

WELCOME TO TECHNICAL ORDER 00-105E-9, 1 FEBRUARY 2006, REVISION 11.

THIS IS SEGMENT 29 COVERING CHAPTER 30 from the A109 to Lynx MK3.

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 29 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 Retaining out of date rescue information can negatively affect the user's operability and outcome of emergencies.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>
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None.			
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NOTE

Chapter 30 contains emergency rescue and mishap response information for the following NATO aircraft:

ITA	A 109
ITA, TUR	AB 204
ITA, TUR	AB 204A/S
ITA, TUR	AB 206
TUR	AB 212
ITA, TUR, ESP	AB 212A/S
CAN	AB412/CH-146
USA, TUR	AH-1 P/W
USA, GBR	AH-64
TUR	AS-532
DNK	AS-550C2
GEU	BO-105CB
CAN, ITA, USA, GBR	CH-47/HC2/3
GEU, USA	CH-53/H-53D,E
FRA	ECUREUIL ALSTAR AS 355
FRA	ECUREUIL 2*
FRA	FENNEC AS 555AN
GBR	GAZELLE AH1
GBR	GAZELLE HT2
GBR	GAZELLE HT3
ITA	HH-3F*
USA, TUR	H/M/S/UH-60A,G,H,J,L S-70-28D
USA, TUR	HUGHES 300/MH-6
DNK, USA	HUGHES 500/OH-6
GBR	LYNX HAS 3
PRT	LYNX LBH MK9
GBR	LYNX MK3
GBR	LYNX MK7
GBR	LYNX MK8
DNK	LYNX MK90B
GBR	LYNX MK95
FRA	LYNX WG 13
GBR	MERLIN
TUR	OH-13S
USA, TUR	OH-58A/C/D
GBR, FRA, ESP, PRT, TUR	PUMA HC1/SA 330
BEL	SA 313/318
BEL, FRA, PRT, NLD	SA 316B/319B/SE 3160
FRA	SA 341/342
GBR	SEA KING AEW 2
GBR	SEA KING ASW 5
GBR, ITA, ESP	SEA KING HAR 3/SH 3D
GBR	SEA KING HAS/ASW/6
GBR	SEA KING MK4
GBR	SEA KING MK6
GBR	SEA KING MK7
GEU, GBR, DNK, BEL, NOR	SEA KING MK-41/HC-4/S-61/WESTLAND SAR
GEU, DNK	SEA LYNX MK-88
USA, ESP	SH-60B
FRA	SUPER FRELON SA 321
FRA, ESP, NLD	SUPER PUMA & COUGAR/HD-21
USA, ITA, GRE, NLD	UH-1
USA, TUR, NOR	UH-1N
GBR	WESSEX HC2/HC5C

* Aircraft information pending

Chapter 30 Cover

CHAPTER 30

NATO

HELICOPTER

AEROSPACE EMERGENCY RESCUE AND MISHAP RESPONSE INFORMATION

30-1. INTRODUCTION AND USE.

30-2. This section contains emergency rescue and mishap response information illustrations in alpha-numerical order relative to type and model of aircraft. This arrangement of illustrations is maintained from Chapter 4 throughout the remainder of the publication.

30-3. GENERAL ARRANGEMENT.

30-4. Aircraft type designation has been positioned in the upper right corner of the horizontal illustration for rapid identification. Additional aids to rapid orientation are:

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

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

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

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

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

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

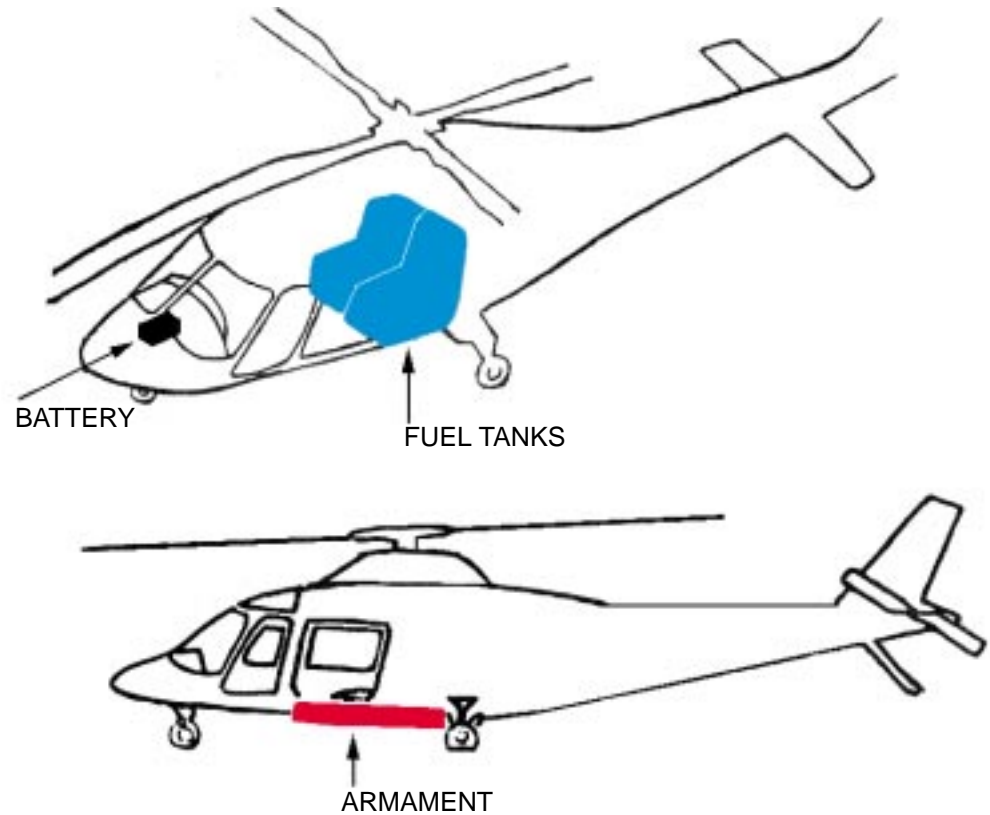
AIRCRAFT HAZARDS

OTHER HAZARDS:

Battery acid
Bromochlorodifluoromethane (BCF Fire Extinguishant)
Bromotrifluoromethane (BTM Fire Extinguishant)
Cadium (Battery/Bolt protection/Steel protection)
Cartridge operated equipment
Composite Materials (Man-made mineral fibres)
Fluorolastomers (Burnt seals)
Freon
Polytetrafluoroethylene
Fuel: NATO F-34
Hydraulic oil: H-515
Engine oil: NATO O-156
Oxygen: Gaseous

NOTE:

Cargo cabin insulation blanket produces phosgene gas on burning.



SPECIAL TOOLS/EQUIPMENT
Power Rescue Saw
Crash Ax

AIRCRAFT ENTRY

1. NORMAL ENTRY

- a. Use external handles on crew and passenger doors.

2. EMERGENCY ENTRY

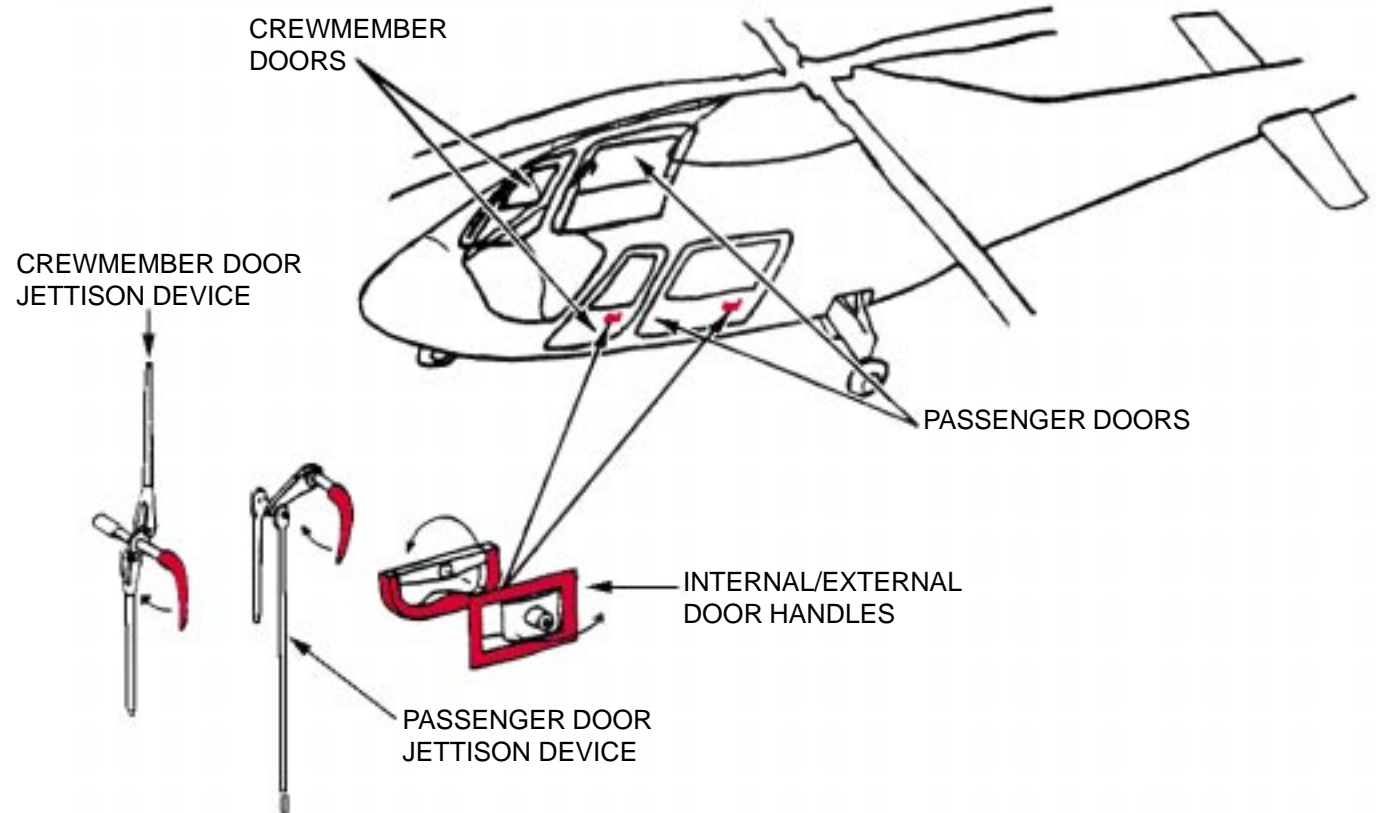
- a. Use crew and passenger door jettison device handles.

NOTE:

Jettison door device is a non-explosive, door separating mechanism.

3. CUT-IN

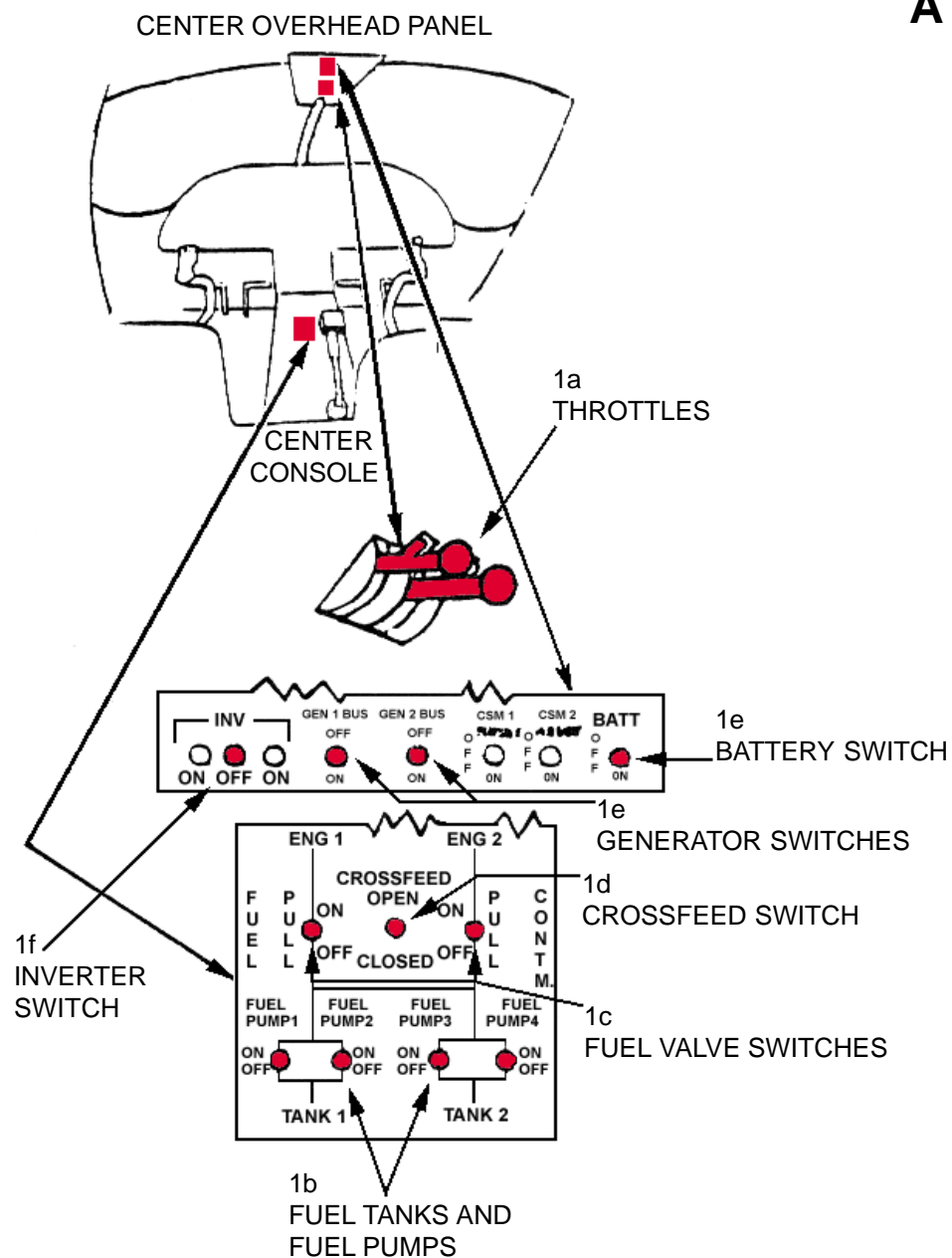
- a. Cut-in as required.



- a. Place throttles, located on center overhead panel, to OFF position.
- b. Place fuel tanks and fuel pump switches, located on center overhead panel, to OFF position.
- c. Place fuel valve switches, located on center console, to OFF position.
- d. Place fuel crossfeed switches, located on center console, to CLOSED position.
- e. Place battery and generator switches, located on center overhead panel, to OFF position.
- f. Place inverter switch, located on center overhead panel, to OFF position.

2. AIRCREW EXTRACTION

- a. Unlatch lap belts and remove shoulder harnesses from crewmembers.
- b. Unlatch lap belts from passengers.



SPECIAL TOOLS/EQUIPMENT

None

AB 204

AIRCRAFT ENTRY

1. NORMAL ENTRY

- a. Rotate locking handle, located on entry doors, clockwise to OPEN position.

2. EMERGENCY ENTRY

- a. Use crew and cargo door jettison device handles.

NOTE:

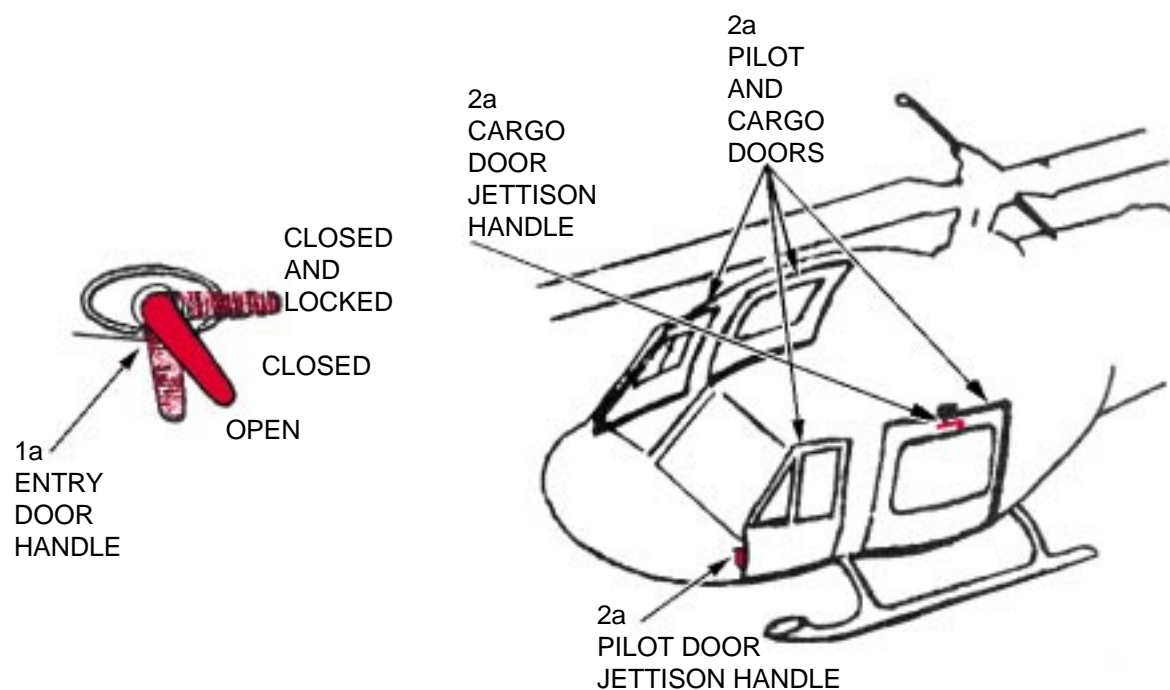
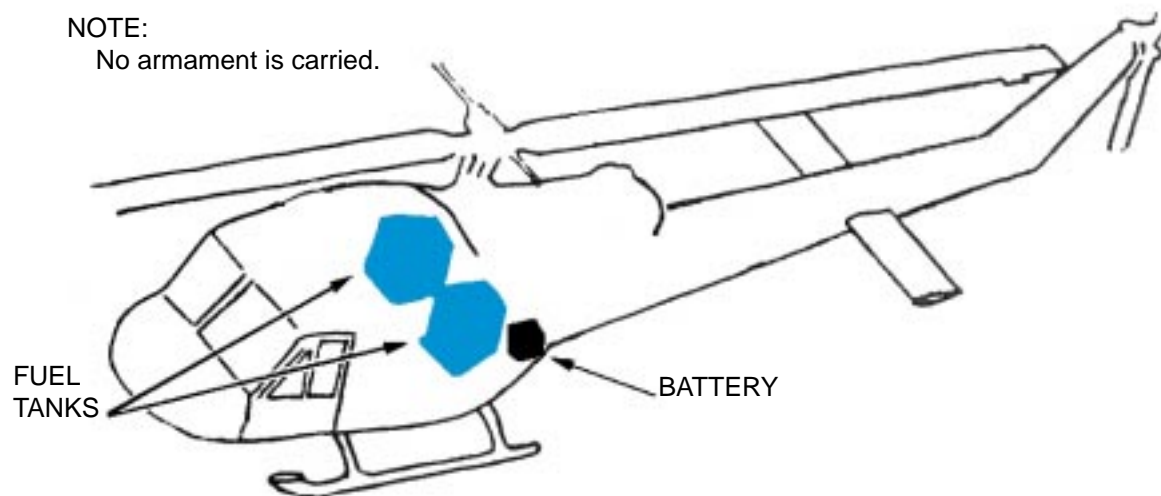
Jettison door device is a nonexplosive, door separating mechanism.

3. CUT-IN

- a. None.

NOTE:

No armament is carried.



ENGINE SHUTDOWN AND AIRCREW EXTRACTION

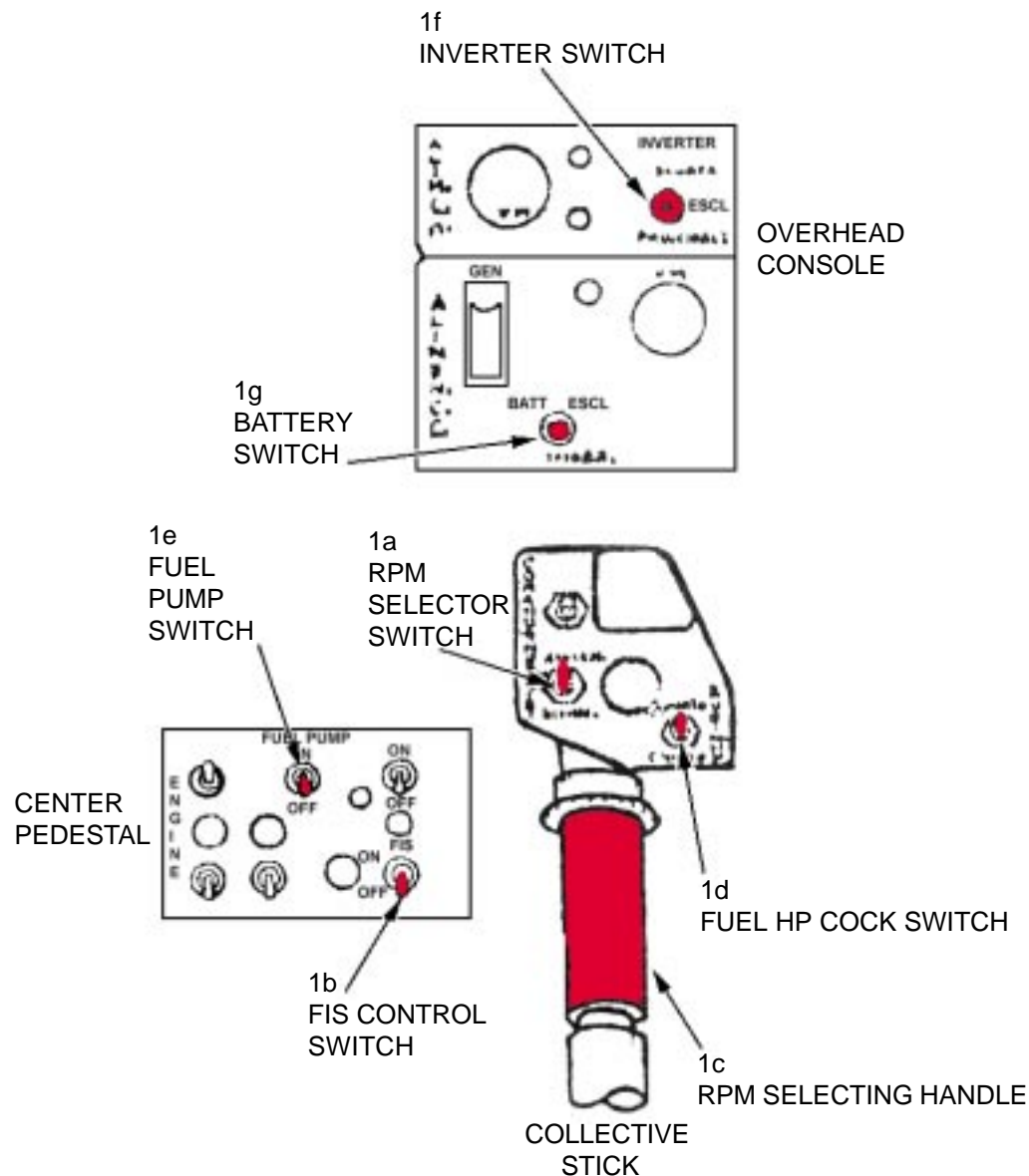
AB 204

1. ENGINE SHUTDOWN

- a. Decrease engine RPM by operating RPM selector switch, located on pilot's collective stick on left side of main console, until green light computer actuator is on.
- b. Place FIS control switch, located on center pedestal, to OFF position.
- c. Place RPM selecting handle, located on pilot's collective stick, to CLOSED position.
- d. Place fuel HP cock switch, located on pilot's collective stick, to OFF position.
- e. Place fuel pump switch, located on center pedestal, to OFF position.
- f. Place inverter switch, located on overhead console, to ESCL position.
- g. Place battery switch, located on overhead console, to ESCL position.

2. AIRCREW EXTRACTION

- a. Unlatch lap belts and remove shoulder harnesses from crewmembers.
- b. Unlatch lap belts from passengers.



SPECIAL TOOLS/EQUIPMENT

None

AB 204A/S

AIRCRAFT ENTRY

1. NORMAL ENTRY

- a. Rotate locking handle, located on entry doors, clockwise to OPEN position.

