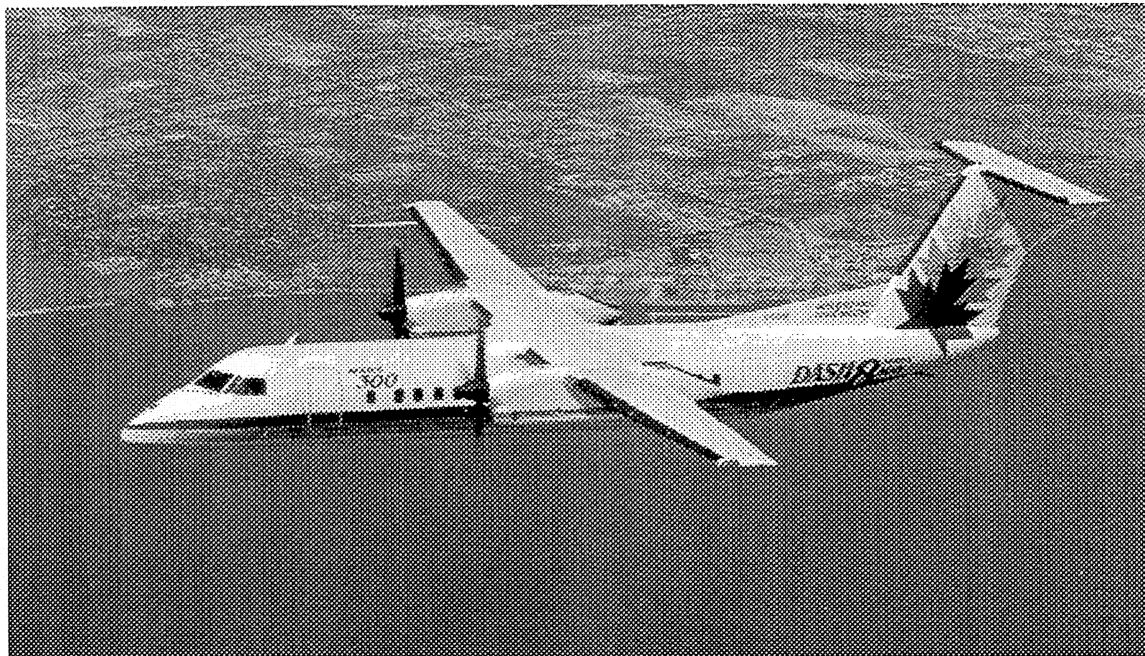


Boeing Canada
de Havilland Division

PSM 1-83-14

DASH 8 CRASH-FIRE-RESCUE INFORMATION



**DASH 8
SERIES 300
CRASH-FIRE-RESCUE
INFORMATION**

PSM 1-83-14

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

NOVEMBER 1988
RE-ISSUED SEPTEMBER 30, 1991

Boeing Canada
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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 Destroy superseded pages.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
Table of Contents	September 30, 1991
1	September 30, 1991
2	September 30, 1991
3	September 30, 1991
4	September 30, 1991
5	September 30, 1991
6	September 30, 1991
7	September 30, 1991
8	September 30, 1991
9	September 30, 1991
10	September 30, 1991
11	September 30, 1991
12	September 30, 1991
3	September 30, 1991
14	September 30, 1991
15	September 30, 1991
16	September 30, 1991
17	September 30, 1991
18	September 30, 1991
19	September 30, 1991
20	September 30, 1991
21	September 30, 1991
22	September 30, 1991
23	September 30, 1991
24	September 30, 1991

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DASH 8 CRASH-FIRE-RESCUE INFORMATION

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DASH 8 CRASH-FIRE-RESCUE INFORMATION

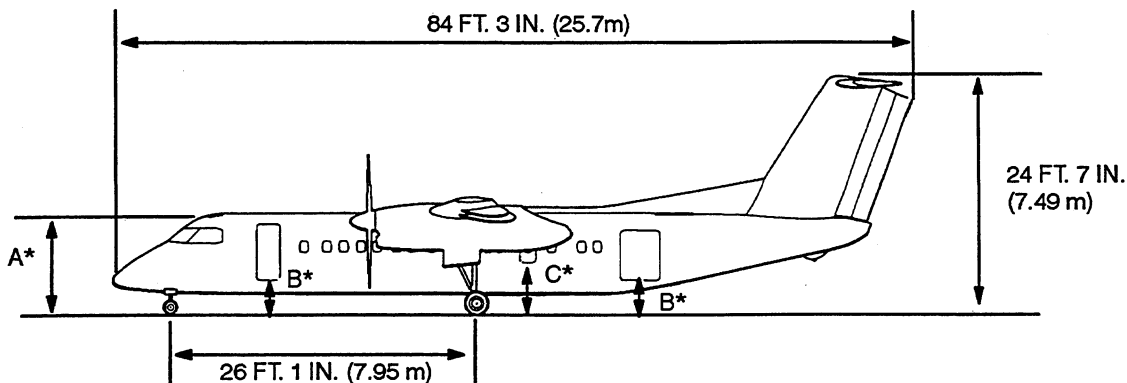
TABLE OF CONTENTS

	PAGE
GENERAL ARRANGEMENT	1
FAMILIARIZATION AND LOCATION GUIDE	2
EXTERIOR WALK-AROUND	3
INTERIOR ARRANGEMENT	4
CABIN CROSS-SECTION	5
FLIGHT COMPARTMENT (VIEW FORWARD)	6
FLIGHT COMPARTMENT (VIEW AFT)	7
EXITS	8
SERVICE DOORS	9
AIRCRAFT DOORS AND GROUND SERVICE PANELS	10
EVACUATION ROUTES	11
PASSENGER AND CREW ESCAPE SYSTEMS	12
BAGGAGE DOOR OPERATION	13
GALLEY SERVICE DOOR OPERATION	14
FLIGHT COMPARTMENT EMERGENCY ESCAPE HATCH	15, 16
ENGINE DANGER AREAS	17
CUT-THROUGH AREAS	18
FUSELAGE SAFETY EQUIPMENT LOCATIONS	19
CREW OXYGEN LOCATIONS	20
FIRE CONTROL RECOMMENDATIONS	21
FLAMMABLE MATERIAL LOCATIONS	22
ENGINE FIRE ACCESS LOCATIONS	23
ENGINE FIRE EXTINGUISHER AND BATTERY POWER SWITCH LOCATION	24

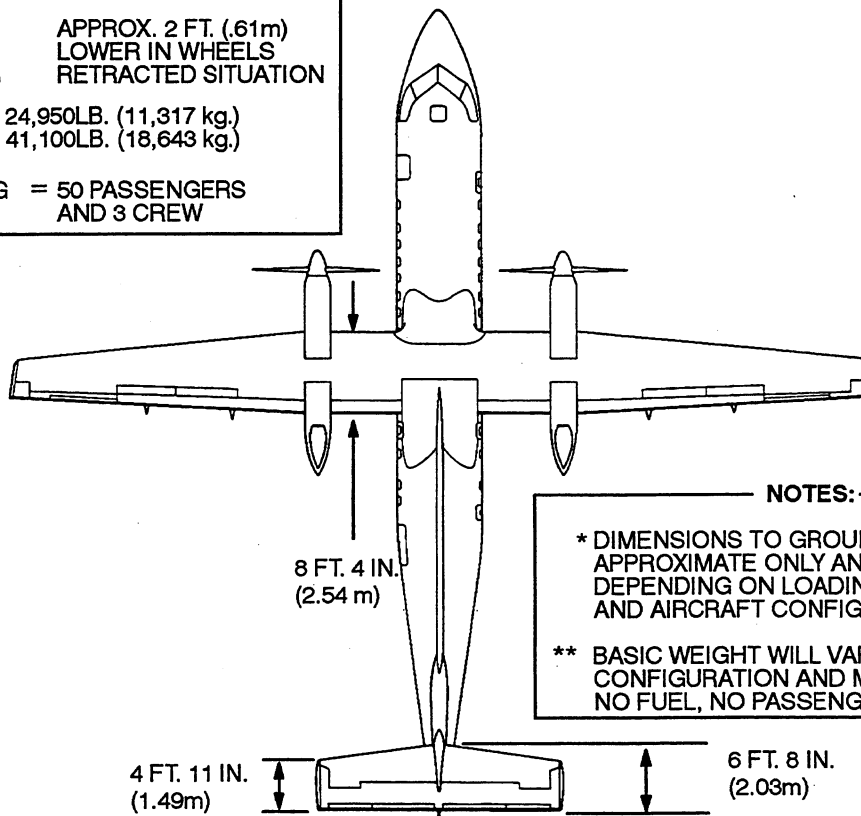
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DASH 8 CRASH-FIRE-RESCUE INFORMATION

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



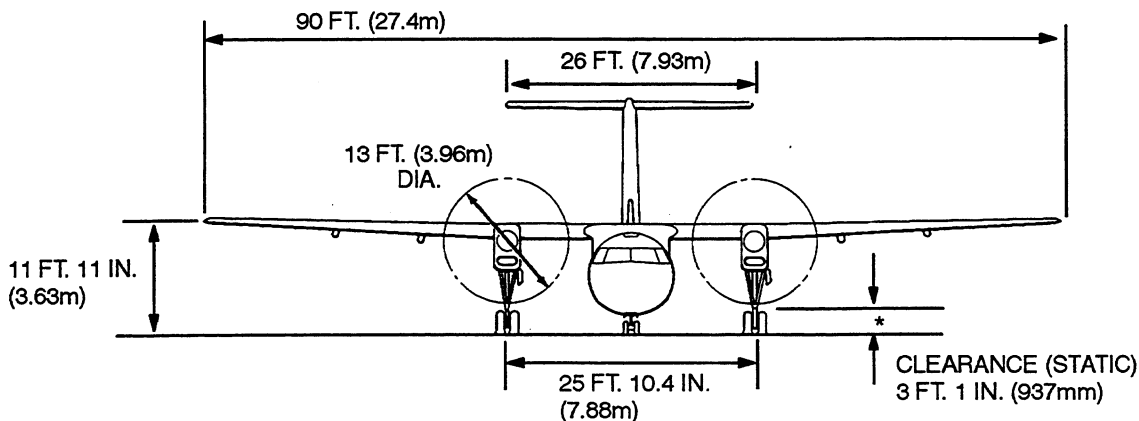
WHEELS EXTENDED	WHEELS RETRACTED
A* = 125 IN. (3.18m)	APPROX. 2 FT. (.61m)
B* = 43 IN. (1.09m)	LOWER IN WHEELS
C* = 63 IN. (1.06m)	RETRACTED SITUATION
BASIC WEIGHT ** = 24,950LB. (11,317 kg.)	
GROSS WEIGHT**= 41,100LB. (18,643 kg.)	
STANDARD SEATING = 50 PASSENGERS AND 3 CREW	



NOTES:

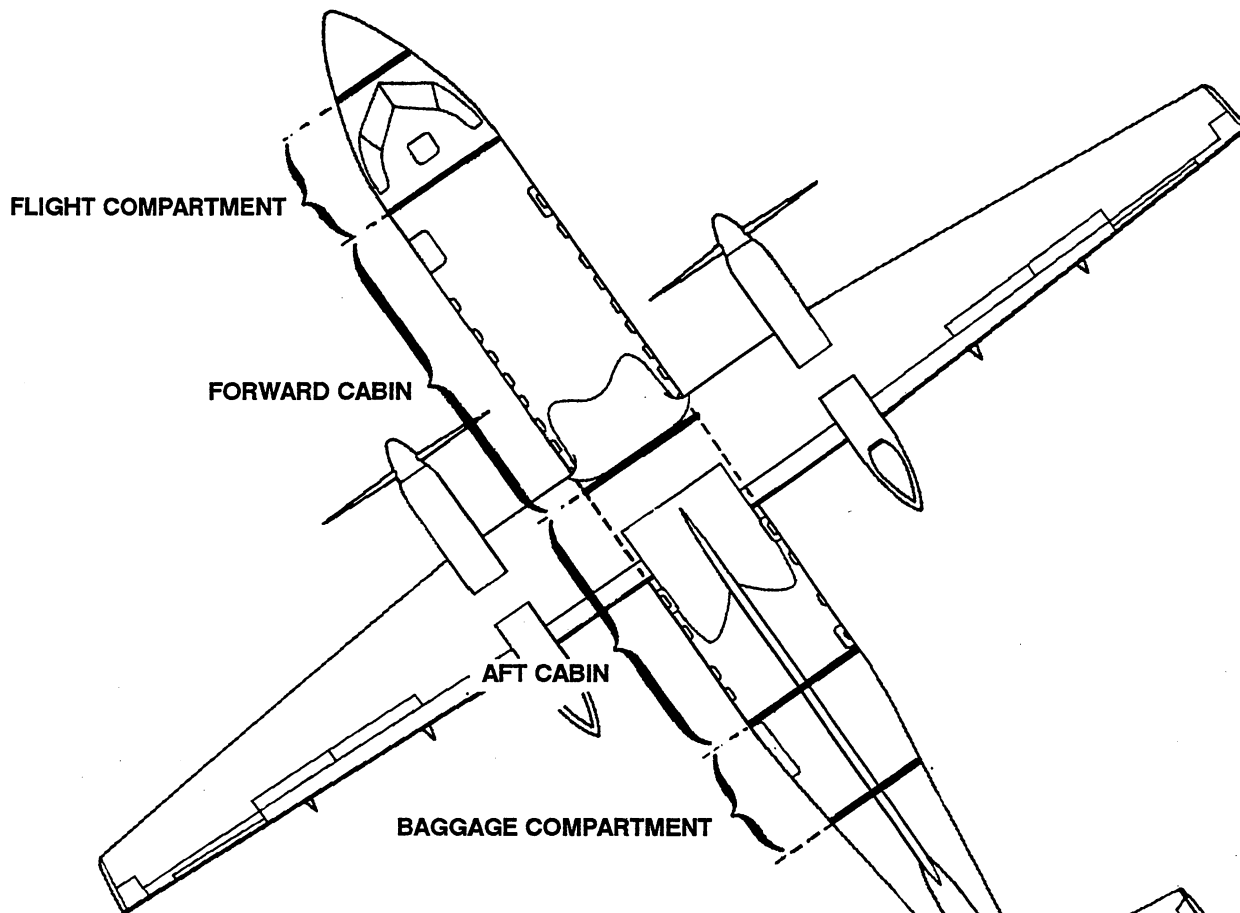
* DIMENSIONS TO GROUND LINE ARE APPROXIMATE ONLY AND VARY DEPENDING ON LOADING CONDITIONS AND AIRCRAFT CONFIGURATION.

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



GENERAL ARRANGEMENT

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



LEGEND

- **FLIGHT COMPARTMENT**
FIRE EXTINGUISHER
FIRE AXE LOCATION
PORTABLE OXYGEN BOTTLE
EMERGENCY HATCH AND
ROPE LOCATION

- **FORWARD CABIN**
EMERGENCY DOOR - TYPE I
AIRSTAIR DOOR

- **AFT CABIN**
FIRST AID KIT*
EMERGENCY DOORS - TYPE III
GALLEY SERVICE DOOR*
GALLEY LOCATION*
FIRE EXTINGUISHER BOTTLES (2)*
OXYGEN BOTTLES (3)

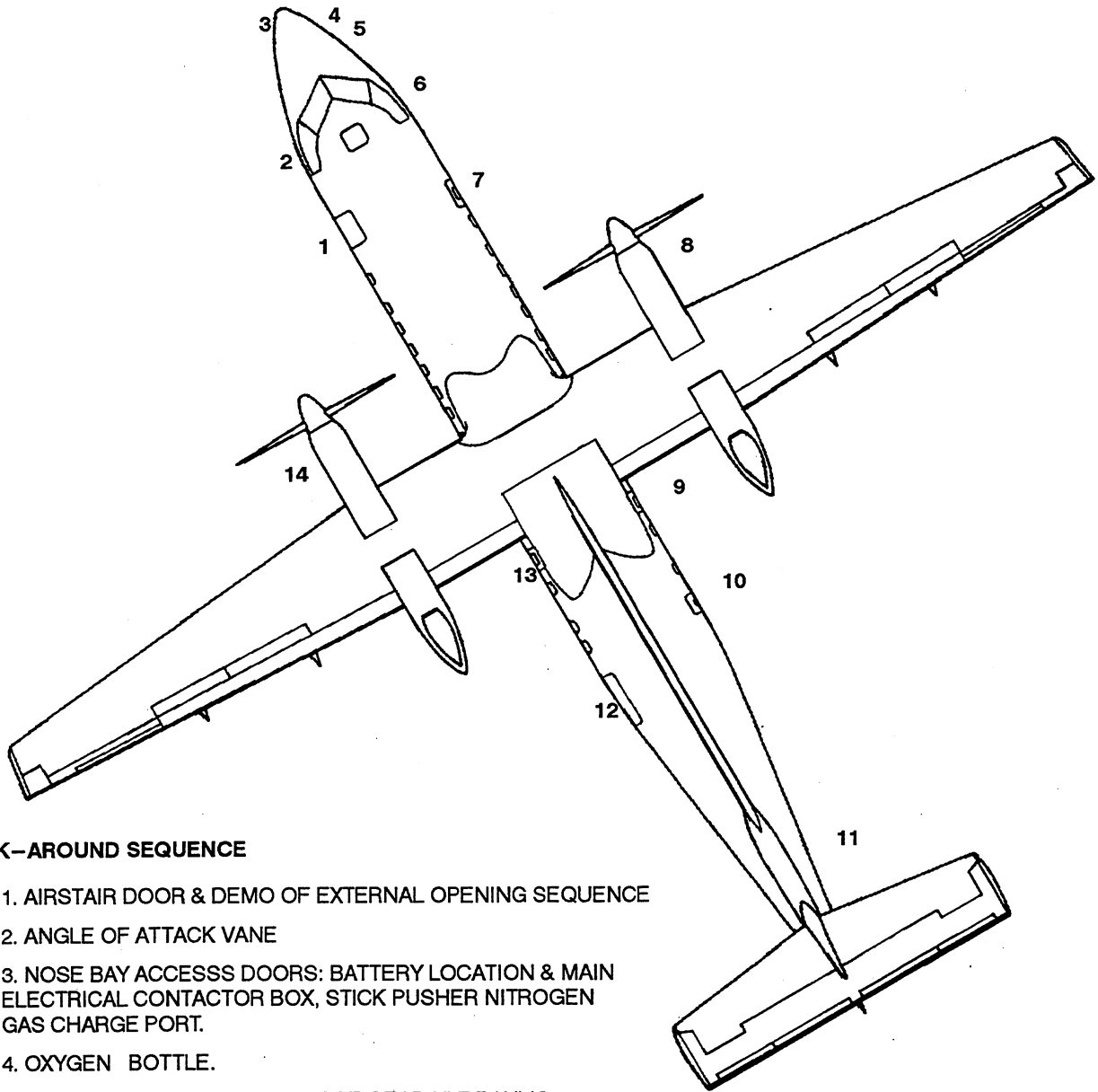
- **BAGGAGE COMPARTMENT**
ACCESS TO BAGGAGE COMPARTMENT
SMOKE DETECTOR

* MAY VARY WITH
AIRLINE AND
CONFIGURATION

FAMILIARIZATION AND LOCATION GUIDE

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DASH 8 CRASH-FIRE-RESCUE INFORMATION

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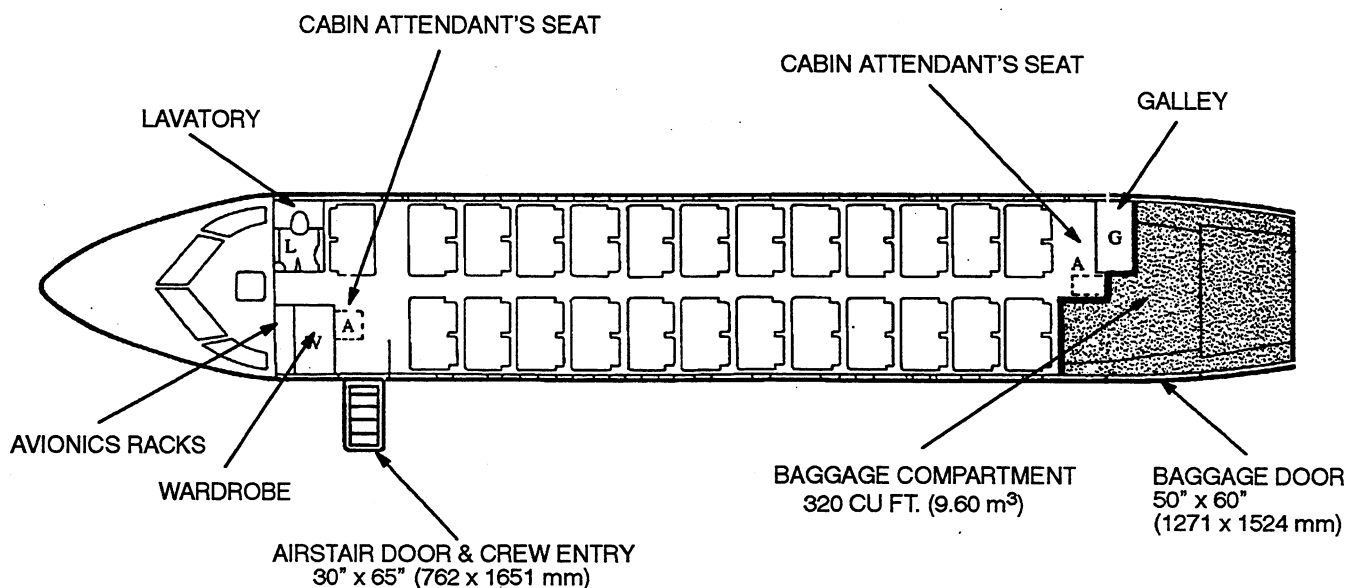
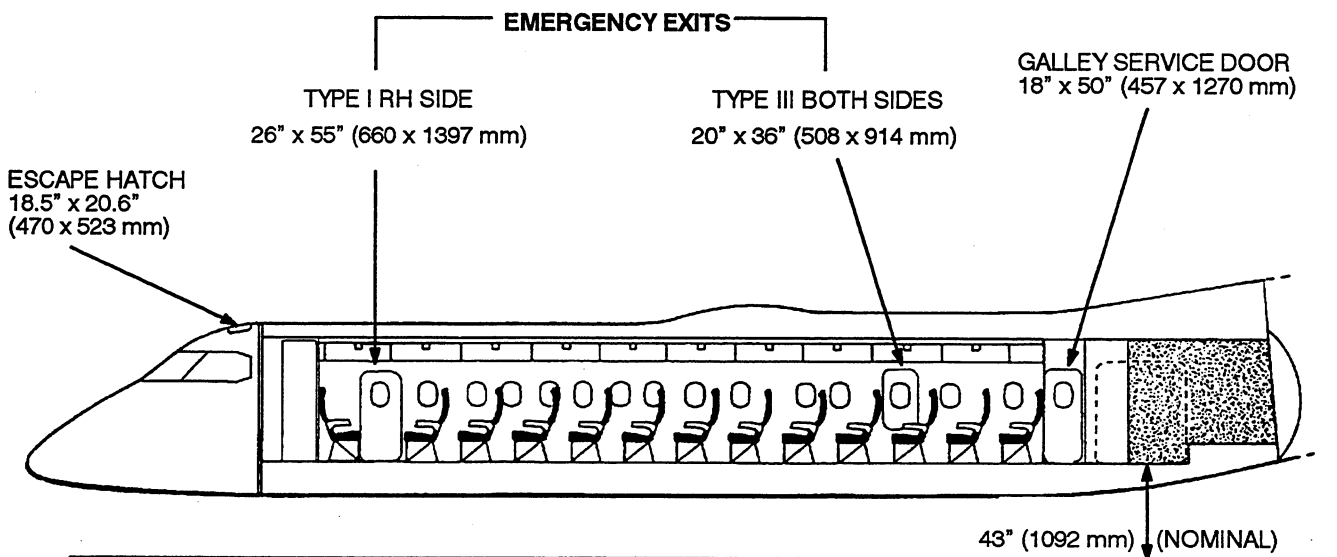
WALK-AROUND SEQUENCE

