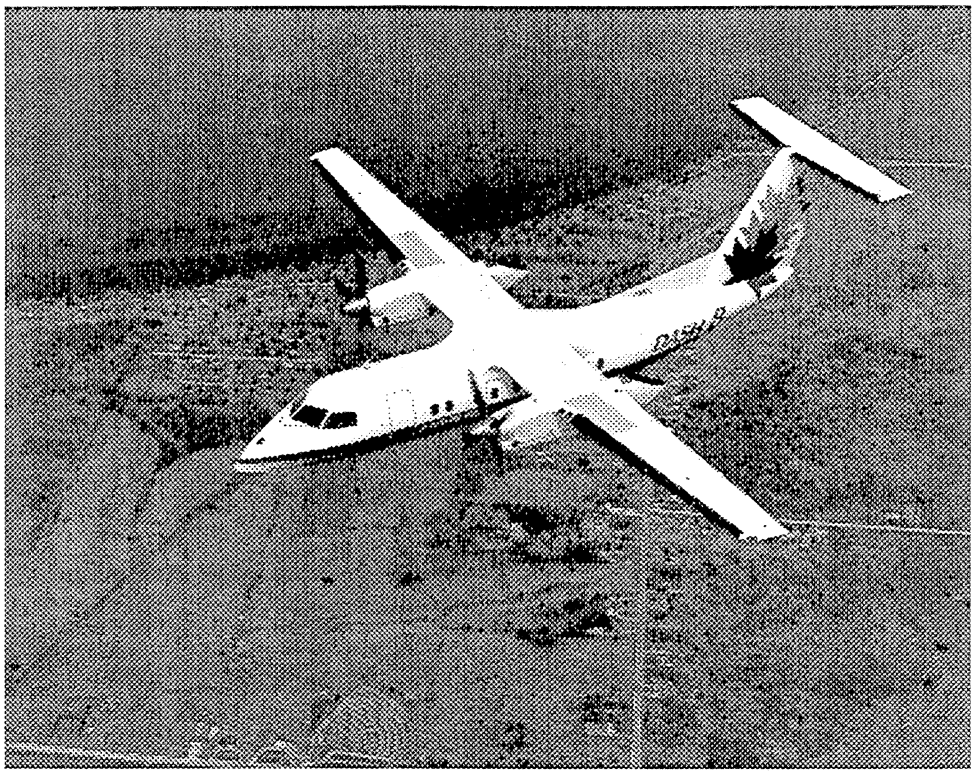
DASH 8 CRASH-FIRE-RESCUE INFORMATION



DASH 8
SERIES 100
CRASH-FIRE-RESCUE INFORMATION

PSM 1-8-14

THIS MANUAL IS FOR THE INFORMATION OF FIRE AND RESCUE PERSONNEL.

PRODUCT SAFETY DEPARTMENT OF CUSTOMER SUPPORT
BOEING OF CANADA LTD.
de HAVILLAND DIVISION
DOWNSVIEW, ONTARIO, CANADA M3K 1Y5

APRIL 1985
RE-ISSUED SEPTEMBER 30, 1991

Boeing Canada
de Havilland Division

DASH 8 CRASH-FIRE-RESCUE INFORMATION

LIST OF EFFECTIVE PAGES

Insert this page and latest revised page(s). Destroy superseded pages. Listed below are all current pages of the manual and their dates of issue.

PAGE	DATE
Title Page	September 30, 1991
A	September 30, 1991
Log of Revisions	September 30, 1991
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22	September 30, 1991

LOG OF REVISIONS

Insertion of all Revisions must be recorded in the Log of Revisions below.

Rev. No.	Date Inserted	Inserted By

Rev. No.	Date Inserted	Inserted By

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DASH 8 CRASH–FIRE–RESCUE INFORMATION

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DASH 8 CRASH-FIRE-RESCUE INFORMATION

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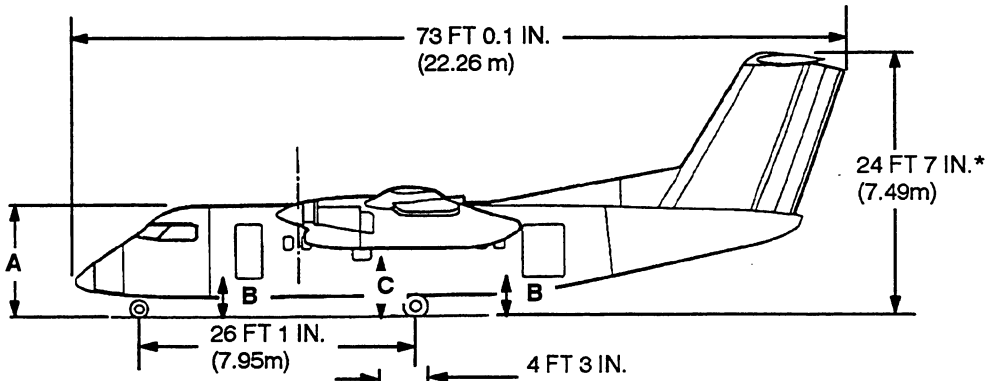
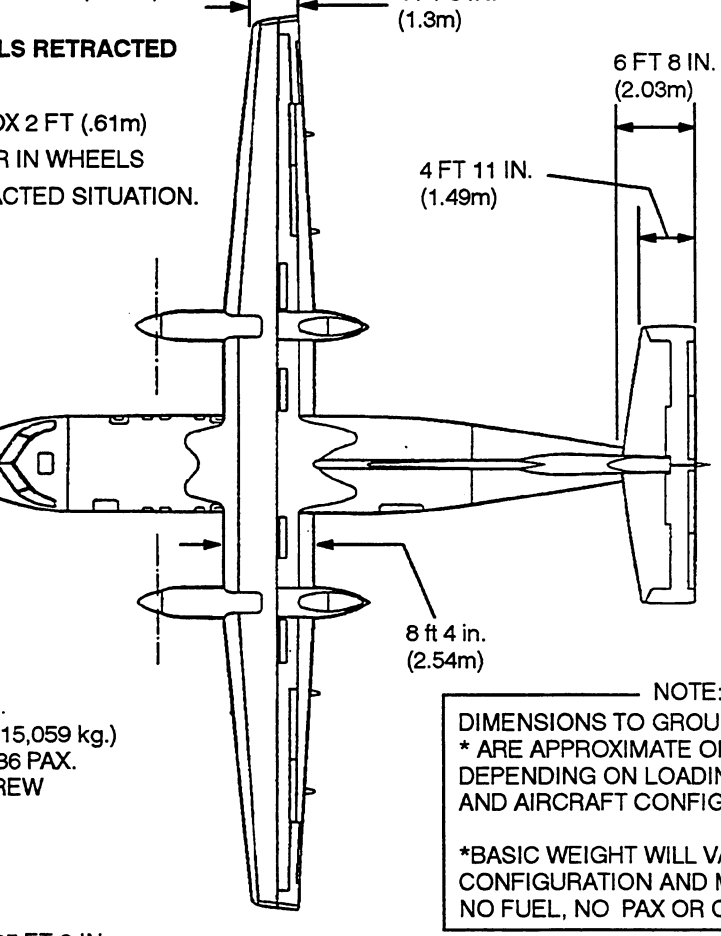
DASH 8 CRASH-FIRE-RESCUE INFORMATION



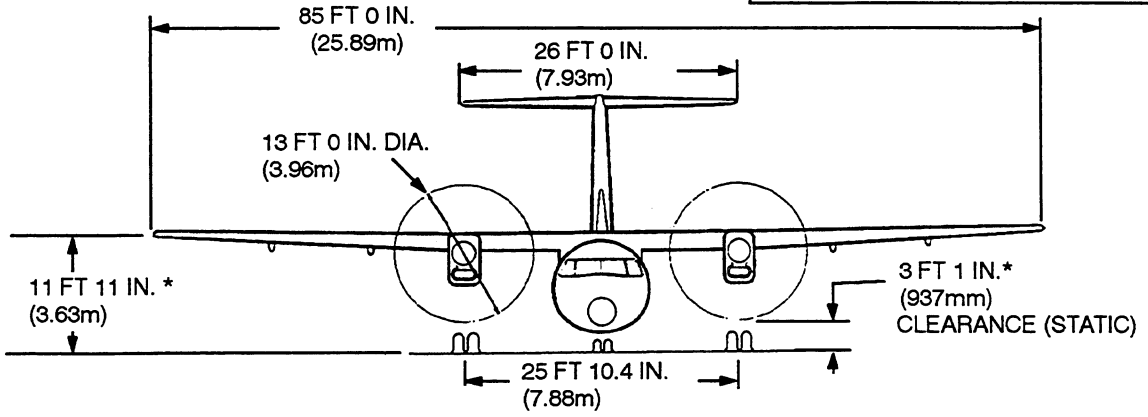


WHEELS EXTENDED	WHEELS RETRACTED
A=125.00 IN.(3.18m)	APPROX 2 FT (.61m)
B=43.00IN(1.09m)	LOWER IN WHEELS
C=63.00IN(1.6m)	RETRACTED SITUATION.

* BASIC WEIGHT = 21,047
GROSS WEIGHT = 33,200 lb. (15,059 kg.)
SEATING CAPACITY = UP TO 36 PAX.
AND CREW

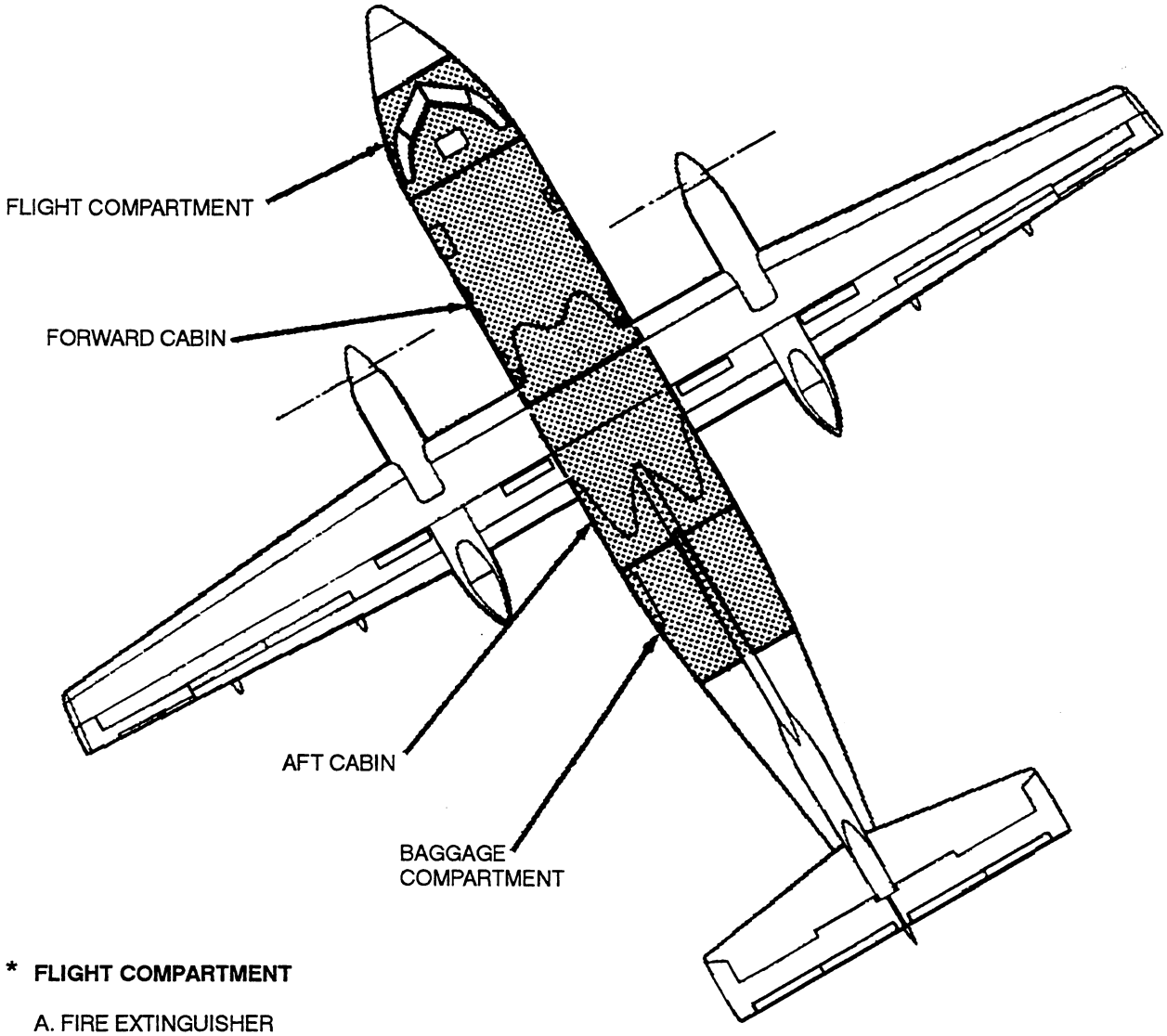
NOTE:
DIMENSIONS TO GROUND LINE INDICATED * ARE APPROXIMATE ONLY AND VARY DEPENDING ON LOADING CONDITIONS AND AIRCRAFT CONFIGURATION.