2. EMERGENCY ENTRY

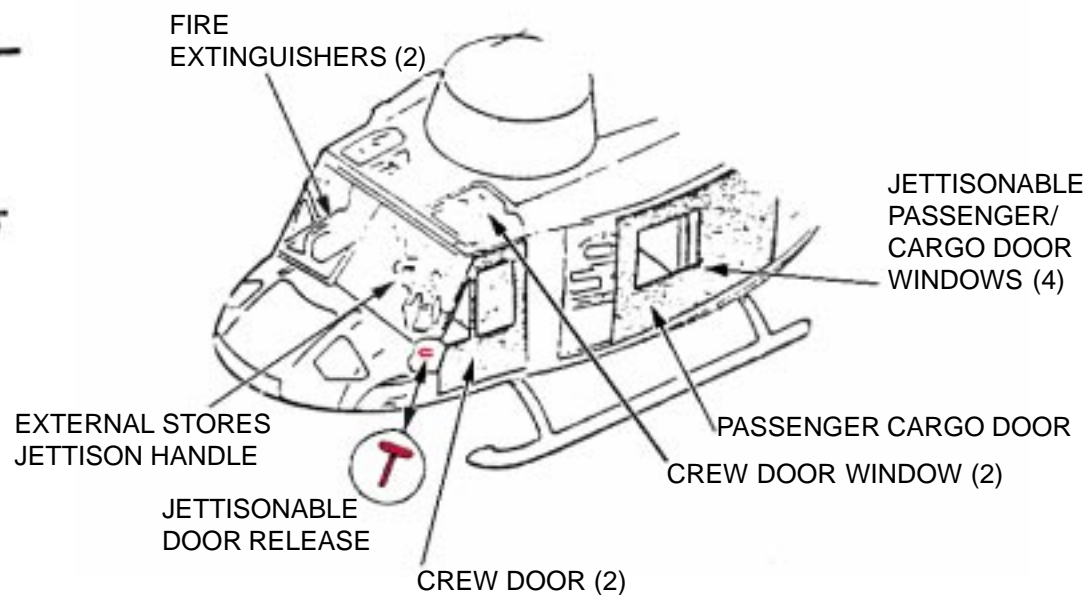
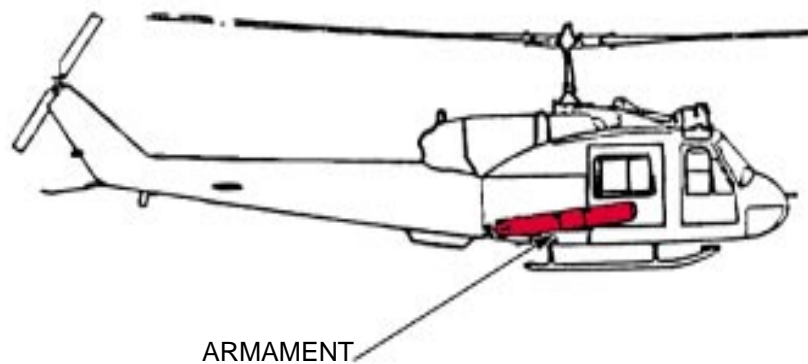
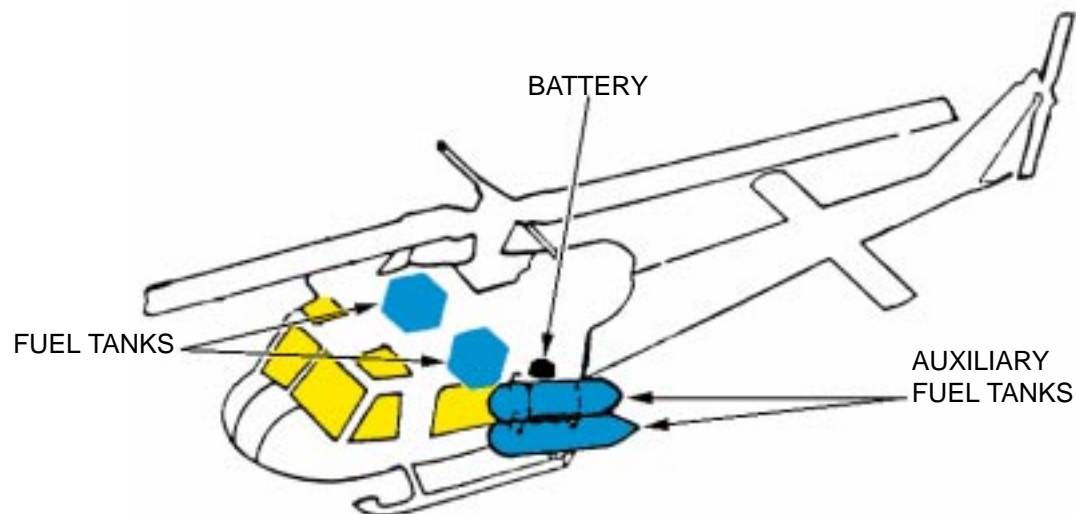
- a. Use crew and cargo door jettison device handles.

NOTE:

Jettison door device is a nonexplosive, door separating mechanism.

3. CUT-IN

- a. None.



ENGINE SHUTDOWN AND AIRCREW EXTRACTION

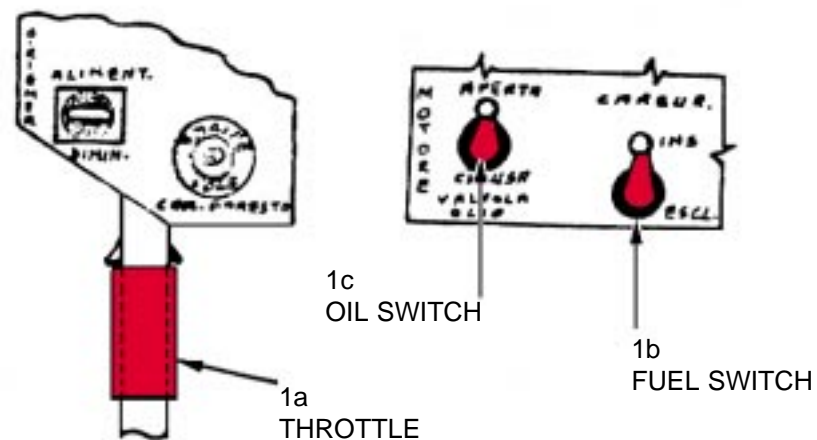
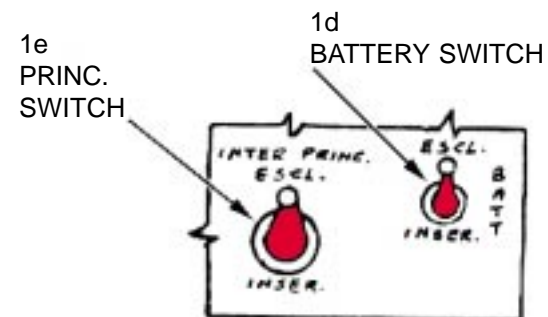
AB 204A/S

1. ENGINE SHUTDOWN

- a. Place throttle, located in the completely CLOSED position.
- b. Place the fuel shutoff switch in the OFF position.
- c. Place the oil switch in the OFF position.
- d. Place the battery switch in the OFF position.
- e. Place the princ. switch in the OFF position.

2. AIRCREW EXTRACTION

- a. Unlatch lap belts and remove shoulder harnesses from crewmembers.
- b. Unlatch lap belts from passengers.



SPECIAL TOOLS/EQUIPMENT

None

AB 206

AIRCRAFT ENTRY

1. NORMAL ENTRY

- a. Rotate locking handle, located on entry doors, clockwise to OPEN position.

2. EMERGENCY ENTRY

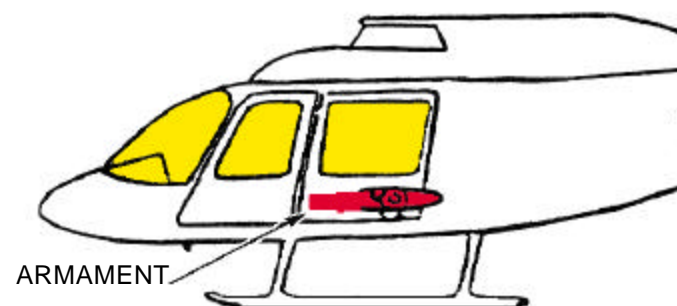
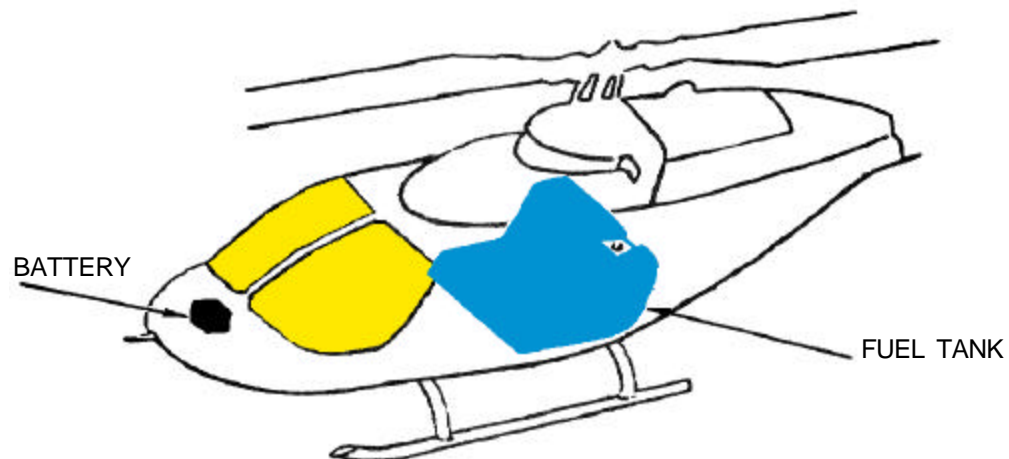
- a. Use crew and cargo door emergency jettison handles.

NOTE:

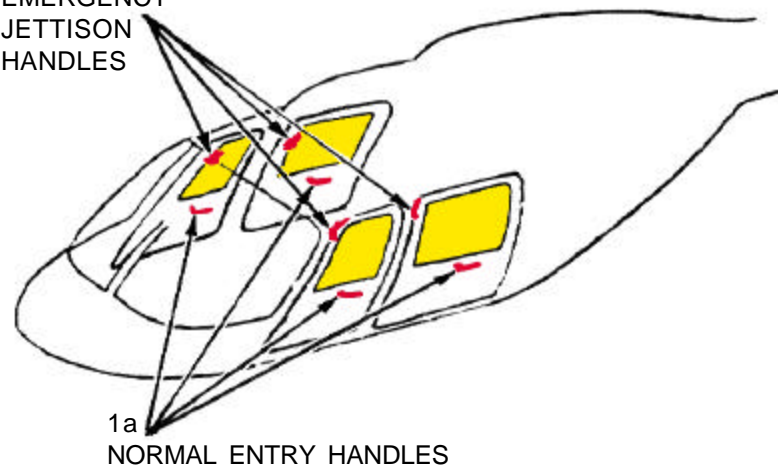
Jettison door devices are a nonexplosive, door separating mechanism.

3. CUT-IN

- a. None.



2a
EMERGENCY
JETTISON
HANDLES

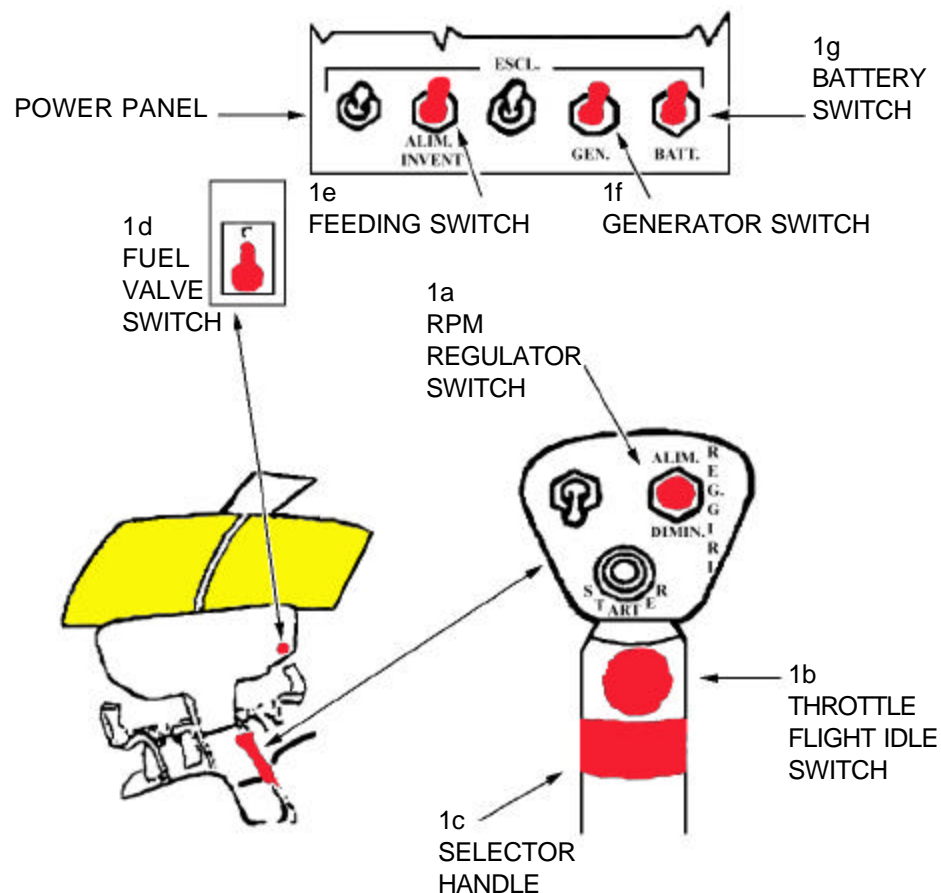


ENGINE SHUTDOWN AND AIRCREW EXTRACTION

AB 206

1. ENGINE SHUTDOWN

- Decrease (Dimin.) the RPM regulator (REG. GIRI) switch, located on the throttle control stick, to the IDLE position.
- Rotate the throttle against the flight idle (fermo di minimo) position.
- Push flight idle (fermo di minimo) switch and close selector handle, located on throttle control stick.
- Place the fuel valve switch, located on the forward overhead panel, to the OFF (escl.) position.
- Place the feeding (alim. invent.) switch, located on the power panel, up to the CUT OUT (escl.) position.
- Place the generator switch, located on the power panel, up to the CUT OUT (escl.) position.
- Place the battery switch, located on the power panel, up to the CUT OUT (escl.) position.



2. AIRCREW EXTRACTION

- Unlatch lap belts and remove shoulder harnesses from crewmembers.
- Unlatch lap belts for passengers.

SPECIAL TOOLS/EQUIPMENT

None

AB 212

AIRCRAFT ENTRY

1. NORMAL ENTRY

- a. Rotate locking handle, located on entry doors, clockwise to OPEN position.

2. EMERGENCY ENTRY

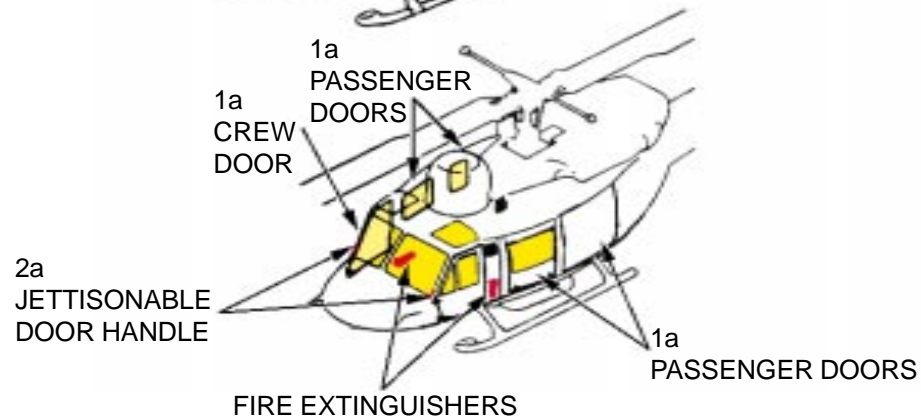
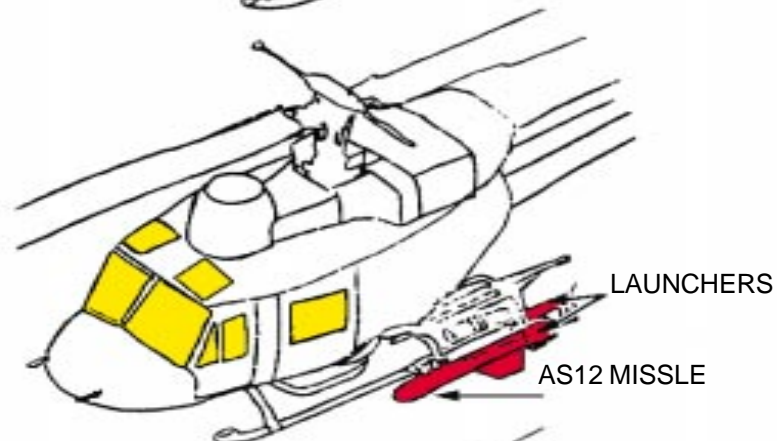
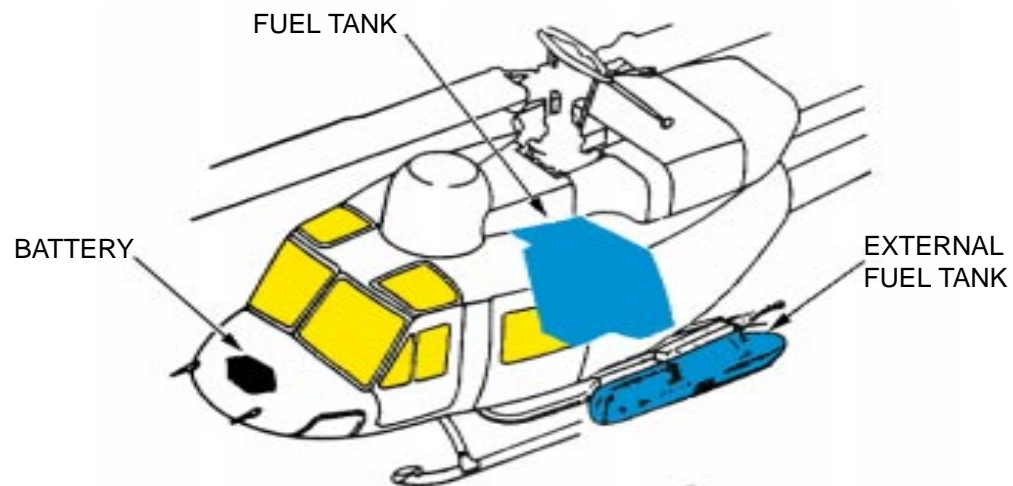
- a. Use crew door emergency jettison handles.

NOTE:

Jettison door devices are a nonexplosive, door separating mechanism.

3. CUT-IN

- a. None.



ENGINE SHUTDOWN AND AIRCREW EXTRACTION

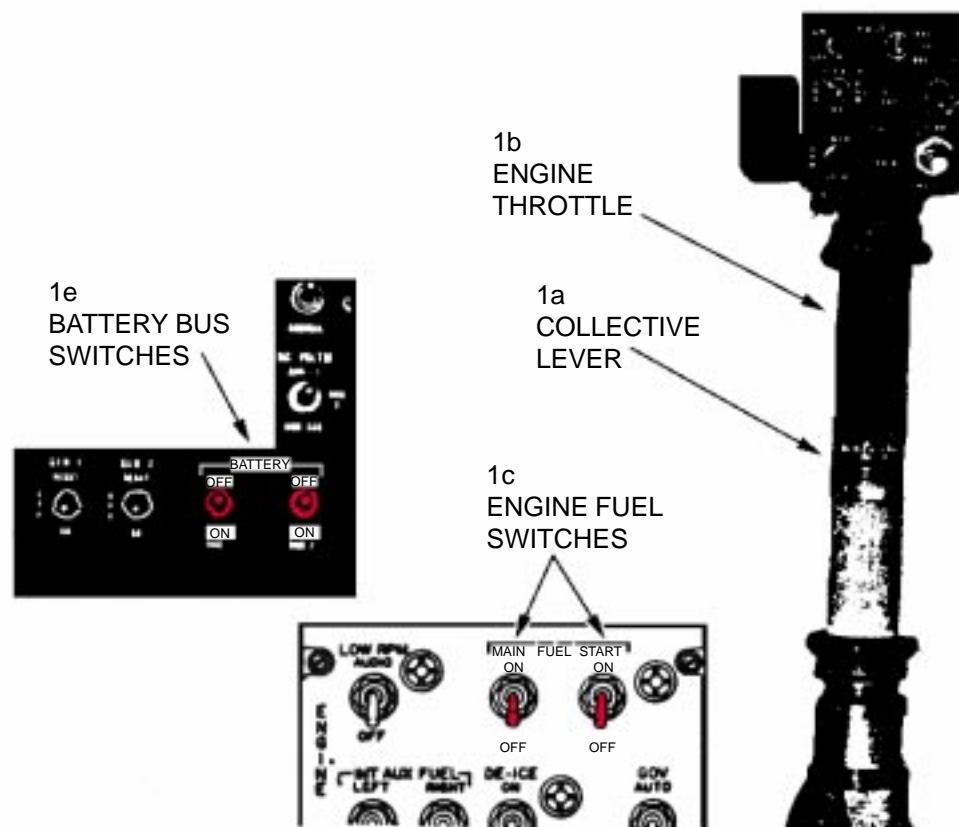
AB 212

1. ENGINE SHUTDOWN

- Place the collective lever, located on the throttle control stick, to the FULL DOWN and LOCKED position.
- Place both engine throttles, located on the control stick, to the completely CLOSED position.
- Place both engine fuel switches, located on the engine panel, to the OFF position.
- Place both engine boost pump switches to the OFF position.
- Place the battery bus switch, located on the power panel, to the OFF position.

2. AIRCREW EXTRACTION

- Unlatch lap belts and remove shoulder harnesses from crewmembers.
- Unlatch lap belts for passengers.



SPECIAL TOOLS/EQUIPMENT

None

AB 212A/S

AIRCRAFT ENTRY

1. NORMAL ENTRY

- a. Rotate locking handle, located on entry doors, clockwise to OPEN position.

2. EMERGENCY ENTRY

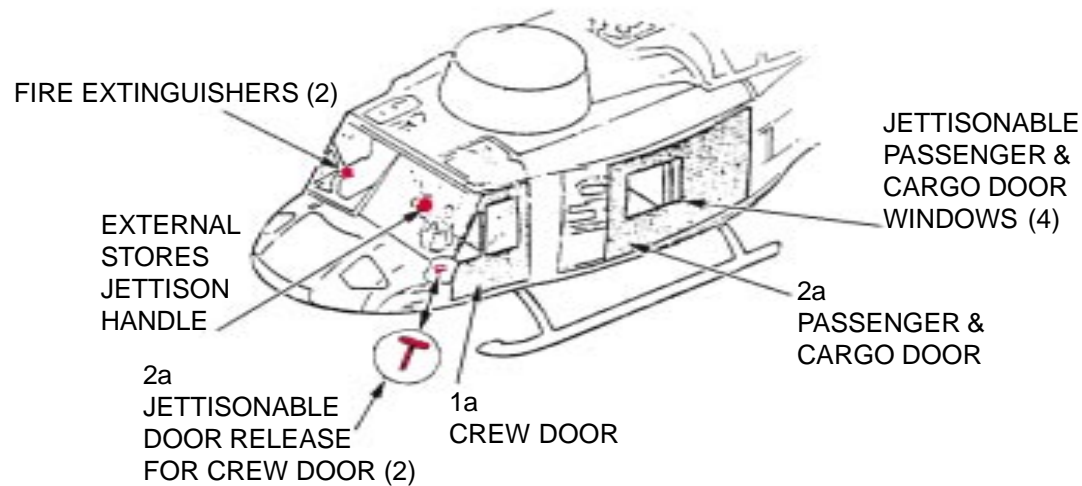
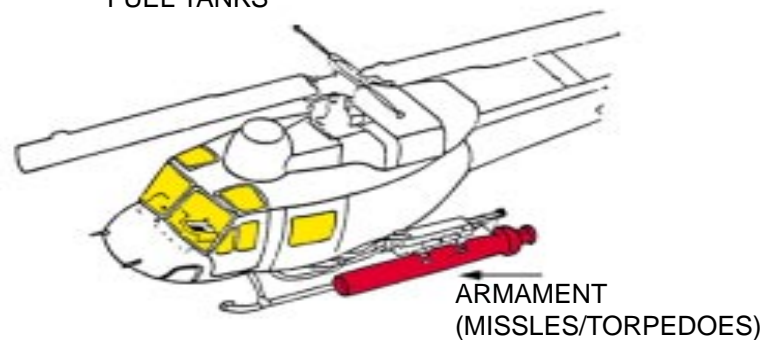
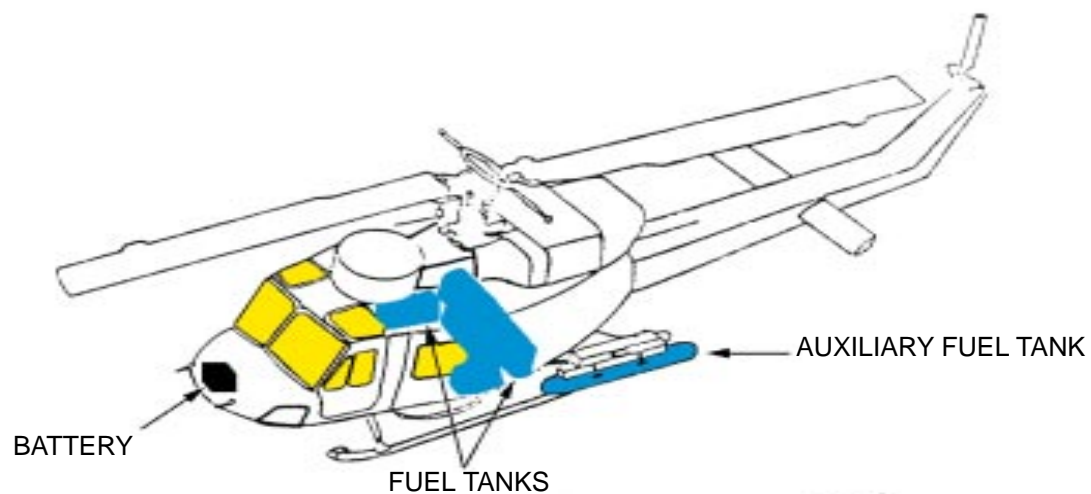
- a. Use crew and passenger/cargo door emergency jettison handles.

NOTE:

Jettison door devices are a nonexplosive, door separating mechanism.

3. CUT-IN

- a. None.



