTE:**

If flight station is accessible, brakes may be released to tow aircraft by cutting the four brake flex lines on each main landing gear.

**WARNING**

Do not cut any other lines besides the brake flex lines.

**NOTE:**

Brake flex lines are the two lines closest to the tires.  
Brake flex lines have internal woven metallic armor.

**L-1011-1**

**SPECIAL TOOLS/EQUIPMENT**

- Power Rescue Saw
- 36 Foot Ladders
- Fire Drill II

**AIRCRAFT ENTRY-1/-100/-200 SERIES**

**1. EXTERNAL NORMAL/EMERGENCY ENTRY**

- a. Pull emergency release handles, located forward on all doors, to open doors in and up automatically. Slide will not deploy.
- b. Push exit button, located on flight compartment hatch, to open flight compartment hatch. Hatch opening can be used for the emergency decent device.
- c. Pull galley door latch, located above galley door, down and push door in and up until uplatch engages.

**2. INTERNAL NORMAL/MANUAL EXIT**

- a. Place evacuation slide mode selector lever in the desired position (engage to deploy slide, detach to prevent slide deployment).
- b. Electrically operate the doors by using the open and close switches.

**3. INTERNAL EMERGENCY EXIT**

- a. Place evacuation slide mode selector lever in the desired position (engage to deploy slide, detach to prevent slide deployment).
- b. Remove transparent plastic cover over inside "T" handle.
- c. Pull inside "T" handle down all the way. Counterbalance will drive door completely open rapidly and deploy slide if selected.

**4. CUT-IN**

- a. Cut-in areas located 20 inches above and below windows.

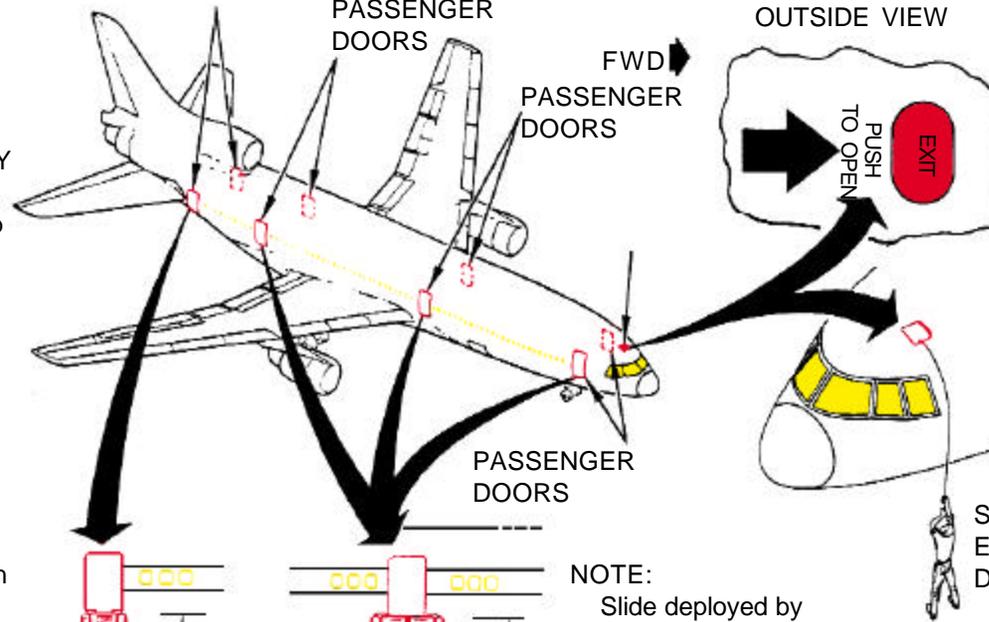
**NOTE:**

Fuselage rings located every 20 inches in these areas.

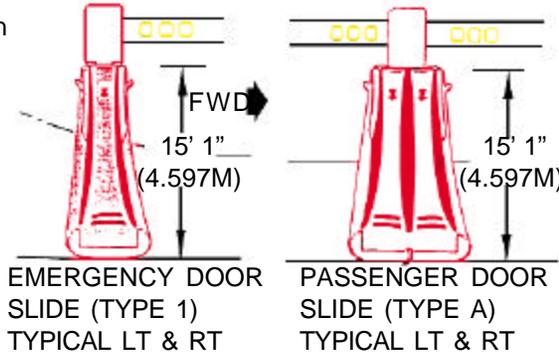
**EMERGENCY DOORS**

**PASSENGER DOORS**

**OUTSIDE VIEW**



SHOWING CREW USE OF EMERGENCY DESCENT DEVICE



**PASSENGER DOOR OPERATING PANEL**

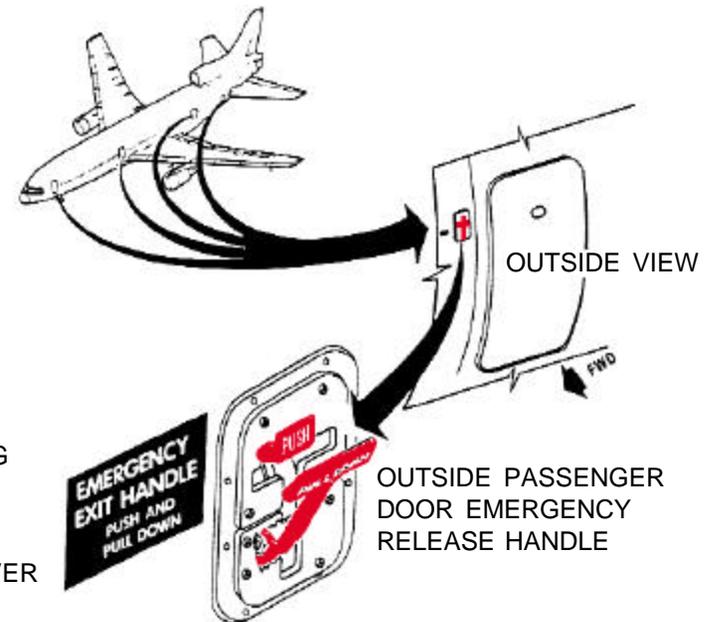
BATTERY OPERATED INCANDESCENT LIGHT

NORMAL OPERATION ELECTRICAL DOOR OPENING & CLOSING



EMERGENCY MECHANICAL DOOR OPENING

2 POSITION DETENTED LEVER FOR GIRT BAR LATCHES CONTROL



**OUTSIDE VIEW**

OUTSIDE PASSENGER DOOR EMERGENCY RELEASE HANDLE

# ENGINE/APU SHUTDOWN AND AIRCREW EXTRACTION

## 1. ENGINE SHUTDOWN

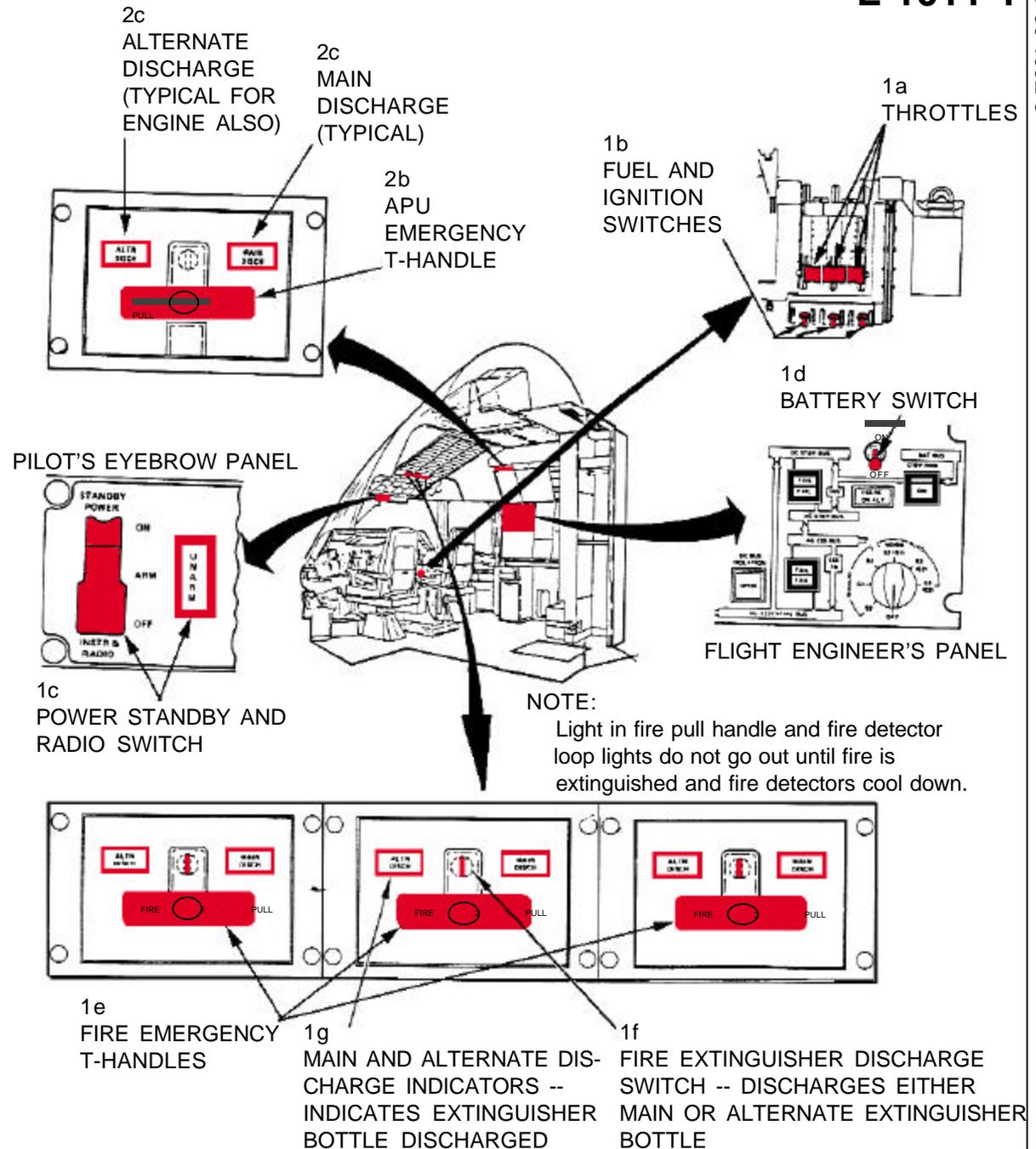
- Retard throttles, located on pilot's center console, to IDLE CUTOFF position.
- Place fuel and ignition switches, located on pilot's center console, to OFF position.
- Lift red cover of standby power instrument and radio switch, located on pilot's eyebrow panel, to OFF position.
- Unlock battery switch, located on flight engineer's panel, and move to OFF position by pulling out on battery switch and then moving switch down.
- In case of fire (see fire detector light) or engines fail to shutdown, pull emergency fire T-handles, located on pilot's overhead panel.
- Move spring loaded toggle switch, located under T-handle, to main discharge, to release extinguishing agent.
- If fire was not extinguished after step e, wait 30 seconds before moving same switch to alternate discharge.