*BASIC WEIGHT WILL VARY DUE TO CONFIGURATION AND MODIFICATION NO FUEL, NO PAX OR CREW.



GENERAL ARRANGEMENT

Boeing Canada
de Havilland Division
DASH 8 CRASH-FIRE-RESCUE INFORMATION



*** FLIGHT COMPARTMENT**

A. FIRE EXTINGUISHER
B. FIRE AXE LOCATION
C. PORTABLE OXYGEN BOTTLE

*** FORWARD CABIN**

A. OXYGEN BOTTLES
B. GALLEY LOCATION
C. EMERGENCY DOOR-TYPE II
D. FIRST AID KIT

*** AFT CABIN**

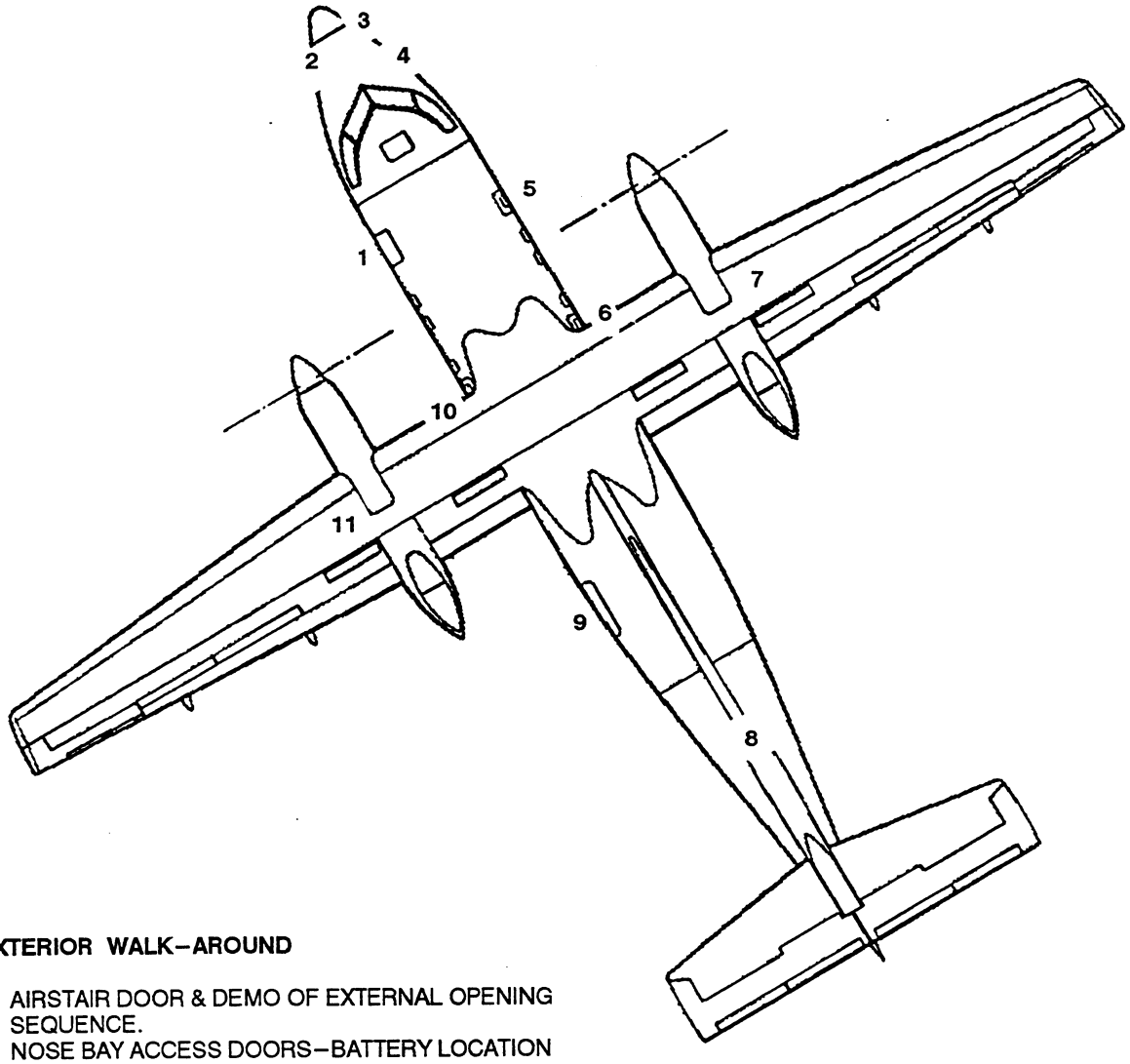
A. EMERGENCY DOORS-TYPE III
B. FIRE EXTINGUISHER BOTTLES

*** BAGGAGE COMPARTMENT**

A. ACCESS TO BAGGAGE COMPARTMENT
B. SMOKE DETECTOR

FAMILIARIZATION AND LOCATION GUIDE

DASH 8 CRASH-FIRE-RESCUE INFORMATION



EXTERIOR WALK-AROUND

1. AIRSTAIR DOOR & DEMO OF EXTERNAL OPENING SEQUENCE.
2. NOSE BAY ACCESS DOORS-BATTERY LOCATION & MAIN ELECTRICAL CONTACTOR BOX.
3. OXYGEN BOTTLE.
4. NOSE GEAR WHEEL WELL, NOSE GEAR HYDRAULIC & RESERVOIR.
5. TYPE II EMERGENCY DOOR - EXTERNAL OPENING SEQUENCE.
7. TYPE III EMERGENCY DOOR - EXTERNAL OPENING SEQUENCE.
8. REAR COMPARTMENT ACCESS DOOR - OPENING SEQUENCE & FLIGHT DATA RECORDER & COCKPIT RECORDER LOCATION.
9. BAGGAGE COMPARTMENT DOOR - OPENING SEQUENCE.
10. TYPE III EMERGENCY DOOR - EXTERNAL OPENING SEQUENCE.
11. NO1. NACELLE, MAIN LANDING GEAR & HYDRAULIC RESERVOIR.

EXTERIOR WALK-AROUND

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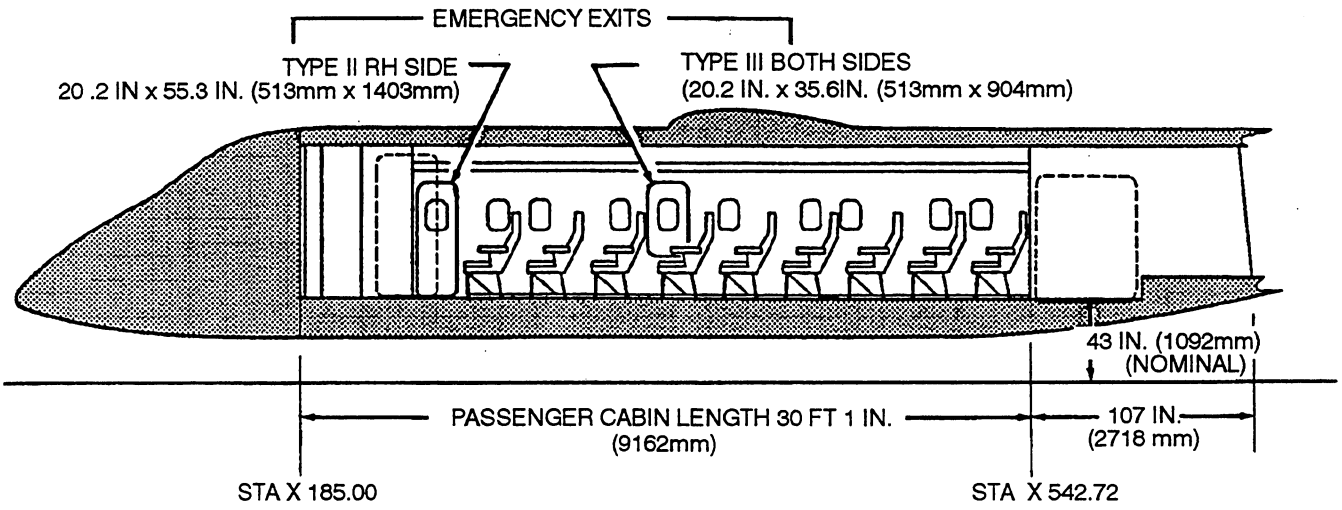
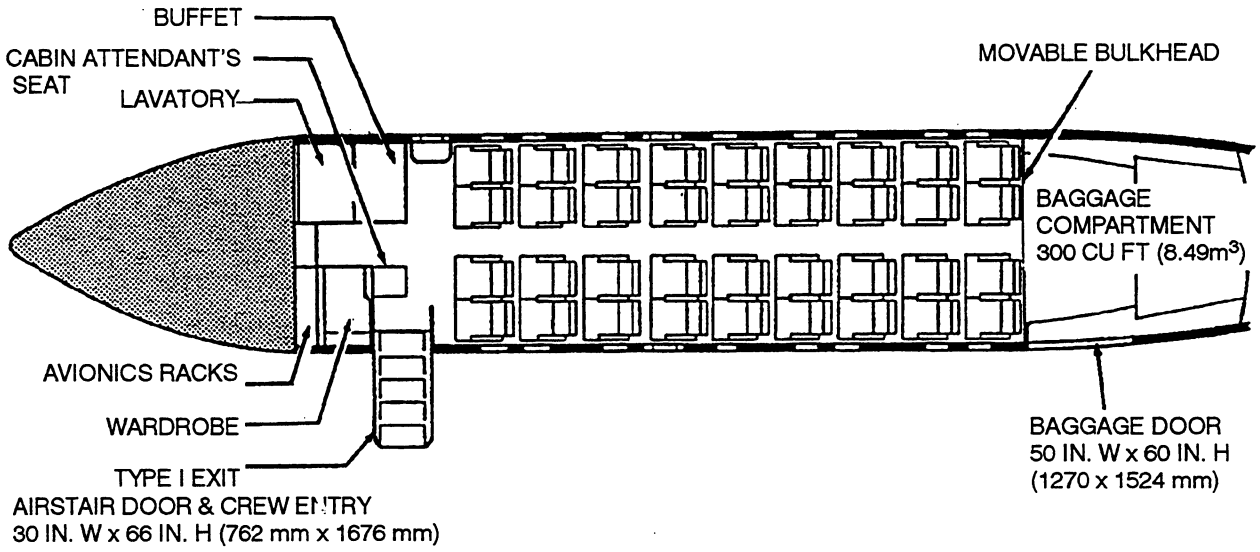
DASH 8 CRASH–FIRE–RESCUE INFORMATION