1. AIRSTAIR DOOR & DEMO OF EXTERNAL OPENING SEQUENCE
2. ANGLE OF ATTACK VANE
3. NOSE BAY ACCESS DOORS: BATTERY LOCATION & MAIN ELECTRICAL CONTACTOR BOX, STICK PUSHER NITROGEN GAS CHARGE PORT.
4. OXYGEN BOTTLE.
5. NOSE GEAR WHEEL WELL, NOSE GEAR HYDRAULIC AND RESERVOIR
6. ANGLE OF ATTACK VANE.
7. TYPE I EMERGENCY DOOR - EXTERNAL OPENING SEQUENCE.
8. NO.2 NACELLE MAIN LANDING GEAR, HYDRAULIC RESERVOIR AND REFUEL POINT.
9. TYPE III EMERGENCY DOOR - EXTERNAL OPENING SEQUENCE.
10. GALLEY SERVICE DOOR - EXTERNAL OPENING SEQUENCE.
11. REAR COMPARTMENT ACCESS DOOR - OPENING SEQUENCE & FLIGHT DATA RECORDER & COCKPIT RECORDER LOCATION.
12. BAGGAGE COMPARTMENT DOOR - OPENING SEQUENCE.
13. TYPE III EMERGENCY DOOR - EXTERNAL OPENING SEQUENCE.
14. NO.1 NACELLE, MAIN LANDING GEAR & HYDRAULIC RESERVOIR.

EXTERIOR WALK-AROUND

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

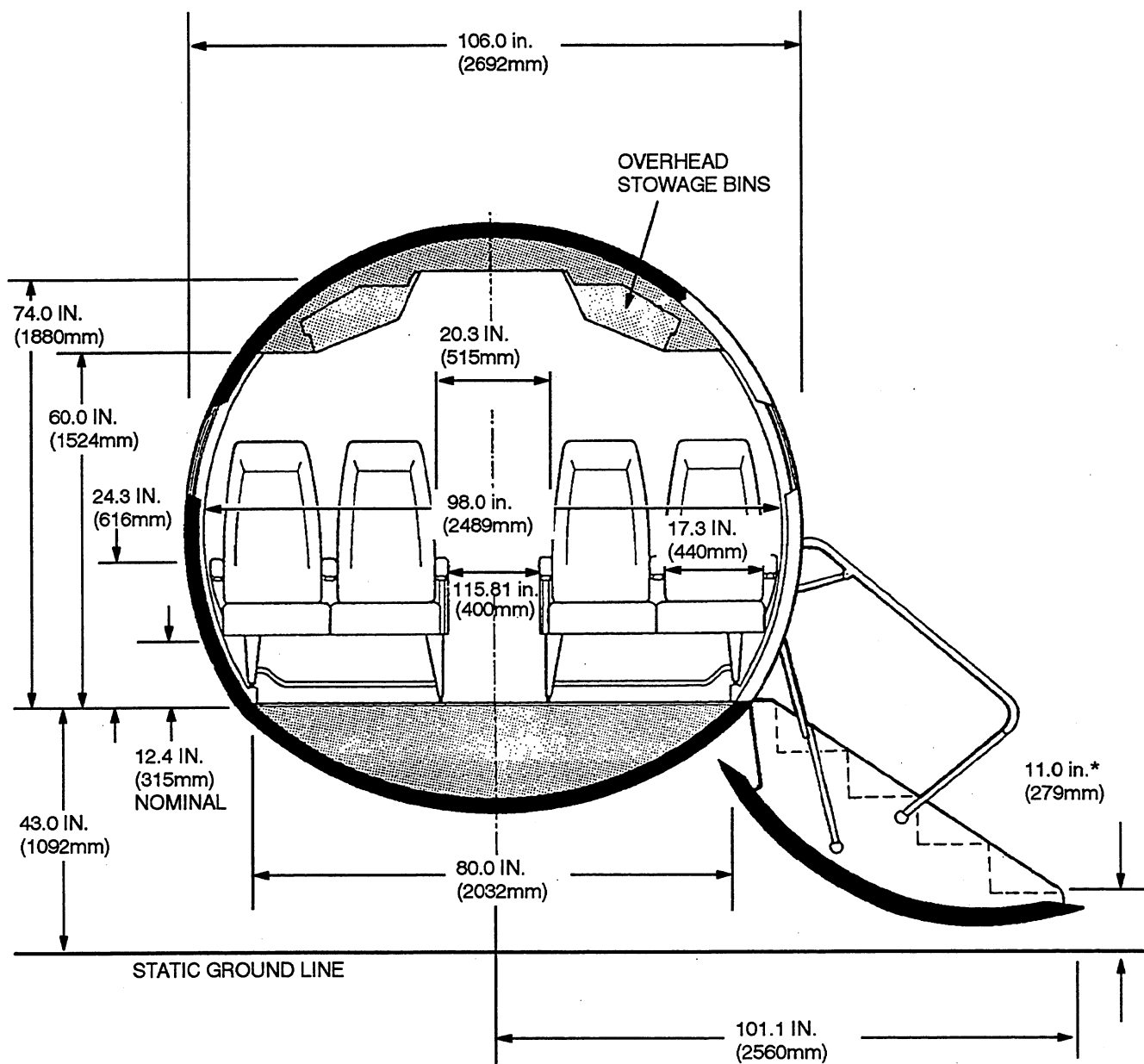
STANDARD 50 SEAT VERSION



- 50 PASSENGERS @ 32" (787 mm) PITCH
- BAGGAGE PER PASSENGERS 8.3 CU FT. (0.24 m³)

INTERIOR ARRANGEMENT

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de Havilland Division
DASH 8 CRASH-FIRE-RESCUE INFORMATION

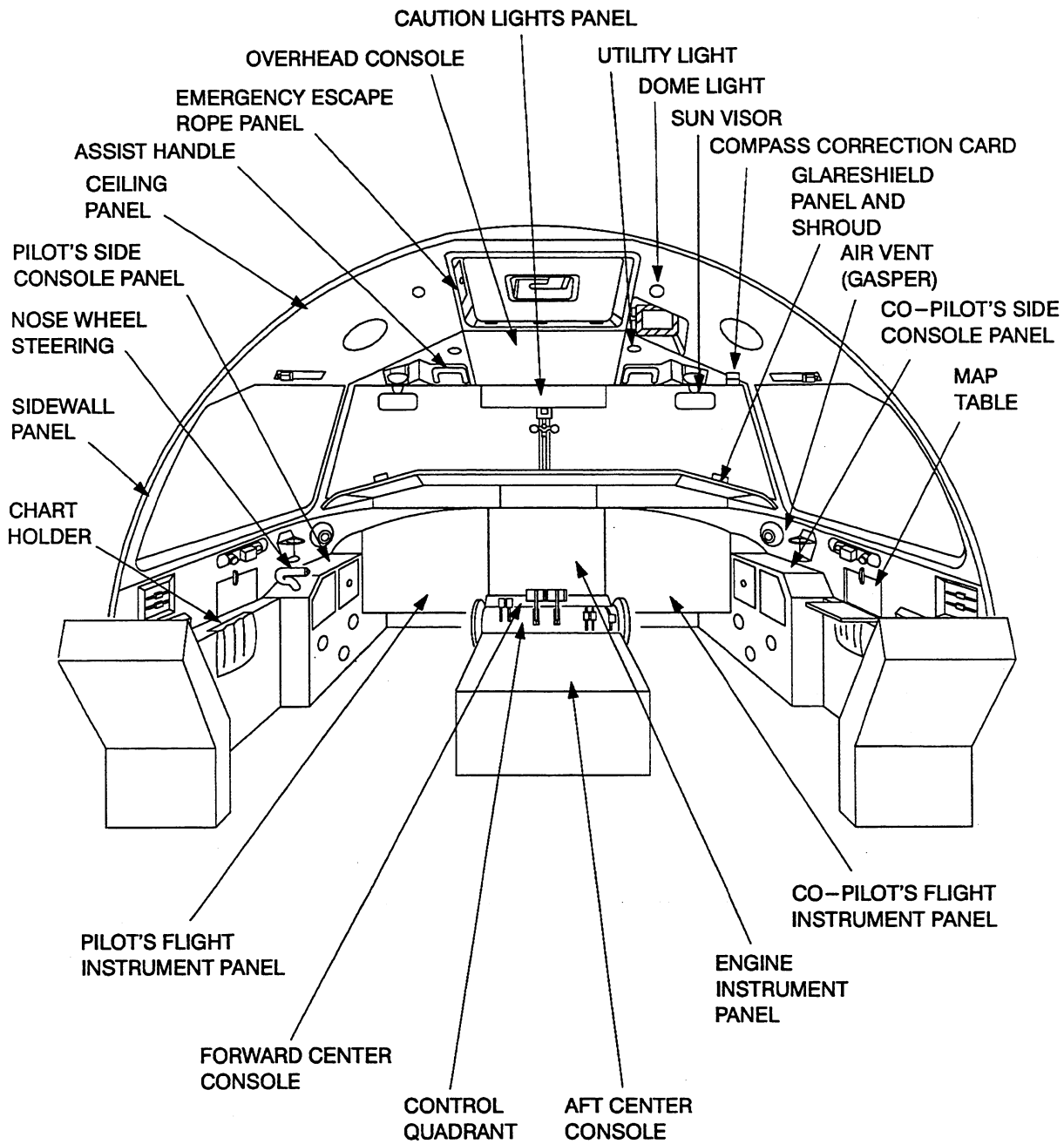


NOTE:

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

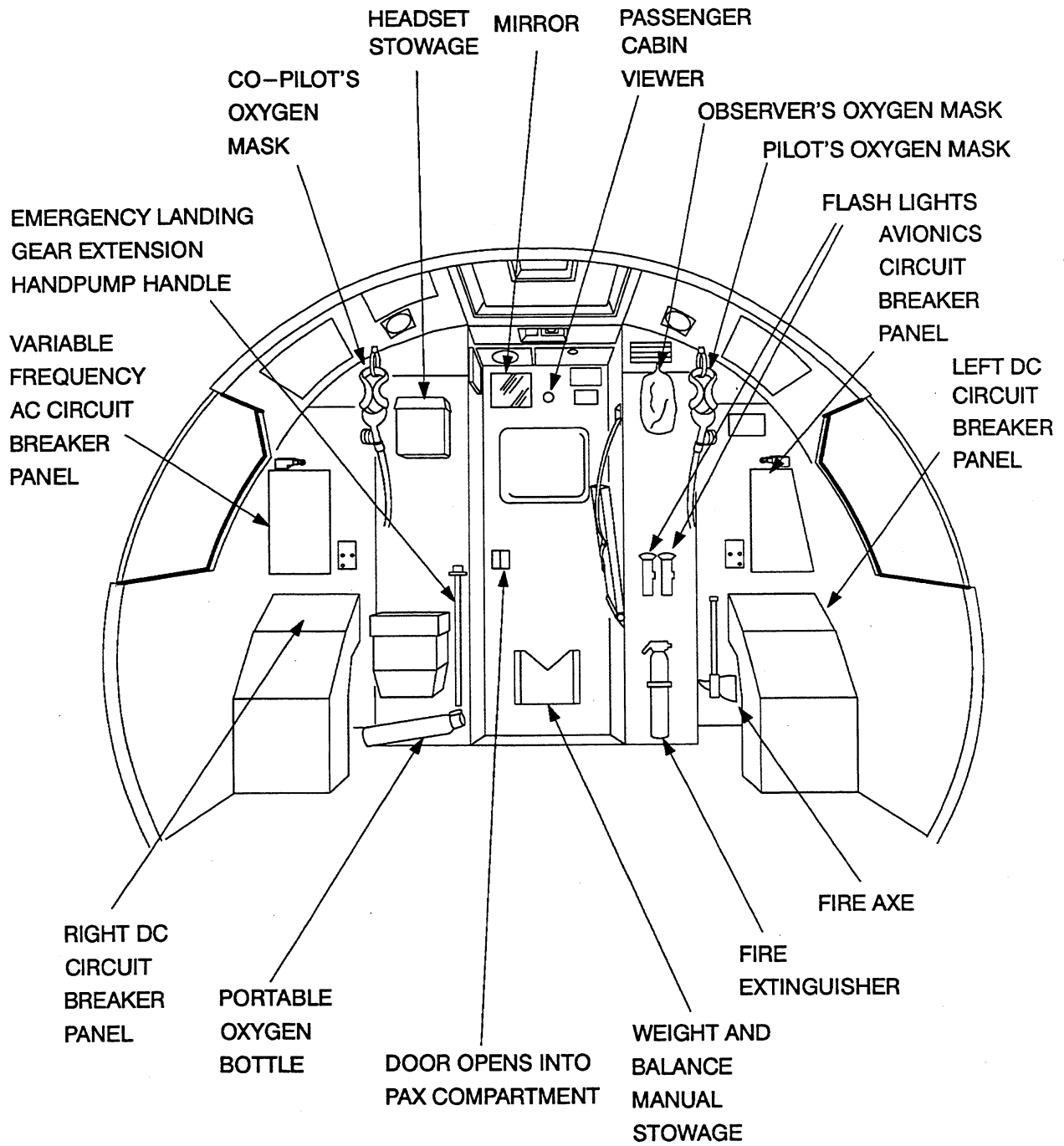
CABIN CROSS-SECTION

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



**FLIGHT COMPARTMENT
(VIEW FORWARD)**

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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, may be operated by either internal or external handles. The Airstair door incorporates an inflatable seal fed from the 18 psi deicing system. A Type I 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 aft of the wing. The Type I and Type III emergency exit doors each incorporate a window and are opened by either internal or external handles located below the window. The Type I emergency door incorporates an inflatable seal similar to the airstair door. The 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 I EMERGENCY EXIT DOOR OPERATION

The external handle located below the window, is normally flush with the exit door skin and incorporates a push-button for quick release, enabling the handle to be rotated. Rotating the handle operates cam rollers and a seal venting mechanism by means of a series of shafts, levers and pushrods to unlock the door. To remove the door using the external handle, push the quick-release button to release the handle. Turn the handle counterclockwise and pull the door outwards.

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 the 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.

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DASH 8 CRASH-FIRE-RESCUE INFORMATION

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SERVICE DOORS

GENERAL

Two service doors are located on the aircraft. The Galley Service door is located on the right side of the aft fuselage. The Baggage compartment door is located on the left side of the aft fuselage.

GALLEY SERVICE DOOR OPERATION

The Galley Service door is a plug type door which opens inward and upward along tracks in the rear fuselage ceiling. Door opening is performed by manually operating the external door handle to unlock the door, and by lifting and supporting the door until it is fully open and latched.

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.

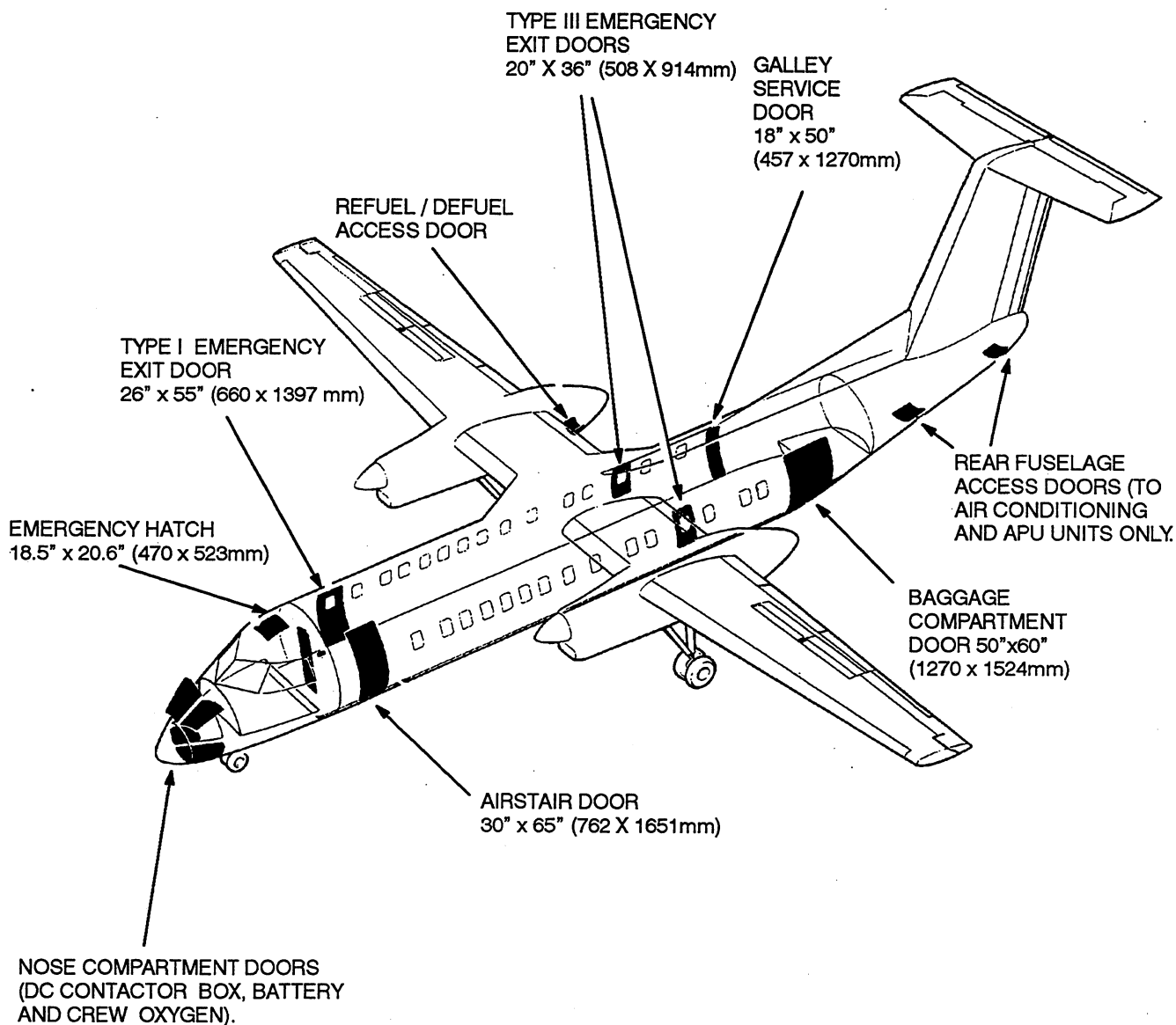
NOTE

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

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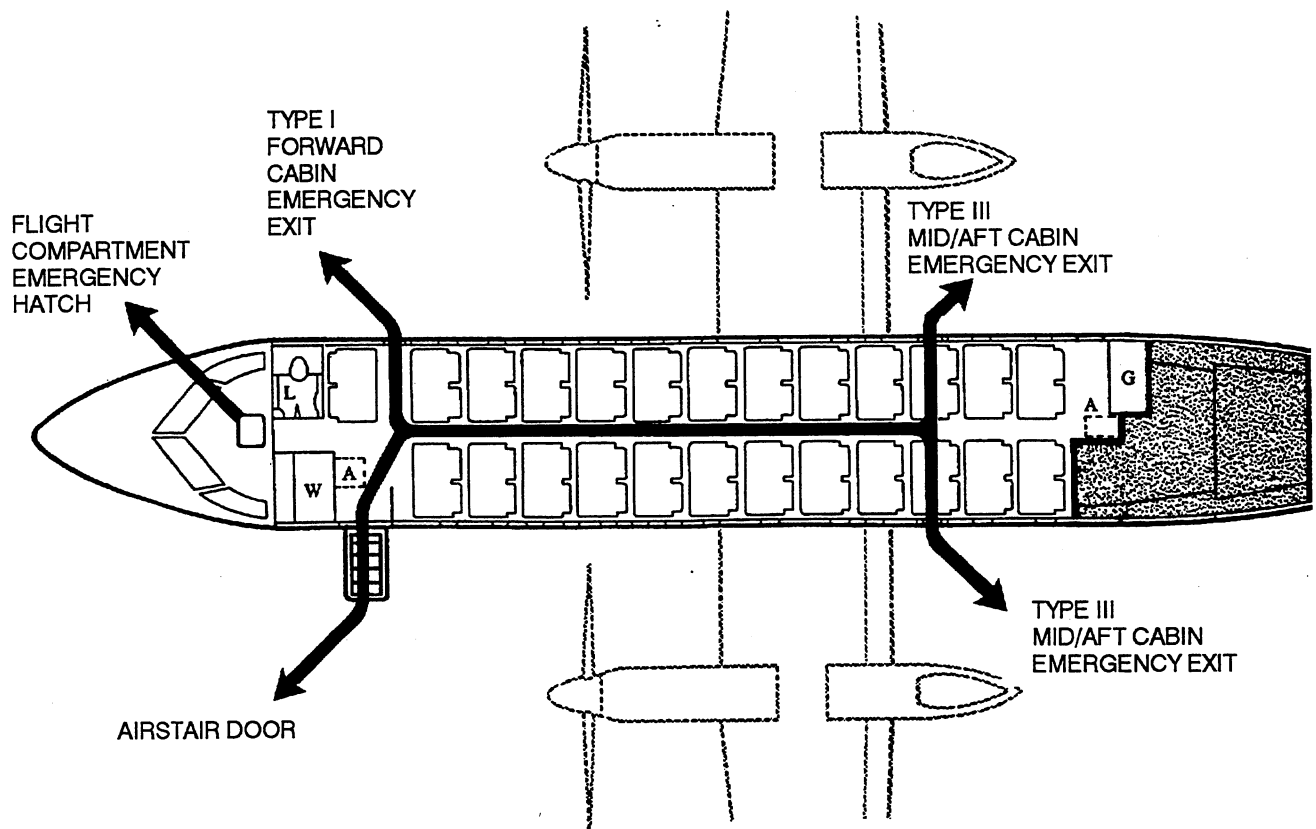
DASH 8 CRASH-FIRE-RESCUE INFORMATION