## 2. APU SHUTDOWN

- Place APU master power switch, located on flight engineer's panel to OFF position.
- In case of APU fire (see fire detector light) pull T-handle, located on flight engineer's panel.
- Extinguisher discharge switch is exposed and bottle may be fired by moving switch to right or left.

## 3. AIRCREW EXTRACTION

- Unlatch lap belt and remove shoulder harness from crewmember(s) and flight attendants.
- If seat tracks are not damaged during crash landing, use adjustable seat controls to retract seats to aft position.
- Passenger seats are equipped with lap belts only.

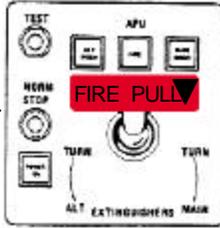


# APU/ENGINE DOORS AND FIRE ACCESS PANELS

## TO OPEN APU CONTROL PANEL DOOR

1. Push button upward.
2. Door opens downward.

APU CONTROL PANEL



VIEWING LOOKING UP AND FORWARD

APU CONTROL PANEL DOOR

## AUTO FIRE SHUTDOWN

1. "FIRE" light illuminates.
2. Warning horn sounds (if gear down).
3. APU auto shutdown occurs.
4. APU emergency fuel shutoff valves close.
5. Main extinguisher discharges.
6. To discharge alternate extinguisher, pull "FIRE PULL" handle out and down, then turn handle counterclockwise.
7. "FIRE" light will extinguish and horn will silence if overheat condition is alleviated. If "FIRE PULL" handle is pulled, horn will silence.

## NOTE:

If auto fire shutdown system or main discharge light is not on with auto shutdown, pull "FIRE PULL" handle out and down, then rotate counterclockwise. Pulling handle out and down, shuts down the APU and silences the horn. Rotating handle counterclockwise fires the alternate extinguisher.

## NORMAL SHUTDOWN

1. Push "NORM STOP" switch.
2. After 120 seconds, press "POWER ON" switchlight. "POWER ON" light should go out. If not, again press "POWER ON" switchlight.

## TO OPEN COWL

1. Press trigger to release latches.
2. Pull latches out to unlock (5 places).
3. Pull cowl outward and up.

L-1011-1

FIRE ACCESS DOOR (LT & RT)

HINGED COWL (LT & RT)

FIRE EXTINGUISHER ACCESS

MAGNESIUM GEAR BOX

TRIGGER

TRIGGER

FIRE ACCESS PANEL (DOOR WITHIN A DOOR)

HINGED COWL

LATCHES

## TO OPEN (4 DOORS)

1. Push buttons inward to release latches.
2. Pull latches down to unlock.
3. Door opens downward.

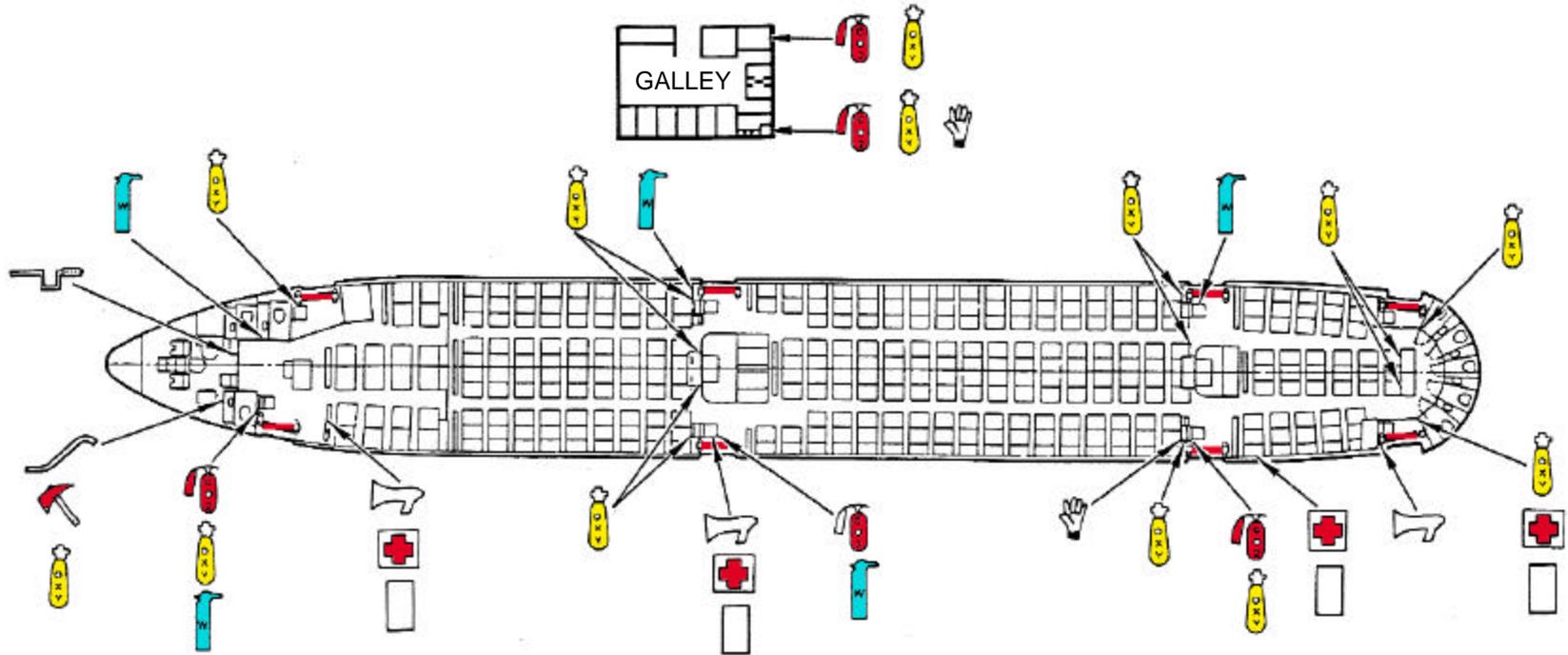
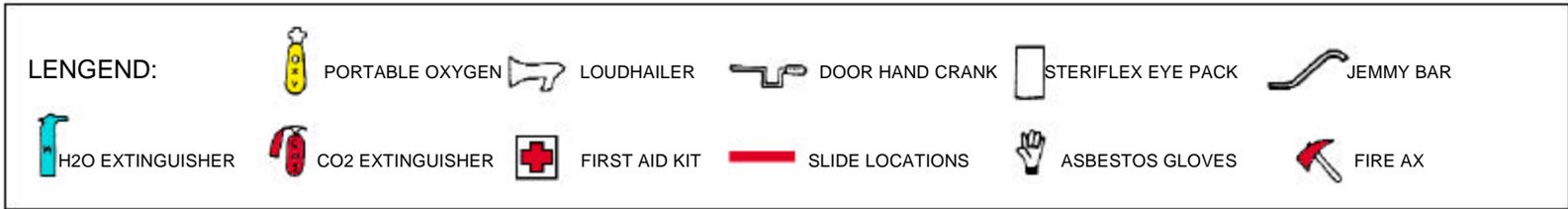
## TO OPEN TAIL COWL