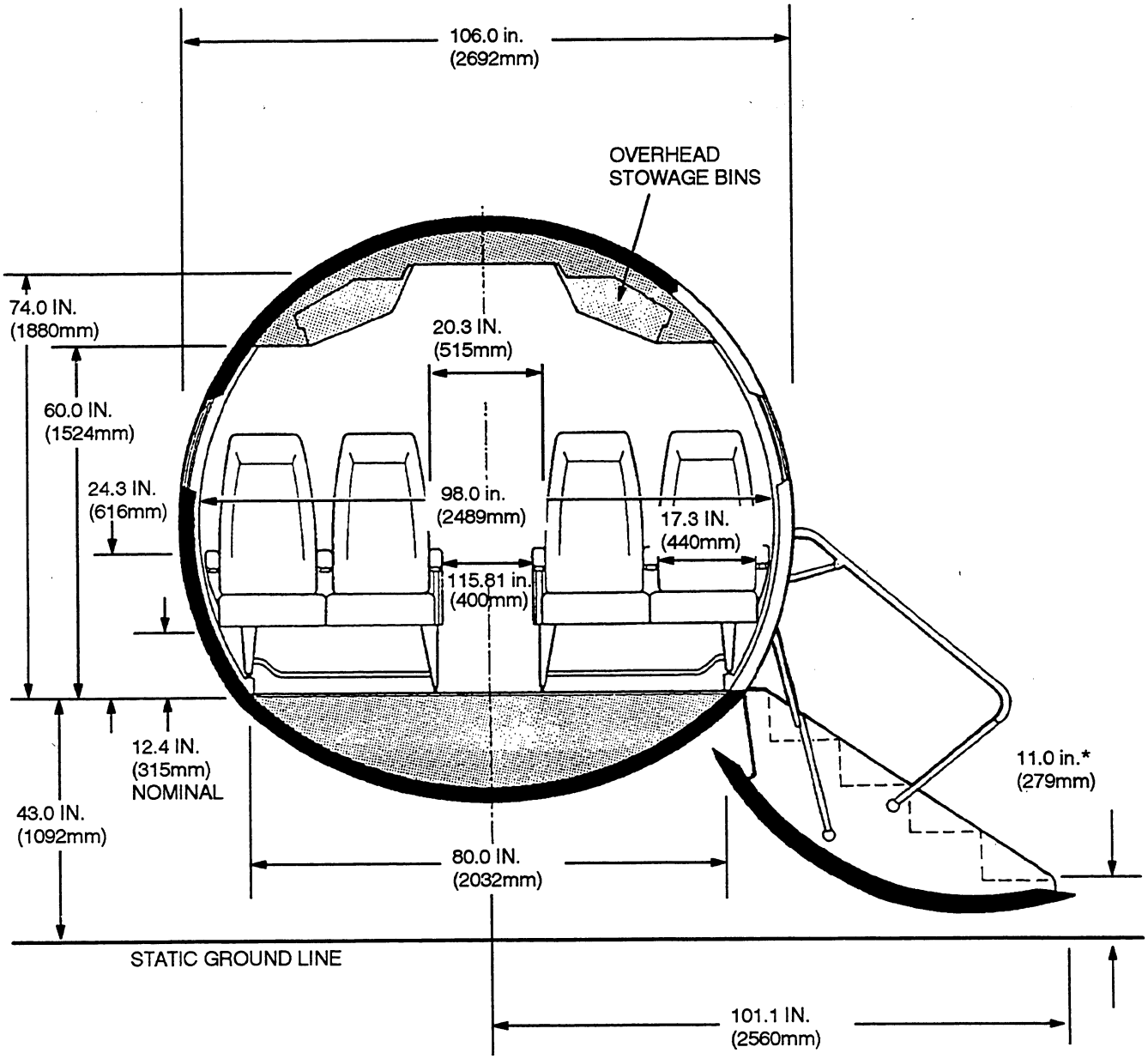
36 PASSENGER STANDARD AIRCRAFT





- 36 PASSENGERS AT 31 INCH PITCH (787 mm)
- 8.3 CU FT. BAGGAGE PER PASSENGER (0.24 m^3)

INTERIOR ARRANGEMENT



NOTE:

* DIMENSIONS ARE APPROXIMATE AND MAY VARY DEPENDING ON AIRCRAFT CONFIGURATION AND LOADING CONDITIONS.

CABIN CROSS-SECTION

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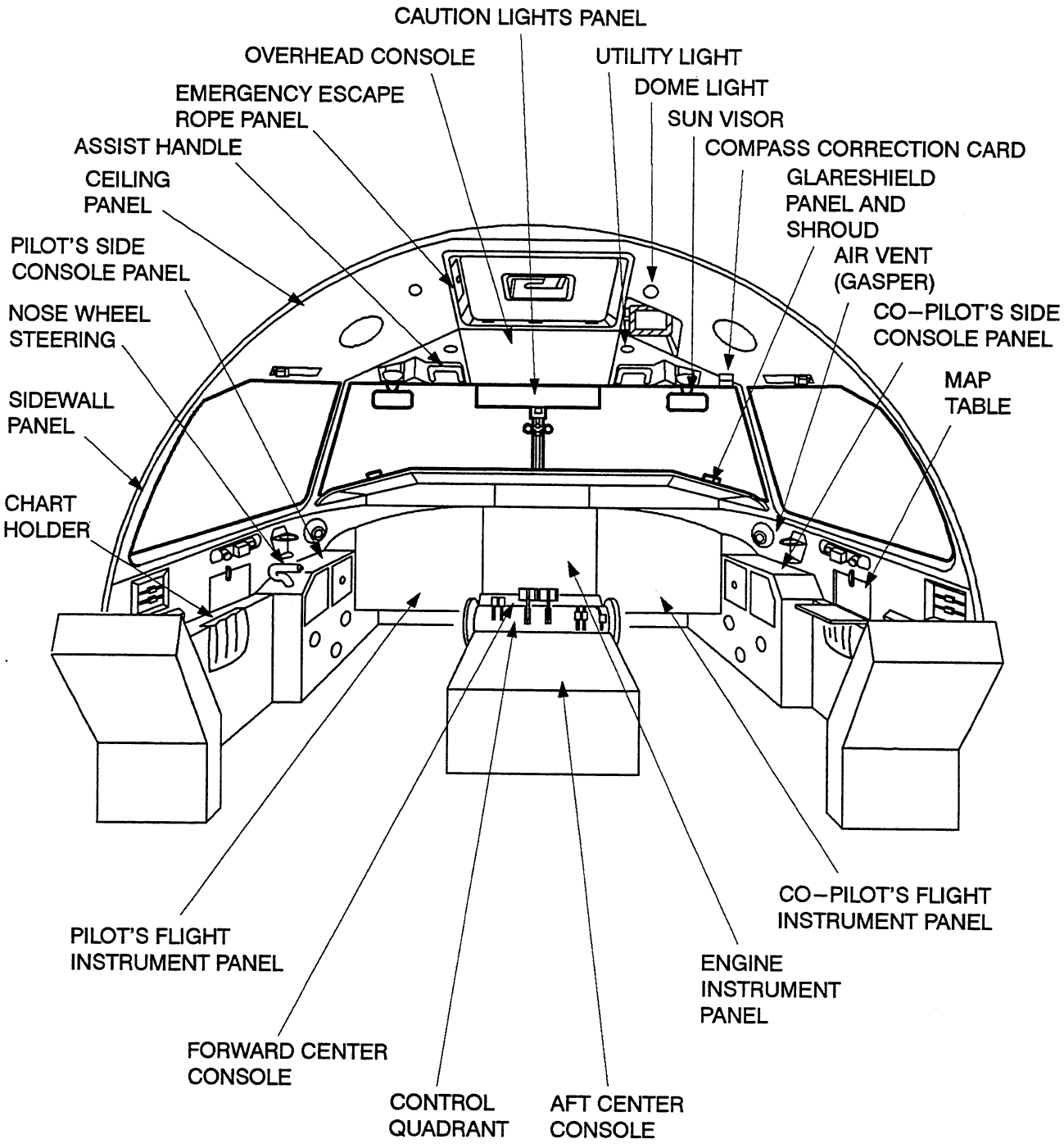
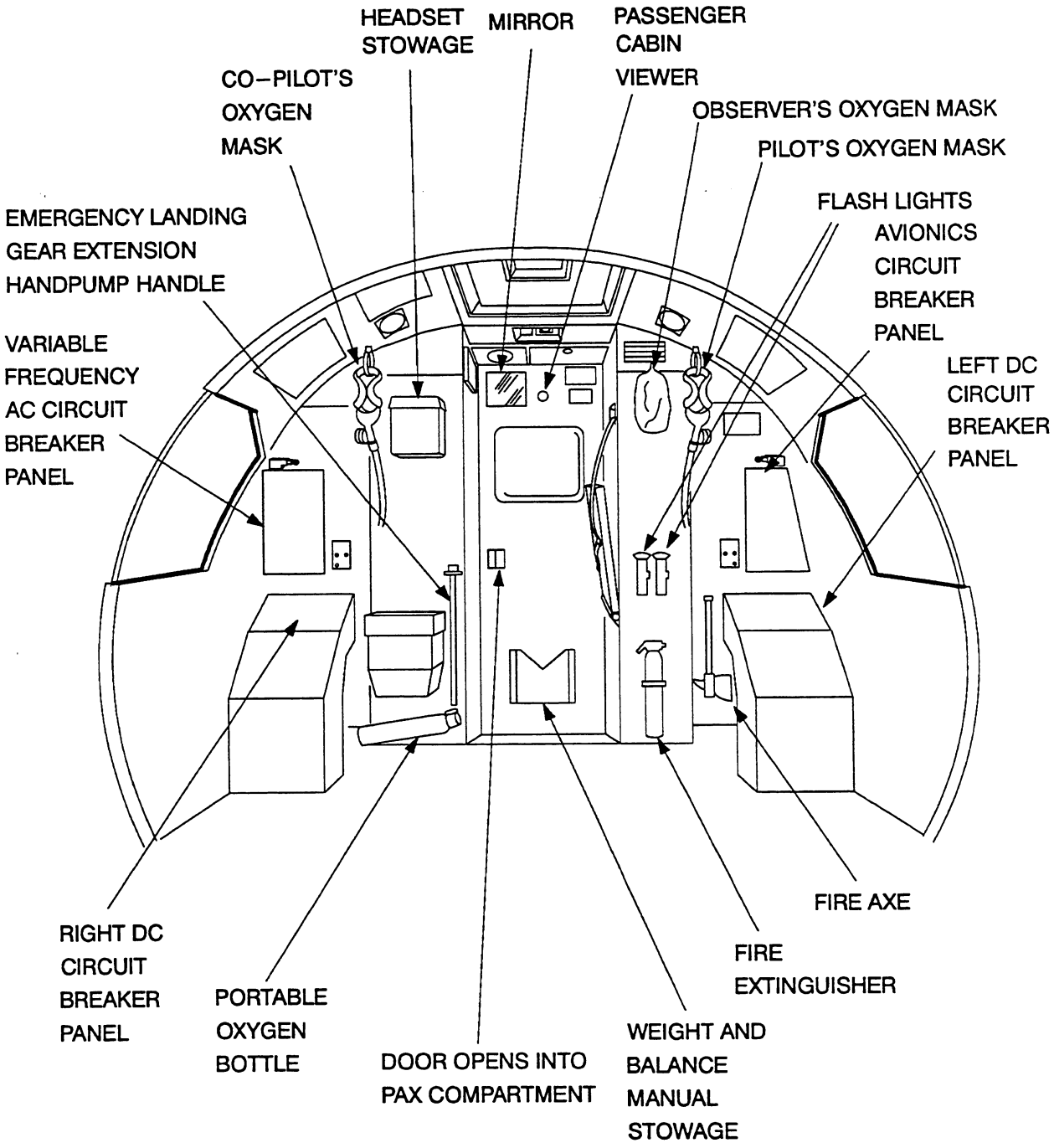