AIRCRAFT DOORS AND GROUND SERVICE PANELS

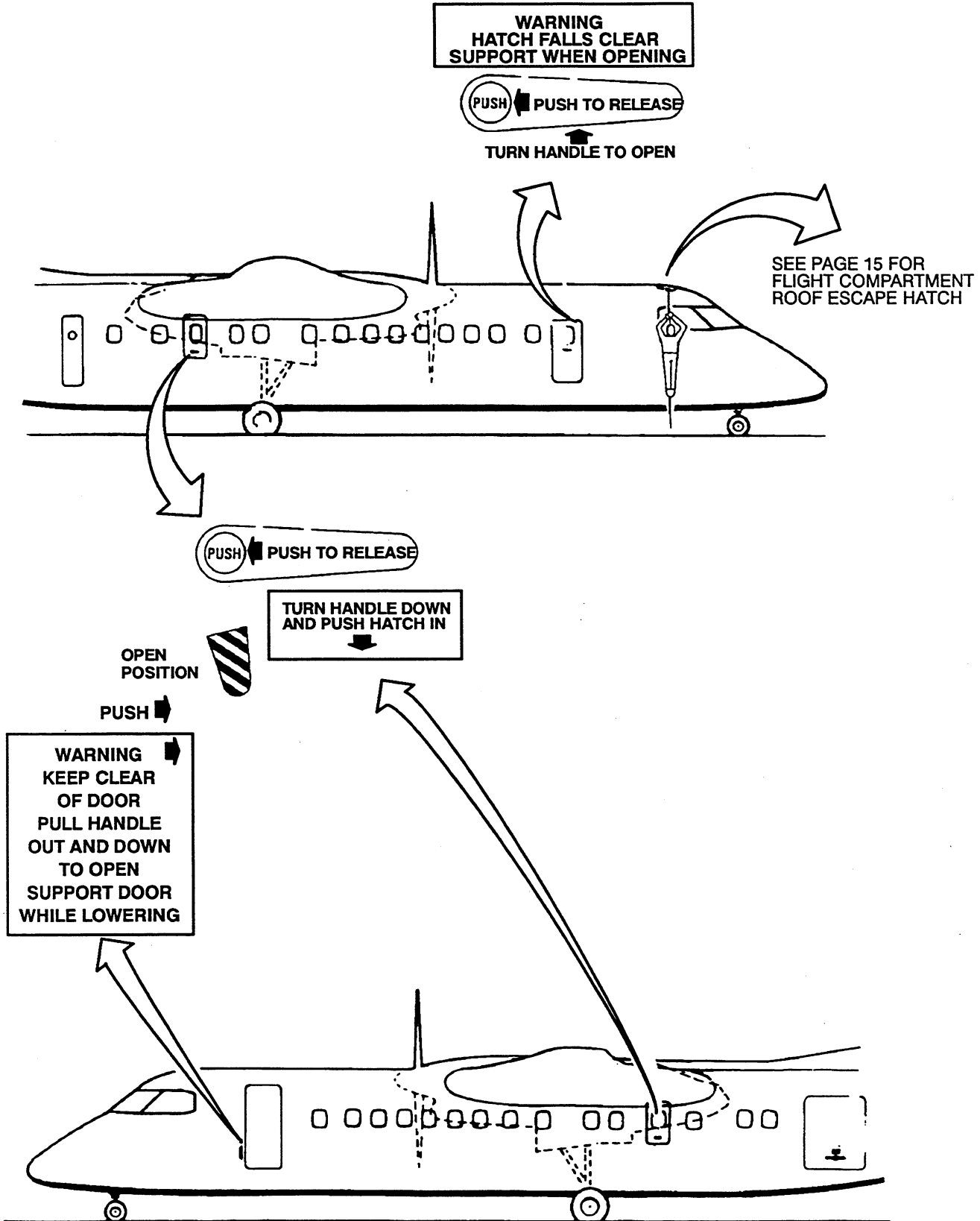
Boeing Canada
de Havilland Division
DASH 8 CRASH-FIRE-RESCUE INFORMATION

PSM 1-83-14



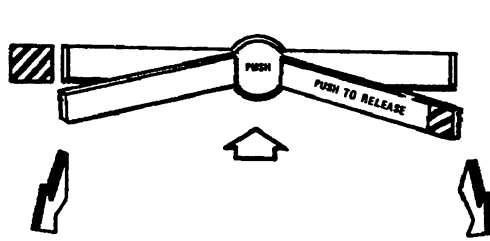
EVACUATION ROUTES

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

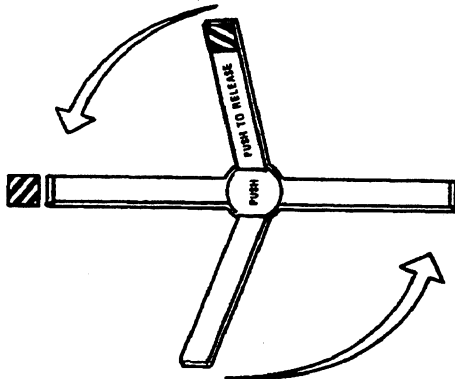


PASSENGER AND CREW ESCAPE SYSTEMS

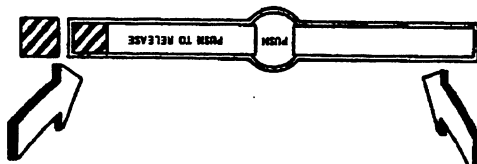
DASH 8 CRASH-FIRE-RESCUE INFORMATION



1 TO OPEN, PUSH ON BUTTON
DOOR HANDLES SPRING
OUTWARDS

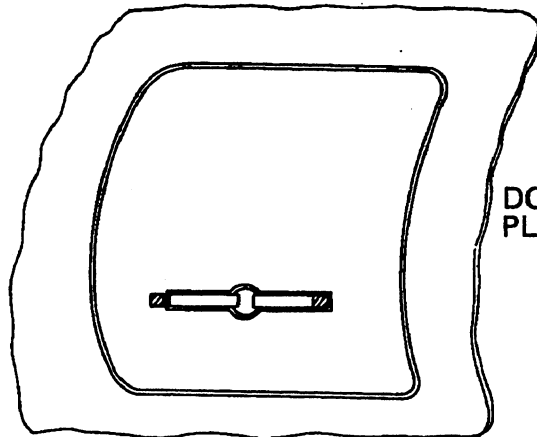


2 TURN HANDLES COUNTER
CLOCKWISE 180°
(DOOR MOVES INWARDS)

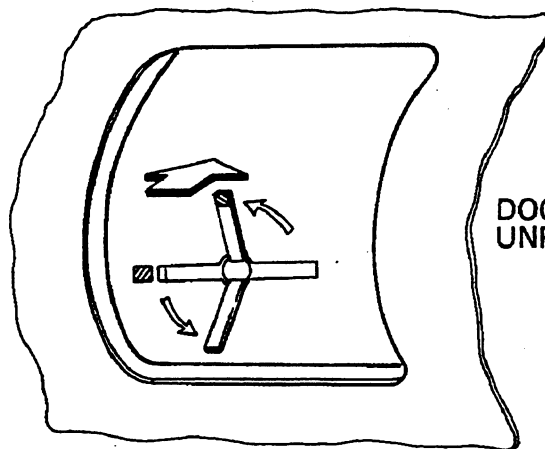


3 PUSH HANDLES IN FLUSH
WITH FUSELAGE, THEN
PUSH DOOR UPWARDS TO
OPEN

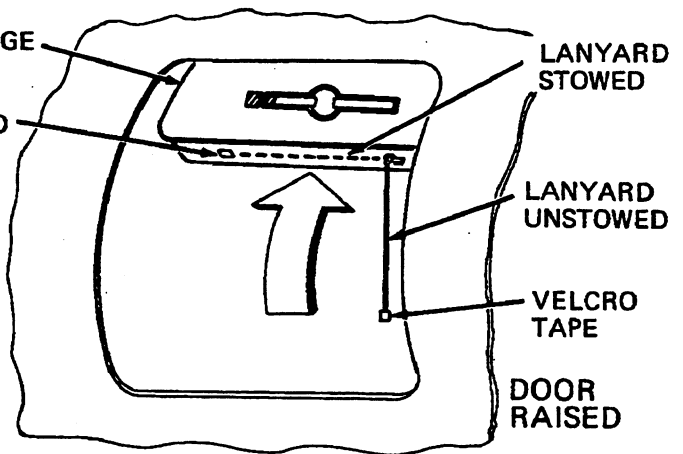
4 TO CLOSE, PULL BAGGAGE DOOR
DOWN AND TURN HANDLE CLOK-
WISE 180°



DOOR
PLUGGED



DOOR
UNPLUGGED



WARNING

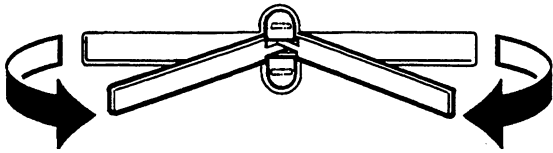
LIFT DOOR TO OPEN
HANDLE TO BE FLUSH BEFORE LIFTING
WHEN RAISING OR LOWERING KEEP CLEAR OF
DOOR PATH

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

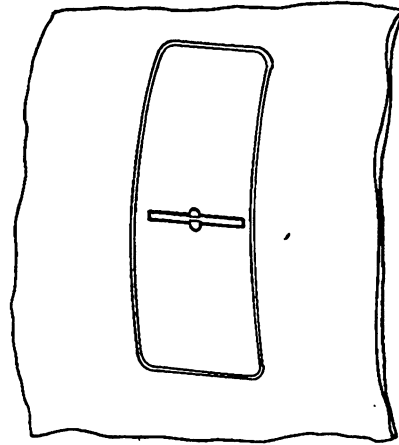
Boeing Canada de Havilland Division DASH 8 CRASH-FIRE-RESCUE INFORMATION

1. PRESS BUTTON

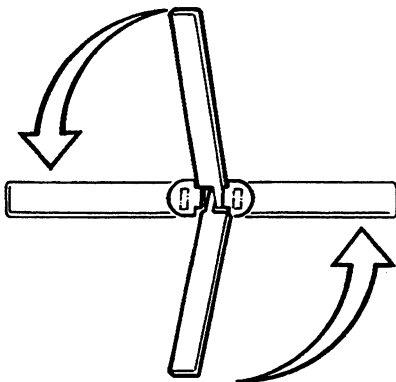


HANDLES SPRING OUT WHEN
BUTTON IS PRESSED.