1. Press triggers to release latches.
2. Pull latch out to unlock.
3. Pull cowl outward and up.

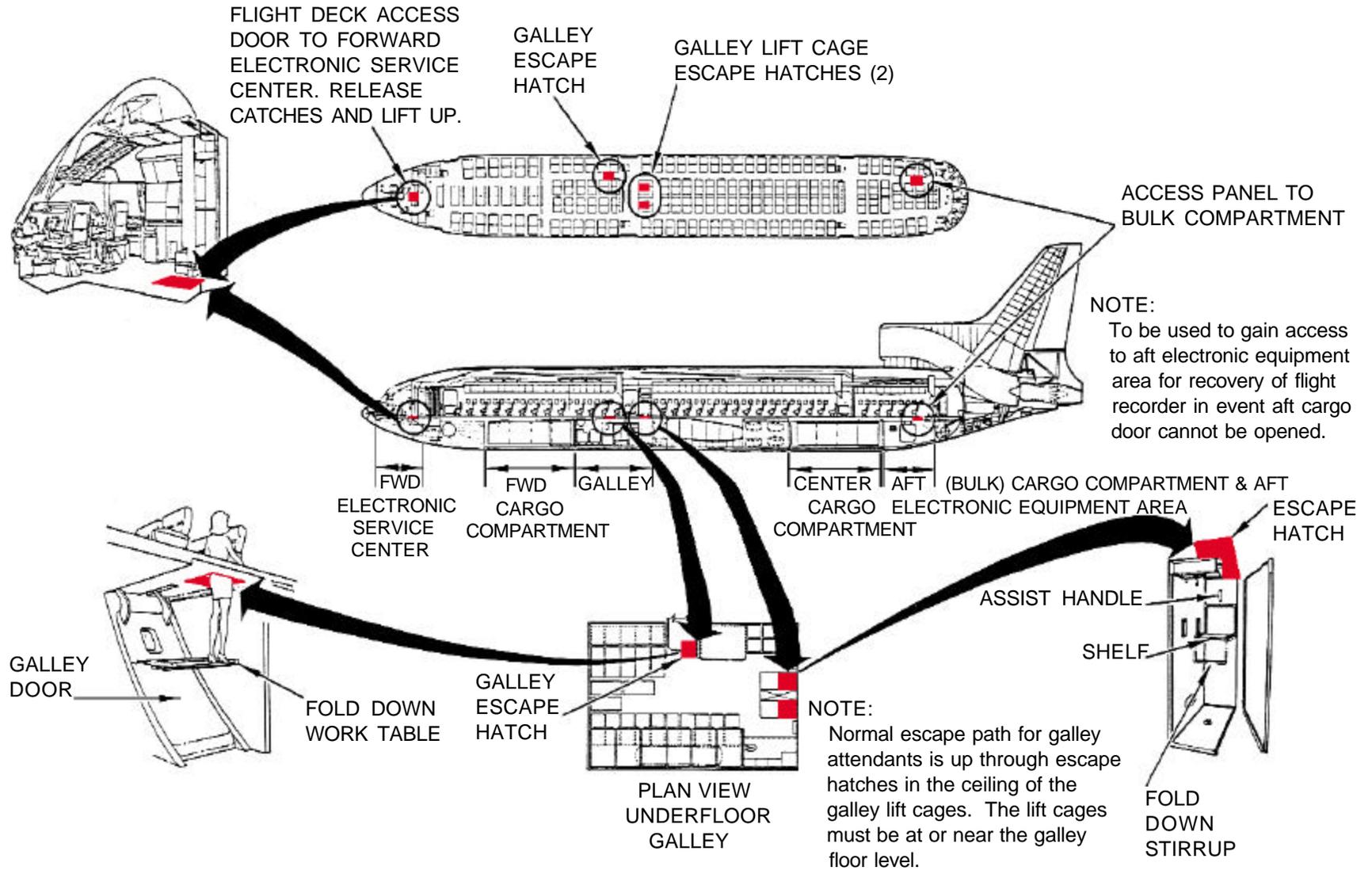
# EMERGENCY EQUIPMENT AND SEATING LOCATIONS

**NOTE:**

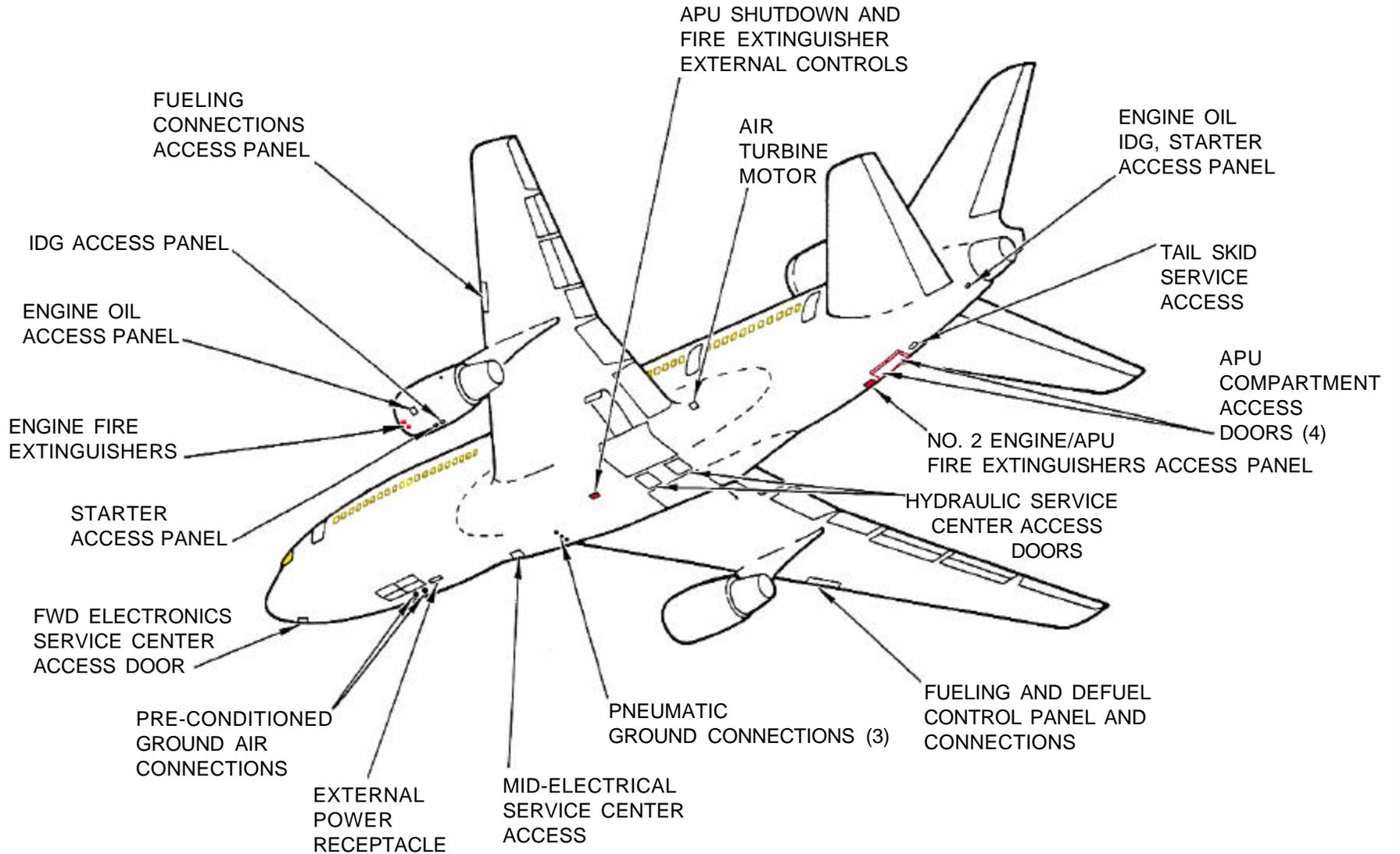
Flight crew is 3 plus attendants. First class is 24 with 6 abreast. Economy class is 222 with 9 abreast. All economy passenger capacity is a maximum of 400. Most common configuration has a maximum of 330 passengers.