FLIGHT COMPARTMENT (VIEW FORWARD)

DASH 8 CRASH-FIRE-RESCUE INFORMATION



FLIGHT COMPARTMENT (VIEW AFT)

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DASH 8 CRASH-FIRE-RESCUE INFORMATION

EXITS

GENERAL

There are five emergency exits located on the aircraft. A Flight Compartment Emergency Escape Hatch, available to the flight crew, is located in the Flight Compartment roof and is operated by an internal handle. An Airstair door, located on the forward left side of the fuselage, is operated by internal or external handles. The Airstair door incorporates an inflatable seal fed from the 18 psi deicing system. A Type II emergency exit door is located on the right side of the fuselage, opposite the airstair door. Two Type III emergency exit doors are located one on each side of the fuselage, just forward of the wing. The Type II and Type III emergency exit doors each incorporate a window and may be opened by either internal or external handles located below the window. The Type II and Type III emergency exit doors incorporate a compression seal around the outside of the door to contain aircraft pressurization when the doors are closed.

TYPE II AND TYPE III EMERGENCY EXIT DOOR OPERATION

The external handle, located below the window, is flush with the door skin and incorporates a push-button for quick-release, enabling the handle to be rotated. Rotating the handle actuates the locking pin and vent dish by a system of pulleys, a cable and a shaft quadrant. A cable guard is installed over the shaft quadrant.

To remove either the Type II or Type III emergency exit door using the external handle, push the quick-release button to release the handle. Turn the handle counterclockwise to open the vent and retract the locking pin. Push the door inward.

AIRSTAIR DOOR OPERATION

The Airstair door is opened externally by operation of the door handle lever located on the left side of the fuselage just forward of the door. Initial movement of the handle trips the door seal pressurizing valve to release the seal pressure allowing cabin pressure to deplete. Continued movement of the handle moves the door upward and inward to clear the ten pressure pads from their mating stops so that the door may be manually pulled open. Door lowering is assisted by a door counter-balance system.

SERVICE DOORS

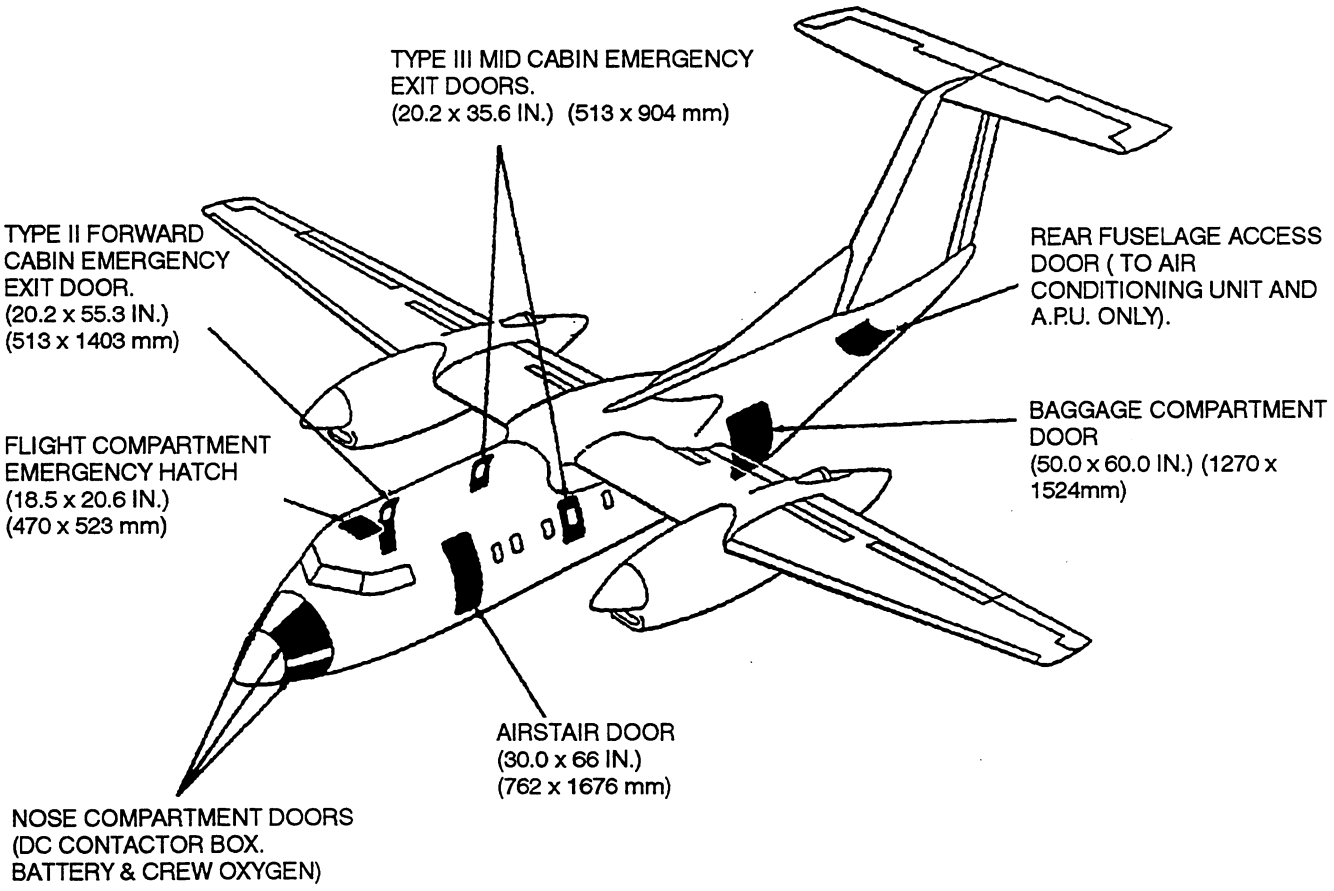
BAGGAGE DOOR OPERATION

The Baggage door is located on the left side of the rear fuselage. The door is opened and closed manually using an external handle which normally is flush with the door skin. A quick-release button is located in the center of the handle.

To open the Baggage door, release the handle from the stowed position by pushing the quick-release button. Rotate the handle 180 degrees counterclockwise to unlock the door and initiate an inward and upward movement. Stow the handle by pressing it back into its recess in the door and, while supporting the door, manually raise to the fully open position. Secure the door in the open position by engaging the door support strut.

NOTE

Cabin compartment emergency entry from the baggage compartment is not normally possible.



AIRCRAFT DOORS AND GROUND SERVICE PANELS

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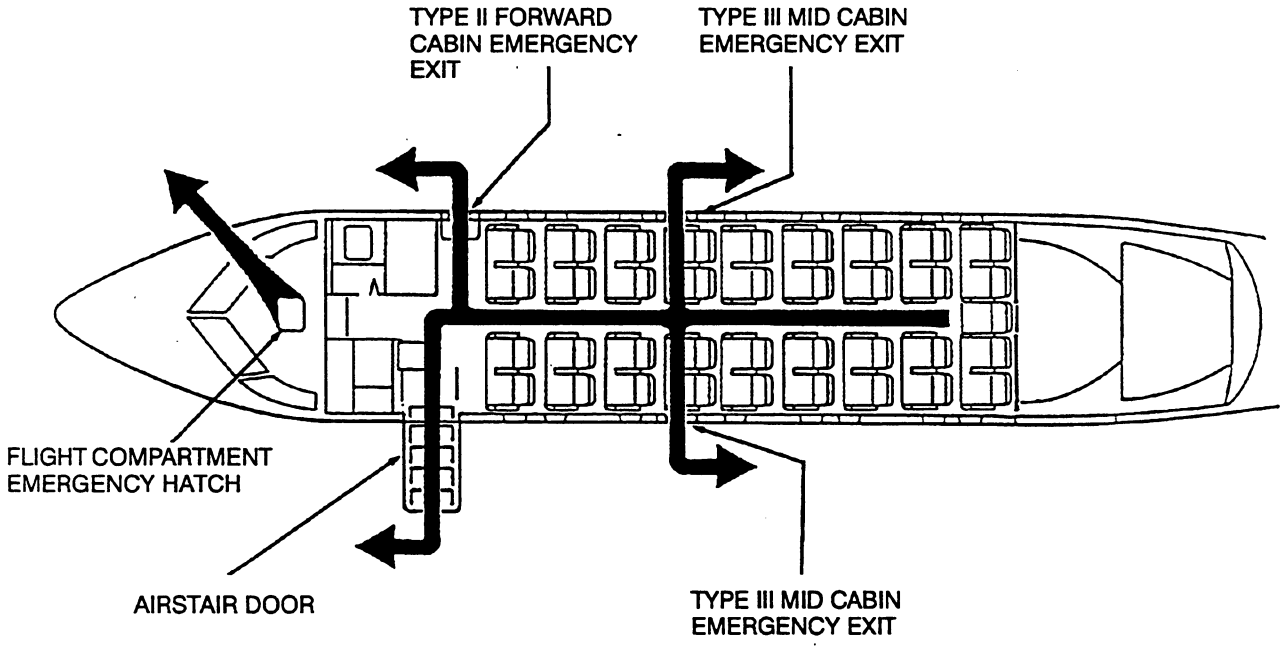
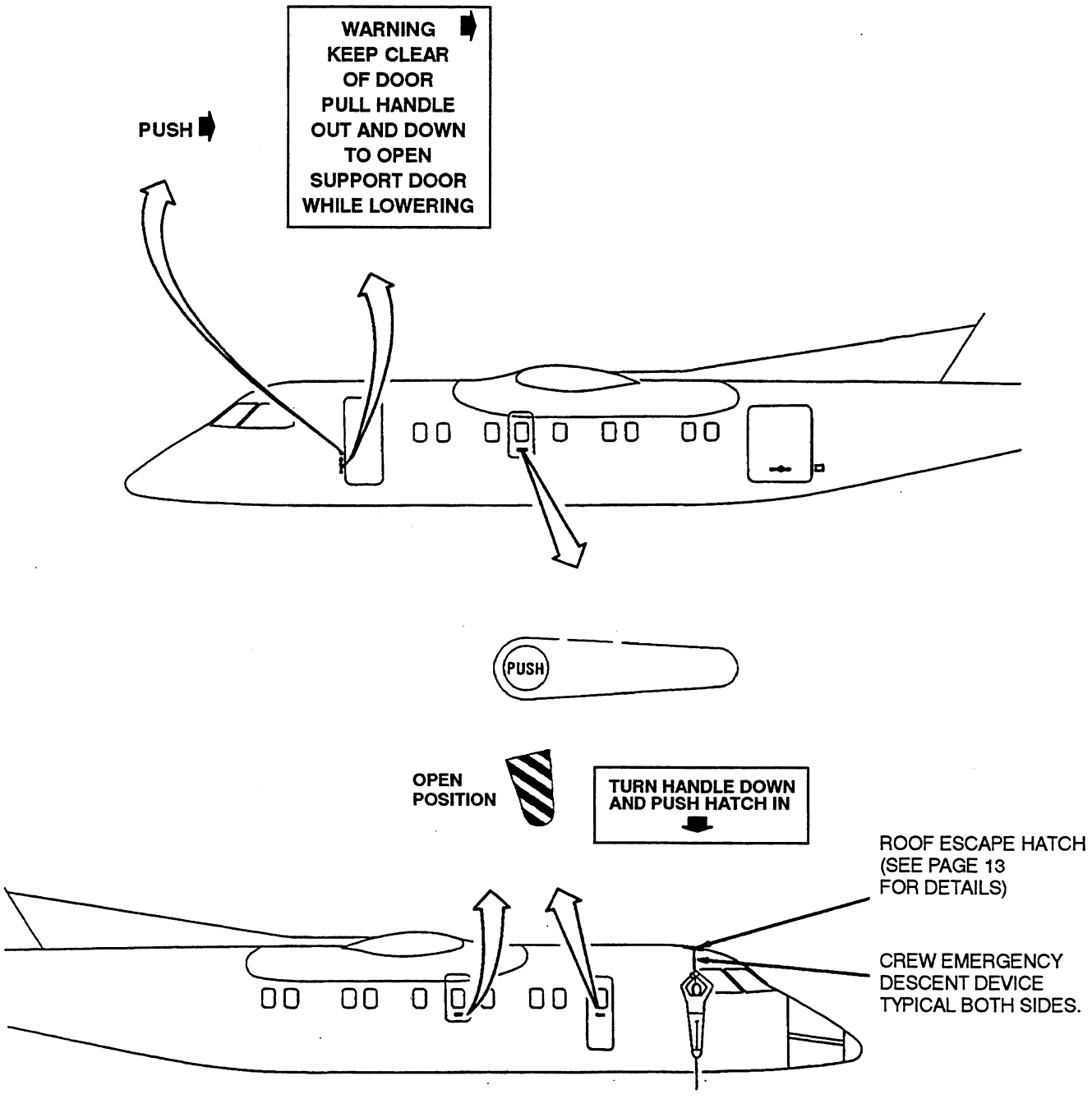
DASH 8 CRASH–FIRE–RESCUE INFORMATION