DOOR
PLUGGED

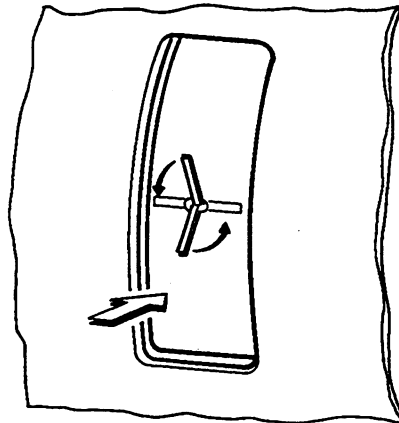


2. ROTATE HANDLES 180°

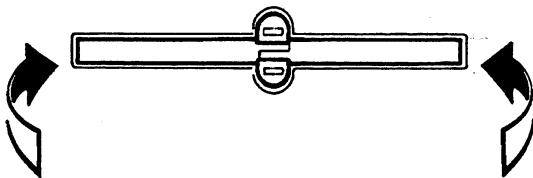


DOOR UNPLUGS (MOVES IN)
AS HANDLES ARE TURNED 180°

DOOR
UNPLUGGED



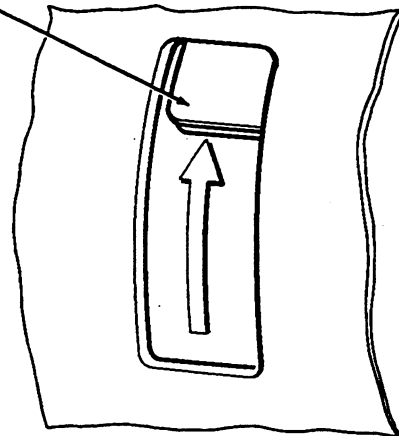
3. PRESS HANDLES INTO DOOR



HANDLES ARE PRESSED INTO
LATCH FLUSH WITH DOOR
BEFORE RAISING DOOR TO
OPEN POSITION.

DOOR
RAISED

GALLEY SERVICE DOOR



WARNING

ONLY OPEN DOOR FROM RAISED PLATFORM
LIFT DOOR TO OPEN
HANDLE TO BE FLUSH BEFORE LIFTING
ENSURE DOOR IS LATCHED WHEN OPEN

GALLEY SERVICE DOOR OPERATION

DASH 8 CRASH-FIRE-RESCUE INFORMATION

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.

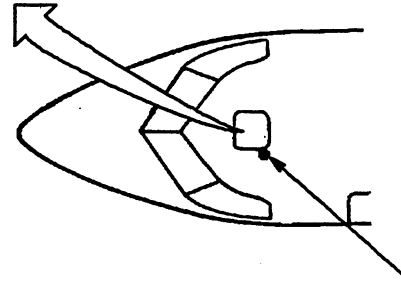
A downward pull on the handle of approximately 40 pounds releases the rollers against the action of the forward locking and release detent springs. The hatch may then be completely removed.

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

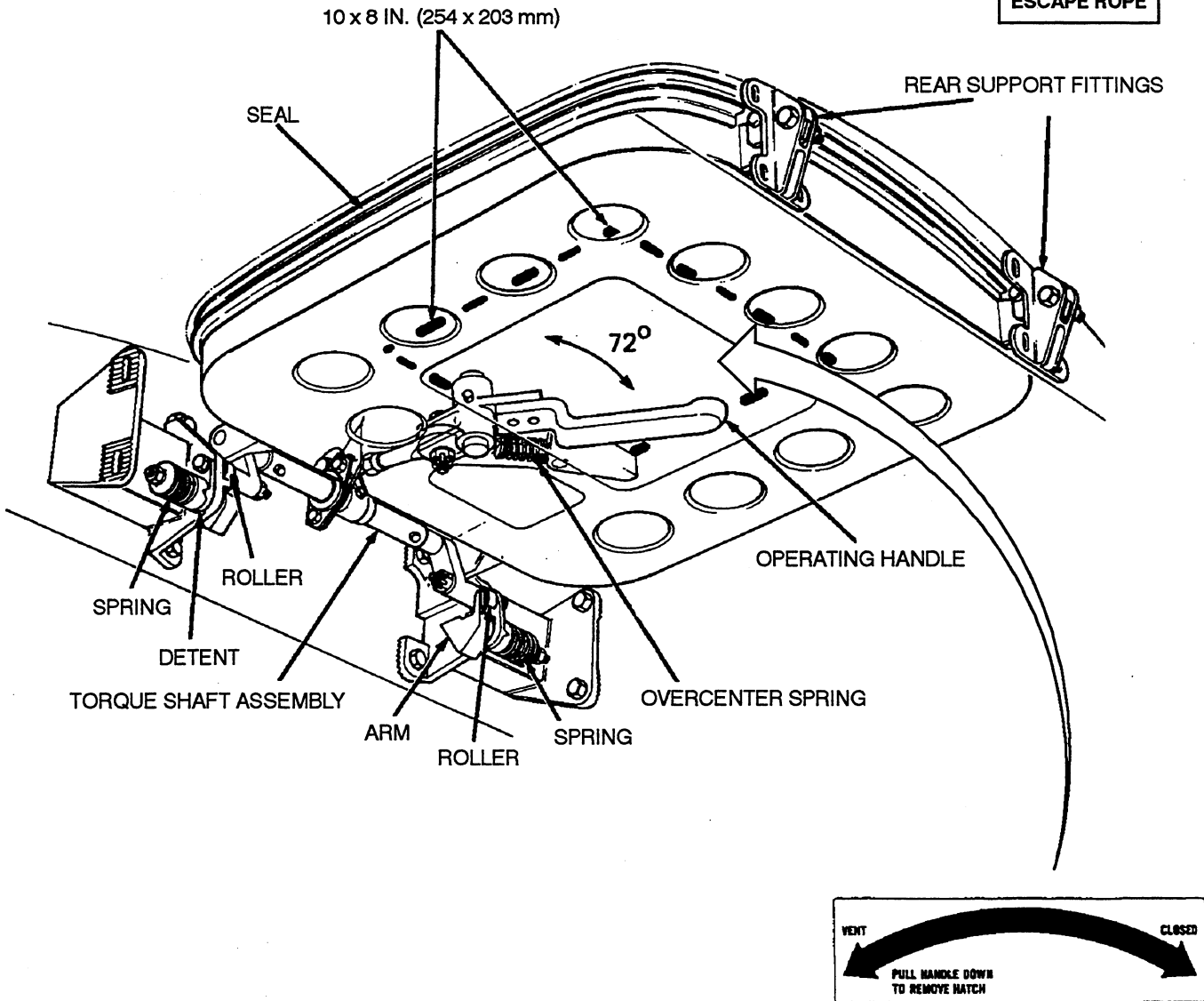
FLIGHT COMPARTMENT
EMERGENCY HATCH
18.5" X 20.6" (470 X 523 mm)

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.



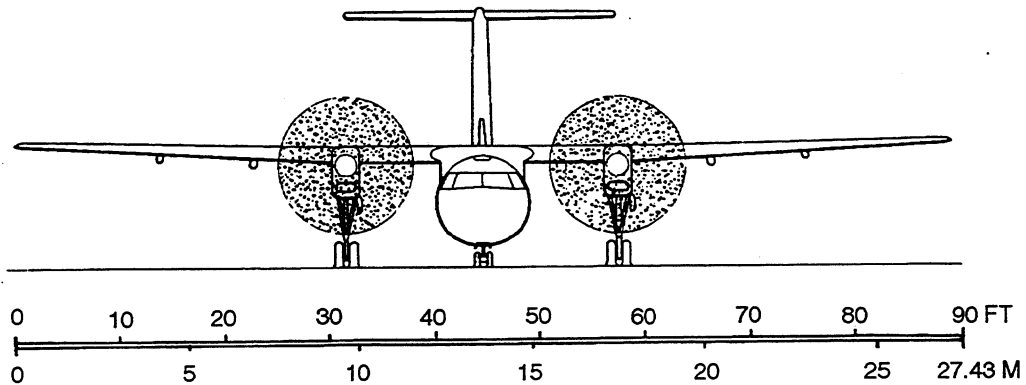
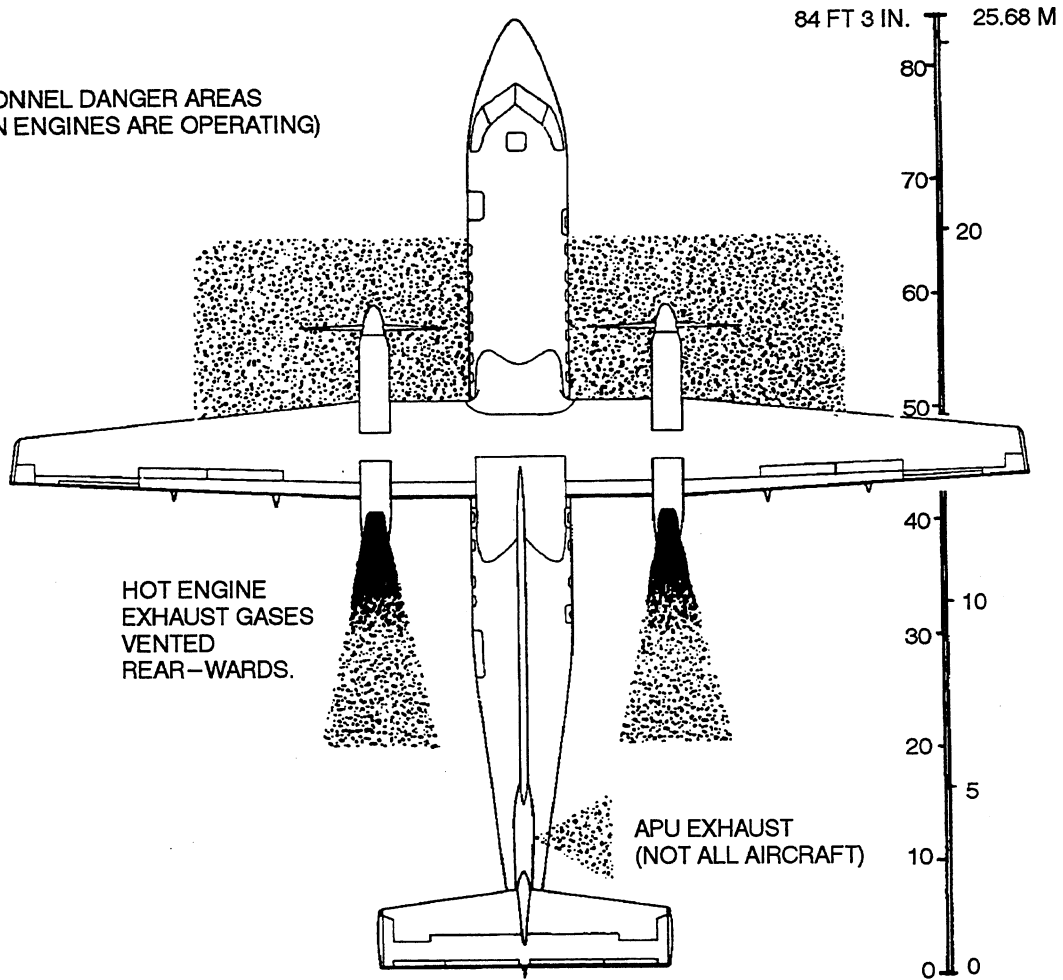
**EMERGENCY
ESCAPE ROPE**