# MISCELLANEOUS HATCHES



# ACCESS DOORS AND PANELS



# CARGO AND SERVICE CENTER DOORS

## TO OPEN GALLEY DOOR

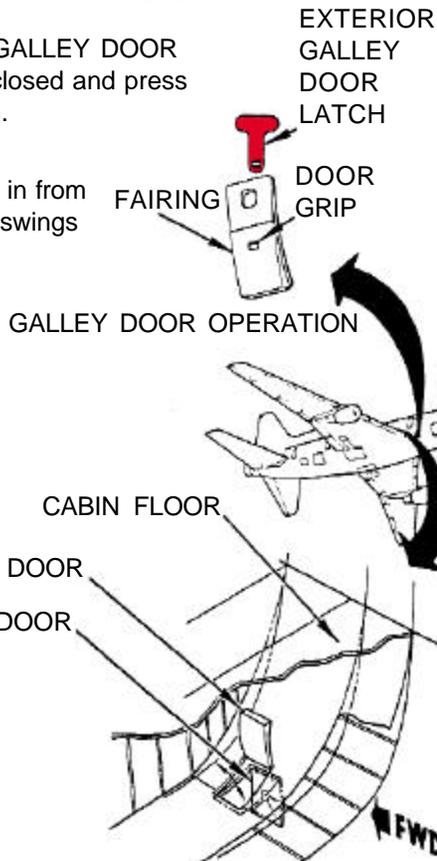
1. Pull latch down, push door in and up until uplatch engages.

## TO CLOSE GALLEY DOOR

1. Pull door closed and press latch push.

### NOTE:

Door opens in from bottom and swings up.



GALLEY DOOR OPERATION

Galley door opening and closing. The galley door is manually opened or closed from the inside or outside.

**OUTSIDE- OPEN**-Pull out on exterior latch above door and push in and up on door until uplatch engages. Counterbalance will assist door swinging into overhead.

**CLOSE**-Unlatch door and pull closed then press exterior latch flush.

**INSIDE-OPEN**-Move interior lever to open position, assist door up until up latch engages.

**CLOSE**-Unlatch door and push closed then move handle to the closed position. Confirm that the door ditch latches are properly engaged by checking alignment of the stripe in accordance with the decal at the aft ditch latch.

## MID ELECTRICAL SERVICE CENTER ACCESS DOORS

### TO OPEN FAIRING DOOR

1. Push button in.
2. Pull handle out and turn counterclockwise 90°.
3. Door opens out.

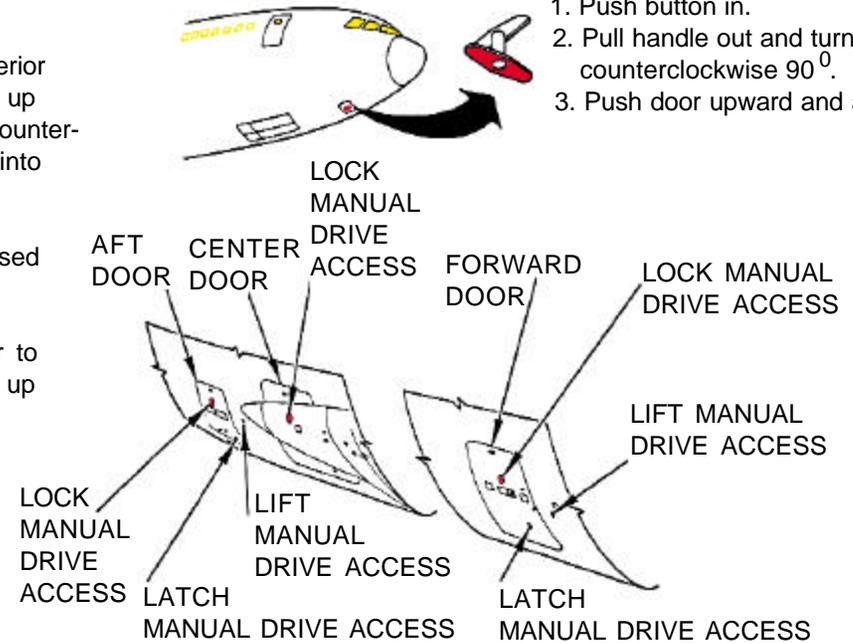
### TO OPEN PRESSURE DOOR

1. Turn handle counterclockwise 90°.
2. Push door up to engage retaining latch.  
This provides quick access to aircraft battery.

## FORWARD AVIONICS SERVICE CENTER DOOR OPERATION

## TO OPEN AVIONICS SERVICE CENTER DOOR

1. Push button in.
2. Pull handle out and turn counterclockwise 90°.
3. Push door upward and aft.



## FORWARD, CENTER AND AFT CARGO DOOR MANUAL OPERATION

1. Remove lock actuator manual drive access (tri-wing screwdriver with no. 5 tip required) and rotate the manual knob clockwise approximately 12 turns.

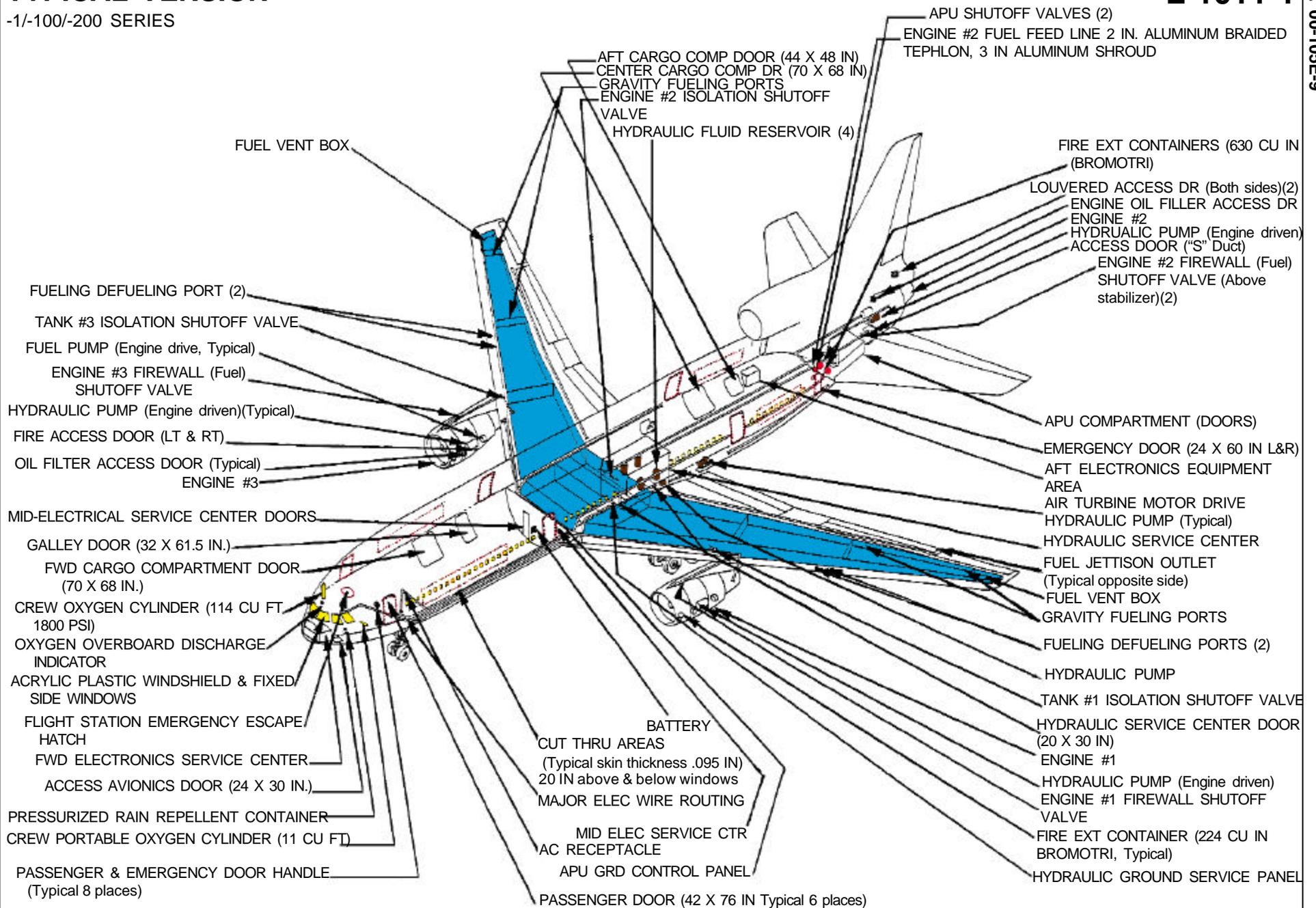
### NOTE:

Center cargo door has fairing access with one quick release latch prior to regular access.

2. Push in latch actuator manual drive access (spring loaded), insert a 1/2 inch square drive hand crank and rotate 130 turns clockwise.
3. Remove lift actuator manual drive access (tri-wing screwdriver with no. 5 tip required), insert a 1/2 inch square drive hand crank and rotate 200 turns counterclockwise or as necessary for entry.