ENGINE SHUTDOWN AND AIRCREW EXTRACTION

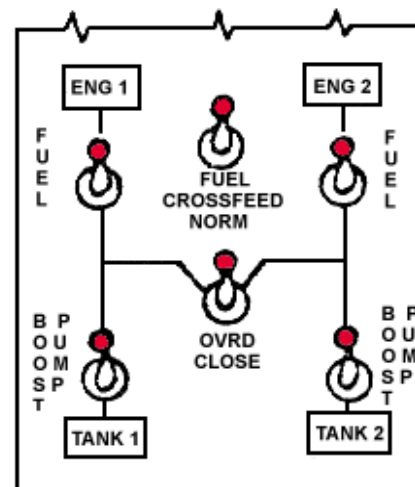
1. ENGINE SHUTDOWN

- Place the throttle, located on the pilot collective stick, to the completely CLOSED position.
- Place the fire extinguisher selector switch to MAIN.
- Pull fire T-handle.
- Place fuel crossfeed switch, located on the engine and fuel control panel, to OVERRIDE CLOSE position.
- Place the fuel switches, located on the engine and fuel control panel, to the OFF position.
- Place boost pump switches, located on the engine and fuel control panel, to the OFF position.

2. AIRCREW EXTRACTION

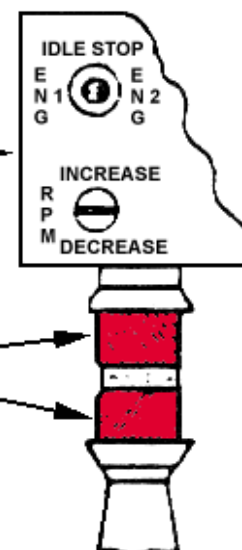
- Unlatch lap belts and remove shoulder harnesses from crewmembers.
- Unlatch lap belts for passengers.

1d, 1e, 1f →
ENGINE AND FUEL
CONTROL PANEL



1a
PILOT
COLLECTIVE STICK →

1a
THROTTLES →



AB 212A/S

AIRCRAFT PAINT SCHEME

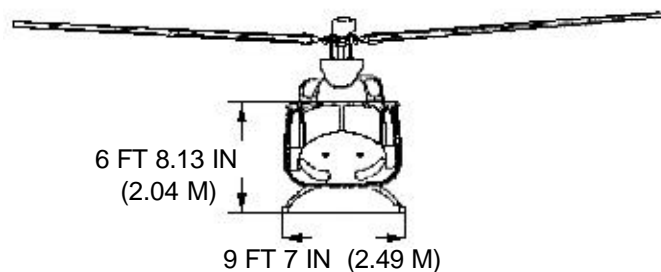
AB 412/CH 146



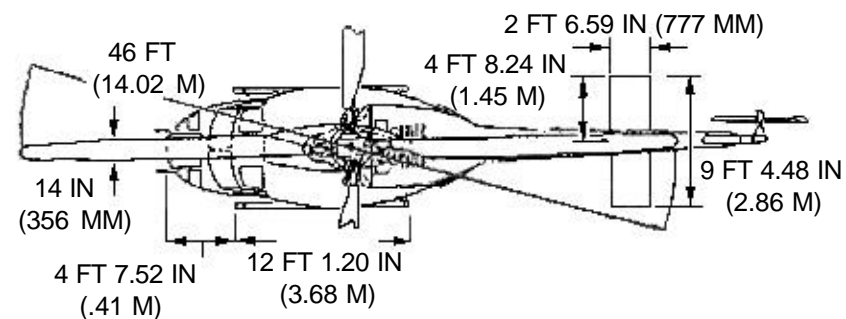
AIRFRAME DIMENSIONS

AB 412/CH 146

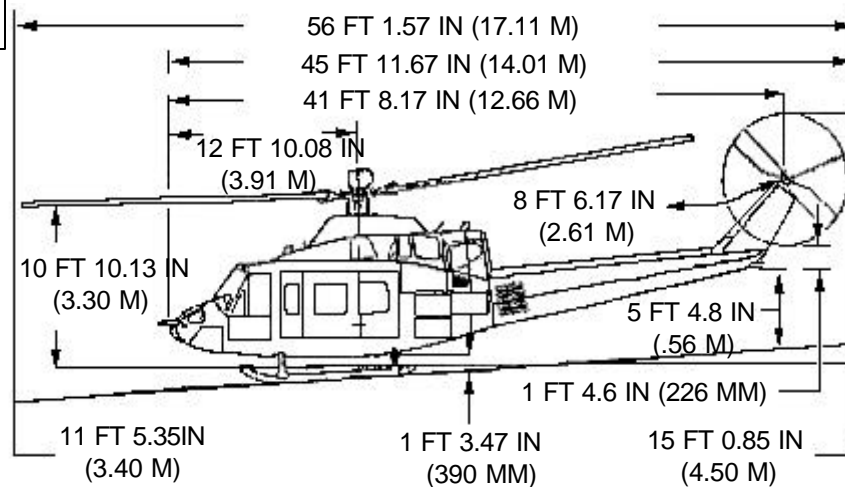
FRONT
VIEW



TOP
VIEW



SIDE
VIEW



AIRCRAFT GENERAL INFORMATION

The Agusta Bell (AB) 412/CH 146 "Griffon" helicopter is a twin engine with a single four-blade main rotor system and a tail rotor to provide direction control. (CH = Canadian designation)

Crew: Three, two forward and one aft.

Maximum passenger load: 15, depending on aircraft configuration.

Fuel is carried in 10 interconnected fuel cells and one auxiliary tank. All fuel tanks are crash proof and have one way valves to prevent fuel spills in the event of a crash. The fuel tanks are located below cabin floor and four are located aft of the cabin and above level of underfloor cells. Capacity is 330 US gallons (1500 L) with auxiliary combined.

The Flight Data Recorder (Black Box) is located in the nose compartment left of the aircraft battery. (FDR is officially painted orange.)

AB 412/CH 146

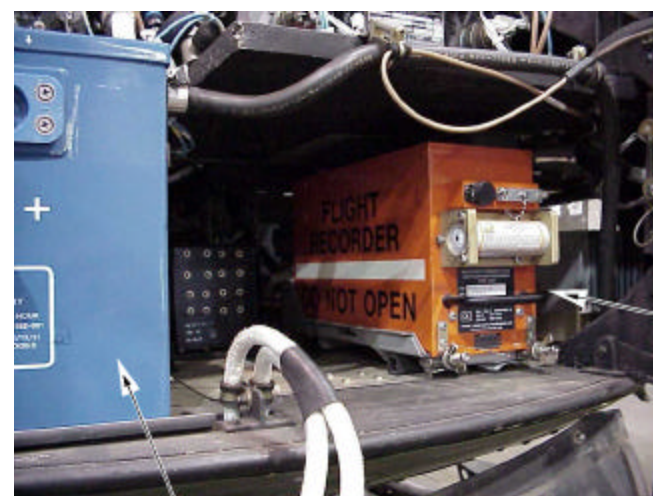


RIGHT SIDE FUSELAGE VIEW WITH NOSE COMPARTMENT OPEN



AFT CABIN AREA
FUEL TANKS

BELOW CABIN FLOOR
FUEL TANKS



BATTERY



FLIGHT DATA
RECORDER

AIRFRAME MATERIALS

AB 412/CH 146

NOTE:

The airframe material is a semi-monocoque structure with metal and fiberglass covering.

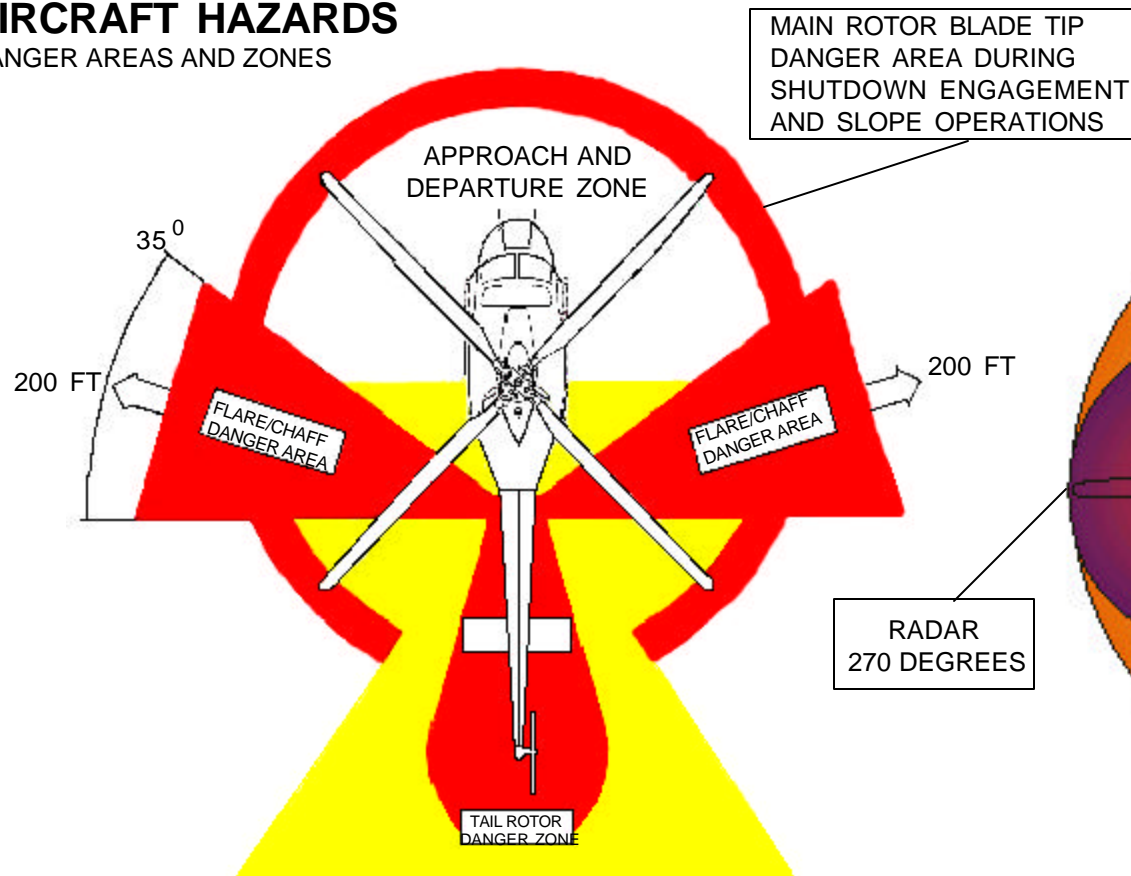
	ALUMINUM ALLOID
	COMPOSITE MATERIAL
	FIBERGLASS
	HARDENED GLASS



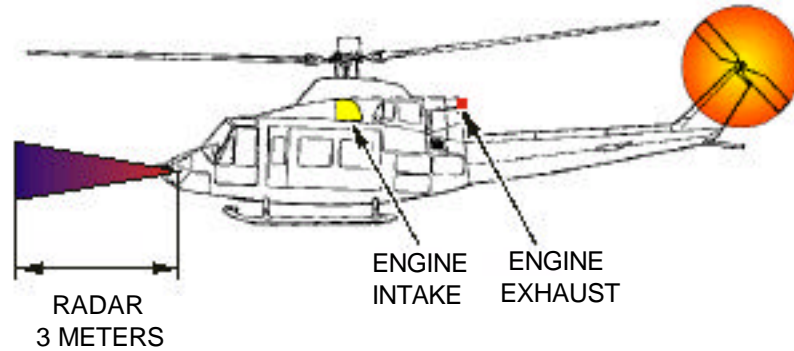
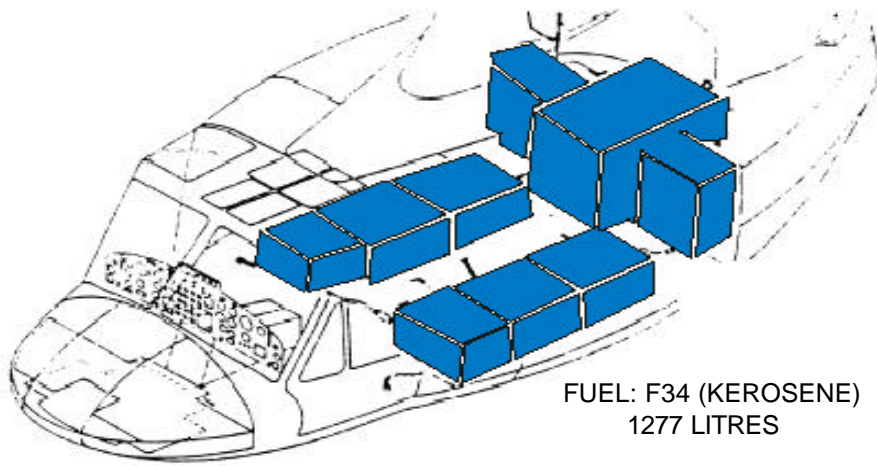
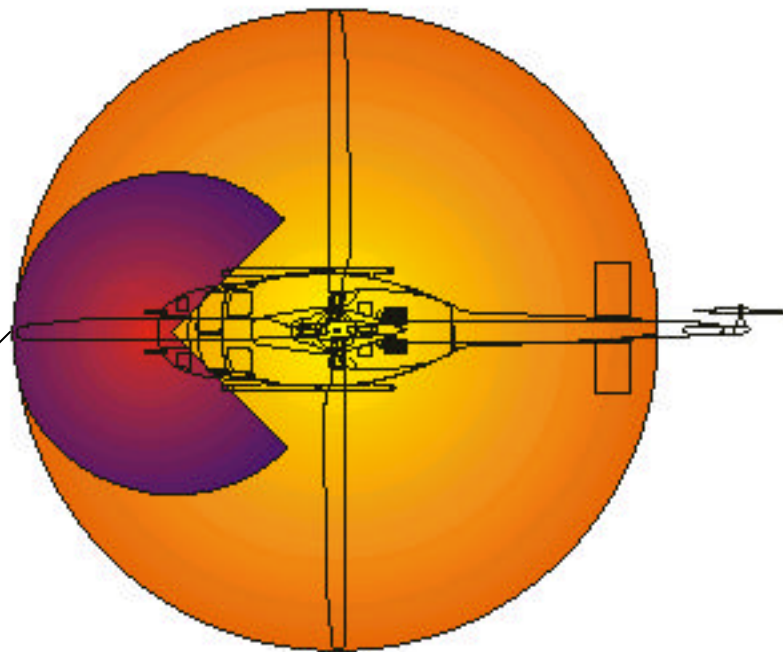
AIRCRAFT HAZARDS

DANGER AREAS AND ZONES

AB 412/CH 146



RADAR 270 DEGREES

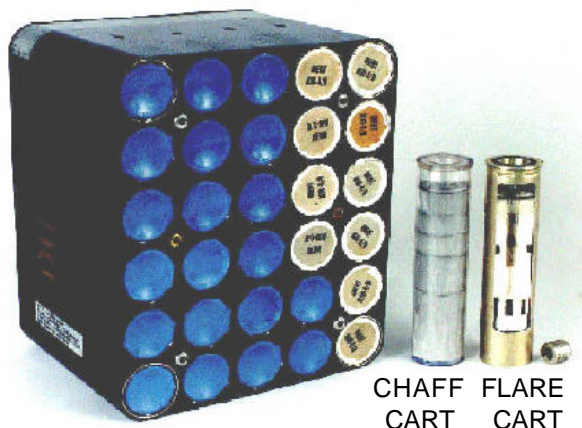


AIRCRAFT HAZARDS - Continued

CHAFF/FLARES AND GUN



LEFT SIDE
CHAFF AND FLARE
DISPENSER



ALE-29 CHAFF AND
FLARE DISPENSER
WITH CARTRIDGES

CHAFF CART
FLARE CART

AB 412/CH 146



RIGHT SIDE
CHAFF AND FLARE
DISPENSER



GUN STOWED

C6 DOOR GUN WITH
7.62 MM AMMO
(GUN MOUNTED ON LEFT
SIDE, AMMO STORED IN
CARGO COMPARTMENT)



GUN READY

AIRCRAFT HAZARDS-Continued

1. EXTERNAL AIRCRAFT BATTERY DISCONNECT

NOTE:

Aircraft uses a Nicad battery. Handle carefully.

- a. The battery is located in the nose compartment inside a blue box. Use a phillips screwdriver to open the panel.
- b. In case of an emergency: to disconnect the battery, turn the olive green knob counterclockwise.
- c. Pull the knob out from the battery connection to disconnect.

1a
OPEN NOSE
COMPARTMENT



1a
BATTERY



1b, 1c
BATTERY
KNOB



1c
DISCONNECTED BATTERY

SPECIAL TOOLS/EQUIPMENT

Crash Ax	V-Knife
Power Kawck	Force Rescue Tool
Phillips Screwdriver	

AIRCRAFT ENTRY

NOTE:

Orientation: pilot - right side, co-pilot - left side.

WARNING

Responding vehicles must not approach within 50 feet of aircraft until the rotors are stopped. Always approach aircraft from the front at the pilot's 10 O'clock or 2 O'clock position. Stay out of danger areas to prevent injury or death. (See page AB 412/CH 146.5.)

NOTE:

Whether the rotors are rotating or not, insure pilot can see you at all times while approaching the aircraft.

1. NORMAL ENTRY

- a. Open pilot's or co-pilot's doors by rotating external door handle, located at the door's aft edge.
- b. Open cabin area, from right side of fuselage, by rotating external cabin door handle down. (This door may also be considered the cargo door, depending on aircraft configuration.)

2. EMERGENCY ENTRY

- a. Gain entry into cabin/cargo area by rotating external handle down, slide the door aft, or remove door by rotating the jettison handle (release up) at the forward edge of the door.
- b. Entry may be accomplished by removing the emergency exit windows. (See page AB 412/CH 146.9 step 1b.)

3. CUT-IN

- a. Cut-in windows and doors as required. (Cut-ins are enhanced in red. Actual aircraft color is subdued black.)

AB 412/CH 1463a
CUT-IN INDICATIONS1a, 1b
EXTERNAL DOOR HANDLE FOR
CO-PILOT (OPPOSITE FOR PILOT)3a
CUT-IN INDICATIONS FOR
CABIN/CARGO AREA2a, 2b
EXTERNAL JETTISON DOOR
HANDLE FOR PILOT (OPPOSITE
FOR CO-PILOT)

EMERGENCY EXITS

1. EMERGENCY EXITS

NOTE:

The main emergency exits are the cargo doors, located on either side; the Pilot and Co-pilot's doors and windows can also be used for emergency exits.

- a. To open the cargo doors, turn the internal handles down and slide the doors aft.
- b. In case of jammed cargo doors, open the emergency window exits by firmly pushing out on bottom corners by applying 50 pounds of pressure. Corners are marked by red dots. (This can be done internally or externally. Illustrated view is internal)
- c. To use the emergency exits for the pilot and co-pilot, pull the yellow and black T-handle (release up) just inside the door hinges (forward edge of door).



1a
INTERNAL
CARGO
DOOR
HANDLE

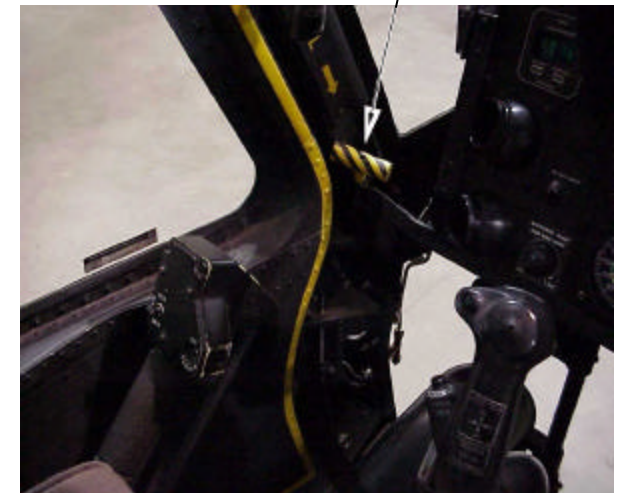
1b
WINDOW EXIT
CORNERS

CARGO AREA WITH PAX SEATS REMOVED



AB 412/CH 146

1c
CO-PILOT INTERNAL
JETTISON HANDLE
(OPPOSITE SIDE SAME)



ENGINE SHUTDOWN

1. ENGINE SHUTDOWN

- a. Shutdown the engines by pulling the two FIRE PULL T-handles, located at the center of the upper instrument panel.
- b. IN CASE OF FUEL LEAK: shutdown electrical power by selecting the two battery switches, located on the center of the upper right console, to the OFF position. The switches are marked BATTERY BUS 1 and BATTERY BUS 2.
- c. IN CASE OF ENGINE FIRE: activate the fire extinguishment system by pulling the FIRE PULL T-handles and pulling the station handle (#1 or #2 designated engine) to ignite the Halon bottles. Both handles are located on the pilot's instrument panel.

NOTE:

Two squib-activated Halon bottles are located in the aft compartment. When the squibs are ignited, they activate the main Halon bottle and the reserve Halon bottle, which then discharges the Halon to each corresponding selected engine. (See page AB 412/CH 146.13 4a.)

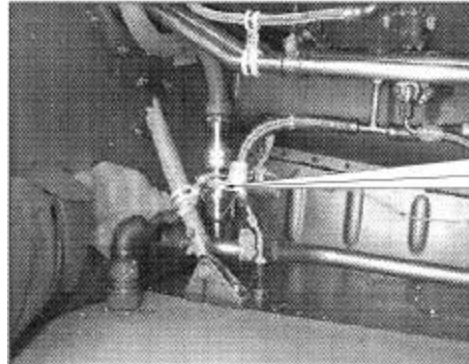
2. OTHER ITEMS FOR ENGINE SHUTDOWN

- a. The engine fuel cut off valves are located internally on both sides of aircraft.
- b. The engine throttle is located to the left side of the left pilot seat.
- c. The rotor brake handle is located on the overhead console.

1a, 1c
FIRE T-HANDLES



2a
FUEL CUT OFF VALVE



2c
ROTOR BRAKE HANDLE (STOWED)



AB 412/CH 146



1b
BATTERY SWITCHES



2c
ROTOR BRAKE HANDLE
(BRAKE ENGAGED)

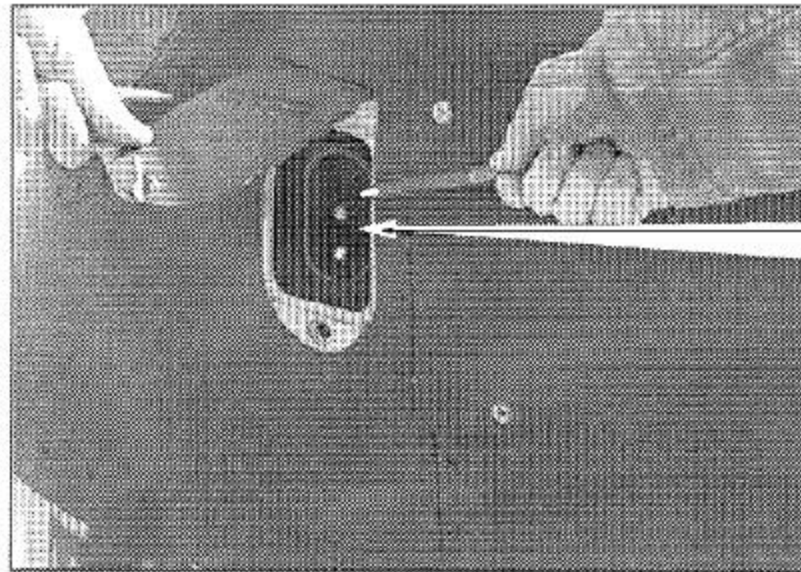


APU SHUTDOWN

1. APU SHUTDOWN

- a. The APU cut-off switches are located on both sides forward of pilot and co-pilot doors.
- b. Open APU cut-off switch panel by turning panel door lock, located at bottom of panel.
- c. APU cut-off switch is located inside APU door panel. Place switch in OFF position to cut-off power to the APU.

AB 412/CH 146

RIGHT
CARGO
DOOR1a
APU
CUT-OFF
SWITCH
PANEL1c
APU
CUT OFF
SWITCH

AIRCREW EXTRACTION

1. AIRCREW EXTRACTION

NOTE:

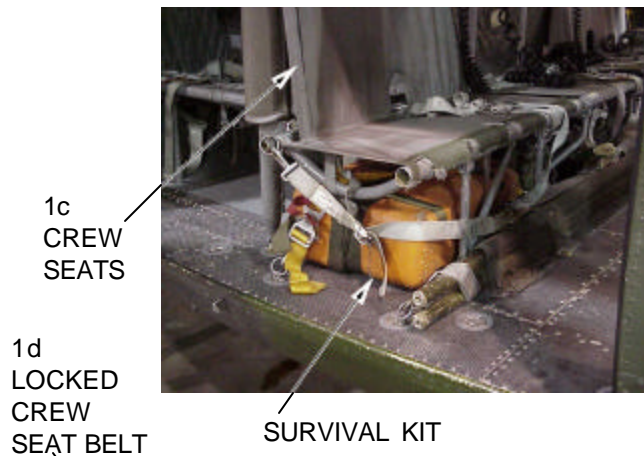
Pilot and co-pilot seat adjustments may be necessary to properly position and make room for pilot(s) extraction. A third crewmember is situated behind pilots.

- The pilot and co-pilot seats can be moved up and down, by using the lower right lever controls.
- The pilot and co-pilot seats can be moved forward and backward, by using the large lever under the seat.
- Third crewmember and passenger seats are stationary.

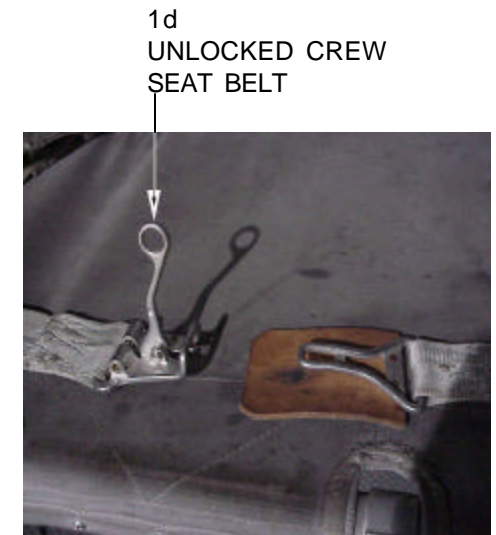
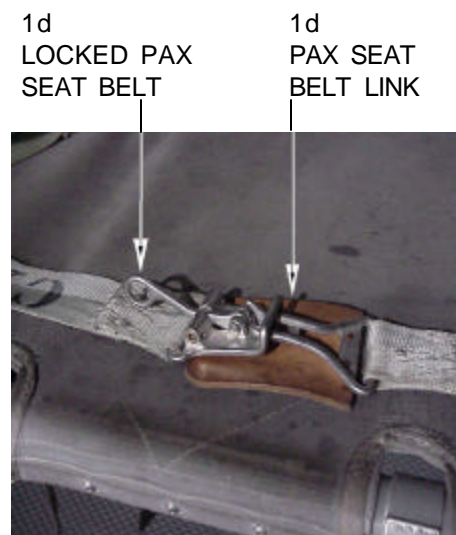
NOTE:

Maximum passenger load is 15, depending on aircraft configuration. Passenger seats are arranged in a row of 4 seats facing aft, another row of 5 seats facing forward, and a pair of seats facing outboard from either side of pylon support structure.