EVACUATION ROUTES

DASH 8 CRASH-FIRE-RESCUE INFORMATION



PASSENGER AND CREW ESCAPE SYSTEMS

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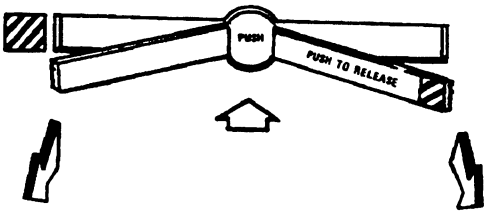
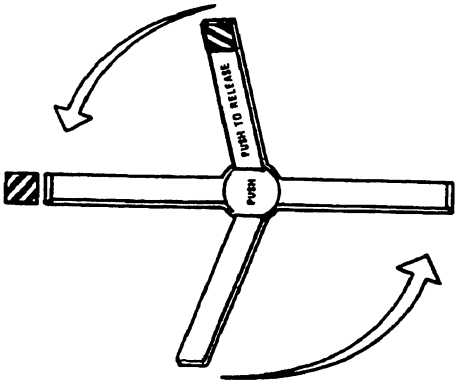
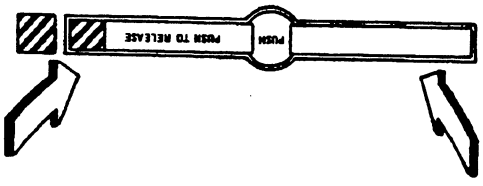
DASH 8 CRASH-FIRE-RESCUE INFORMATION



1 TO OPEN, PUSH ON BUTTON DOOR HANDLES SPRING OUTWARDS

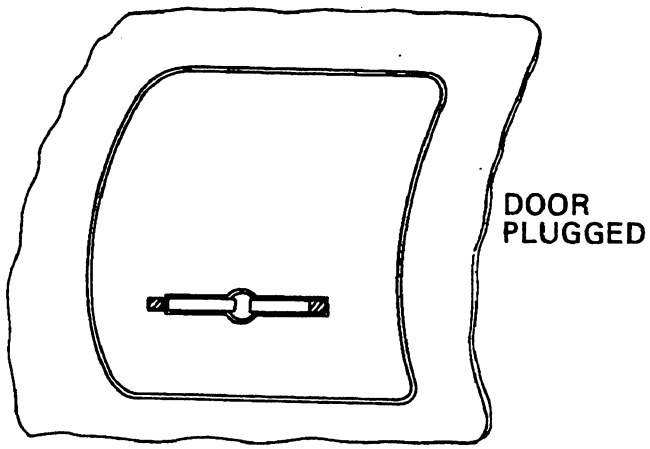


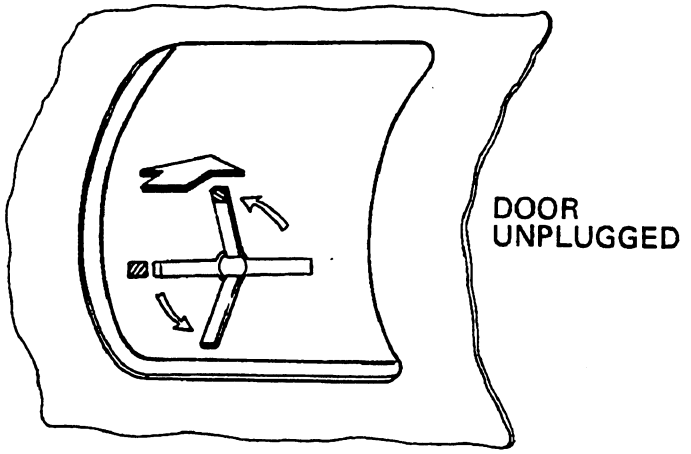
2 TURN HANDLES COUNTER CLOCKWISE 180° (DOOR MOVES INWARDS)

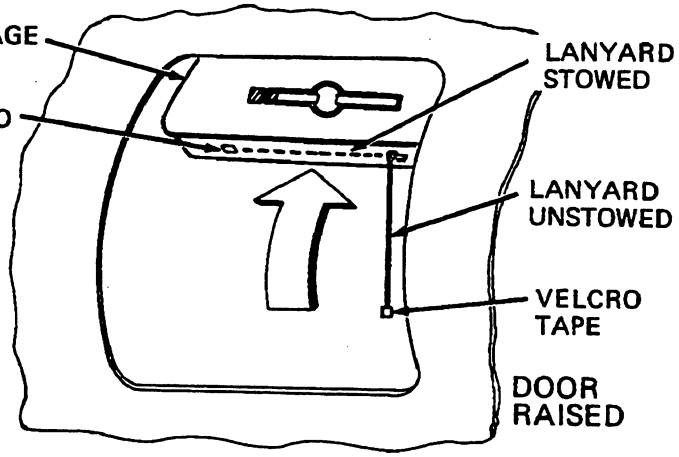


3 PUSH HANDLES IN FLUSH WITH FUSELAGE, THEN PUSH DOOR UPWARDS TO OPEN

4 TO CLOSE, PULL BAGGAGE DOOR DOWN AND TURN HANDLE CLOCK-WISE 180°







WARNING

LIFT DOOR TO OPEN
HANDLE TO BE FLUSH BEFORE LIFTING
WHEN RAISING OR LOWERING KEEP CLEAR OF DOOR PATH

NOTE:
UNSTOW LANYARD AS REQUIRED FOR CLOSING DOOR. ONCE DOOR IS PULLED DOWN, RESTOW LANYARD BEFORE REPLUGGING DOOR (PRE-MOD 8/1056 AIRPLANES). ON AIRPLANES INCORPORATING MOD 8/1056, THE LANYARD STRAP IS REPLACED BY A SUPPORT STRUT. SECURE THE STRUT TO THE RIGHT SIDE DOOR FRAME BRACKET TO SUPPORT THE DOOR IN THE OPEN POSITION. RESTOW SUPPORT STRUT INTO SPRING CLIP BEFORE RE-PLUGGING DOOR.

BAGGAGE DOOR OPERATION

FLIGHT COMPARTMENT EMERGENCY ESCAPE HATCH

DESCRIPTION

The Flight Compartment escape hatch, located in the Flight Compartment roof, is completely detachable for emergency exit or can be partially opened for ventilation when the aircraft is on the ground. The hatch is mounted at the rear on two support fittings and at the front by two locking and release fittings. An operating handle, located in the center of the hatch, is retained in an open or closed position by an overcenter spring. The handle operates a transversely-mounted torque shaft assembly with arms attached at each end. Rollers at the end of each arm engage detented locking release fittings installed in the Flight Compartment roof structure.

A seal is installed around the edge of the hatch to contain the aircraft pressurization when the hatch is closed.

OPERATION

To open the Flight Compartment escape hatch, rotate the handle 72 degrees counterclockwise. A mechanical linkage connected to the handle rotates the torque tube and the rollers move forward in the fittings where they are supported by the spring-loaded detents. Controlled by the geometry of the torque tube and the rollers, the hatch pivots about the rear support fittings and opens approximately one inch at the front. Opening the hatch permits depressurization and provides a modest amount of ventilation to the Flight Compartment.

A downward pull on the handle of approximately 40 pounds releases the rollers against the action of the forward locking and release detent springs. The hatch may then be completely removed.