**TYPICAL VERSION**

-1/-100/-200 SERIES

**L-1011-1**

# AIRCRAFT PAINT SCHEME



# AIRCRAFT DIMENSIONS AND GENERAL GROUND CLEARANCE

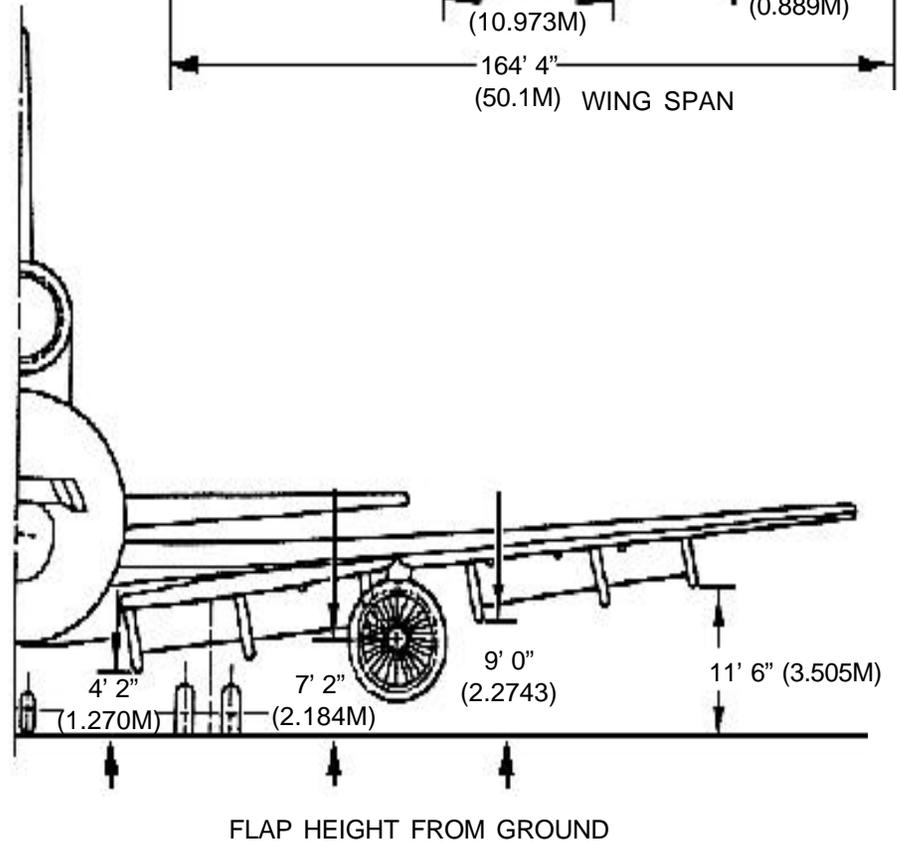
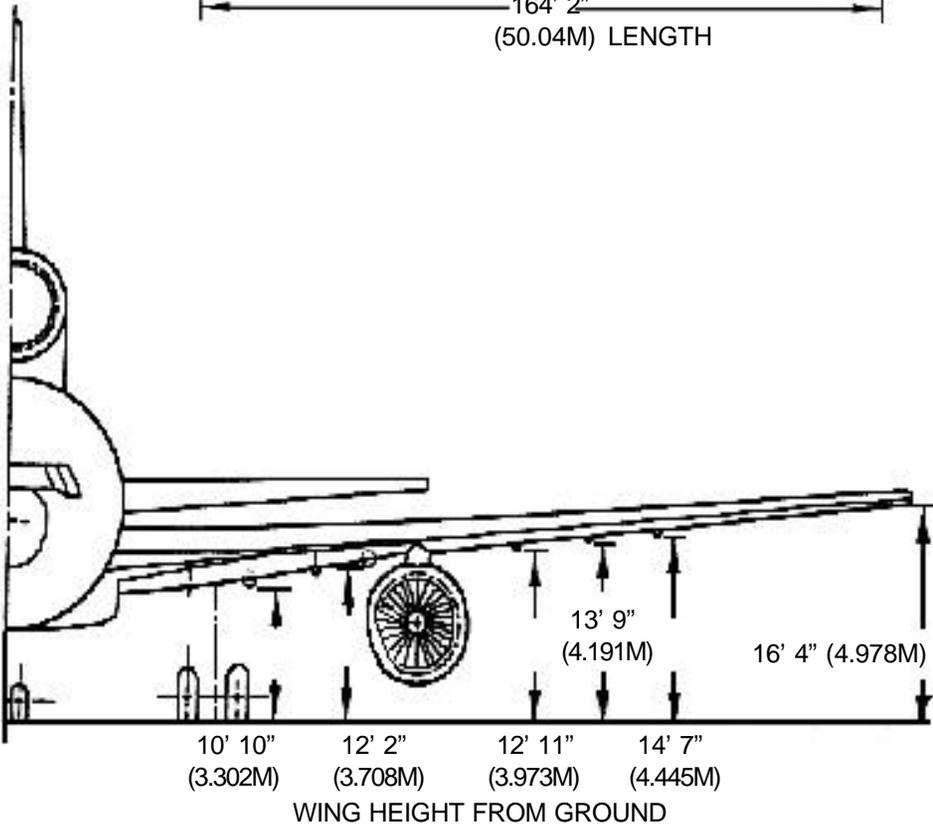
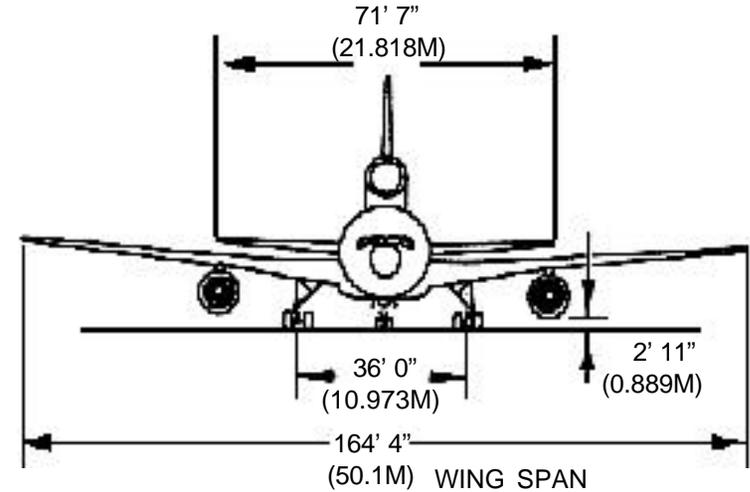
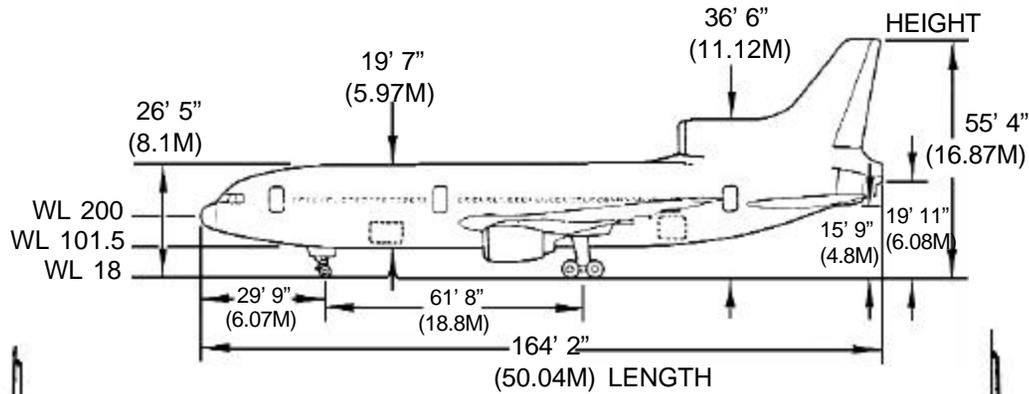
-500 SERIES

NOTE:

The L-1011-500's fuselage is shortened by 13 feet 6 inches and the wing span is 9 feet longer. All heights are approximate.

NOTE:

Aircraft skin penetration points, intake exhaust hazards and emergency brake release hazards are similar to the L-1011-1, -100, -200 models. Refer to pages L-1011-1.2 through L-1011-1.6 and L-1011-1.8 for these areas of concern.