- Disconnect lap belts and shoulder harnesses (as applicable) and place restraints to the side to prevent entanglements.



AB 412/CH 146



FIRE EXTINGUISHER, FIRE ACCESS AND FIRE BOTTLE LOCATIONS

1. AIRCREW AREA

- a. The aircrew area 5 pound Halon fire extinguisher is located on the floor, right side, next to right pilot.

2. CABIN/CARGO AREA

- a. The cabin area 5 pound Halon fire extinguisher is located on the wall, left side, behind left pilot.

3. FIRE ACCESS

- a. The fire access panel for the engine is located on the upper right side of the fuselage. (Red border is used for orientation, not found on actual aircraft.)

4. FIRE BOTTLE

- a. The fire bottle is located aft of fuselage on each side of aircraft. There are two cartridges installed on the bottle.



1a
PILOT EXTINGUISHER

2a
CABIN EXTINGUISHER



4a
FIRE BOTTLE



4a
FIRE BOTTLE CARTRIDGES

3a
FIRE ACCESS



EXTERNAL ACCESSORIES

1. AIRCRAFT RESCUE HOIST

- a. The aircraft hoist is located on the right side of the fuselage above the cargo door area.
- b. The hoist explosive cartridge is located on the underside of the hoist assembly.

2. AIRCRAFT WIRE CUTTERS

- a. The lower cutter is located under the fuselage forward of the support rails.
- b. The upper cutter is located on top of the fuselage above the windshield.

3. AIRCRAFT NIGHT SUN AND FLIR

- a. The night sun is located on the right support rail.
- b. The Forward Looking Infrared (FLIR) is located on the left support rail.

1a
HOIST ASSEMBLY



1b
HOIST EXPLOSIVE
CARTRIDGE



2b UPPER CUTTER



2a LOWER CUTTER



3a NIGHT SUN



3b FLIR



BAGGAGE COMPARTMENT

1. BAGGAGE COMPARTMENT

- a. The baggage compartment door is located on the aft right side of the fuselage. The door can be unlocked by rotating the door handle.
- b. Open baggage compartment door by opening door left to right at door hinges.
- c. There is a baggage compartment smoke in-stalled in the compartment ceiling.
- d. There is a baggage compartment fire warning light on the forward instrument panel in the cockpit.

1a
BAGGAGE COMPARTMENT DOOR HANDLE



1b
BAGGAGE COMPARTMENT DOOR OPEN



1c
BAGGAGE COMPARTMENT SMOKE DETECTOR



1d
BAGGAGE COMPARTMENT FIRE WARNING LIGHT

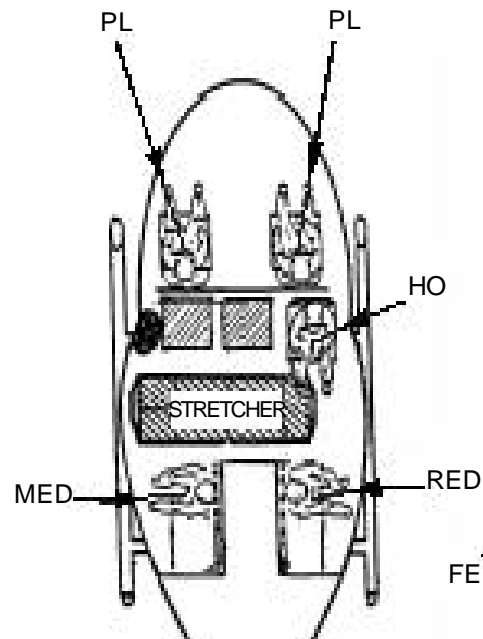


CABIN CONFIGURATIONS

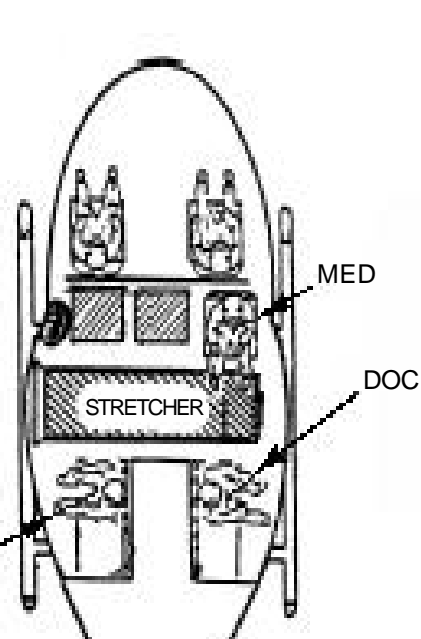
NOTE:

At least two persons are on board. A maximum of 15 persons on board.

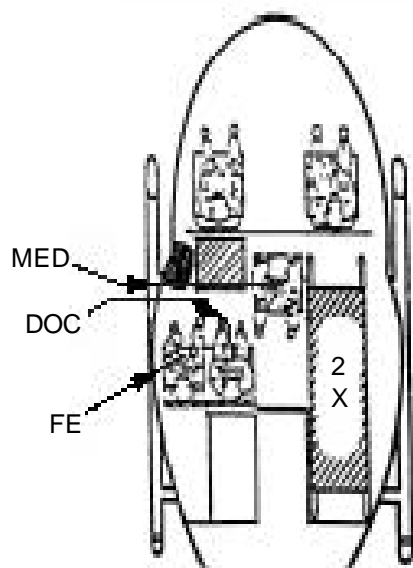
LEGEND	
PL	PILOT
HO	HOIST OPERATOR
RED	RESCUE DIVER
FE	FLIGHT ENGINEER
MED	MEDIC
DOC	DOCTOR
MAT	MATERIAL



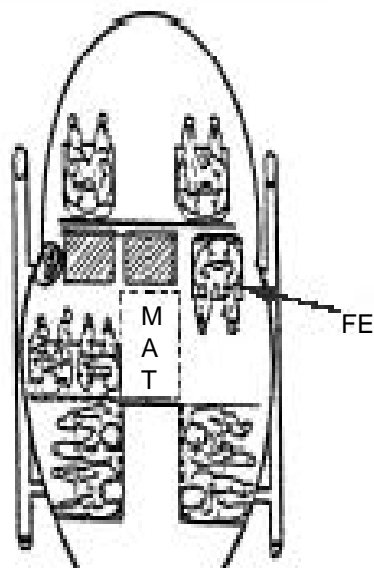
SEARCH AND RESCUE (SAR)



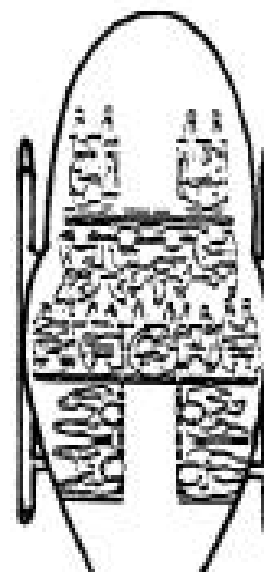
MEDEVAC



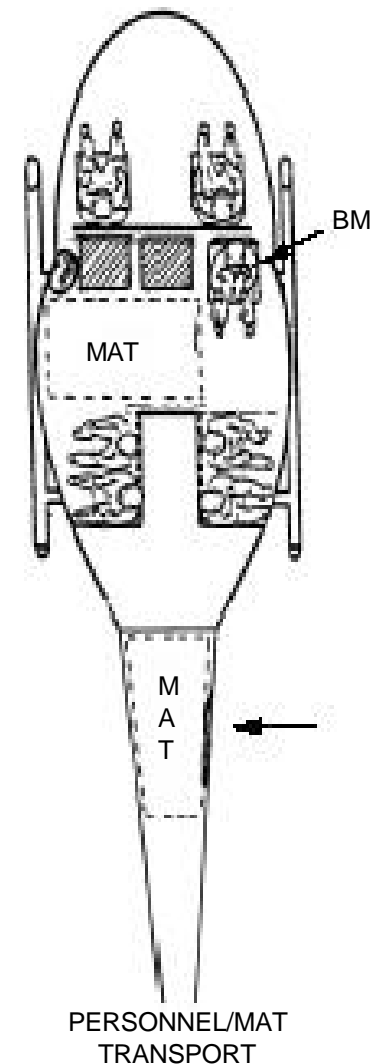
TRAUMA



PERSONNEL/MAT TRANSPORT



PERSONNEL TRANSPORT

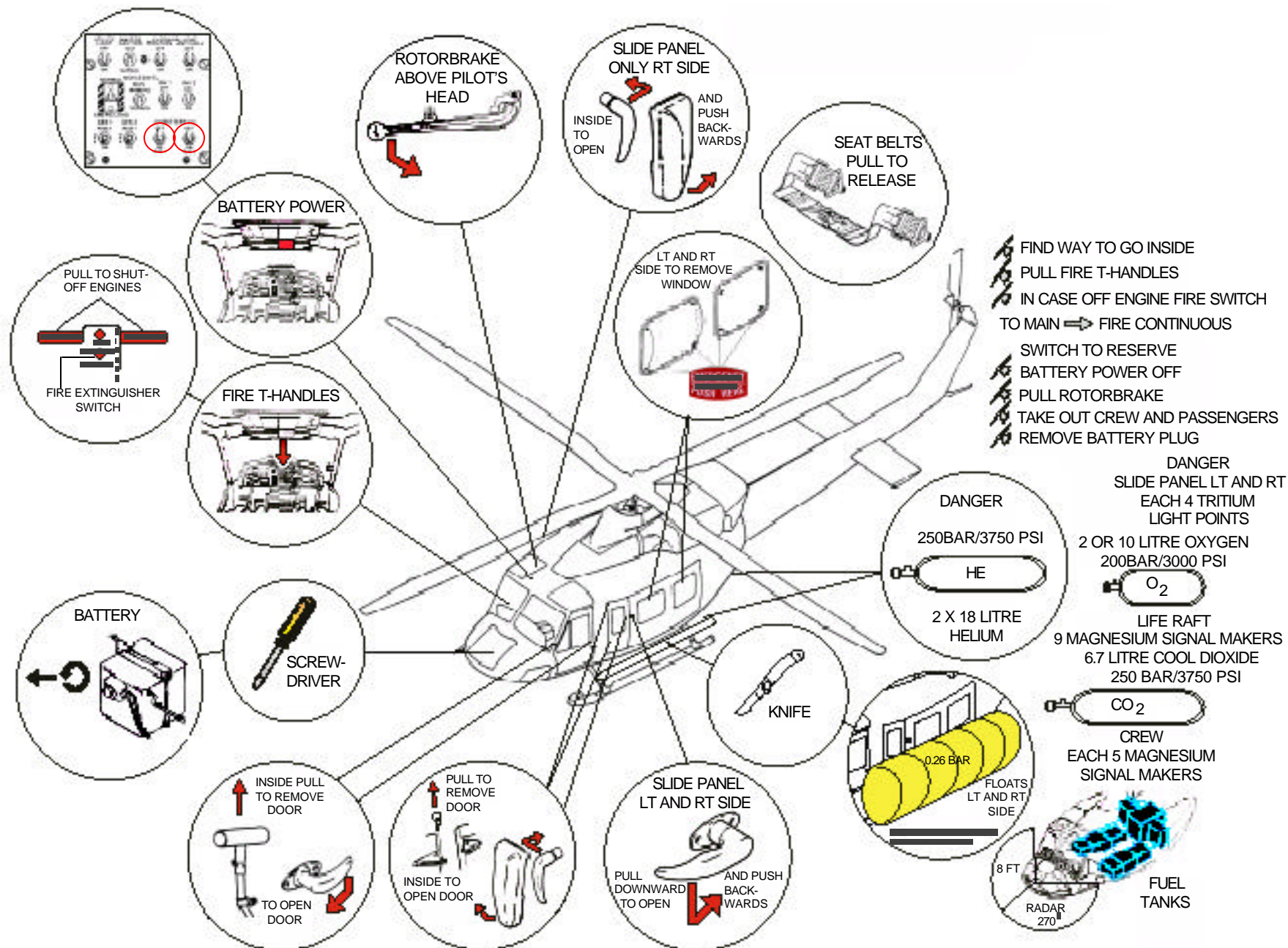
PERSONNEL/MAT
TRANSPORT

CRASH CHART - AB 412 (SAR)

AB 412/CH 146

NOTE:

Most items will also be applicable to the CH 146.



SPECIAL TOOLS/EQUIPMENT

Power Rescue Saw
Crash Ax

AIRCRAFT ENTRY

NOTE:

More information about the AH-1 is located in Chapter 13.

1. NORMAL ENTRY

- a. Main entrance and exits are located on the right side of the aircraft.

2. EMERGENCY ENTRY

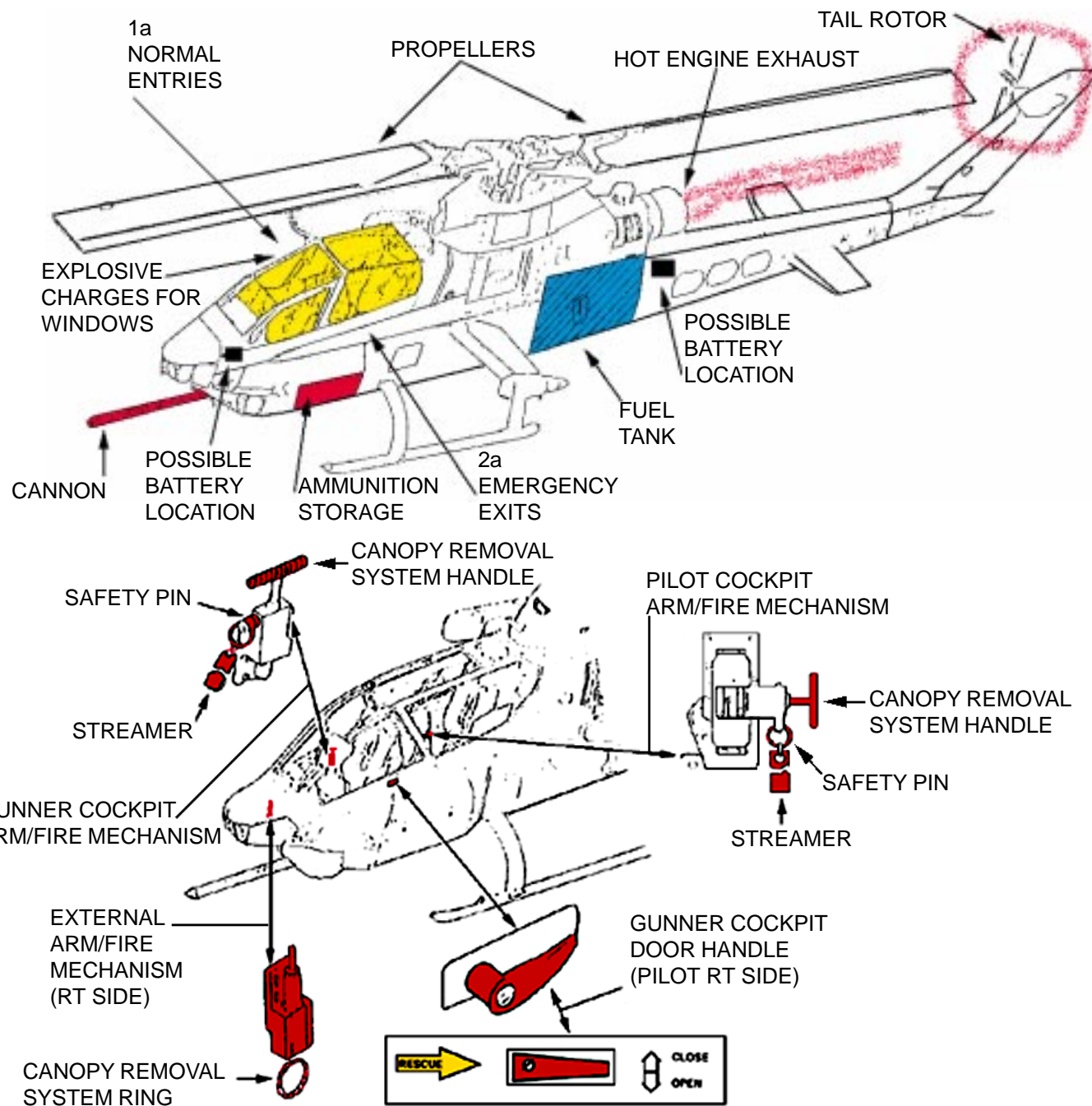
- a. Emergency exits are located on the left side of the aircraft.

WARNING

Windows are equipped with explosive charges for both cockpit windows.

3. CUT-IN

- a. Cut-in windows as required.



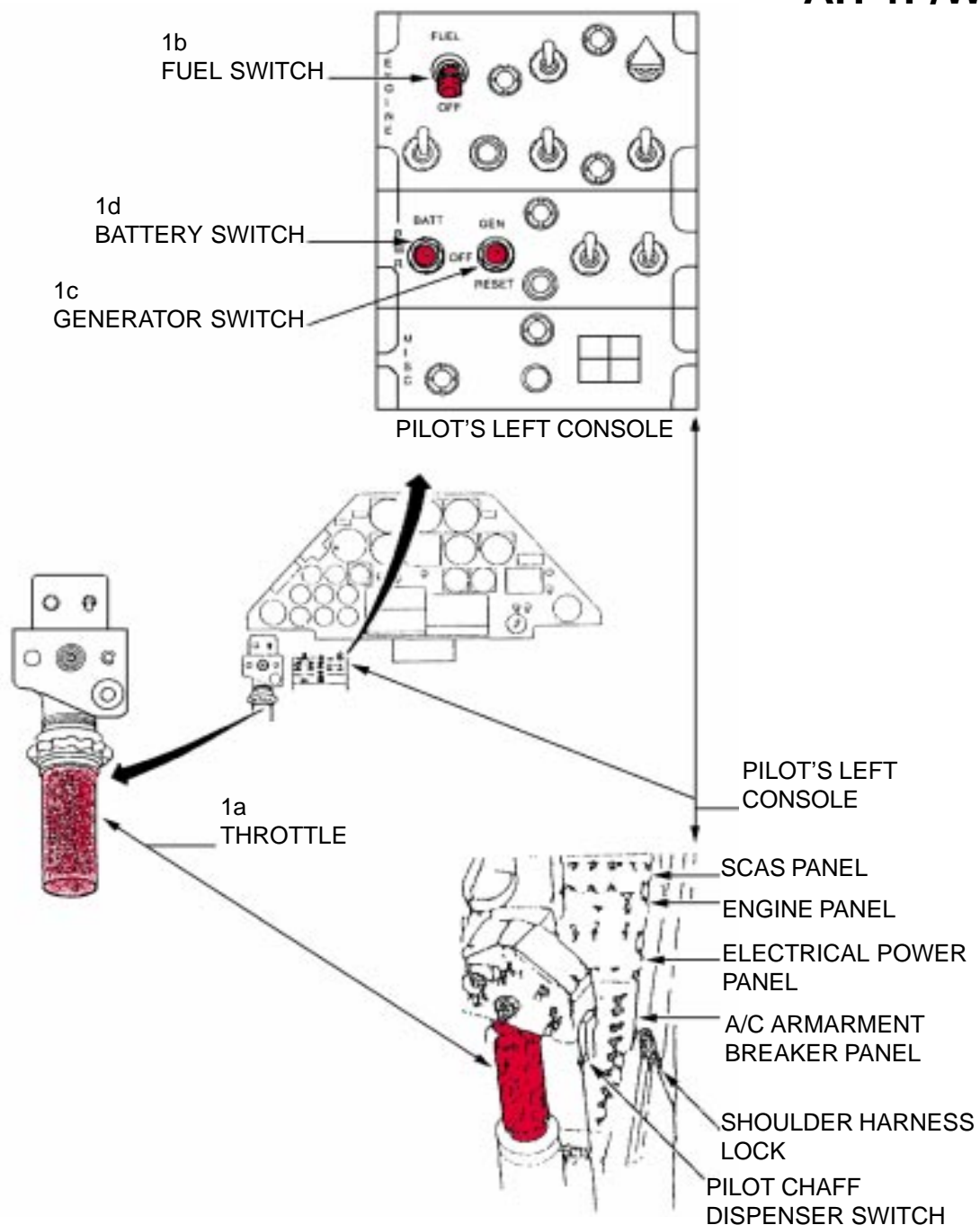
ENGINE SHUTDOWN AND AIRCREW EXTRACTION

1. ENGINE SHUTDOWN

- a. For AH-1P/W, rotate throttle, located pilot's left on console, to the OFF position.
- b. For AH-1W only, engage rotor brake.
- c. For AH-1P only, place fuel switch, located on the pilot's left console, to the OFF position.
- d. For AH-1P only, place generator switch, located on pilot's left console, to the OFF position, if applicable.
- e. Place the battery switch, located on pilot's left console, to the OFF position.

2. AIRCREW EXTRACTION

- a. Unlatch lap belts and remove shoulder harnesses from crewmembers.



The aircraft information is located in Chapter 13
containing US Army aircraft.

SPECIAL TOOLS/EQUIPMENT

Power Rescue Saw
Crash Ax

AS-532

AIRCRAFT ENTRY

NOTE:

This aircraft can seat up to 12 occupants depending on the mission configuration. The civilian version can seat up to 20 occupants.

1. NORMAL ENTRY

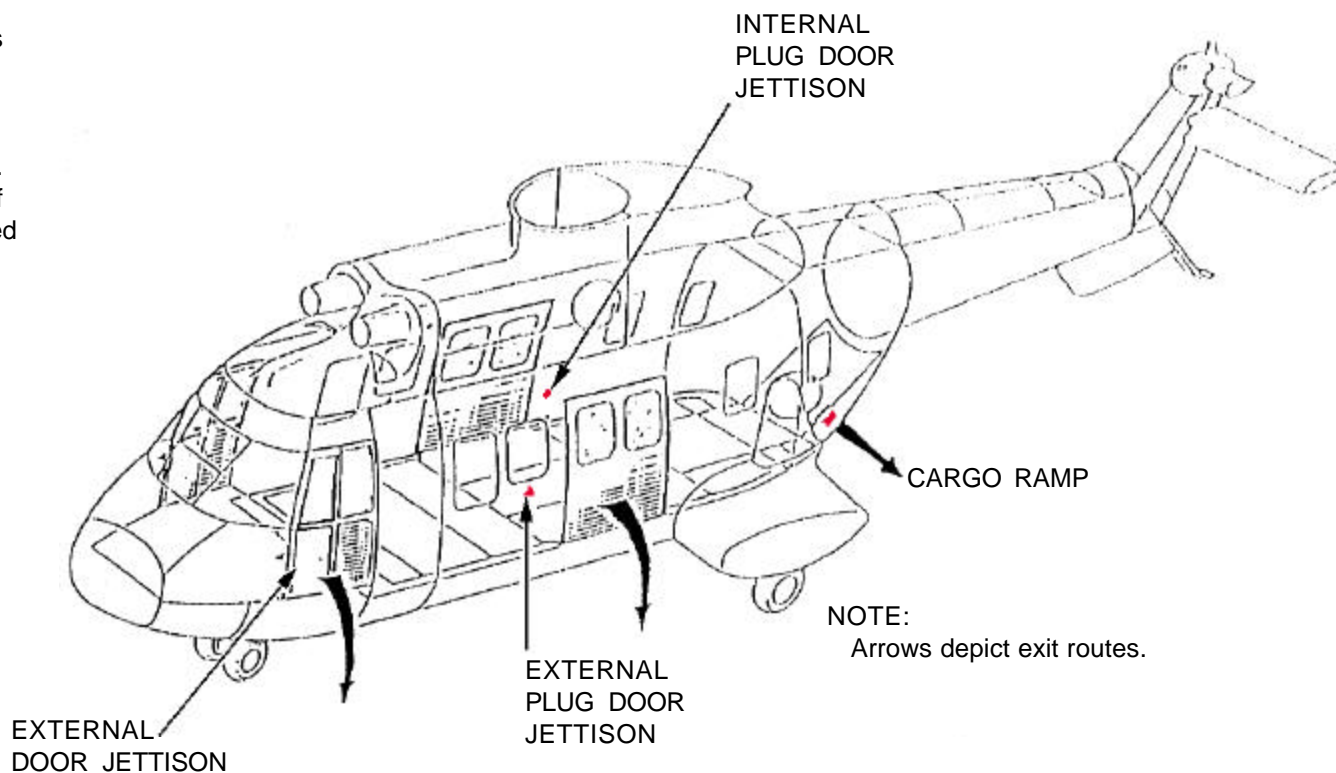
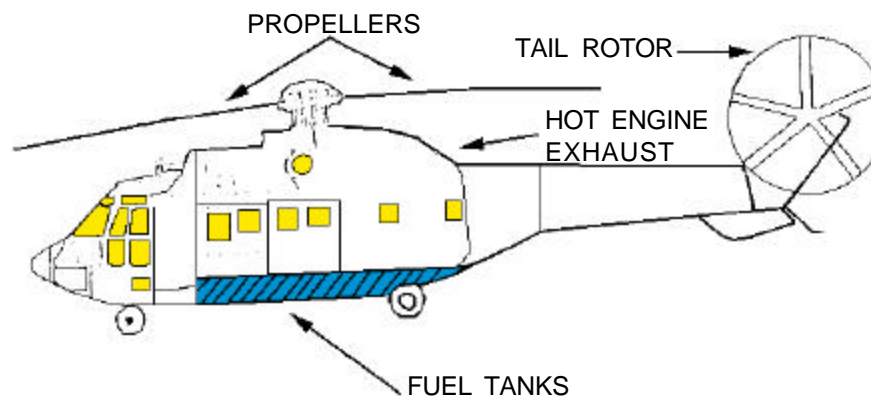
- a. Main entrance and exits are located on both sides of the aircraft, including the aft cargo ramp.