FLIGHT COMPARTMENT EMERGENCY ESCAPE HATCH

DASH 8 CRASH-FIRE-RESCUE INFORMATION

PERSONNEL DANGER AREAS
(WHEN ENGINES ARE OPERATING)



ENGINE DANGER AREAS

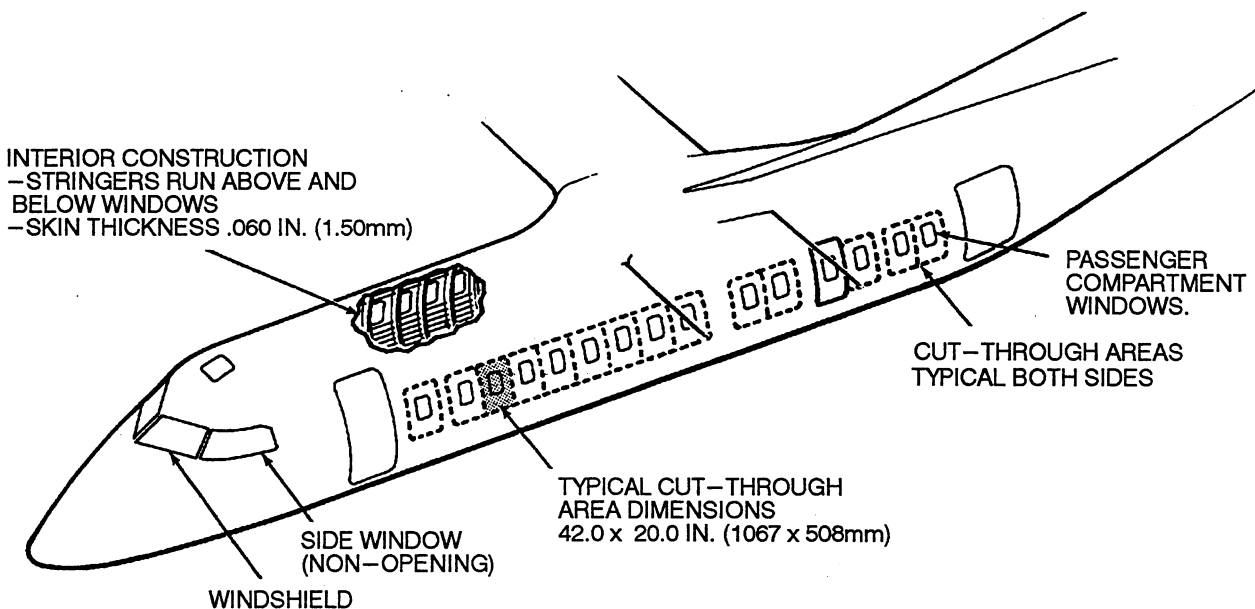
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DASH 8 CRASH-FIRE-RESCUE INFORMATION

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.

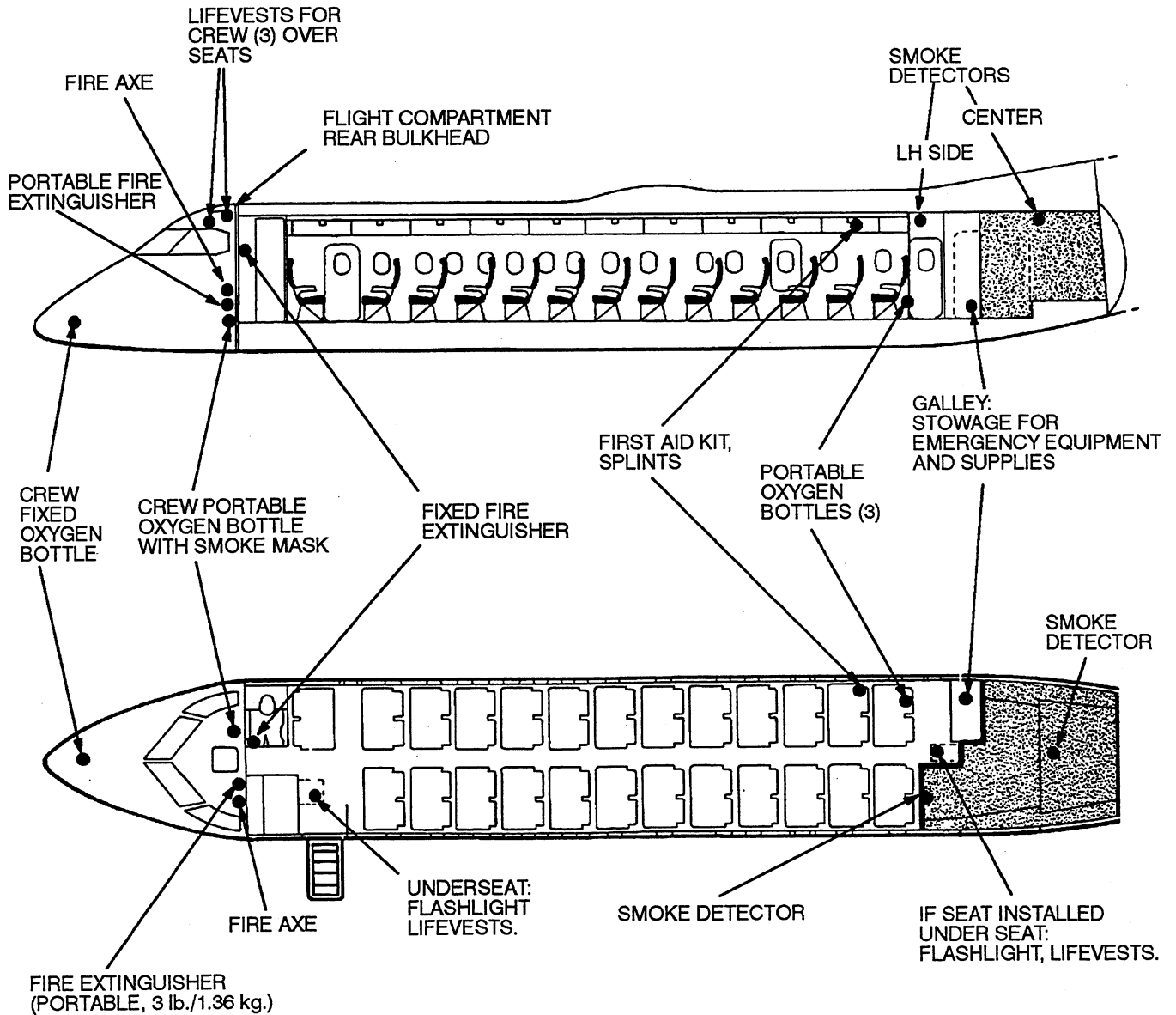


CUT-THROUGH AREAS

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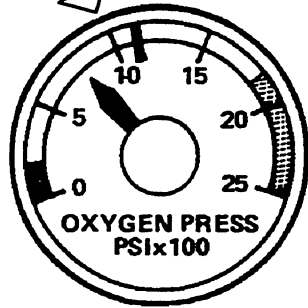
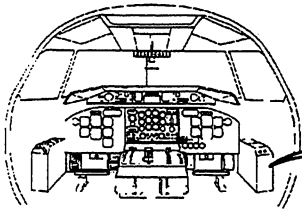
STANDARD 50 PASSENGER AIRCRAFT



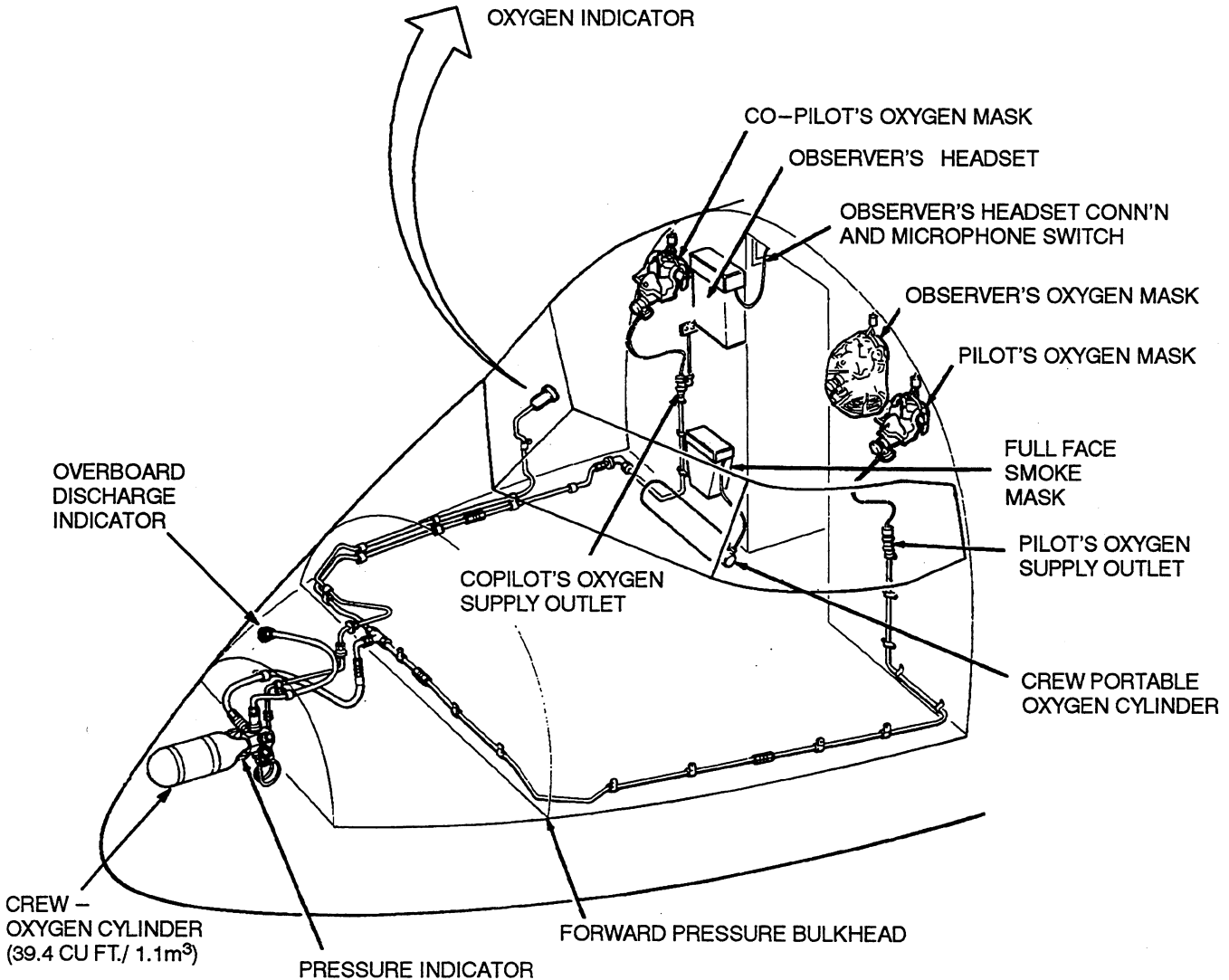
*NOTE: LOCATIONS MAY VARY WITH AIRLINE & CONFIGURATION

FUSELAGE SAFETY EQUIPMENT LOCATIONS

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



RANGE MARKS	
RED:	0 - 250 psi (DANGER LEVEL)
GREEN:	250 - 1800 psi (USEABLE RANGE)
YELLOW:	1800 - 2500 psi (OVERPRESSURE)
BLUE RADIAL:	1300 psi (MINIMUM DISPATCH)