# AIRCRAFT HAZARDS

L-1011-500

## FUEL TANK CAPACITIES AND QUANTITIES

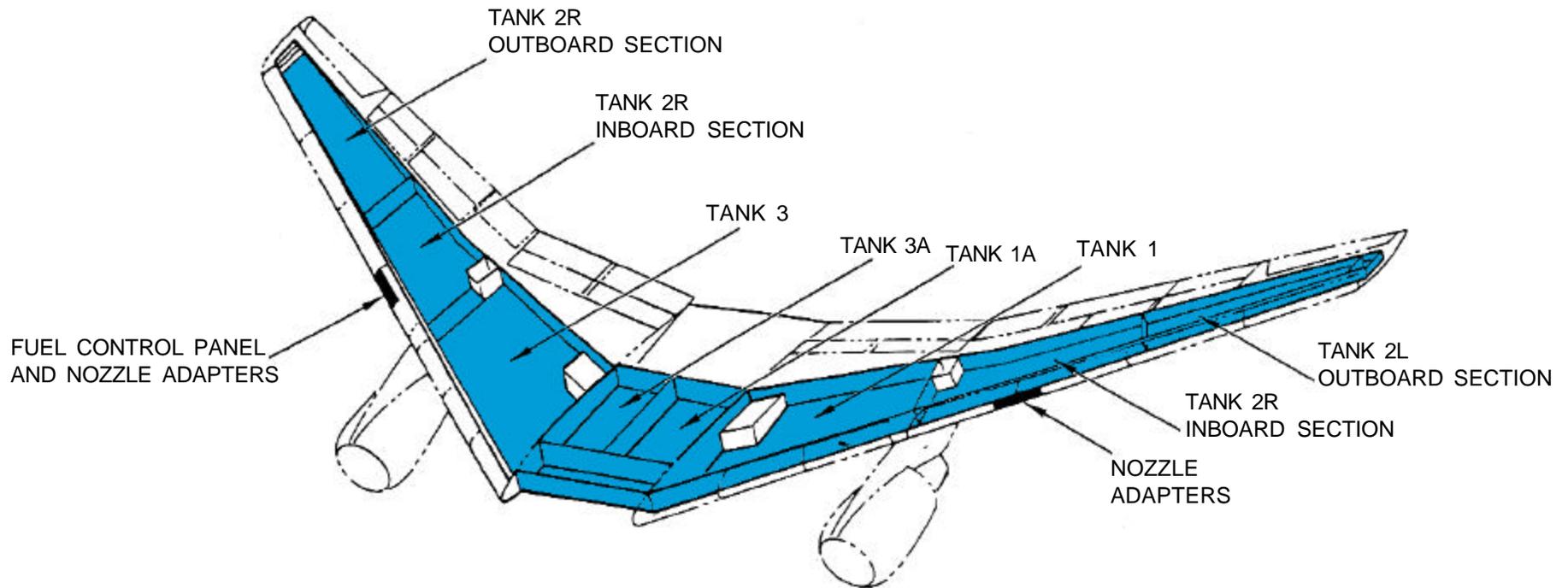
FUEL CELL			JP-4 GALS	JP-8 GALS
	LBS	KGS		
2L OUTBD	8,670	3,933	1,355	1,294
2L INBRD	16,980	7,702	2,653	2,534
1	53,970	24,480	8,433	8,055
1A	27,000	12,247	4,219	4,030
3	53,970	24,480	8,433	8,055
3A	27,000	12,247	4,219	4,030
2R INBRD	16,980	7,702	2,653	2,534
2R OUTBRD	8,670	3,933	1,355	1,294
	213,240	96,724	33,320	31,826

**NOTES:**

L-1011-250 (not illustrated incorporate the -500 modifications for the shortened fuselage length and RB211-524 turbofan engines. Both versions have center section fuel tanks and are considered extended range (ER) aircraft.

The United Kingdom has a tanker/freighter version.

L-1011F is an all cargo aircraft by PEMCO Aeroplex.



**SPECIAL TOOLS/EQUIPMENT**  
 Power Rescue Saw  
 36 Foot Ladders  
 Fire Drill II

**AIRCRAFT ENTRY -500 SERIES**

**1. EXTERNAL NORMAL/EMERGENCY ENTRY**

- a. Pull emergency release handles, located forward of all doors, to open doors in and up automatically. Slide will not deploy.
- b. Push exit button, located on flight compartment hatch, to open flight compartment hatch. Hatch opening can be used for the emergency decent device.
- c. Pull galley door latch, located above galley door, down and push door in and up until uplatch engages.

**2. INTERNAL NORMAL/MANUAL EXIT**

- a. Place evacuation slide mode selector lever in the desired position (engage to deploy slide, detach to prevent slide deployment).
- b. Electrically operate the doors by using the open and close switches.

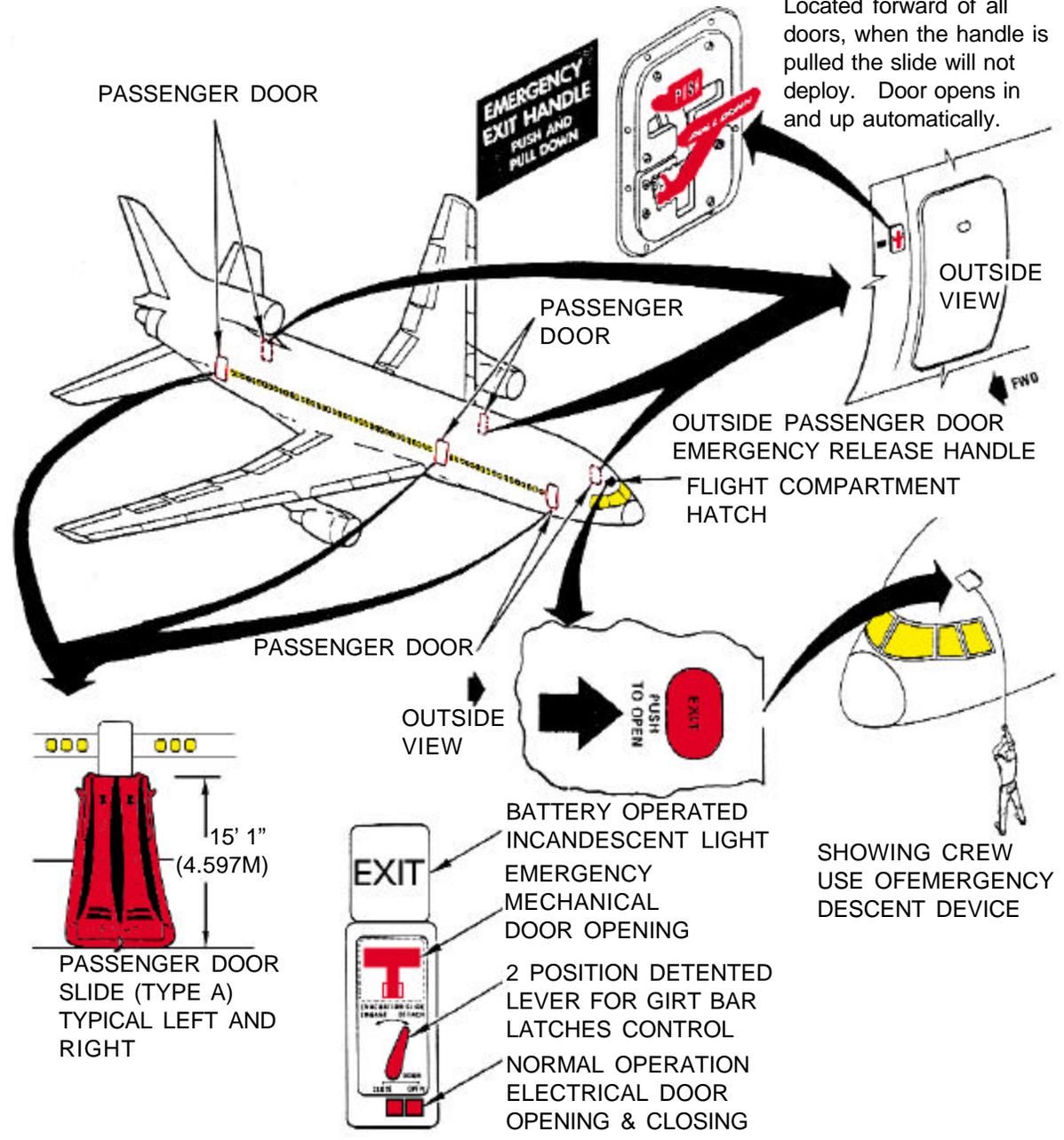
**3. INTERNAL EMERGENCY EXIT**

- a. Place evacuation slide mode selector lever in the desired position (engage to deploy slide, detach to prevent slide deployment).
- b. Remove transparent plastic cover over inside "T" handle.
- c. Pull inside "T" handle down all the way. Counterbalance will drive door completely open rapidly and deploy slide if selected.

**4. CUT-IN**

- a. Cut-in areas located 20 inches above and below windows.

**NOTE:**  
 Fuselage rings located every 20 inches in these areas.



**NOTE:**  
 Located forward of all doors, when the handle is pulled the slide will not deploy. Door opens in and up automatically.

# ENGINE/APU SHUTDOWN AND AIRCREW EXTRACTION

## 1. ENGINE SHUTDOWN

- a. Retard throttles, located on pilot's center console, to IDLE CUTOFF position.
- b. Place fuel and ignition switches, located on pilot's center console, to OFF position.
- c. Lift red cover of standby power instrument and radio switch, located on pilot's eyebrow panel, to OFF position.
- d. Unlock battery switch, located on flight engineer's panel, and move to OFF position by pulling out on battery switch and then moving switch down.
- e. In case of fire (see fire detector light) or engines fail to shutdown, pull emergency fire T-handles, located on pilot's overhead panel.
- f. Move spring loaded toggle switch, located under T-handle, to main discharge, to release extinguishing agent.
- g. If fire was not extinguished after step e, wait 30 seconds before moving same switch to alternate discharge.