2. EMERGENCY ENTRY

- a. Emergency exits are located on both sides of the aircraft, including the aft cargo ramp if ramp is open.
- b. Cockpit and cargo doors can be jettisoned. External jettison handles are located left of doors. Internal jettison handles are located right of doors.

3. CUT-IN

- a. Cut-in windows as required.



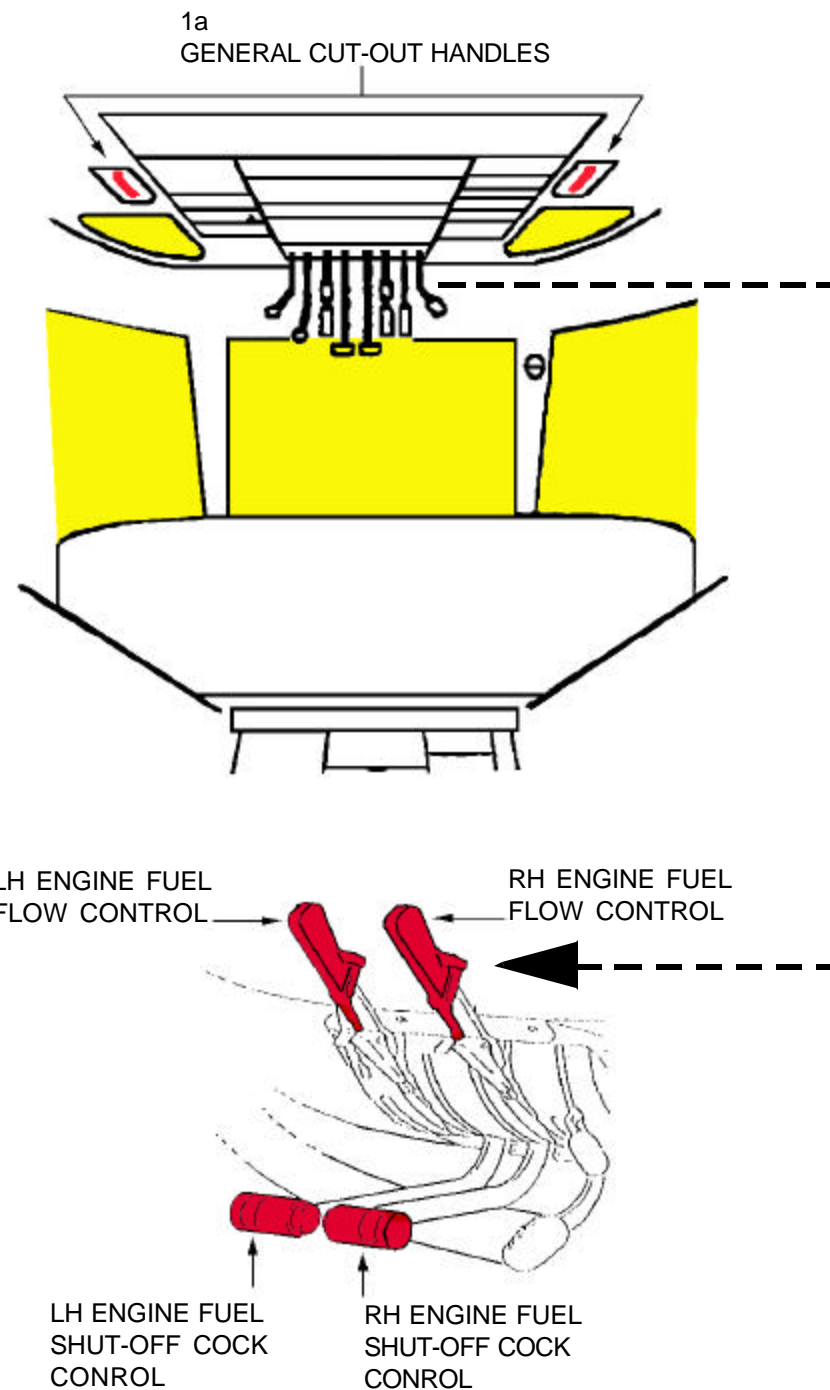
ENGINE SHUTDOWN AND AIRCREW EXTRACTION

1. ENGINE SHUTDOWN

- a. Pull the general cut-out handles, located on the overhead control panel, to shutdown the engines.
- b. Engine controls on the overhead panel are illustrated only for location and identification. These controls are not used for emergency shutdown. They are used under normal conditions.

2. AIRCREW EXTRACTION

- a. Unlatch lap belts and remove shoulder harnesses from crewmembers and passengers.



AS-532

AIRCRAFT PAINT SCHEME

AS-550C2



SPECIAL TOOLS/EQUIPMENT

Power Rescue Saw
Crash Ax

AS-550C2

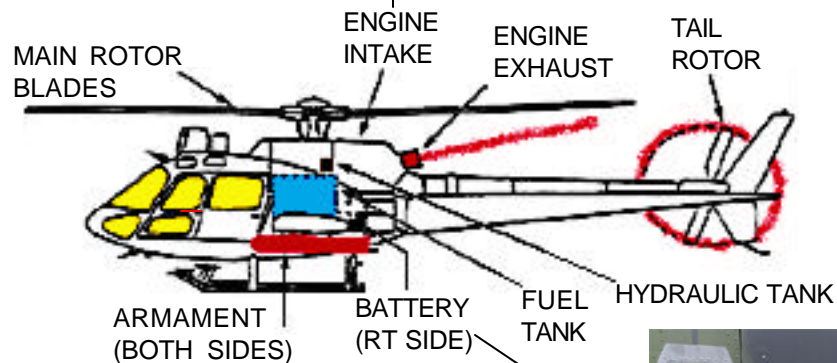
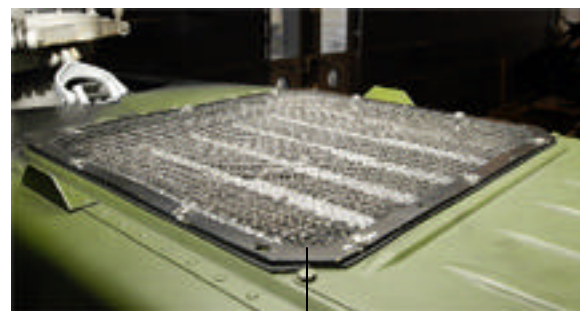
AIRCRAFT ENTRY

1. NORMAL AND EMERGENCY ENTRY

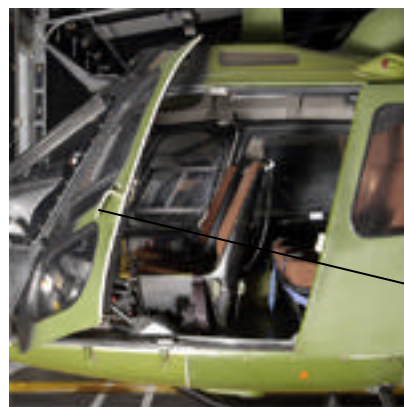
- a. Open pilot's door, located on both sides of fuselage, by turning door handles downward and pulling door outward.
- b. Open cabin door, located on both sides of fuselage, by turning door handles downward to release from door housing, then push door backward.

2. CUT-IN

- a. Cut-in fuselage as required.



1b
PILOT'S DOOR
RELEASE



1a
PILOT'S
DOOR
WITH
HANDLE



1b
CABIN DOOR WITH HANDLE

AS-550C2.3 ENGINE AND ELECTRICAL SHUTDOWN

AS-550C2

T.O. 00-105E-9

1. ENGINE SHUTDOWN

- Place fuel cut-off handle, located on the floor between pilot seats, in the UP position to lock.
- Place rotor brake handle, located on the floor between pilot seats, in the UP position to lock.
- Press cut-off button, located inside the cockpit, to turn off battery power.

2. ELECTRICAL SHUTDOWN

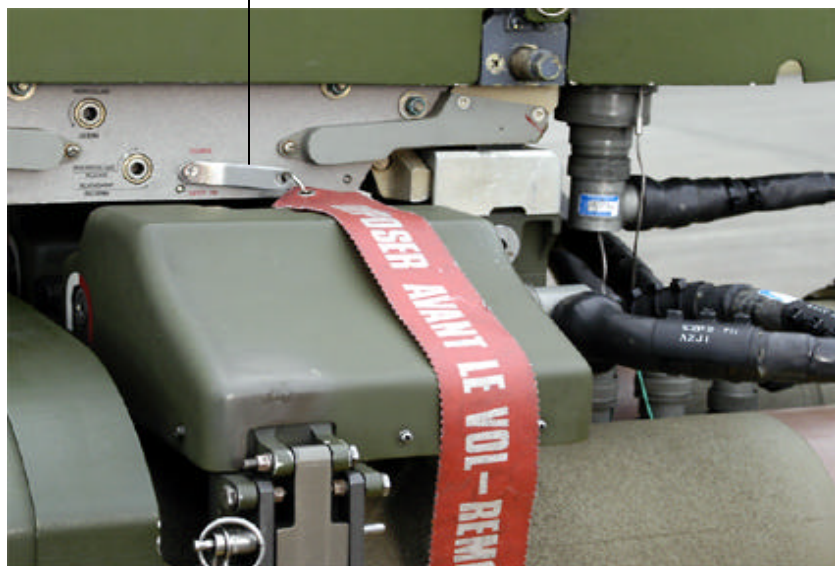
- If the battery cut-off button can not be reached, the battery can be accessed (see page AS-550C2.2) through the access panel. The power connection can be secured and safed by installing a safety pin in the below location above the missile launch pylon.

1a
FUEL CUT-OFF

1b
ROTOR BRAKE



2a
POWER SAFETY PIN



1c
BATTERY
CUT-OFF
BUTTON



AIRCREW EXTRACTION

1. AIRCREW EXTRACTION

NOTE:

All seat restraints are equipped with shoulder harness and lap belt central quick release point.

- Unlatch restraints at quick release point.
- Remove lap belts and shoulder harnesses from crewmember to prevent entanglement.
- Remove crewmember(s) from aircraft.

AS-550C2

2b
SHOULDER HARNESSSES

2a
QUICK RELEASE POINT

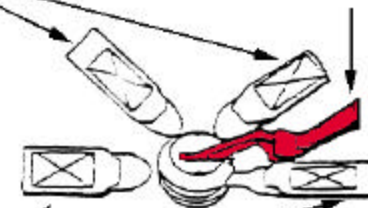
2b
LAP BELTS



2b
SHOULDER HARNESSSES

2a
QUICK RELEASE POINT

2b
LAP BELTS



AIRCREW EQUIPMENT

1. AIRCREW EQUIPMENT

- a. The Ekstra picture targeting device is located at eye level for aircrew use.

NOTE:

The helmet is connected to the aircraft radio by an electrical connection.

- b. The radio connection to the helmet may have to be disconnected prior to aircrew extraction or remove helmet from crewmember to avoid entanglement during extraction.

AS-550C2

1a
EKSTRA PICTURE TARGETING DEVICE



1a
EKSTRA PICTURE TARGETING DEVICE



1b
RADIO CONNECTION TO HELMET

SPECIAL TOOLS/EQUIPMENT

Power Rescue Saw
Crash Ax

BO-105CB**AIRCRAFT ENTRY****1. NORMAL AND EMERGENCY ENTRY****NOTE:**

Special double side doors are located both sides of fuselage. Each section can be opened separately.

- a. Press down exterior handle of cockpit door for release, turn door outwards.
- b. Press down exterior handle of cabin door for release, pull doors outwards and slide backwards.

WARNING

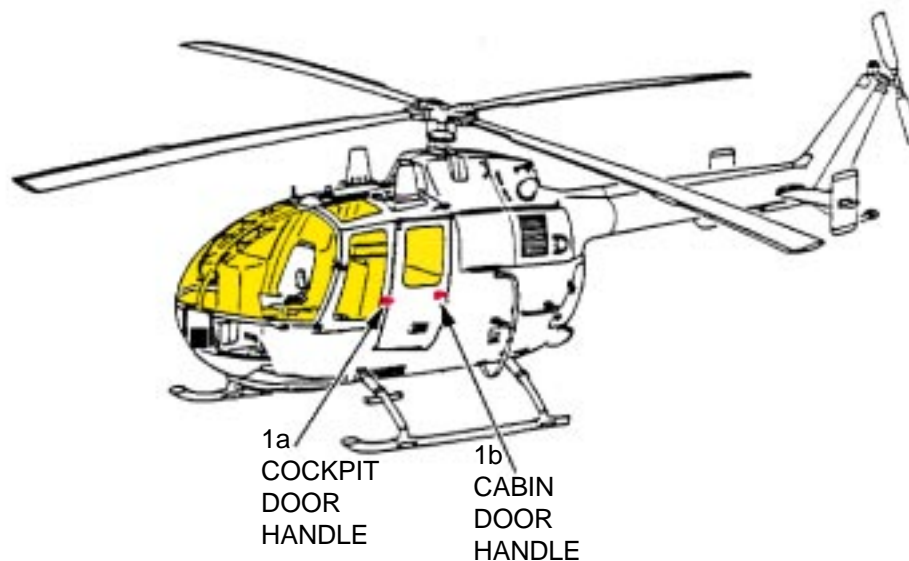
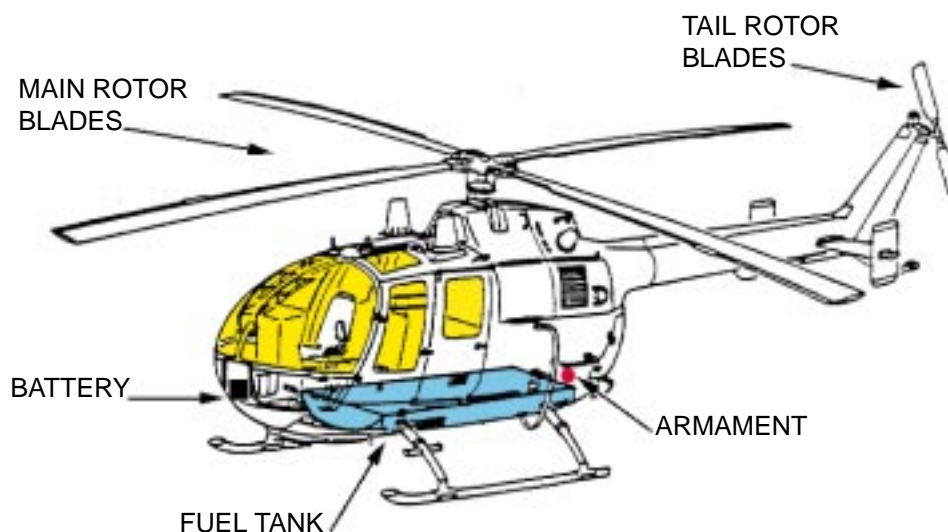
Beware of rotating main rotor blades and tail rotor blades.

NOTE:

Both front section doors are dropable.

2. CUT-IN

- a. Cut-in fuselage as required.



ENGINE SHUTDOWN AND AIRCREW EXTRACTION

BO-105CB

1. ENGINE SHUTDOWN

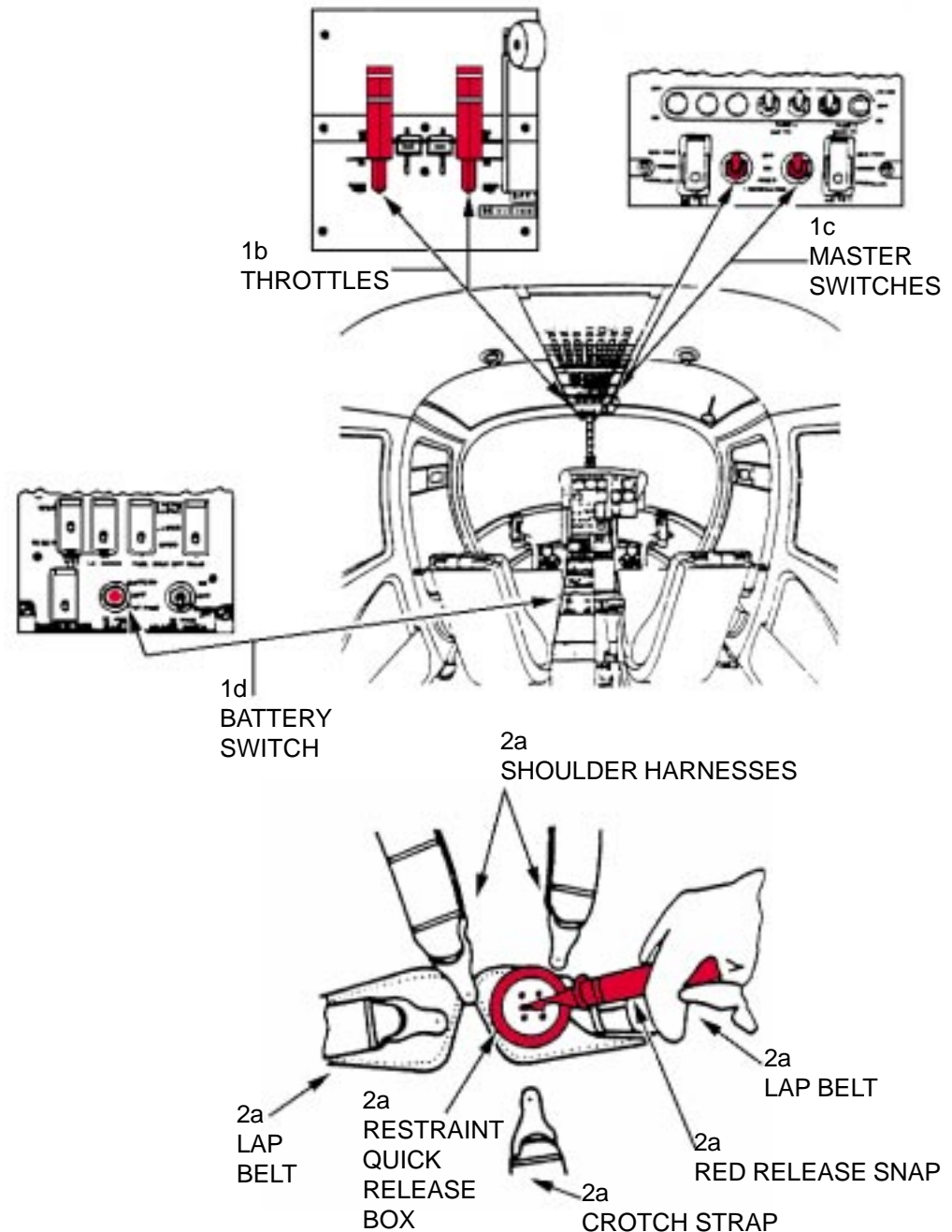
- Lift cover of fuel shutoff switches, located on pilot's center console, and place switches (not illustrated) in the EMERGENCY position.
- Press down spring loaded idle detent stop, located inside throttles on pilot's overhead panel, and move throttles to the OFF position.
- Lift master switches, located on pilot's center console, and move aft to the OFF position.
- Place battery switch, located on center console, to the OFF position.

2. AIRCREW EXTRACTION

NOTE:

Safety belts, shoulder harnesses, and crotch straps of crewmembers are equipped with a restraint quick release box.

- Pull red release snap from restraint quick release box until all restraint straps are released.
- Set all straps aside, to prevent entanglement, and remove crewmember.



The aircraft information is located in Chapter 13
containing US Army aircraft.
HC2,3 aircraft information is pending.

The aircraft information is located in Chapter 9
containing US Air Force aircraft.

AIRCRAFT PAINT SCHEME (B/W)

ECUREUIL ALSTAR AS 355



3/4 VIEW FRONT LEFT



3/4 VIEW FRONT LEFT







3/4 VIEW RIGHT AFT



3/4 VIEW RIGHT AFT

AIRCRAFT GENERALITIES AND CHARACTERISTICS

ECUREUIL ALSTAR AS 355

-  FUEL
-  OIL
-  HYDRAULIC FLUID
-  BATTERY

MISSION: Personnel transport, rescue, base defence

PILOTS: According to mission, 1 or 2

PASSENGERS: Maximum of 4

FUEL: Flashpoint >41 degrees C,
2 reservoirs front 334 L, aft 400 L

OIL: Flashpoint >246 degrees C (2x4.7 L) 9.4 L total

HYDRAULIC FLUID: Flashpoint>93 degrees C (2x3 L) 6 L total
main transmission 4.5L, aft transmission 0.33 L

ENGINE FIRE EXTINGUISHING AGENT: Freon 13 B1 (2x0.620 kg)
(Preferred fire extinguishing agent-powder)

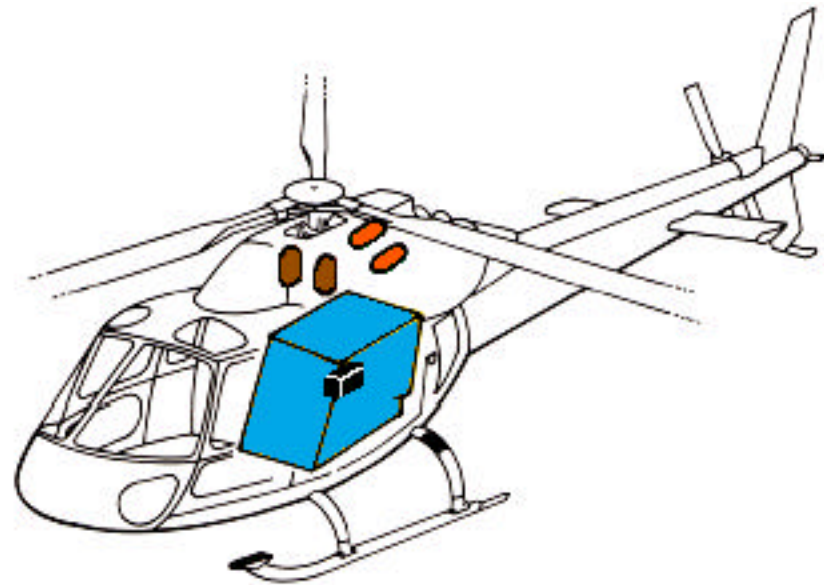
ROTOR BRAKE ASSEMBLY: Brake disc material-steel

DIMENSIONS:

Length with main rotor blades 13.00 M

Main rotor diameter 10.9 M

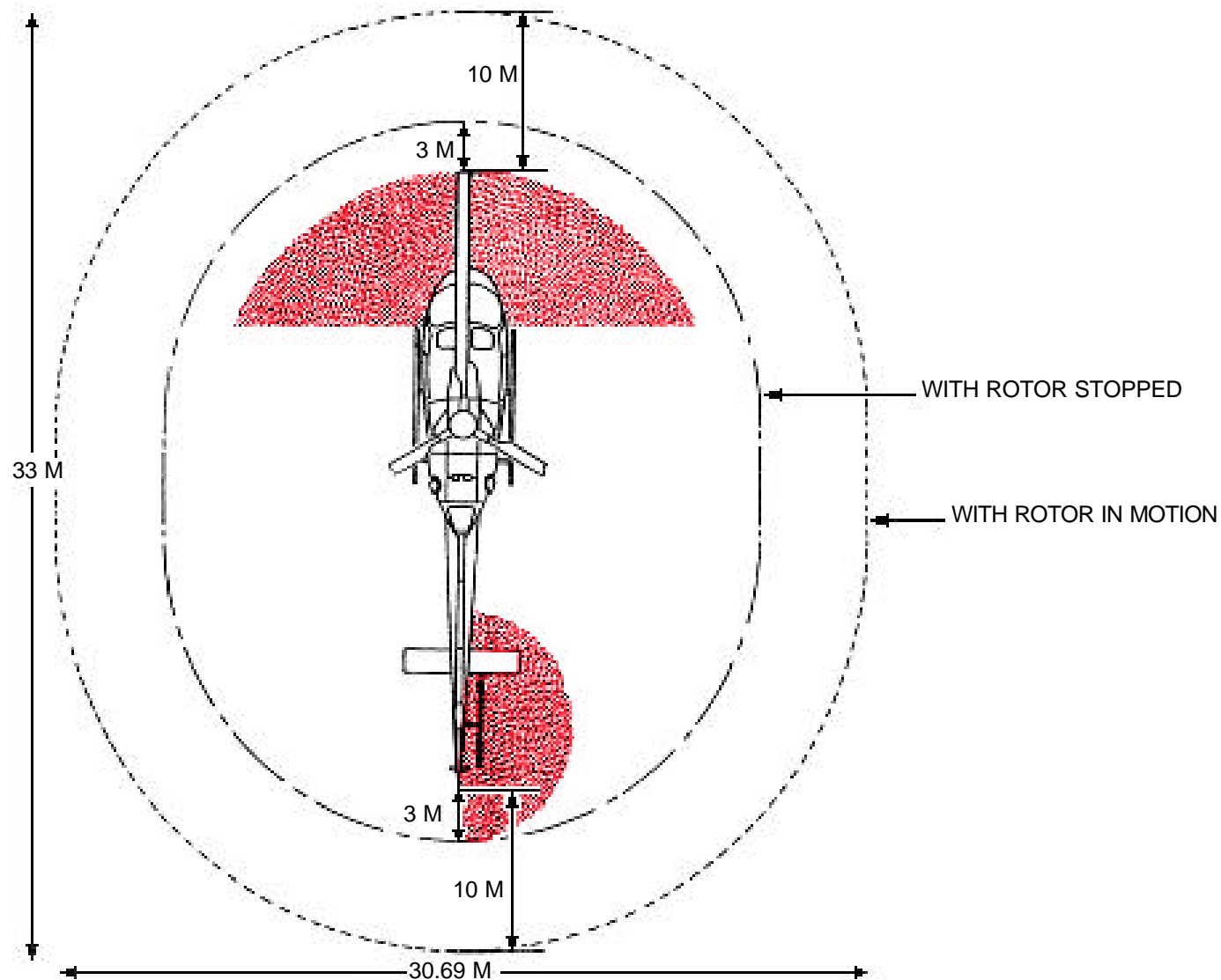
Weight-empty 1690 kg maximum 2540 kg



AIRCRAFT HAZARDS

 HAZARD ZONES

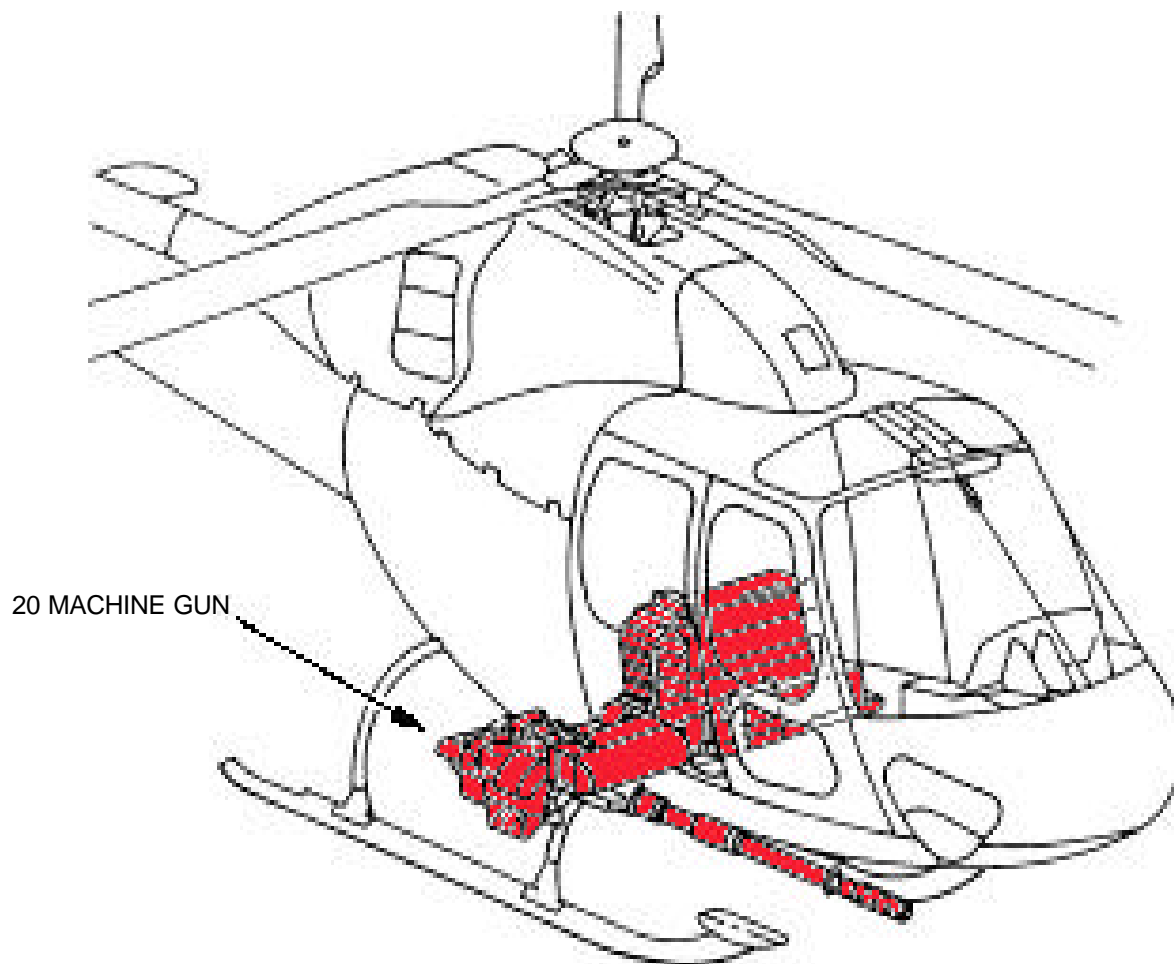
ECUREUIL ALSTAR AS 355



AIRCRAFT HAZARDS-Continued

1. ARMAMENT HAZARD

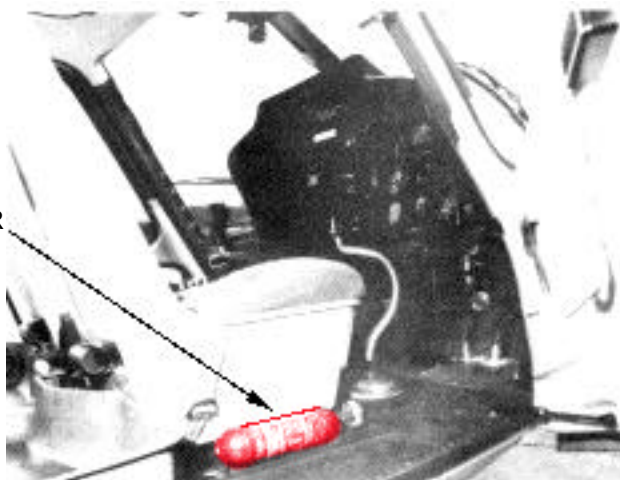
ECUREUIL ALSTAR AS 355



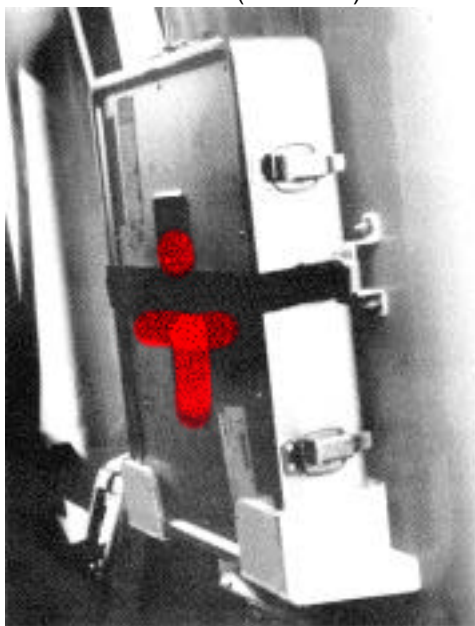
AIRCRAFT PARTICULARITIES

1. AIRCRAFT PARTICULARITIES

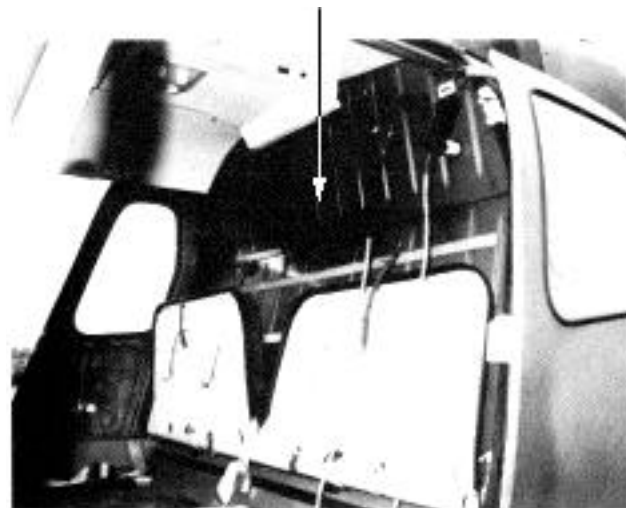
1a
FIRE EXTINGUISHER
LOCATION



1b
FIRST AID KIT LOCATION - BACK OF
PILOT SEAT (RH SEAT)

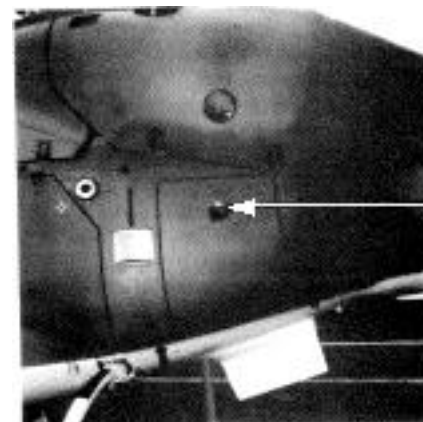


1c
CABLE CUTTERS LOCATION
TOP OF REAR SEATS



ECUREUIL ALSTAR AS 355

1d
BAGGAGE
COMPARTMENT
LOCATION
CLOSED

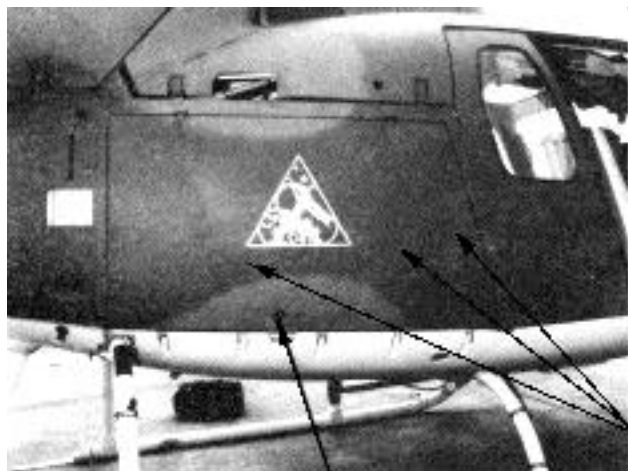


1e
BAGGAGE
COMPARTMENT
LOCATION
OPENED



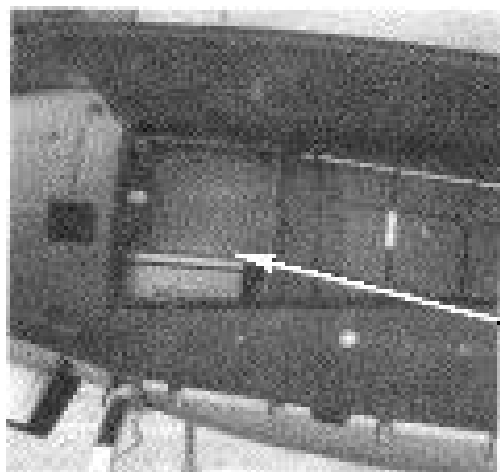
AIRCRAFT BATTERY AND COMPARTMENT

1. AIRCRAFT BATTERY AND COMPARTMENT



BATTERY AND COMPARTMENT LOCATION

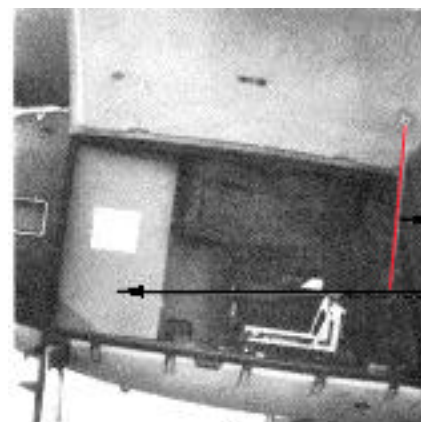
1a
Open battery compartment door, secured by three "dzus" screws.



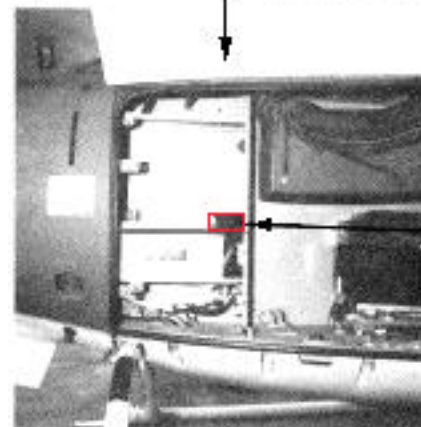
BATTERY WITH COMPARTMENT OPENED

NOTE:
Battery has two butterfly screws.

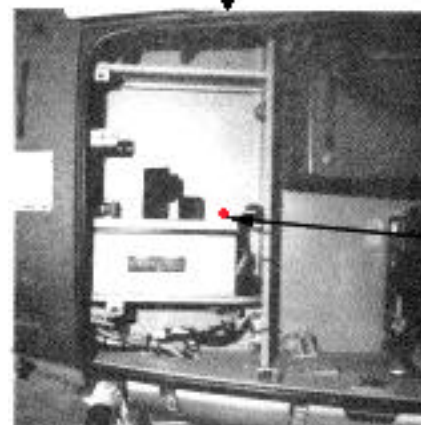
ECUREUIL ALSTAR AS 355



1b
Hold door open using support rod.



1c
Remove battery compartment cover, secured by four "dzus" screws.



1d
Remove black protection cover by pulling upward.

1e
Unscrew the red (battery +) connector to disconnect battery power.

SPECIAL TOOLS/EQUIPMENT

Power Rescue Saw
Crash Ax

AIRCRAFT ENTRY

1. NORMAL AND EMERGENCY ENTRY

- To open pilot's door, turn door handle downward; door will open by itself.
- To open cabin door, turn door handle downward.
- Lightly pull door outward to release door from its housing, then push door backward.

2. INTERNAL EXITING

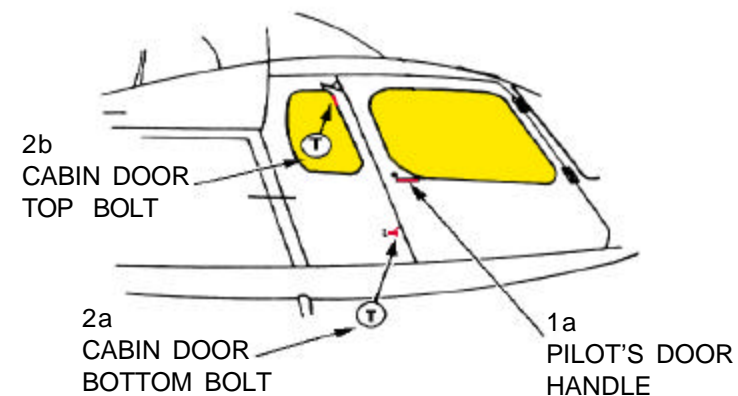
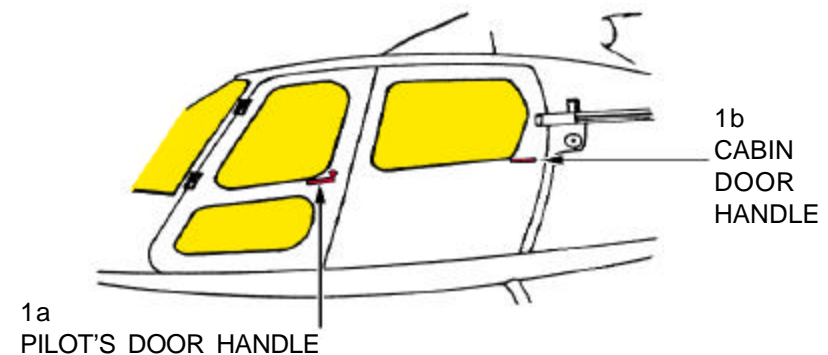
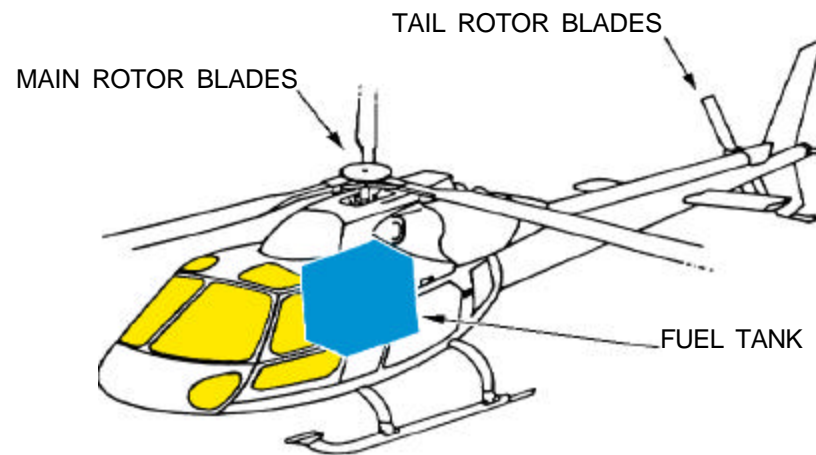
- To open cabin door internally, turn top door bolt ① 1/4 turn, then lower it.
- Turn bottom door bolt ① 1/4 turn, then lift it.

2. CUT-IN

- Cut-in fuselage as required.

ECUREUIL ALSTAR AS 355

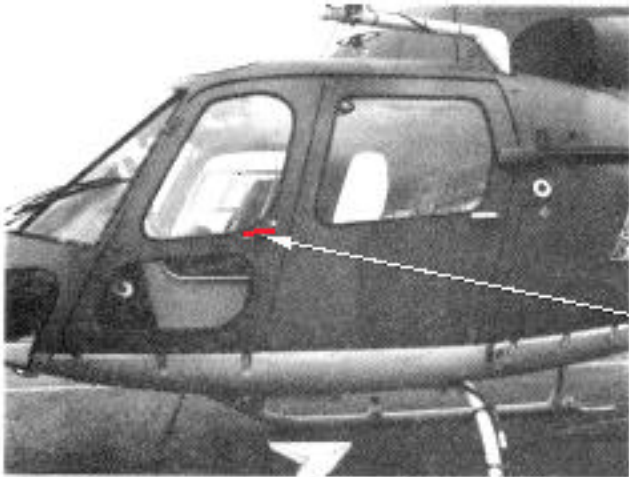
T.O. 00-105E-9



AIRCRAFT CREW DOORS

1. AIRCRAFT CREW DOORS

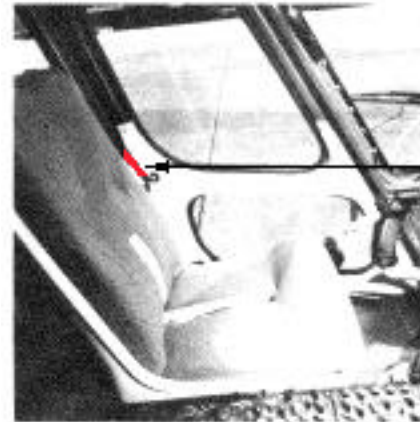
FRONT CREW DOORS



1a
Open from outside (left).
Turn external handle
downward. The door will
open by itself.

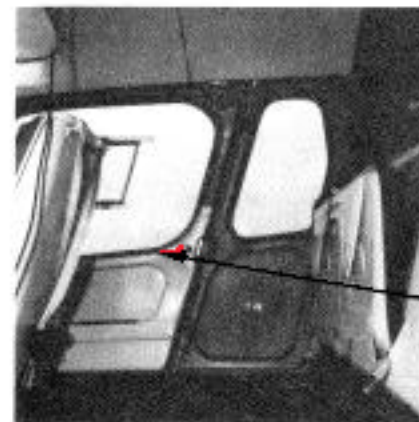


1b
Open from outside (right).
Turn external handle
downward. The door will
open by itself.



1c
Open from inside (left).
Turn external handle
downward. The door will
open by itself.

FRONT CREW DOORS OPENED



1d
Open from inside (left).
Turn external handle
downward. The door will
open by itself.



AIRCRAFT DOORS

1. AIRCRAFT DOORS

REAR DOORS



REAR DOOR EXTERNAL HANDLE



REAR DOOR

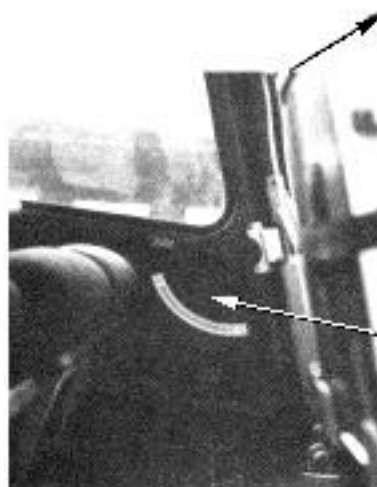
CREW DOOR



CREW AND REAR
DOORS OPENED

1a

Open from outside (left). Turn external handle downward. Pull door slightly towards you to disengage it from its closed position and push toward the aft of the aircraft.

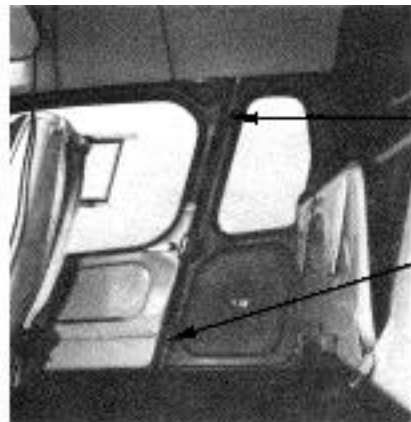


1b

Pull lever "L" upward. Push down slightly away from you to disengage door from its closed position and push toward the aft of the aircraft.

AIRCRAFT DOORS-Continued

1. AIRCRAFT DOORS-Continued



1c
Turn top latch a quarter turn, then pull down.

1d
Turn lower latch a quarter turn, then pull up.

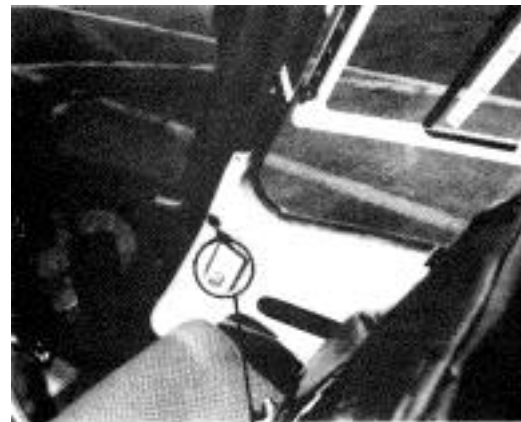
CREW AND REAR
DOORS OPENED



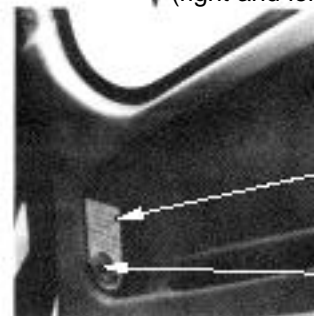
PILOT DOOR OPENED



ECUREUIL ALSTAR AS 355



1e
To remove the emergency door from inside the cockpit (right and left). (Inside only.)



1f
To remove emergency door, remove cover.

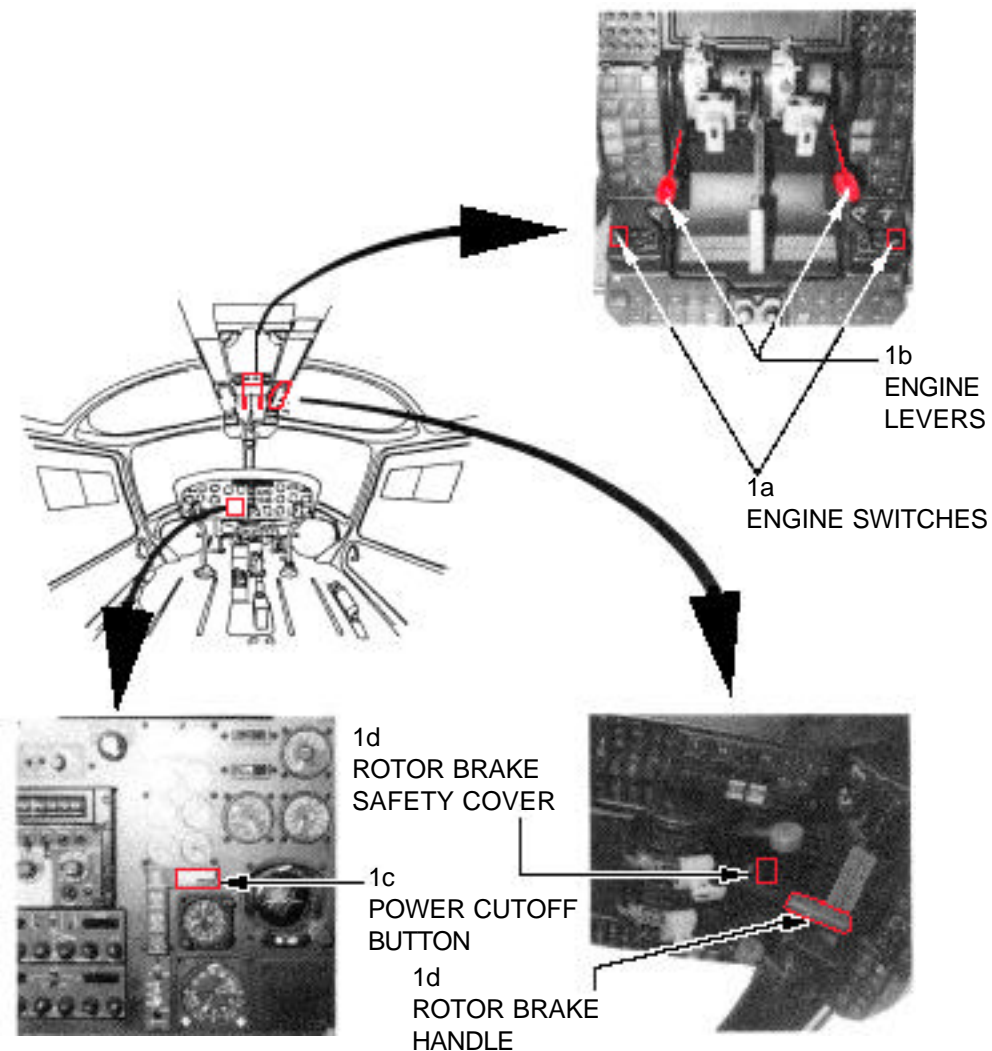
1g
Pull emergency door handle up.