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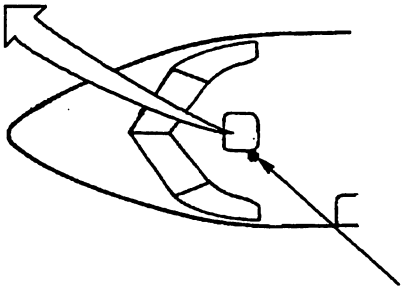
DASH 8 CRASH-FIRE-RESCUE INFORMATION

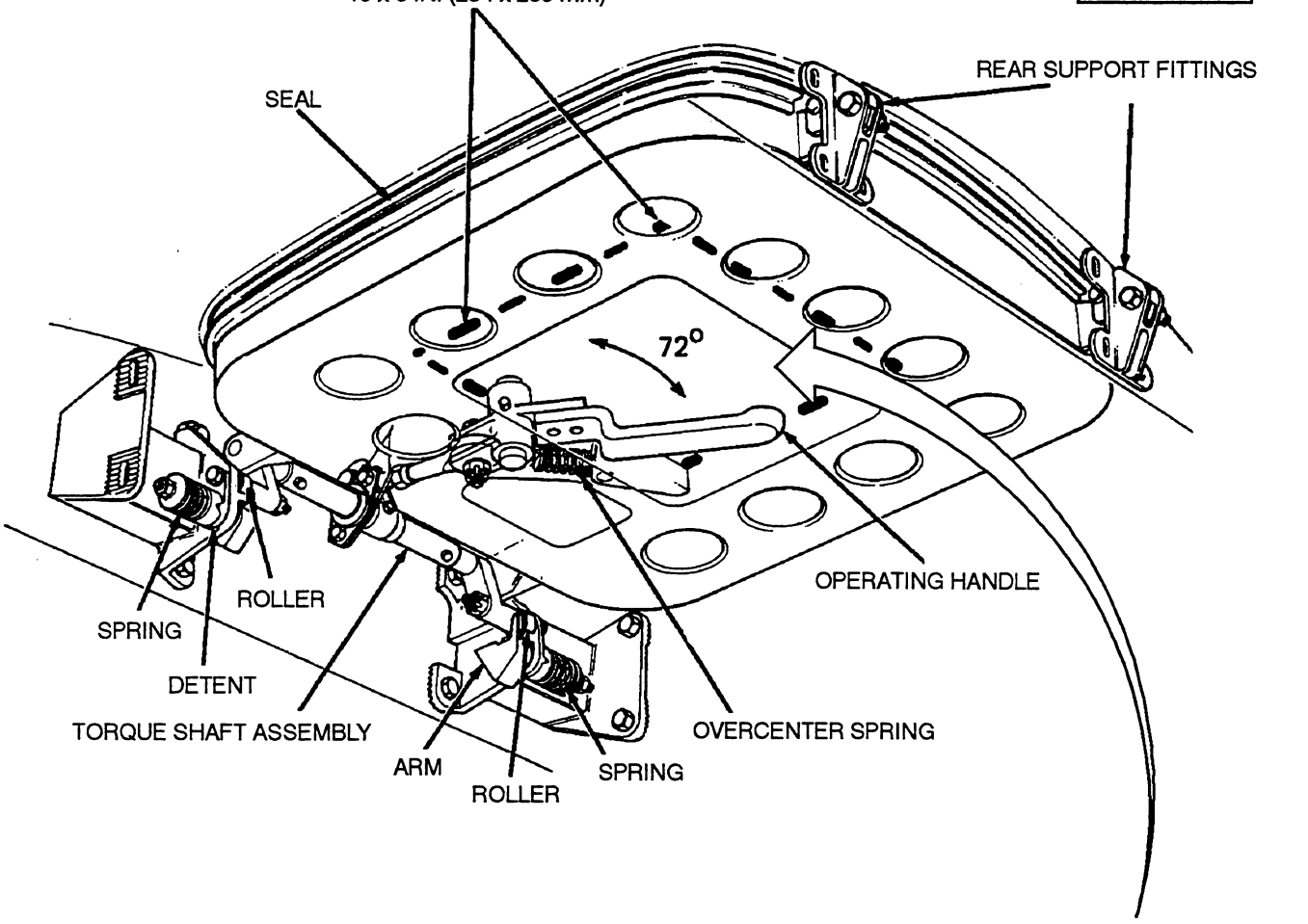
FLIGHT COMPARTMENT
EMERGENCY HATCH
18.5" X 20.6" (470 X 523 mm)

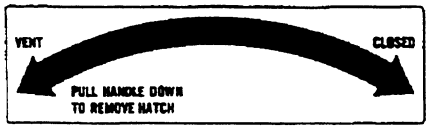


NOTE:

IN AN EMERGENCY IT MAY BE POSSIBLE BY CUTTING THROUGH THE OUTER SKIN TO GAIN ACCESS TO REPOSITION THE OPERATING HANDLE FROM OUTSIDE AND THEN FORCE THE HATCH DOWNWARDS.

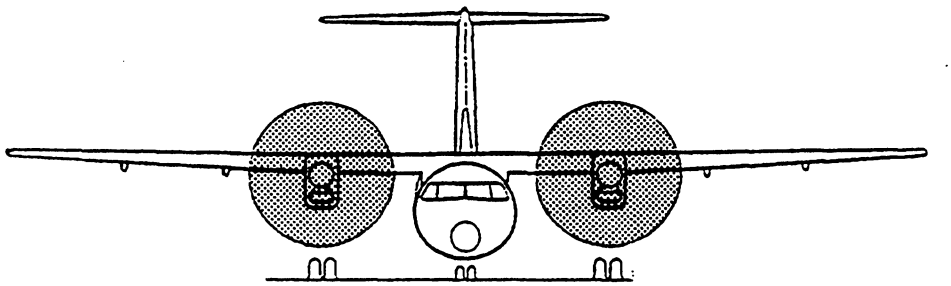
EMERGENCY ESCAPE ROPE





FLIGHT COMPARTMENT EMERGENCY ESCAPE HATCH

DASH 8 CRASH-FIRE-RESCUE INFORMATION



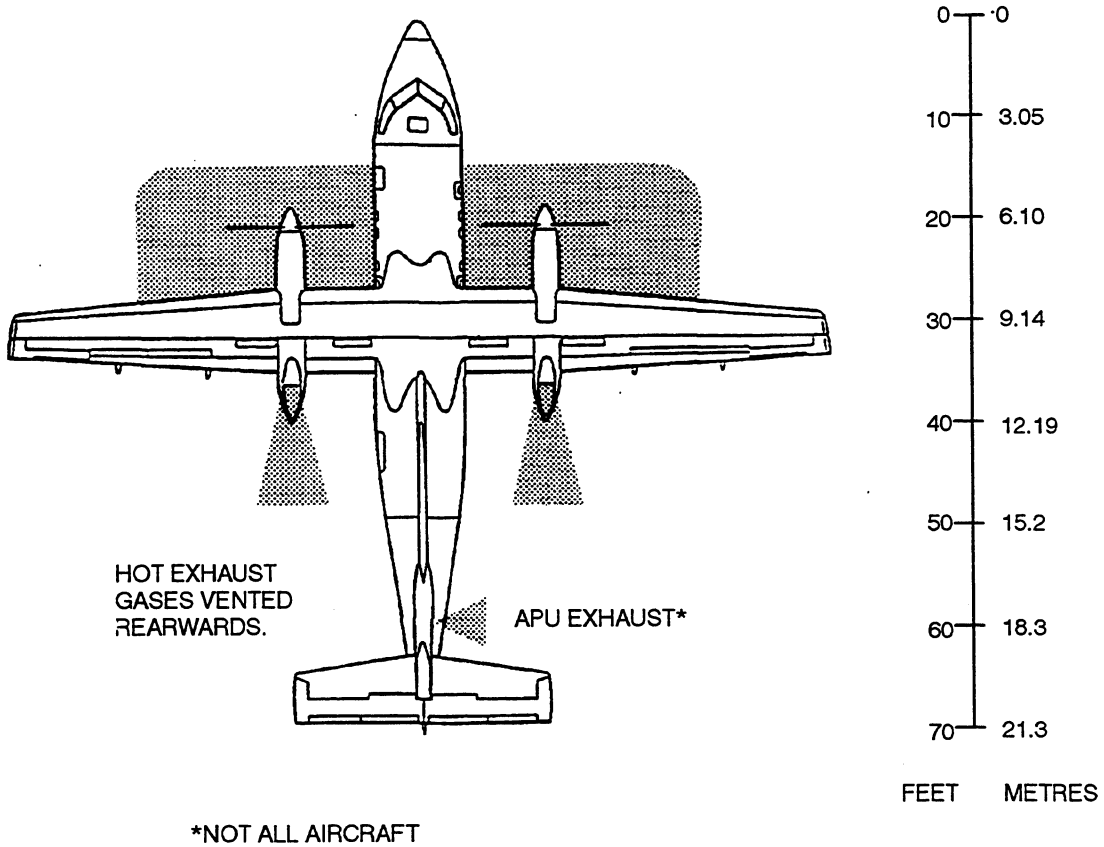
METRES

0 3.05 6.10 9.14 12.19 15.2 18.3 21.3 24.4

0 10 20 30 40 50 60 70 80

FEET

PERSONNEL DANGER AREAS
(WHEN ENGINES ARE OPERATING)