## 2. APU SHUTDOWN

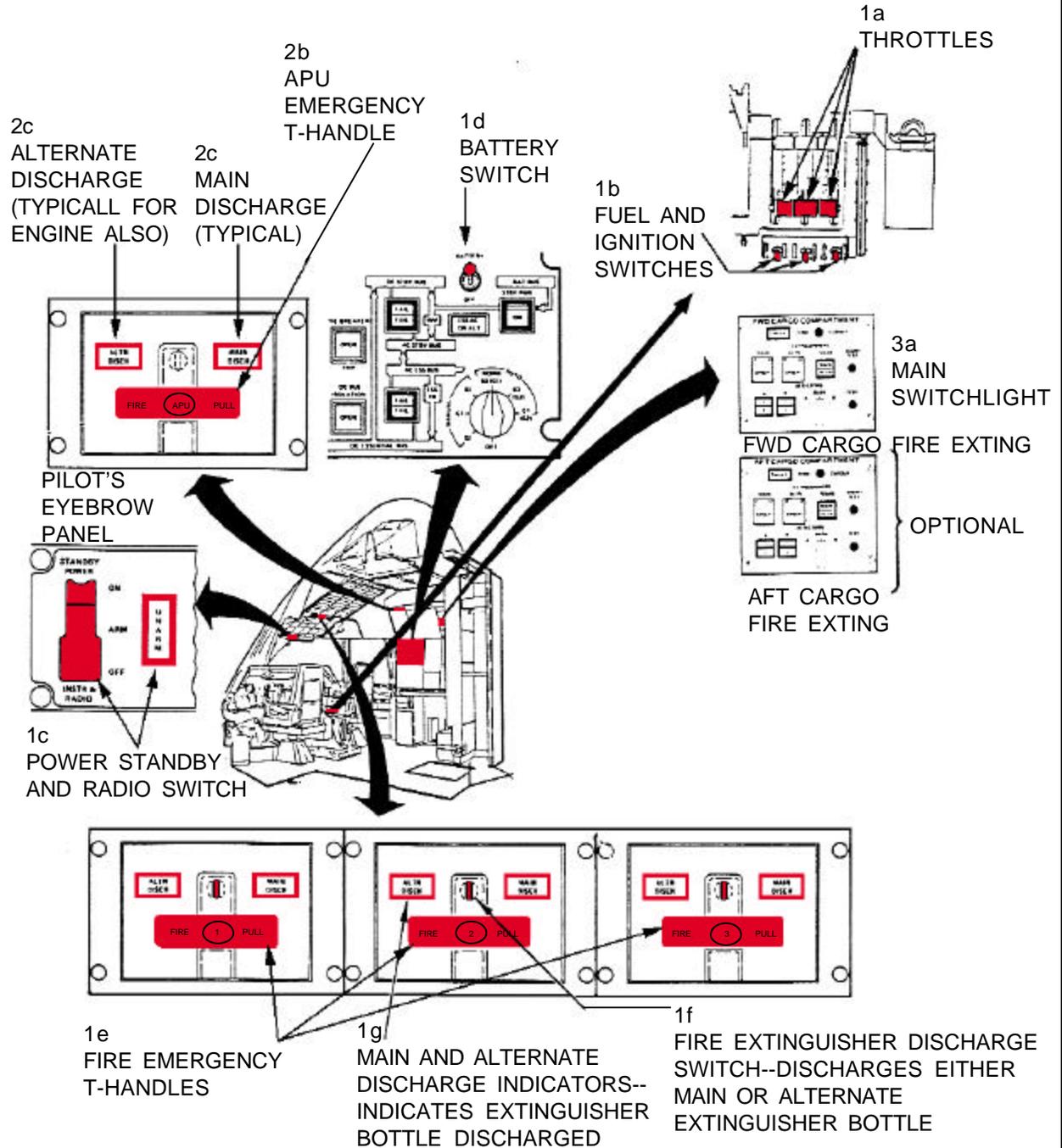
- a. Place APU master power switch, located on flight engineer's panel to OFF position.
- b. In case of APU fire (see fire detector light) pull T-handle, located on flight engineer's panel.
- c. Extinguisher discharge switch is exposed and bottle may be fired by moving switch to right or left.

## 3. CARGO FIRE EXTINGUISHMENT

- a. Lift guard and push main switchlight, assure discharge light comes on. Use alternate extinguisher if main does not extinguish fire. There is only one main and one alternate extinguisher bottle, either can be discharged into either cargo compartment (if applicable). Close applicable door for highest effectivity.

## 4. AIRCREW EXTRACTION

- a. Unlatch lap belt and remove shoulder harness from crewmember(s) and flight attendants.
- b. If seat tracks are not damaged during crash landing, use adjustable seat controls to retract seats to aft position.
- c. Passenger seats are equipped with lap belts only.