ENGINE SHUTDOWN-Continued

1. ENGINE SHUTDOWN

- a. Lift safety covers, located on the over head panel, and place engine shutoff switches the DOWN position.
- b. Pull both fire cutoff switches, located on the over head panel, toward the AFT position.
- c. Depress the red power cutoff button ("main power interrupting") located on the center control panel, ONCE. (Only emergency flight instruments will remain powered.)
- d. To operate the rotor brake, located on the over head panel, remove safety cover and pull the rotor brake handle to the AFT position.

ECUREUIL ALSTAR AS 355

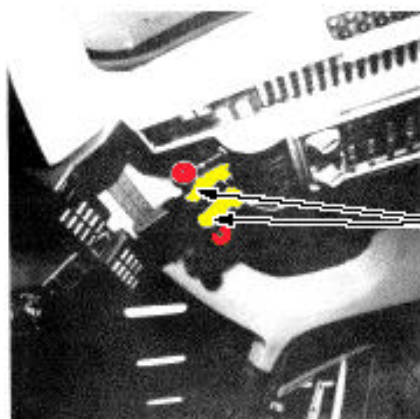


ENGINE SHUTDOWN-Continued

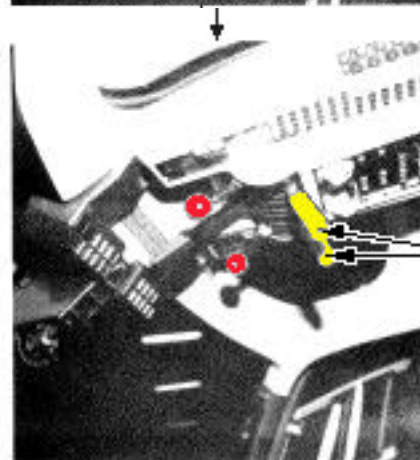
1. ENGINE SHUTDOWN-IN CASE OF FIRE

- a. Pull both engine shutdown (yellow) handles, located on over head panel, slightly toward the right to unlock and continue pull all the way to the AFT position.
- b. Firmly pull both fuel cut-off (red) handles, located on over head panel, to the AFT position.

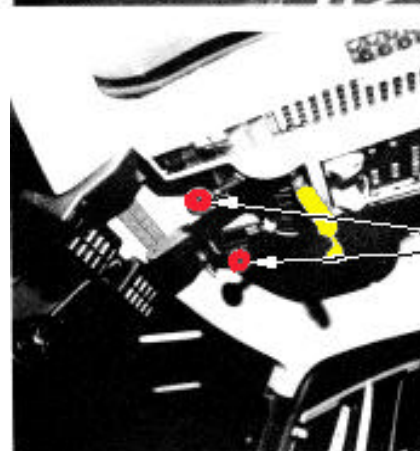
OVER HEAD PANEL VIEWS



1a
ENGINE SHUTDOWN HANDLES
(FORWARD POSITION)



1a
ENGINE SHUTDOWN HANDLES
(AFT POSITION)



1b
FUEL CUT-OFF HANDLES
(FORWARD POSITION)

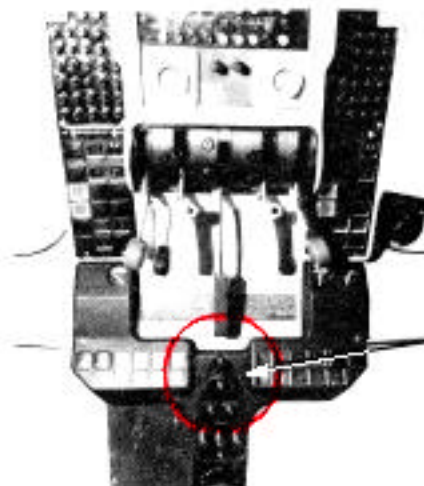
ECUREUIL ALSTAR AS 355

POWER SHUTDOWN

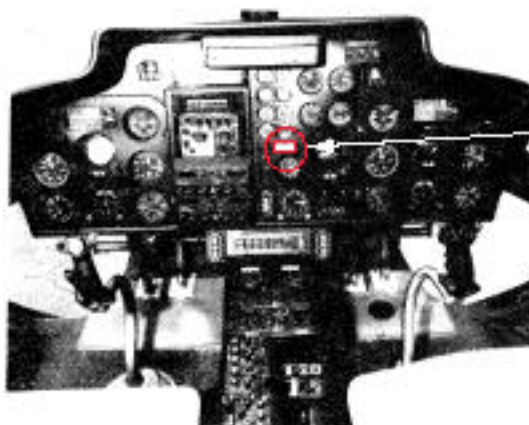
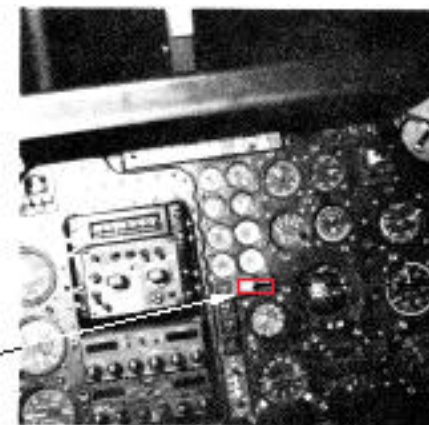
1. POWER SHUTDOWN

- a. The main power shutdown switch is located on the forward instrument panel.
- b. The battery cut off switches are located on the over head panel.

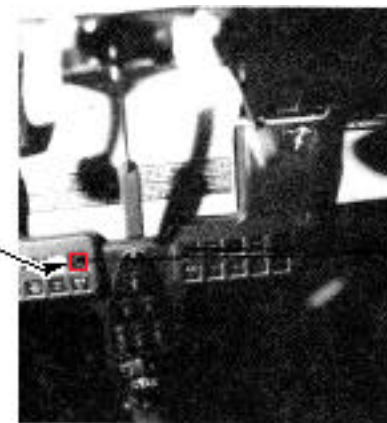
OVER HEAD PANEL



1b
BATTERY
CUTOFF
SWITCHES



1a
MAIN POWER
SHUTDOWN
SWITCH



FORWARD INSTRUMENT PANEL

ECUREUIL ALSTAR AS 355

AIRCRAFT EXTRACTION

1. AIRCREW EXTRACTION

- a. Adjust seats allowing room for pilot and co-pilot extraction. Push down on seat adjustment lever located on left hand side of seat and then pull seat back.
- b. Pull on center harness tab to release crew member from shoulder harness and safety belt.
- c. Rear passengers may have safety belt only.

ECUREUIL ALSTAR AS 355



1a
SEAT ADJUSTMENT

HARNESS RESTRAINT SYSTEM



1b
CENTER HARNESS TAB

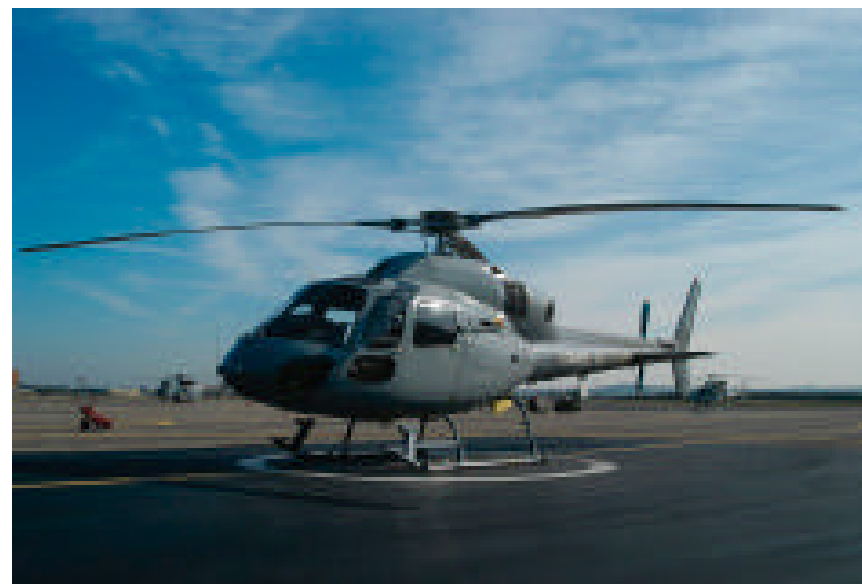


The aircraft information is pending release.

AIRCRAFT PAINT SCHEME



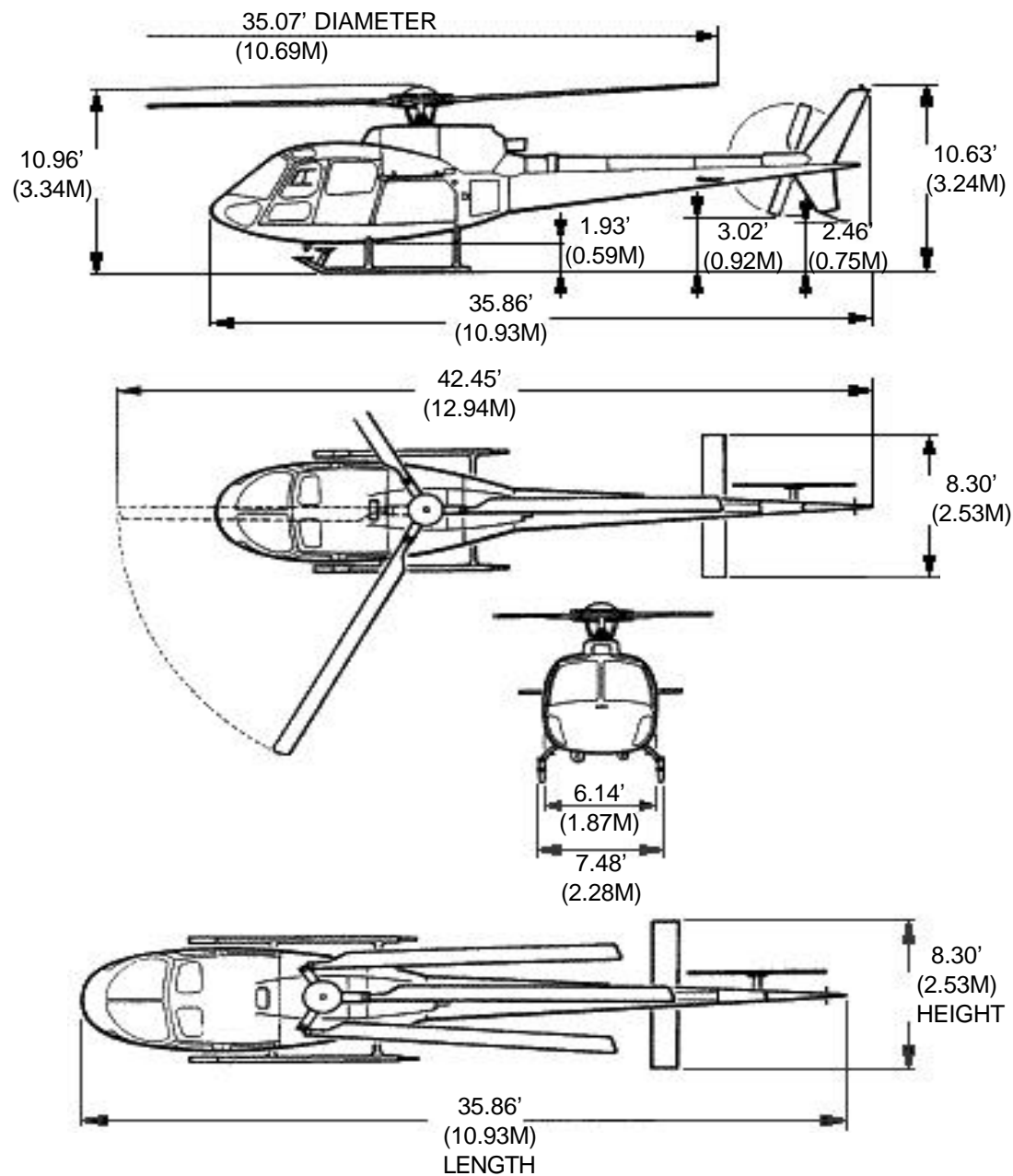
FENNEC AS 555 AN



AIRCRAFT DIMENSIONS

1. CHARACTERISTICS

- a. AIRCRAFT TYPE: Personnel transport, rescue, and base defense.
- b. CREW: 1 to 2 personnel depending on mission requirements.
- c. PASSENGERS: 4 maximum.



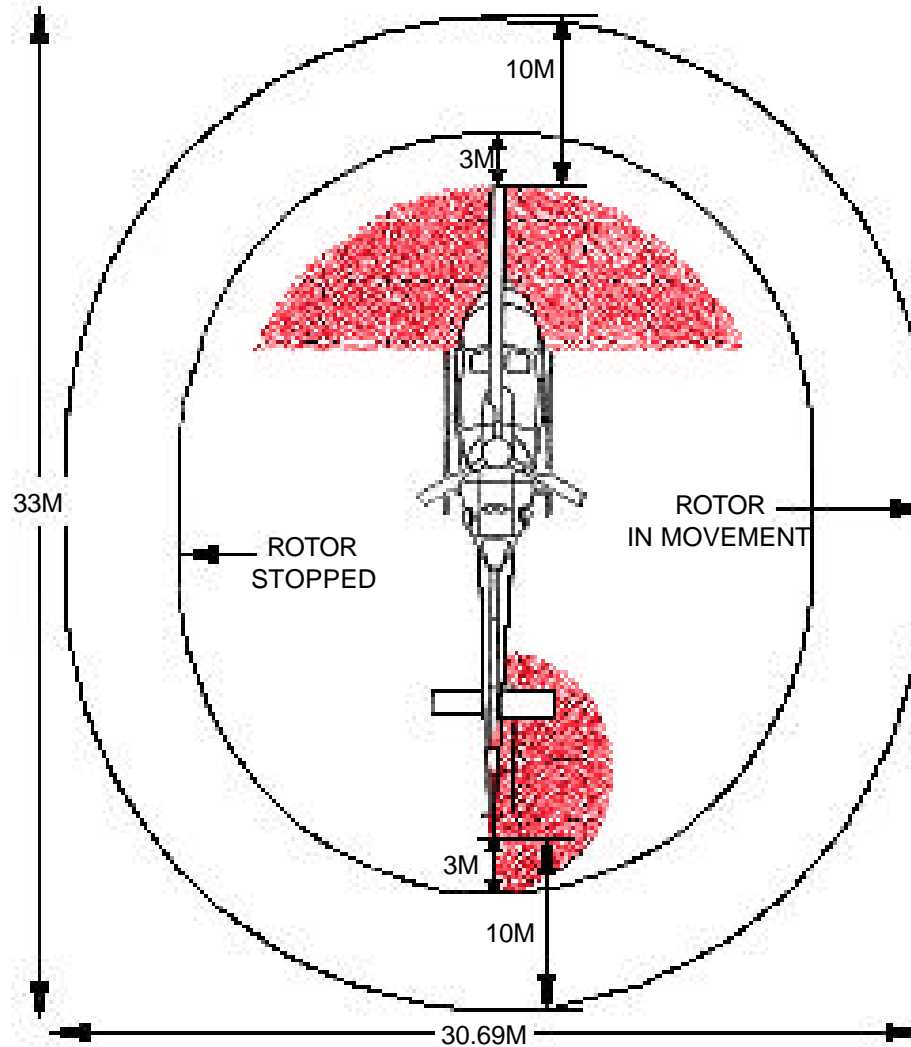
FENNEC AS 555 AN

AIRCRAFT HAZARDS

1. DANGER ZONES


NOTE:


Area outside of designated zones are considered safe.



AIRCRAFT HAZARDS-Continued

FENNEC AS 555 AN

 FUEL: 330 L & 440 LITRES TRO (F 34) & 2 RESERVOIRS [FLASHPOINT $>40^{\circ}\text{C}$]

 OIL: 2 x 4.7 LITRES (O 156) [FLASHPOINT $>246^{\circ}\text{C}$]

 HYDRAULIC FLUID: 2 x 3 LITRES AIR 3520 [FLASHPOINT $>93^{\circ}\text{C}$]

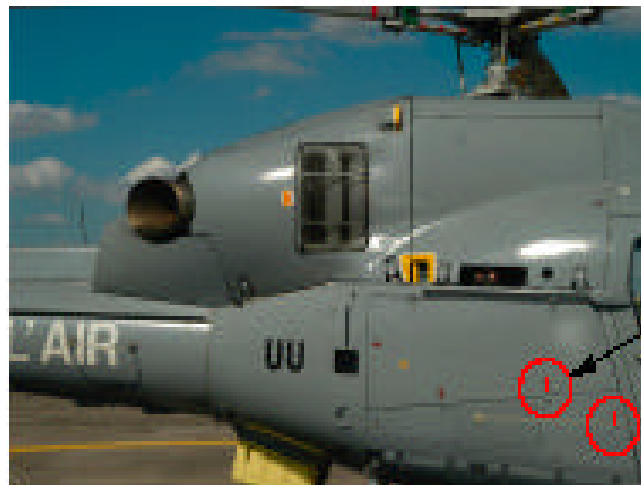
 BATTERY: 1

ENGINE FIRE PROTECTION: 2 x 0.620 KG FREON 13B1



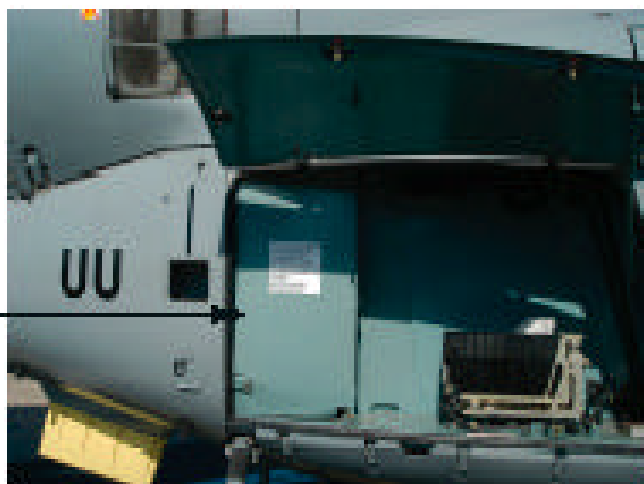
BATTERY LOCATION, DISCONNECT AND REMOVAL

1. BATTERY LOCATION, DISCONNECT AND REMOVAL
 - a. On the aft right side of the fuselage, depress tabs to open top cover of battery compartment.
 - b. Unscrew the "DZUS" screws to open the lower cover of battery compartment.
 - c. Remove the lower cover held by the "DZUS" screws.
 - d. Unscrew the red connectors attached to the battery.
 - e. Remove the battery from battery compartment.



FENNEC AS 555 AN







1c
COMPARTMENT
COVER



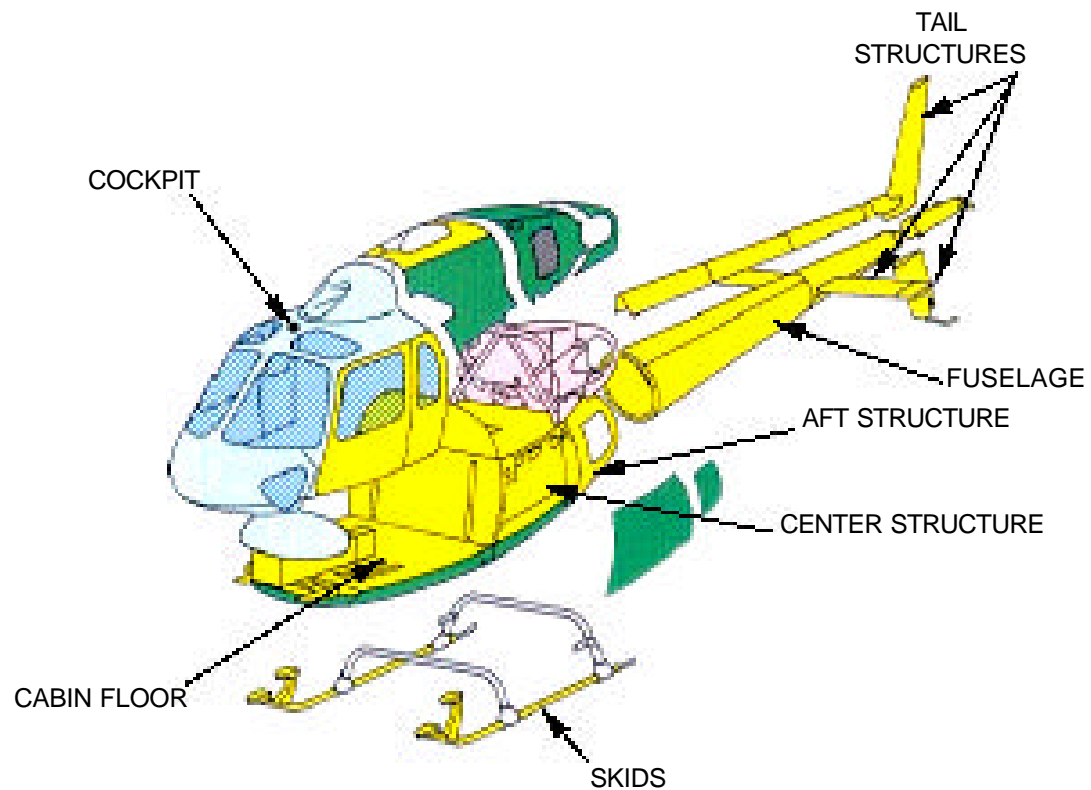
1d, 1e
BATTERY



AIRFRAME MATERIALS

-  GLASS
-  BLENDED LIGHT WEIGHT MATERIALS
-  REINFORCED PLASTIC
-  TITANIUM
-  THERMOPLASTIC
(POLYCARBONATE, POLYAMIDE)
-  STEEL

FENNEC AS 555 AN



SPECIAL TOOLS/EQUIPMENT

Power Rescue Saw

AIRCRAFT ENTRY

1. NORMAL ENTRY

- Open crew door (left or right side) by turning door handle downward.
- Open rear doors (left or right side) by turning door handle downward.
- Pull rear door slightly towards yourself to disengage it from its closed position and push toward the back of the aircraft.

2. EMERGENCY ENTRY

- Same as normal entry. Doors are not jettisoned externally.

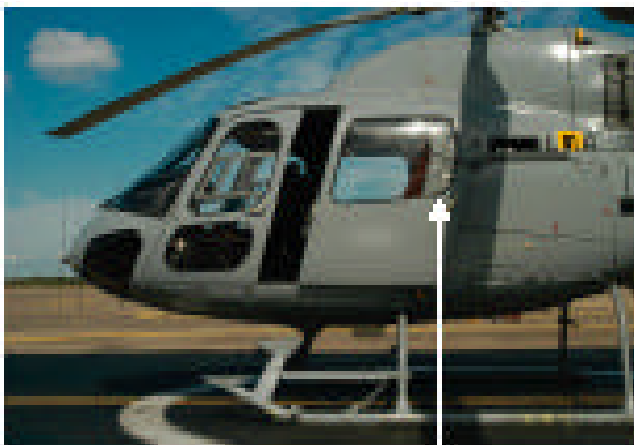
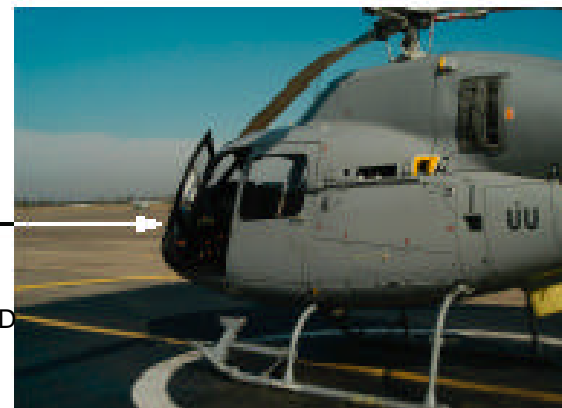
3. CUT-IN

- Cut into fuselage as needed. Avoid cutting near personnel.

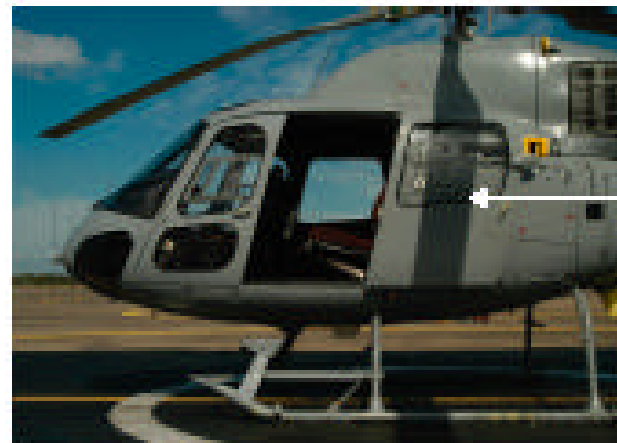
1a
CREW
DOOR
HANDLE



1a
CREW
DOOR
OPENED



1b
REAR DOOR HANDLE



1c
REAR
DOOR
OPENED

FENNEC AS 555 AN

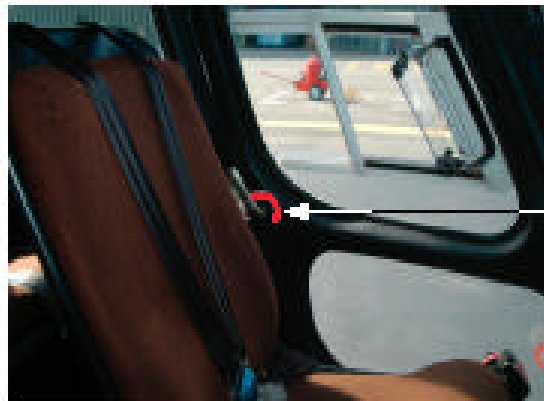
NORMAL AND EMERGENCY EXITS

1. NORMAL EXITS

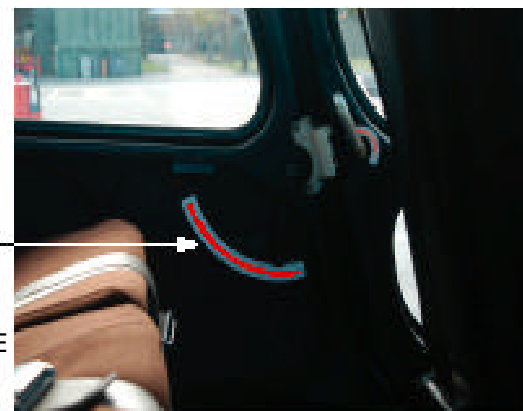
- a. Open crew door (left or right side) by turning door handle downward.
- b. Open rear doors (left or right side) by turning door handle upward, push rear door slightly away from yourself to disengage it from its closed position and push toward the back of the aircraft.