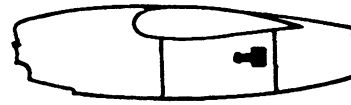


CREW OXYGEN LOCATIONS

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.	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 'SKY-DROL' FUMES. ALL WHEELS ARE FORGED ALUMINUM.
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.	
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	

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

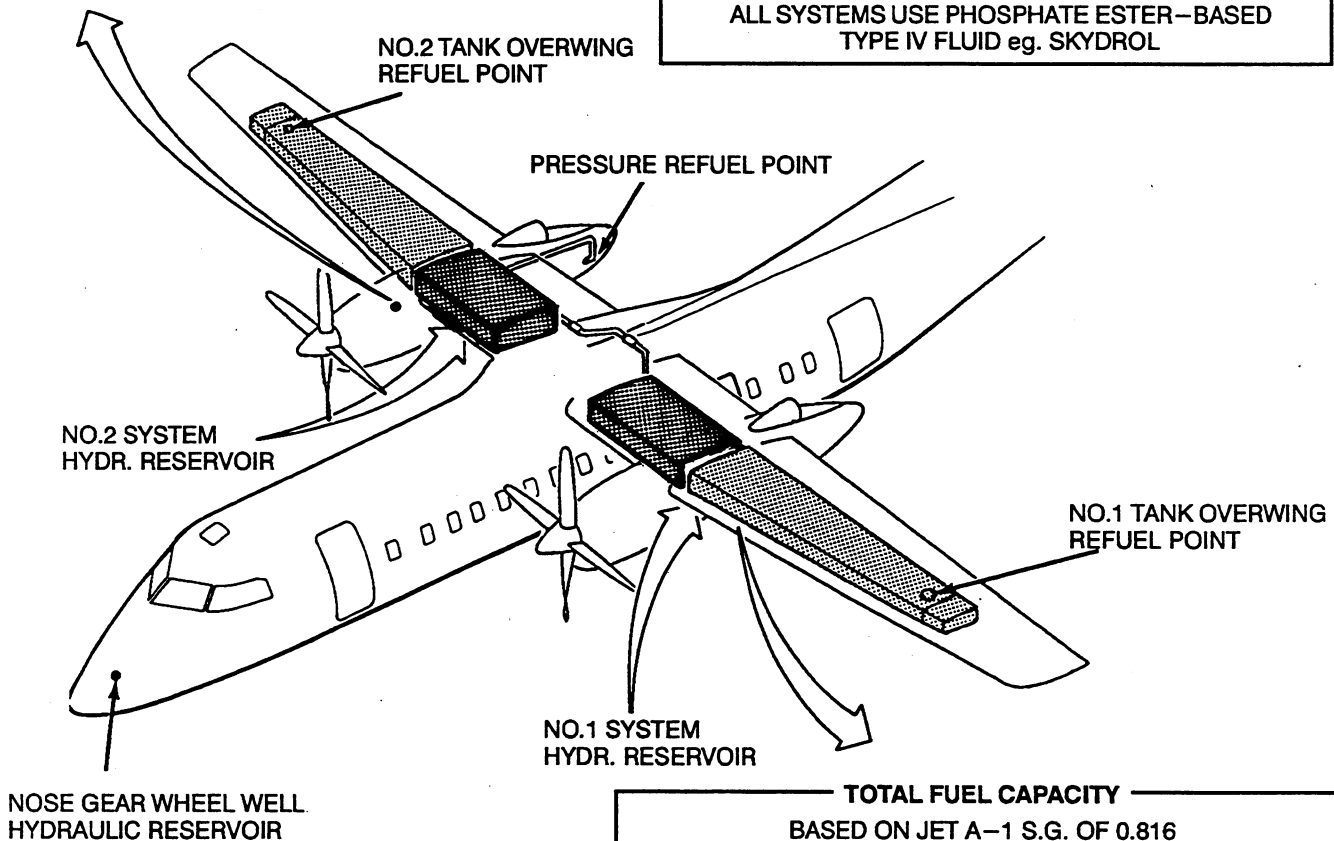


LOCATION OF HYDRAULIC RESERVOIR
(IDENTICAL IN BOTH NACELLES).

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

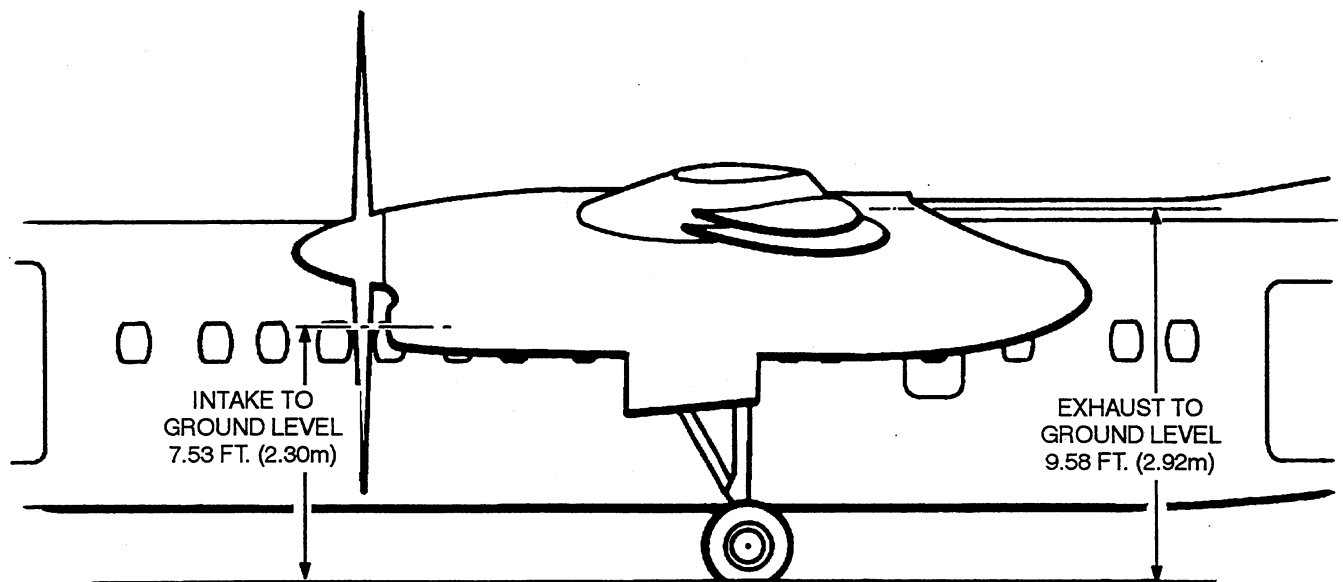
FLAMMABLE MATERIAL LOCATIONS

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

PSM 1-83-14

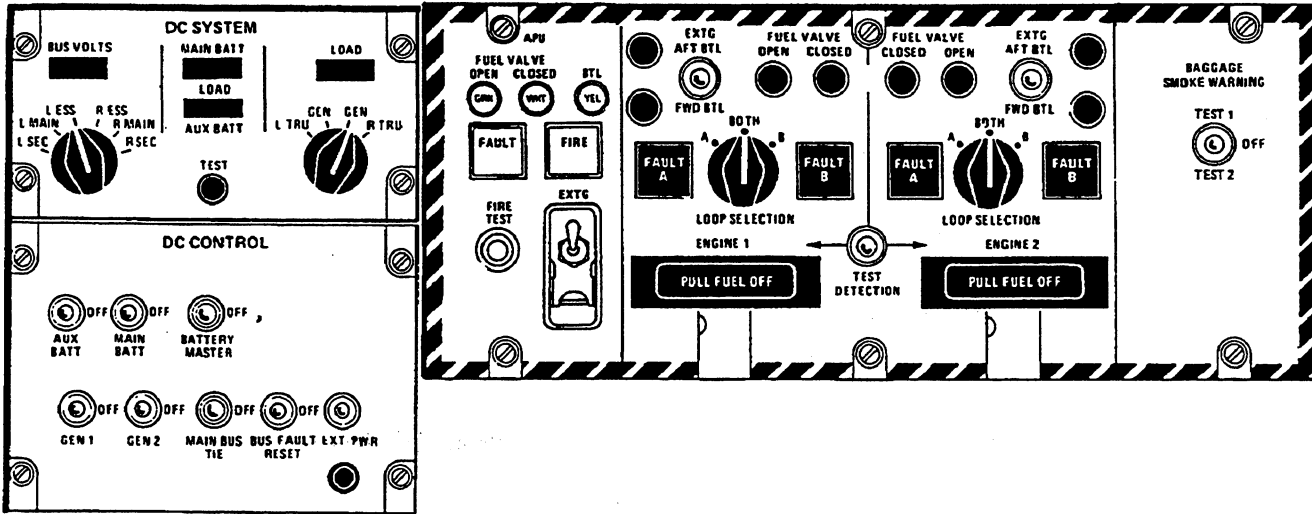
NOTES

- APPROX. 2FT. LOWER IN WHEELS-UP SITUATION.
- THERE ARE NO EXTERNALLY ACCESSIBLE ENGINE FIRE ACCESS PANELS.



ENGINE FIRE ACCESS LOCATIONS

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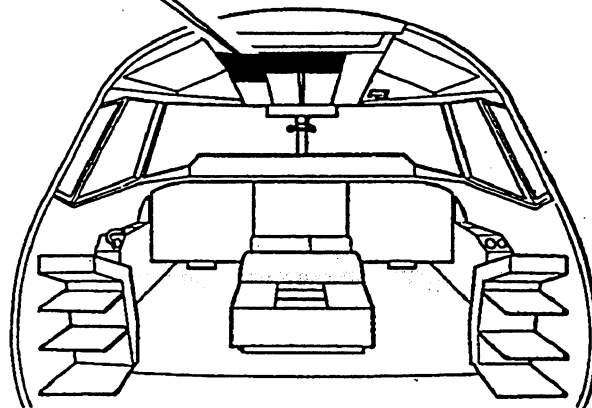


ENGINE FIRE EXTINGUISHER OPERATION

- 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