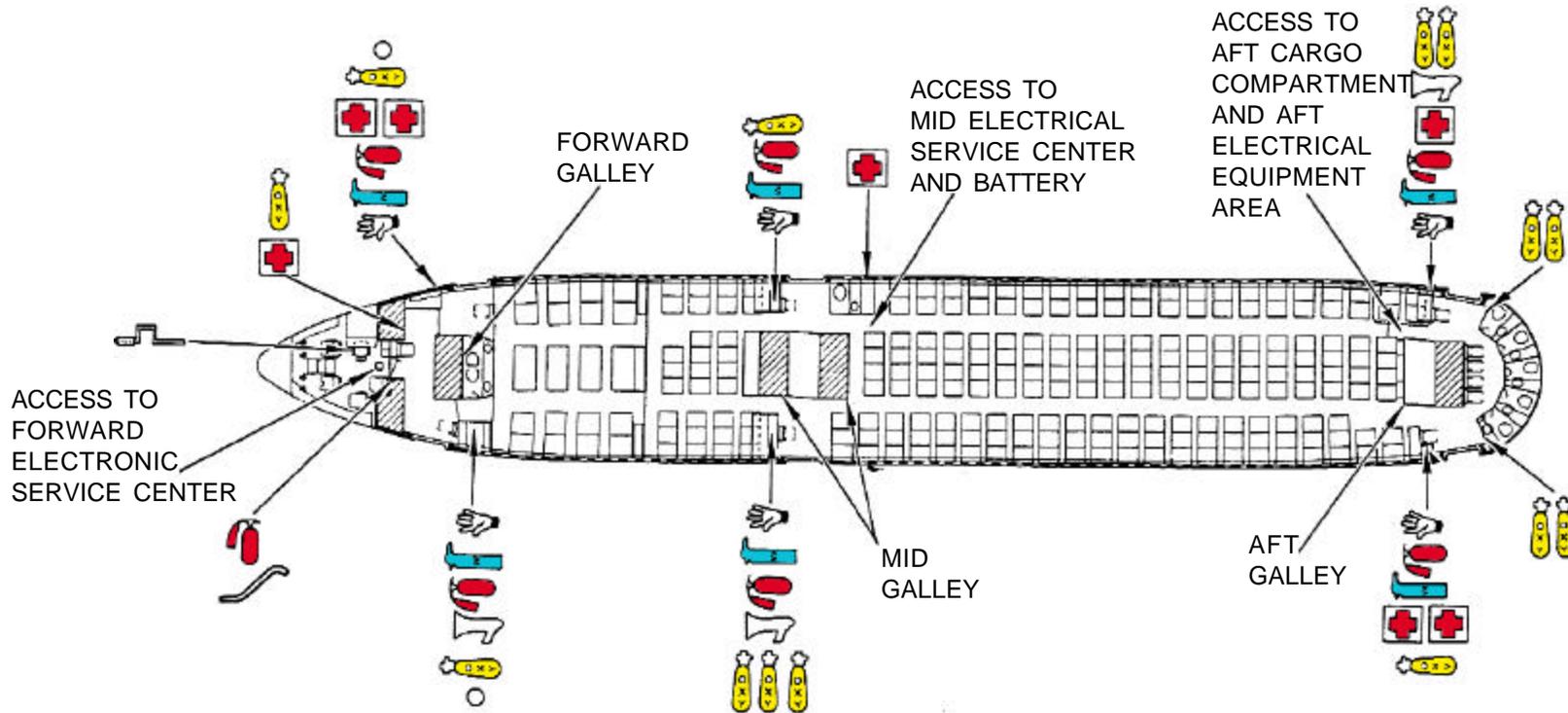
# EMERGENCY EQUIPMENT AND SEATING LOCATIONS

**NOTE:**

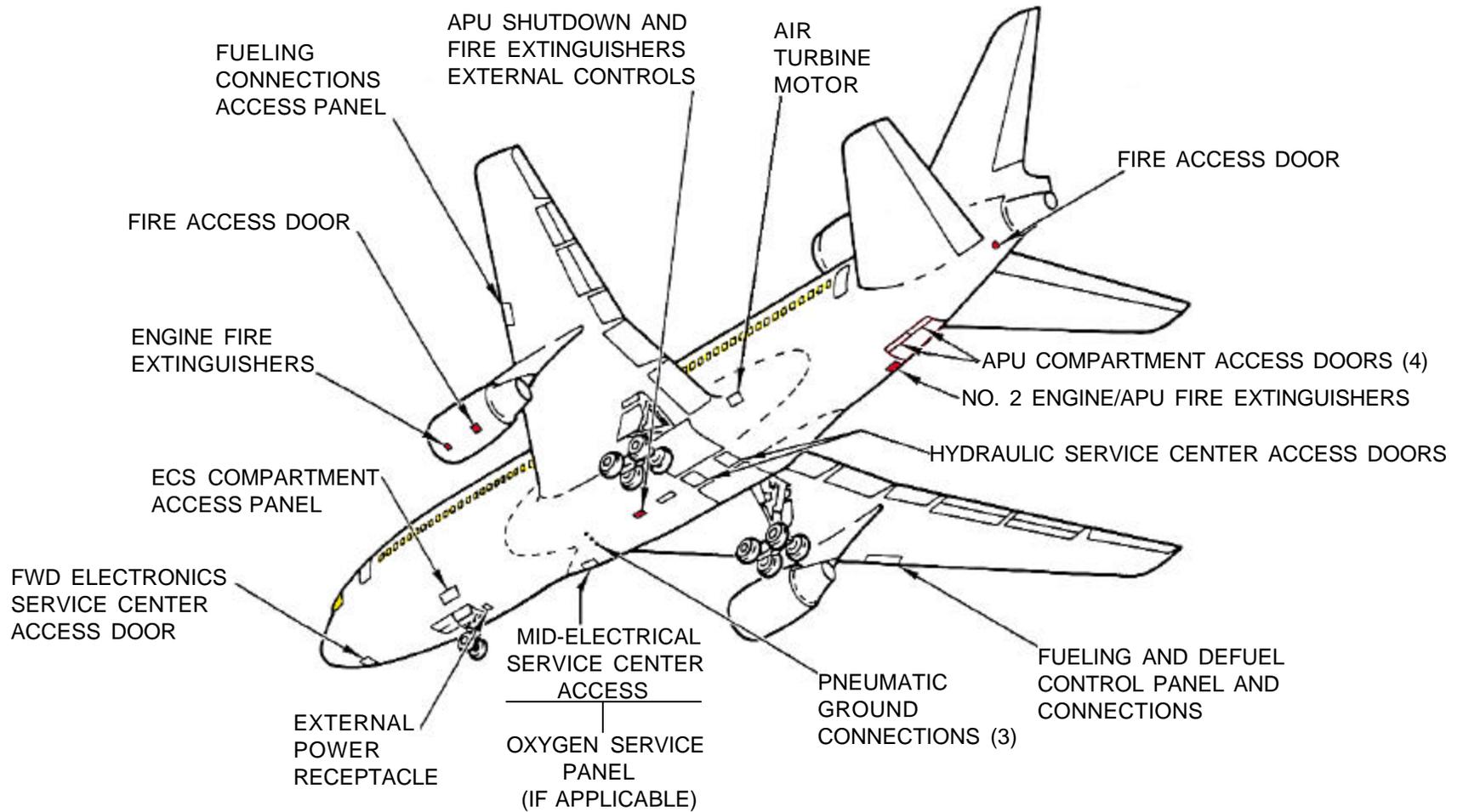
Flight crew is 3 plus attendants. First class is 24 with 6 abreast. Economy class is 222 with 9 abreast. All economy passenger capacity is a maximum of 400. Most common configuration has a maximum of 330 passengers.

**LEGEND:**

	PORTABLE OXYGEN		ASBESTOS GLOVES		H2O EXTINGUISHER		FIRST AID KIT		SURVIVAL PACK
	DOOR CRANK		CO2 EXTINGUISHER		JEMMY BAR OR FIRE AX		LOADHAULER		

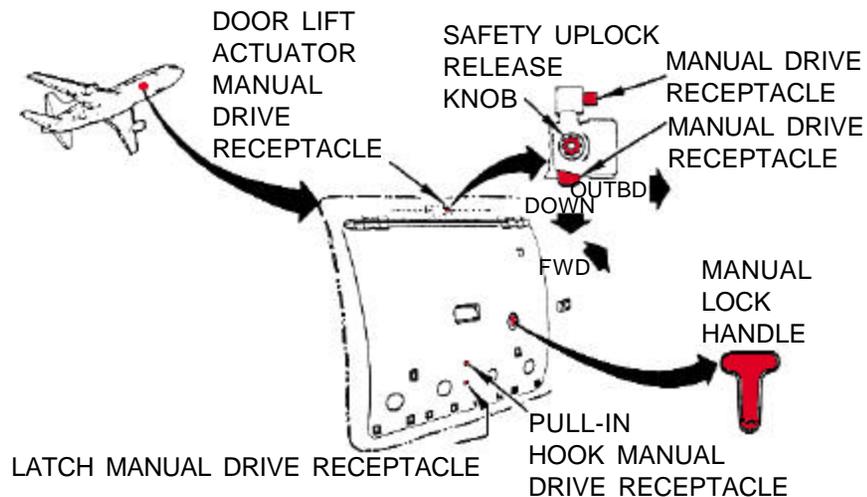


# ACCESS DOORS AND PANELS



# CARGO AND SERVICE CENTER DOORS

L-1011-500

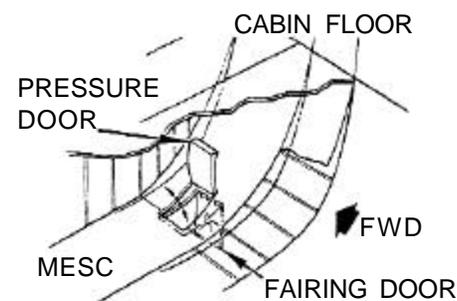


1. Pull manual handle to unlock door.

## NOTE:

To perform the remaining steps, a 1/2 inch square drive is needed.

2. Rotate the latch manual drive by cranking approximately 90 turns counterclockwise.
3. Rotate the hook manual drive approximately 90 turns counterclockwise.
4. Rotate the door lift manual drive counterclockwise until door is open (approximately 100 turns) enough to allow entry into the cargo compartment.
5. Inside the cargo compartment, rotate the door lift manual drive, located on the bottom of the lift actuator clockwise until the door is fully up or as necessary for entry.



MID ELECTRICAL SERVICE CENTER ACCESS DOORS

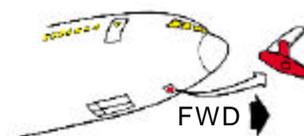
## TO OPEN FAIRING DOOR

1. Push button in.
2. Pull handle out and turn counterclockwise  $90^{\circ}$ .
3. Door opens out.

## TO OPEN PRESSURE DOOR

1. Turn handle counterclockwise  $90^{\circ}$ .
2. Push door up to engage retaining latch provides quick access to aircraft battery.

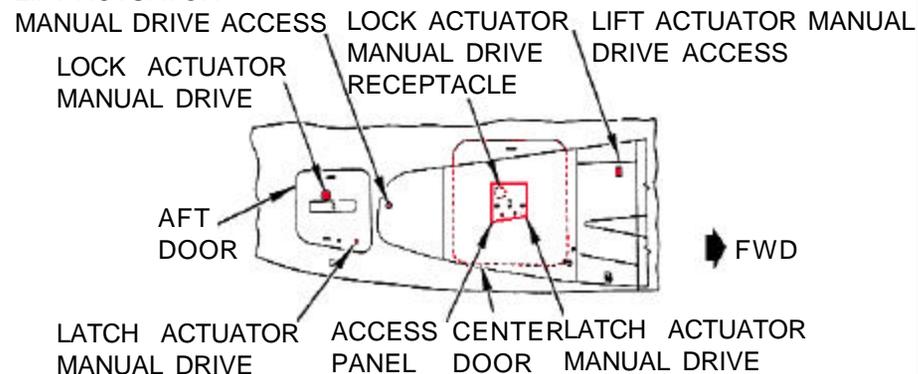
## FORWARD AVIONICS SERVICE CENTER DOOR OPERATION



### TO OPEN DOOR

1. Push button in.
2. Pull handle out and turn counterclockwise  $90^{\circ}$ .
3. Push door upward and aft.

## LIFT ACTUATOR



## CENTER AND AFT CARGO DOOR MANUAL OPERATION

### TO OPEN CENTER CARGO DOOR:

1. Open access panel (4 quick release latches).
2. Remove lock actuator manual drive access (tri-wing screwdriver with #5 tip required) and rotate the manual knob clockwise approximately 12 turns.
3. Under same access as in step 1 insert a 1/2 inch square drive hand crank in the latch manual drive and rotate 130 turns clockwise.
4. Open lift actuator manual drive access (1 quick release latch), insert a 1/2 inch square drive hand crank and rotate 200 turns counterclockwise or as necessary for entry.

### TO OPEN AFT CARGO DOOR

1. Remove lock actuator manual drive access (tri-wing screwdriver with #5 tip required) and rotate the manual knob clockwise approximately 12 turns.
2. Push in latch actuator manual drive access (spring loaded), insert a 1/2 inch square drive hand crank and rotate 130 turns clockwise.
3. Remove lift actuator manual drive access (tri-wing screwdriver with #5 tip required), insert a 1/2 inch square drive hand crank and rotate 200 turns counterclockwise or as necessary for entry.

# TYPICAL VERSION

-500 SERIES

# L-1011-500