*NOT ALL AIRCRAFT

ENGINE DANGER AREAS

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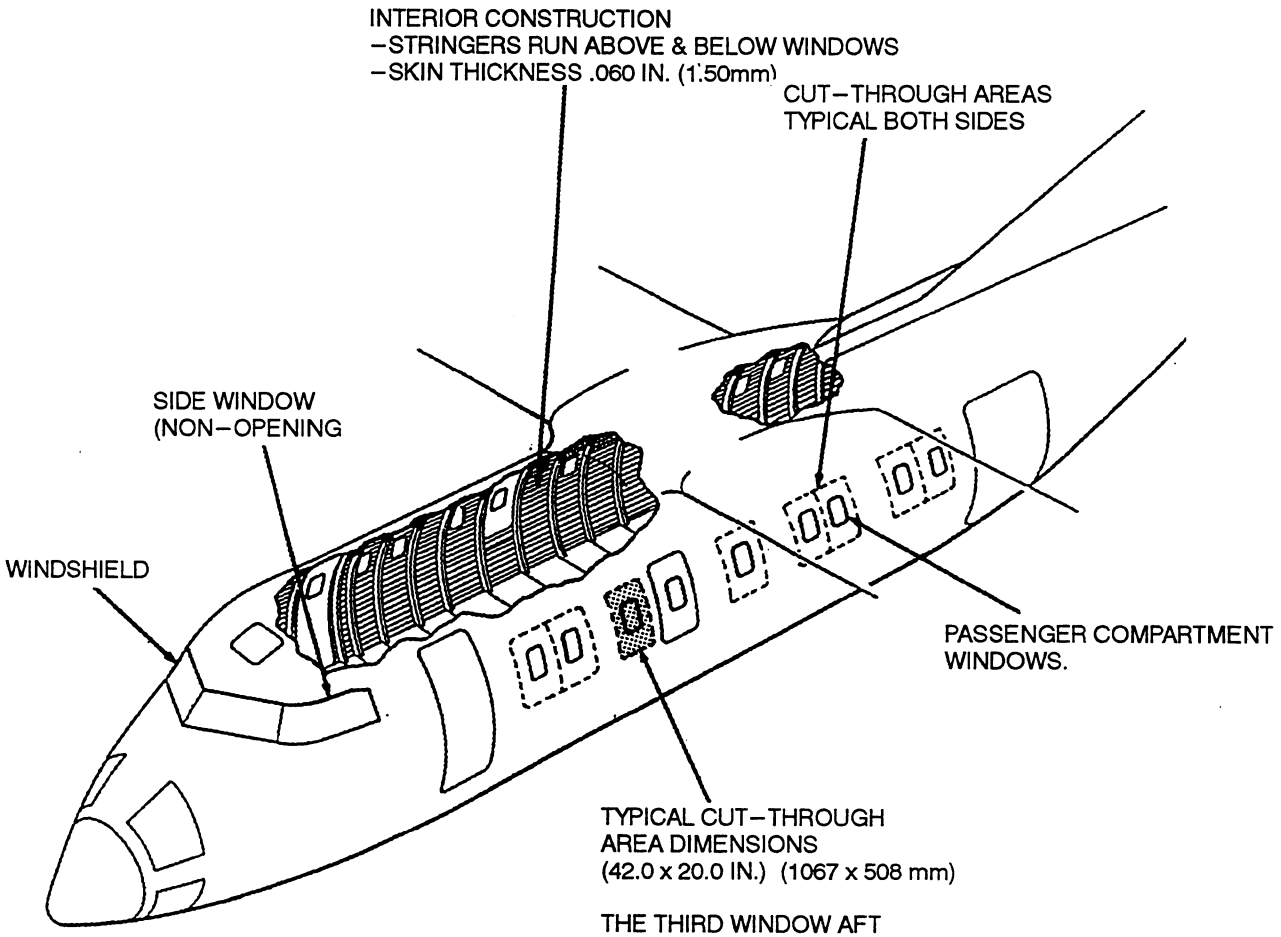
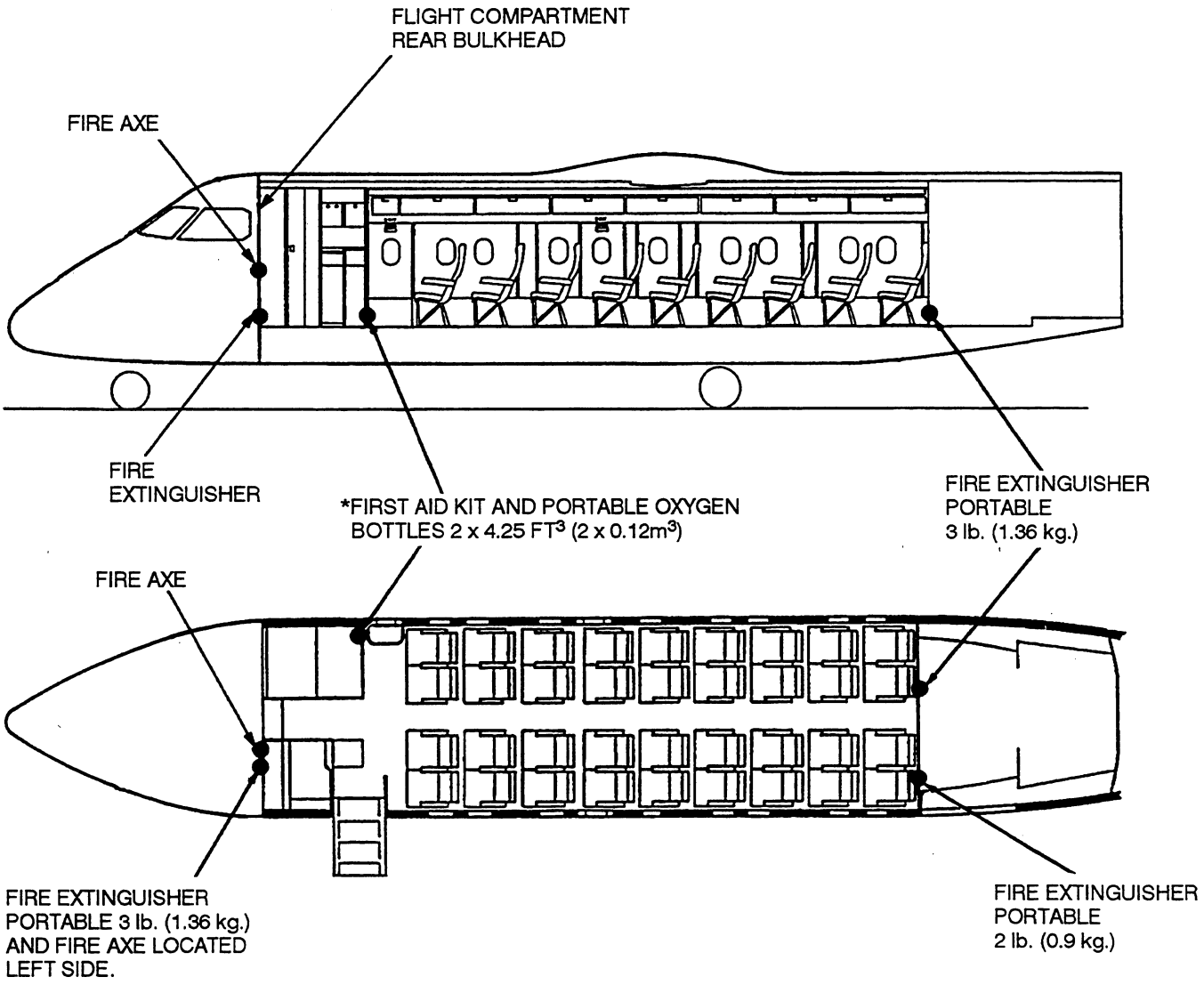
DASH 8 CRASH-FIRE-RESCUE INFORMATION

NOTE:
"CUT-THROUGH" AREAS REQUIRE PORTABLE METAL -CUTTING EQUIPMENT. IT IS RECOMMENDED THAT MAJOR EFFORT TO GAIN ACCESS BE DIRECTED TO HATCHES AND DOORS DUE TO THE TYPE OF STRUCTURE AND POSSIBLE INJURY TO PERSONNEL WITHIN.



CUT-THROUGH AREAS

DASH 8 CRASH-FIRE-RESCUE INFORMATION



*NOTE: MAY VARY WITH AIRLINE & CONFIGURATION

FUSELAGE SAFETY EQUIPMENT LOCATIONS

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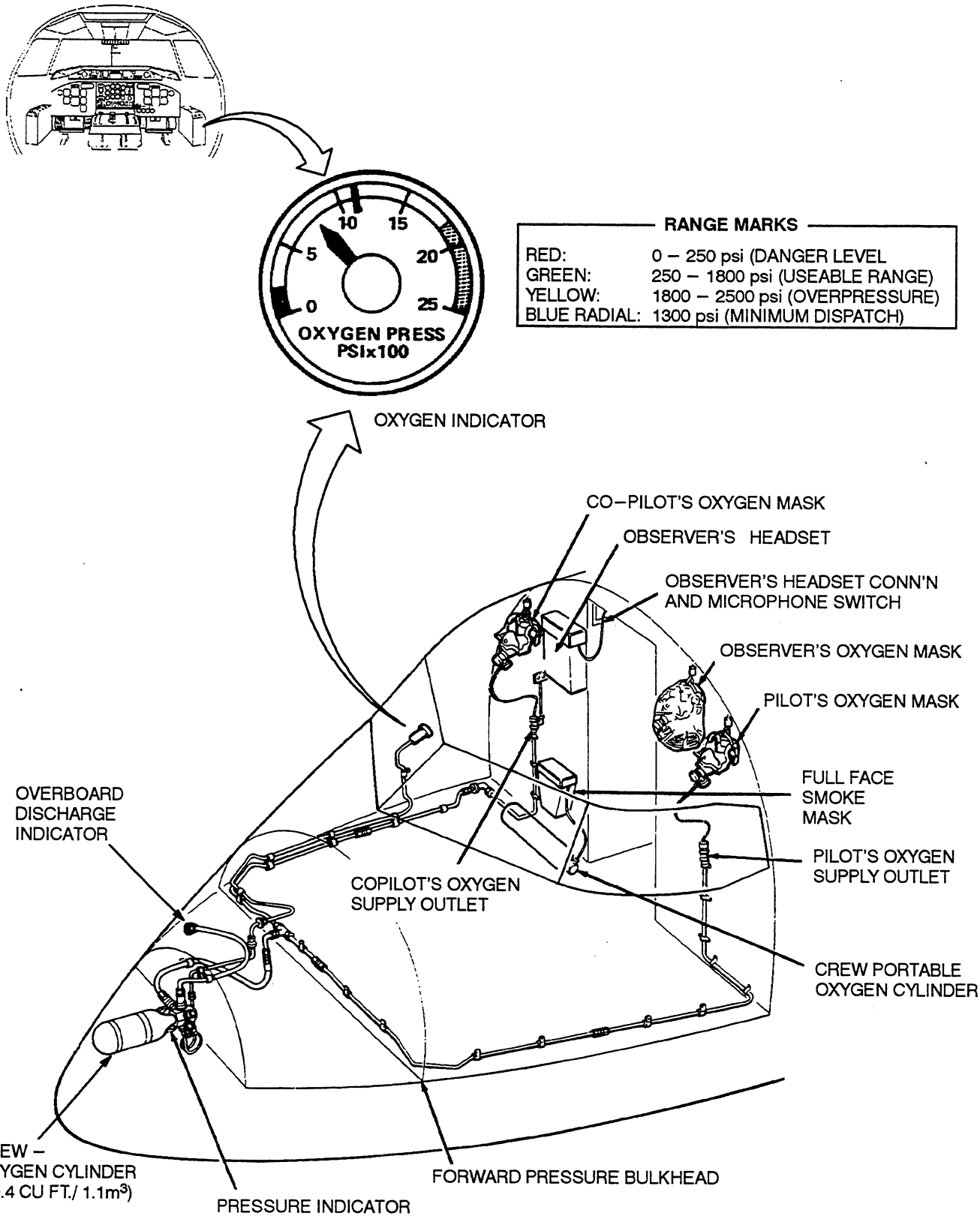
DASH 8 CRASH-FIRE-RESCUE INFORMATION



CREW OXYGEN LOCATIONS

DASH 8 CRASH–FIRE–RESCUE INFORMATION

FIRE CONTROL RECOMMENDATIONS

FIRE AREA	EXTINGUISHER TYPE			NOTES
	PREFERRED	ALTERNATIVE	AVOID	
ENGINE FIRES	HALON 1211	FOAM	CO_2 CAN DAMAGE ENGINE. DRY CHEMICAL IS CORROSIVE.	
FUEL FIRE	1. DRY CHEMICAL POWDER FOR LEAKING FUEL. 2. WATER FOG OR FOAM ON GROUND SPILL AREA.			
WHEEL FIRE	DRY CHEMICAL POWDER	HALON 1211	CO_2 – WHEEL BREAKAGE IS POSSIBLE.	1. WHEELS ARE EQUIPPED WITH FUSIBLE PLUGS WHICH WILL BLOW AT 288°F (142°C). 2. APPROACH LANDING GEAR FROM FORWARD OR AFT. STAND UPWIND OF FIRE TO AVOID 'SKYDROL' FUMES. ALL WHEELS ARE FORGED ALUMINUM.
ELECTRICAL FIRE	HALON 1211	DRY CHEMICAL POWDER/CO_2	WATER	
HYDRAULIC SERVICE BAY FIRE	HALON 1211	DRY CHEMICAL POWDER/CO_2	WATER	
ELECTRICAL/ ELECTRONIC SERVICE BAY FIRE	HALON 1211	DRY CHEMICAL POWDER/CO_2	WATER	
GALLEY FIRE	HALON 1211	DRY CHEMICAL POWDER	WATER	
FLIGHT COMPARTMENT FIRE	HALON 1211	DRY CHEMICAL POWDER	WATER	
CABIN COMPARTMENT FIRE	HALON 1211	DRY CHEMICAL POWDER	WATER	
CARGO COMPARTMENT FIRE	HALON 1211	DRY CHEMICAL POWDER/CO_2	WATER	

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DASH 8 CRASH-FIRE-RESCUE INFORMATION

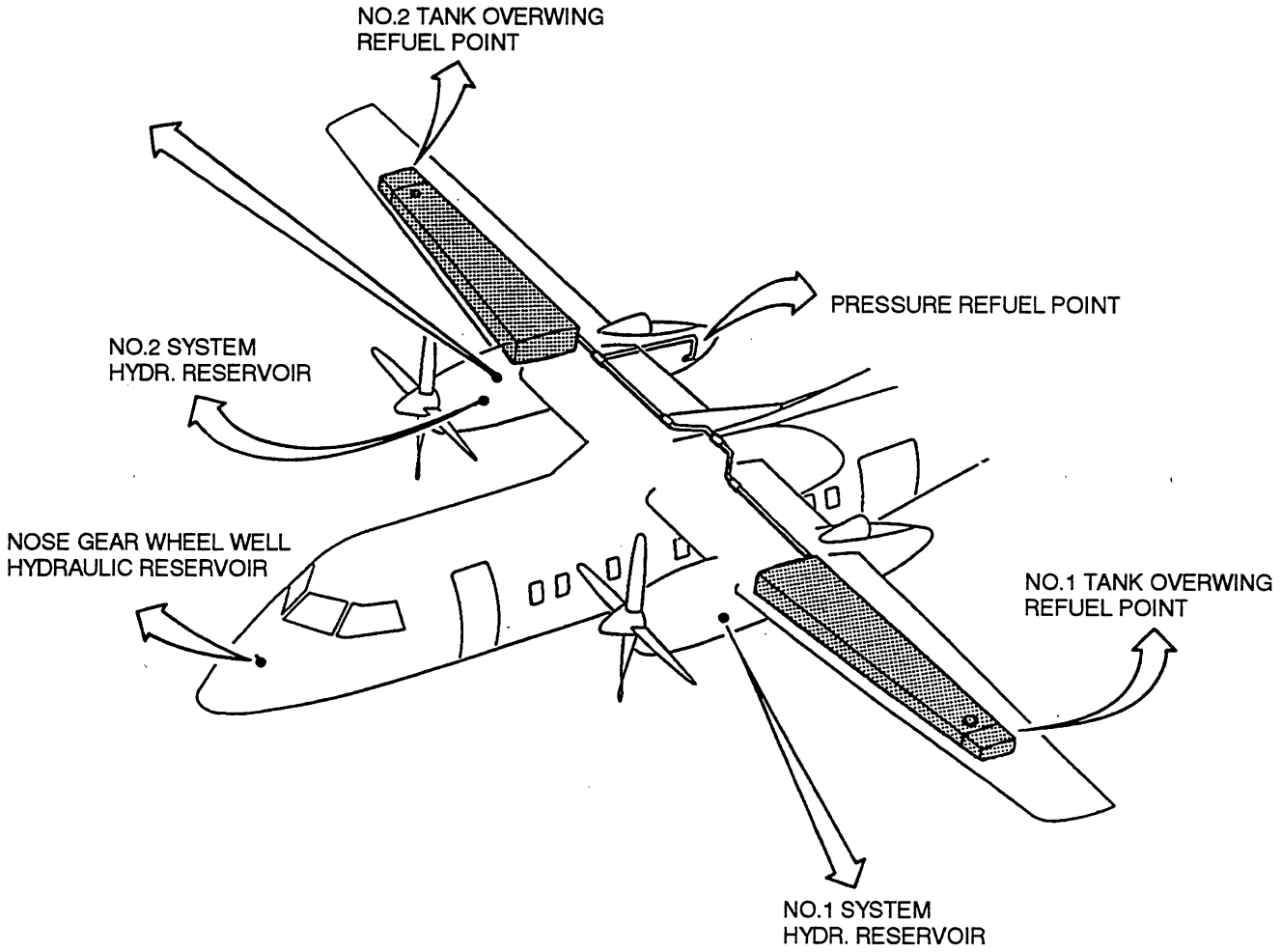
TOTAL OIL CAPACITY
FOR BOTH ENGINES

IMP GAL.	US GAL.	LITRES
9.24	11.09	42

HYDRAULIC FLUID

RESERVOIR	IMP QTS	US QTS	LITRES
NO. 1 SYSTEM	2.20	2.68	2.50
NO. 2 SYSTEM	4.31	5.19	4.90
NOSE	1.06	1.25	1.20

ALL SYSTEMS USE PHOSPHATE ESTER-BASED TYPE IV FLUID eg. SKYDROL



TOTAL FUEL CAPACITY
BASED ON JET A-1 S.G. OF 0.816
(SINGLE TANK DIVIDE BY 2)

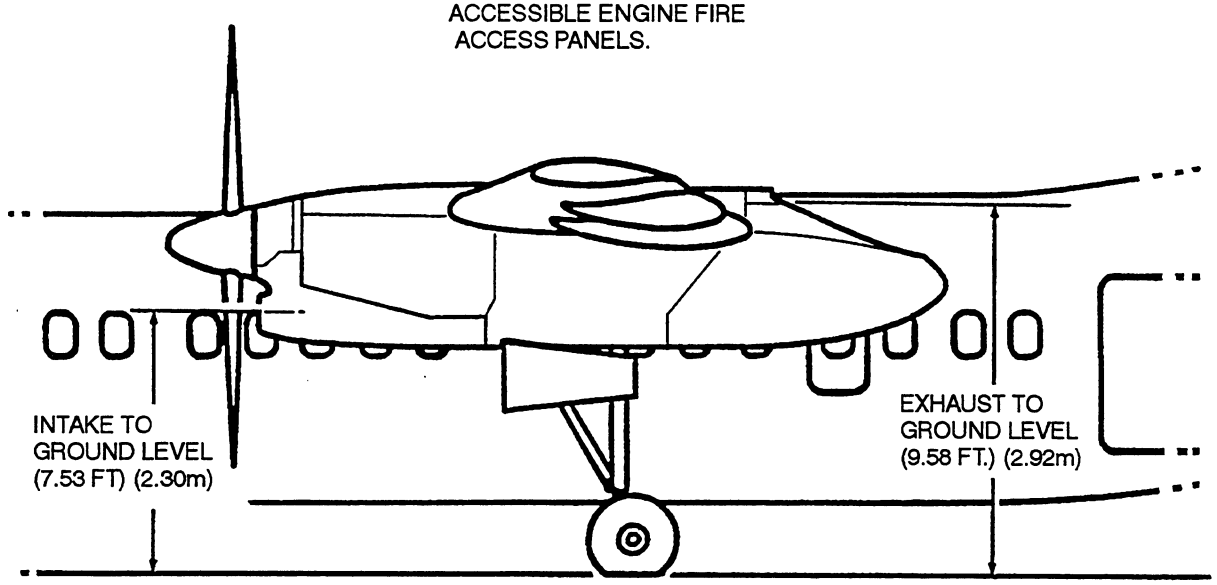
	LB	KG	IMP GAL	US GAL	LITRES
STANDARD FUEL TANKS	5765	2614	705	846	3203
EXTENDED RANGE TANKS	10,433	4732	1276	1532	5800

FLAMMABLE MATERIAL LOCATIONS

NOTE:

* APPROX. 2 FT. LOWER IN WHEELS–UP SITUATION.

* THERE ARE NO EXTERNALLY ACCESSIBLE ENGINE FIRE ACCESS PANELS.



ENGINE FIRE ACCESS LOCATIONS

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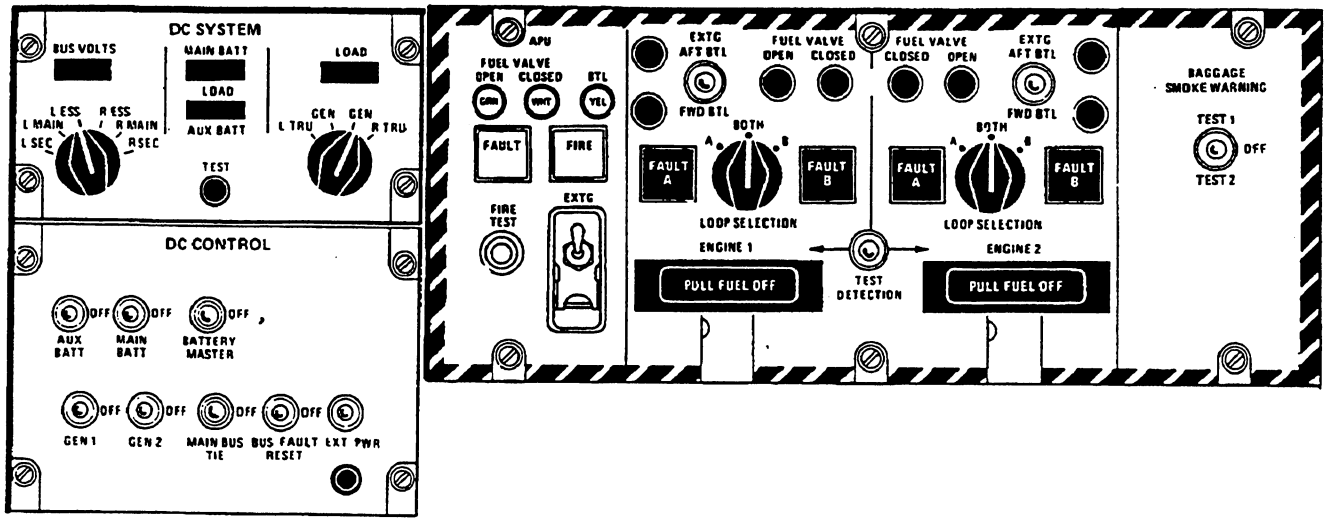
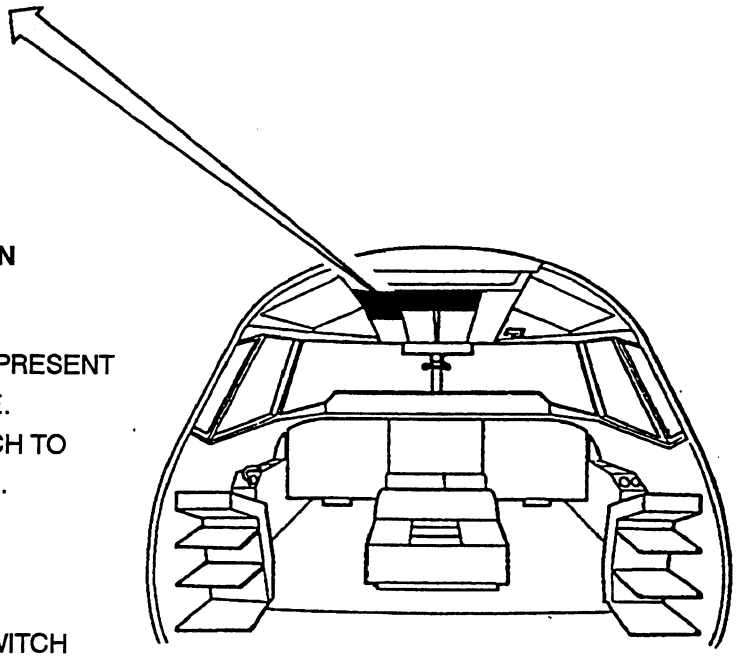
de Havilland Division
DASH 8 CRASH-FIRE-RESCUE INFORMATION





ENGINE FIRE EXTINGUISHER OPERATION

A. ELECTRICAL POWER MUST BE PRESENT
B. PULL "PULL FUEL OFF" HANDLE.
C. SELECT "EXTG" TOGGLE SWITCH TO EITHER "AFT BTL" OR "FWD BTL".

REMOVING ELECTRICAL POWER

A. SELECT "BATTERY MASTER" SWITCH TO "OFF".
B. SELECT "AUX BATT" AND "MAIN BATT" SWITCHES TO "OFF".
C. SELECT "EXT PWR" TO "OFF".

ENGINE FIRE EXTINGUISHER
AND BATTERY POWER SWITCH LOCATIONS