2. EMERGENCY EXITS

- a. To release the crew doors, remove the safety cover and pull handle to jettison door.



2a
CREW
DOOR
HANDLE



2b
AFT
DOOR
HANDLE



2b
CREW DOOR
SAFETY COVER
AND HANDLE



ENGINE AND ELECTRICAL SHUTDOWN

1. ENGINE SHUTDOWN

- a. On the overhead panel, remove safety and pull the handles aft.
- b. Pull both fire cut off handles, located on the overhead panel, aft.
- c. Pull rotor brake handle, located on the overhead panel, aft.

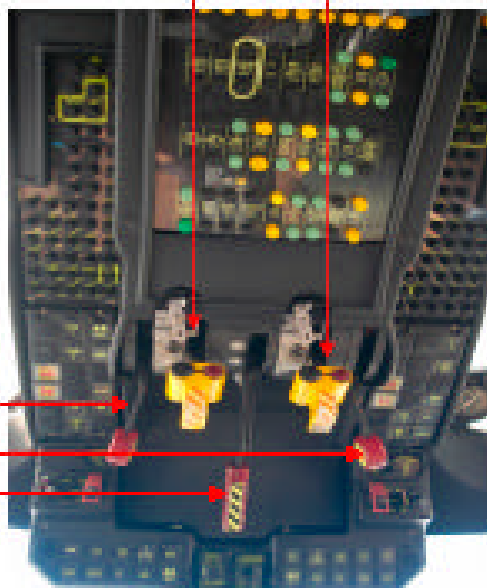


1a
SAFETY
AND
HANDLE

2. ELECTRICAL SHUTDOWN

- a. Press both battery (BAT) switches, located on overhead panel, to the OFF position.
- b. Press the main power interrupter buttons, located on the forward instrument panel, to the OFF position.

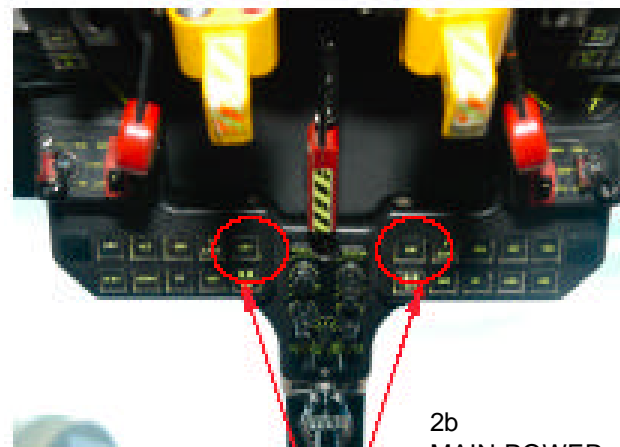
1a
SAFETY AND HANDLES



2b
FIRE CUT OFF
HANDLES

2b
ROTARY BRAKE
HANDLE

FENNEC AS 555 AN



2a
BATTERY SWITCHES

2b
MAIN POWER
INTERRUPTER
BUTTONS



AIRCREW EXTRACTION

1. AIRCREW EXTRACTION

- a. Pull tab at mid section to free crew member from harness restraints.
- b. Release passengers from safety harness.



SPECIAL TOOLS/EQUIPMENT

Power Rescue Saw
Crash Ax

AIRCRAFT ENTRY**1. NORMAL ENTRY**

- To open forward main doors, push button, turn door handle, and pull out forwards.
- To open rear doors, forward main doors must be accessed, operate interior door handle.

2. EMERGENCY ENTRY**NOTE:**

Doors are not equipped with pyrotechnics. Jettisoning doors means to separate doors from aircraft.

- To jettison forward door, lift door handle upwards.
- To jettison rear doors, forward main doors must be accessed, lift interior door handle upwards.

3. CUT-IN

- Cut-in fuselage as required.

OTHER HAZARDS:

Weapons may be carried in Light Fire Power, Support Role, eg: Machine Guns, Rockets, Missiles, Chaff Dispensers, etc.

Acids - Batteries

Bromochlorodifluoromethane - Fire Extinguishant

Bromotrifluoromethane - Fire Extinguishant

Composite Materials - Man Made Fibres

Dimethylformamide - Strobe Power Pack

Ground Illuminating Flare Dispenser

Nitesun Light System

Polytetrafluoroethylene - PTFE

Sonar Locator Beacon(s) - Lithium Battery

Very Flare

Fuel: AVTUR

Hydraulic Oil: OM-15

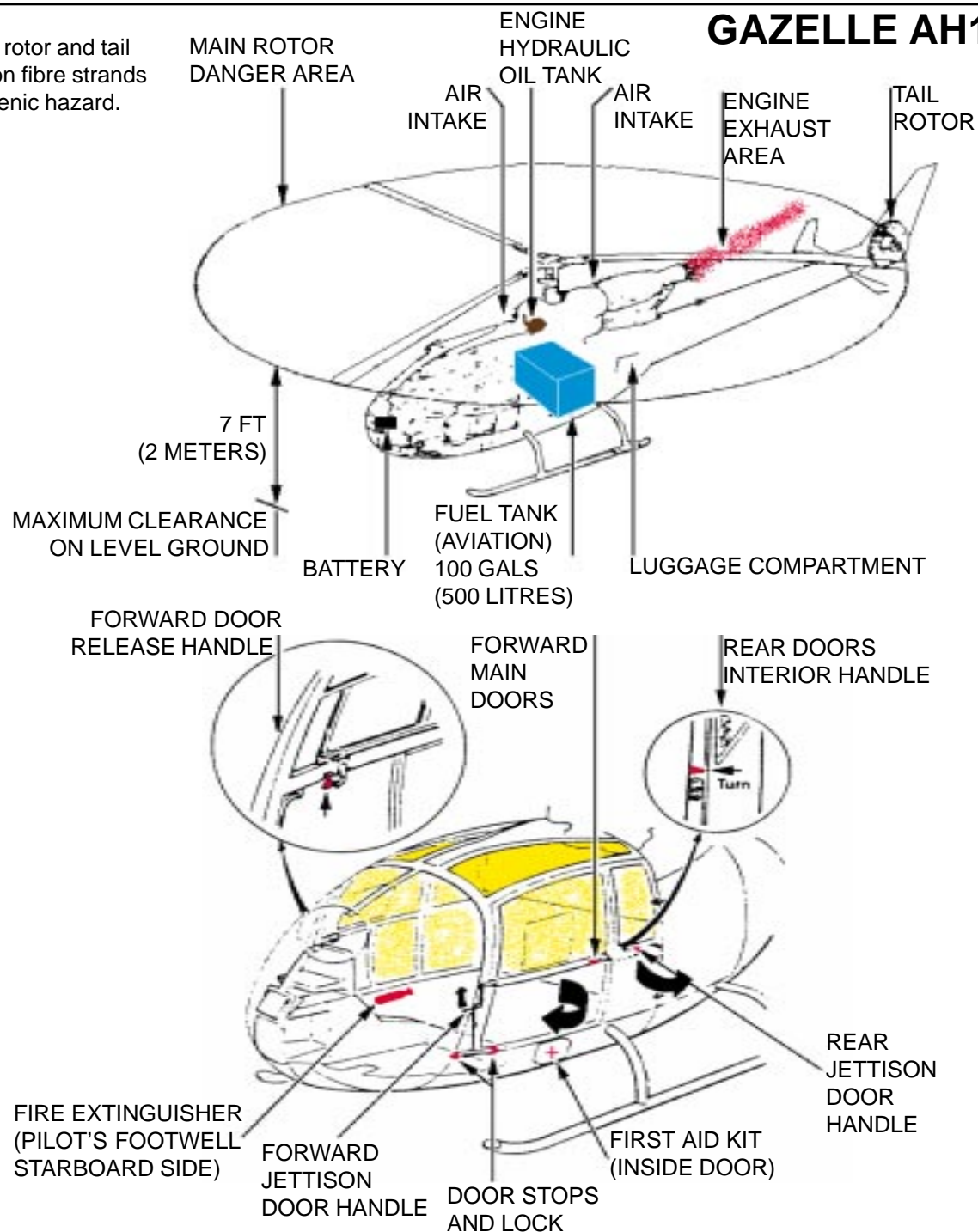
HP Gases: Nitrogen

Engine Oil: OX-38

Oxygen: NIL

NOTE:

Rubber covering on main rotor and tail rotor tie bar contain carbon fibre strands and may pose a carcinogenic hazard.

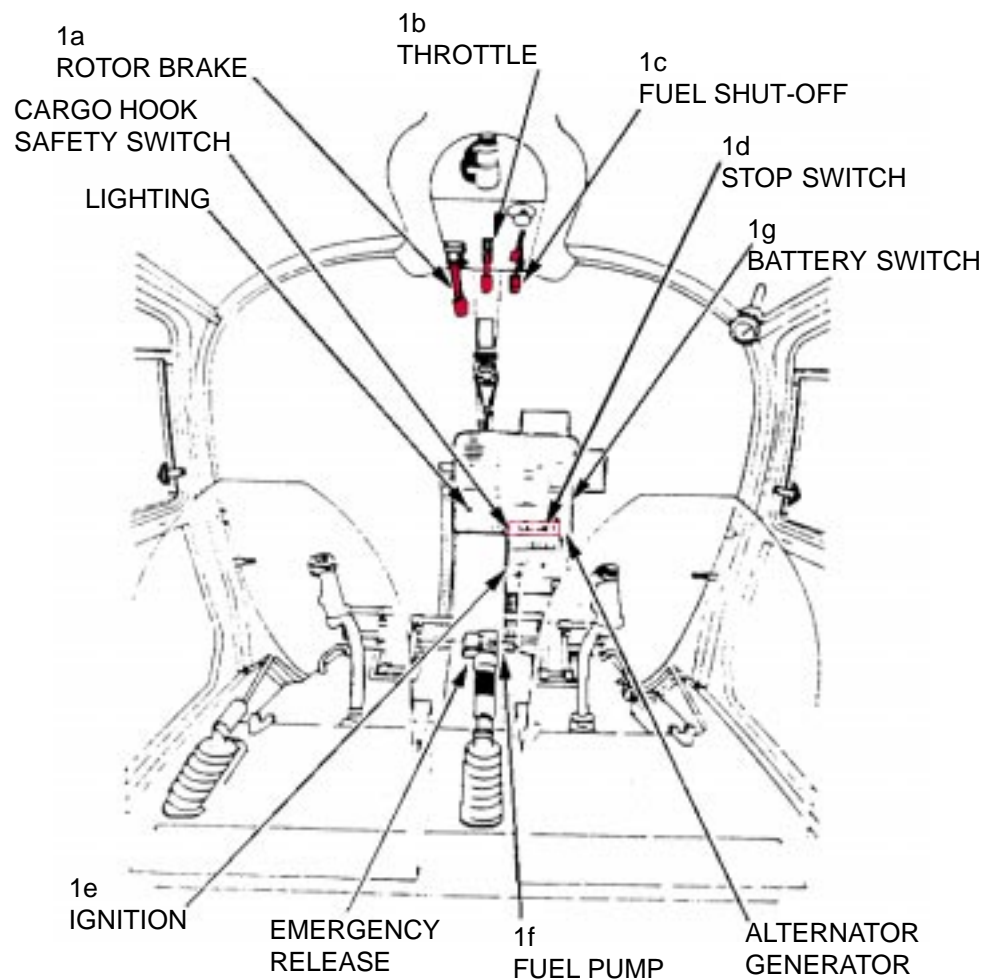


ENGINE SHUTDOWN

GAZELLE AH1

1. ENGINE SHUTDOWN

- a. Gently apply rotor brake, located on overhead control panel.
- b. Retard throttles, located on overhead control panel, to the OFF position.
- c. Pull the fuel shut-off switch, located on the forward center panel, to the AFT position.
- d. Place stop switch, located on the forward center panel, to the STOP position.
- e. Place Ignition switch, located on the forward center panel, to the OFF position.
- f. Place the fuel pump switch, located on the forward center panel, to the OFF position.
- g. Place the battery switch, located on the forward center panel, to the OFF position.



AIRCREW EXTRACTION AND EMERGENCY ACTIONS

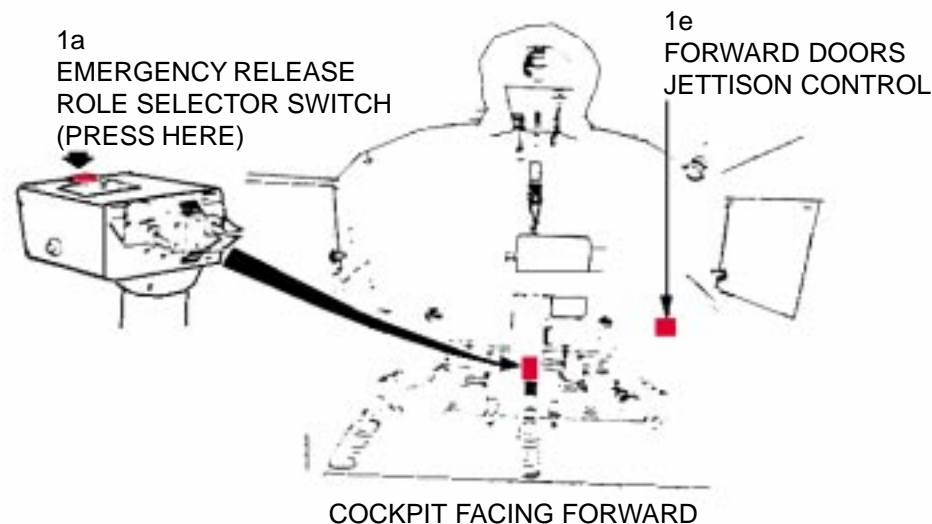
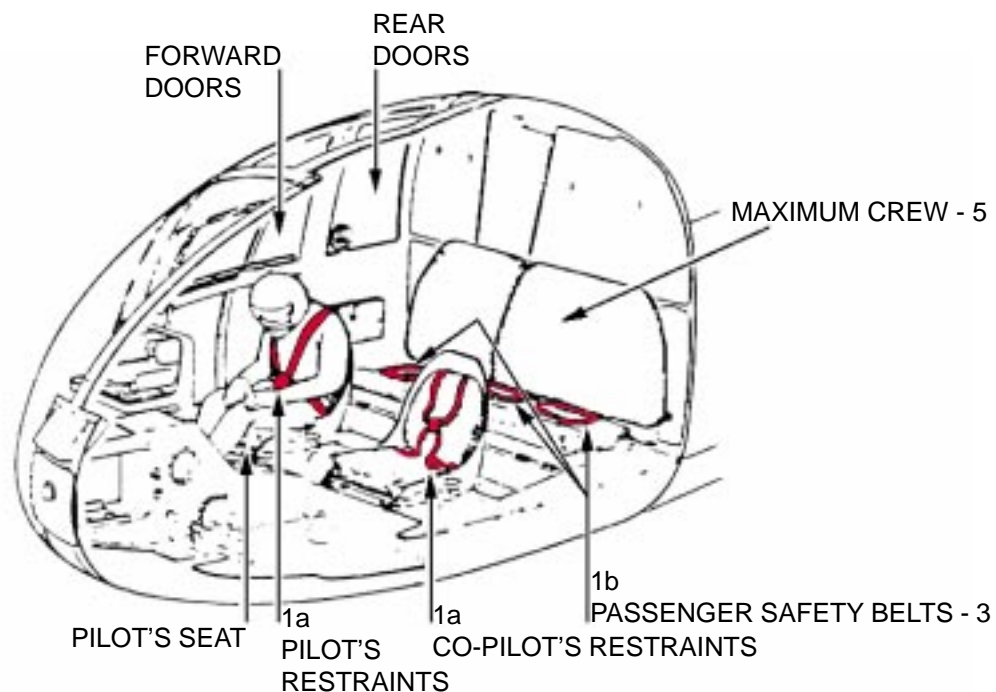
GAZELLE AH1

1. AIRCREW EXTRACTION

- a. Release crew from seats by disconnecting safety belts and harness restraint straps, setting straps aside, and removing crew.
- b. Release passengers from seats by disconnecting safety belts, setting belts aside, and removing passengers.

2. EMERGENCY ACTIONS

- a. Press the emergency release role selector switch, located on center control.
- b. For the winch, cut the cable.
- c. For the cargo door, jettison.
- d. For armament, jettison armament and set to OFF position.
- e. To internally jettison forward doors, press down on door handle and push out door.



The aircraft information is pending release.



GAZELLE (RM)

AIRCRAFT DIMENSIONS AND GENERAL ARRANGEMENT

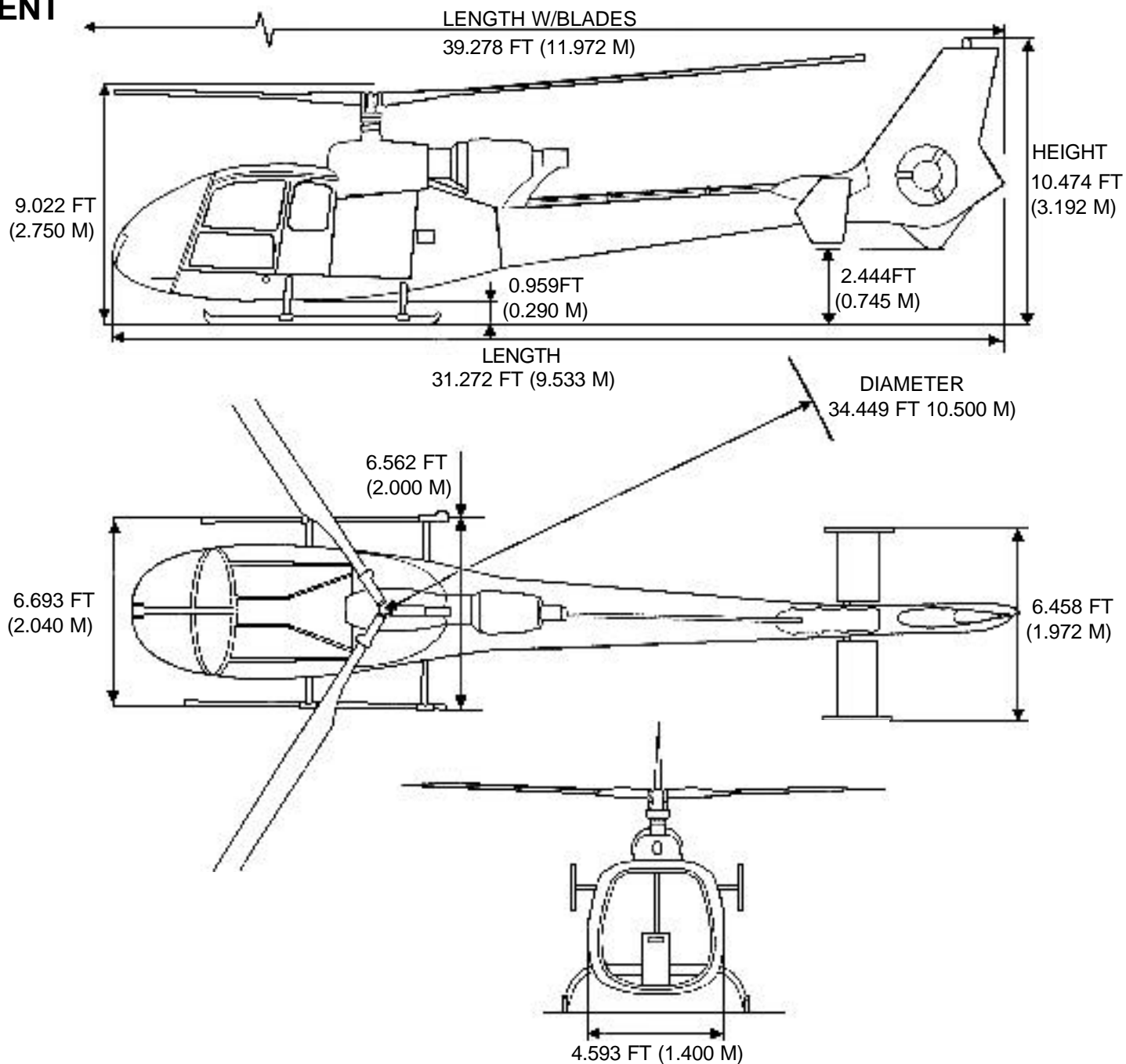
GAZELLE HT3

T.O. 00-105E-9

BLADES SPREAD

NOTE:

The overall dimension should be modified again after fitting the articulated landing gear.



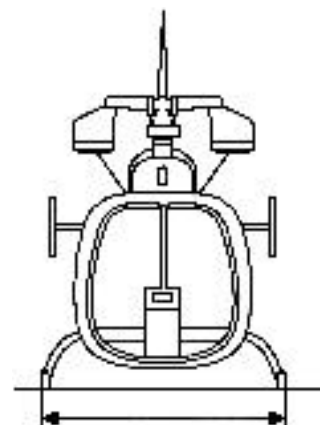
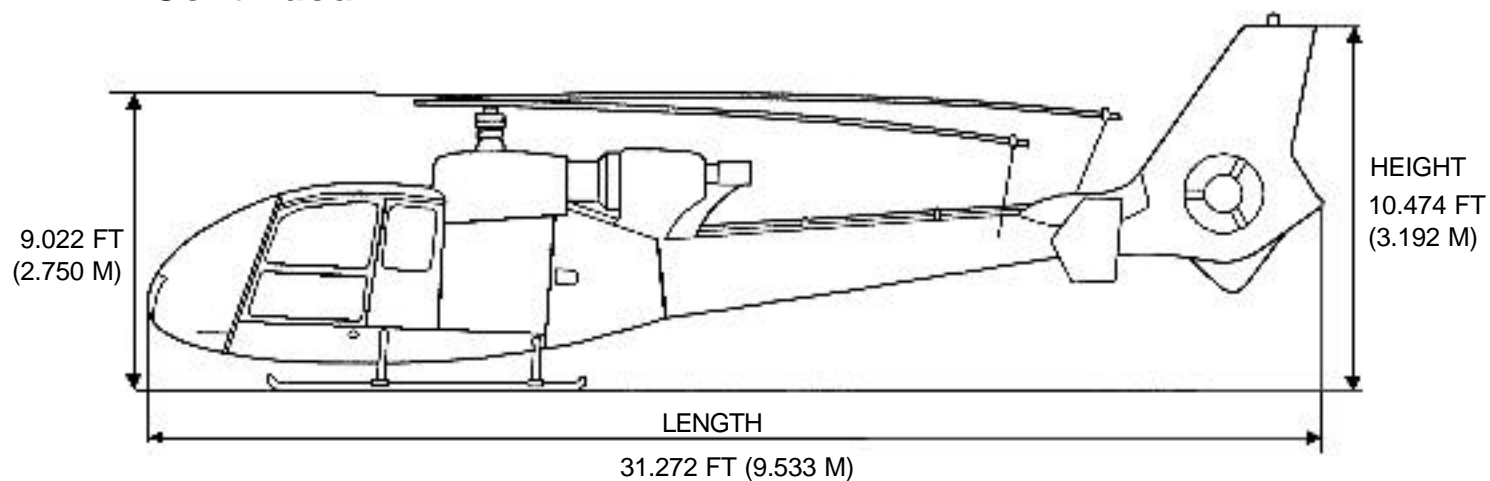
AIRCRAFT DIMENSIONS AND GENERAL ARRANGEMENT-Continued

GAZELLE HT3

BLADES FOLDED

NOTE:

The overall dimension should be modified again after fitting the articulated landing gear.



6.693 FT (2.040 M)

AIRCRAFT DATA AND HAZARD LIST

GAZELLE HT3

AIRCRAFT DATA

Single Rotor Helicopter
 One Turbomesa Astezo IIIA
 turboshaft
 Military Freight Passenger:
 1 crew
 4 passengers
 Aircraft Weight: AUW 1657.3 Kgs

WARNING

Fires resulting from this type of aircraft crash may produce toxic fumes which are hazardous to health.

Personal Protective Equipment (recommendations made by the GRB Royal Navy to be worn at crash site):

Standard No.3 (combat) Dress.
 Appropriate weather protection.
 Civil Emergency Services wear normal uniform with appropriate weather protection.
 Safety helmet (as required).

HAZARD LIST

HAZARD TYPE	ITEM	QUANTITY	LOCATION
Acid - Sulfuric	Battery	1	Nose Compartment
Avtur F-34	Fuel	450 Liters	Fuel Tanks, Ferry Tanks (200L)
Bromochloroufluoro - Methane (BCF)	Cabin Fire Extinguisher	2.5 Kg	Various
Cabin Insulation	Sound Insulation	On Aircraft	Various throughout
Cadmium & Cadmium Oxide	Plated Components	On Aircraft	Various throughout
Dimethylformamide (DMF)	Strobe Power Pack	On Aircraft	
Glass Fibers	Main Rotor Blades		
Lead	Main Rotor Blades	3	
Lithium (Non Rechargeable Batteries			SLB
Nitrogen Compressed			Hydraulic Accumulators
OEP-71	Transmission Gear Box	4 Liters	
OM-15	Hydraulic System	2.5 Liters	Aircraft System
OX-7	Engine Lubrication System	10 Liters	Engine System
Polytetrafluoroethylene (PTFE)		On Aircraft	
Rotor Tie-Bars (Gazelic)	Main & Tail Rotors		
Sonar Locator Beacon		1	
Titanium	Components in Main Gear Box		
Very Flare	Flare		
Oxygen	N/A	Nil	

AIRCRAFT HAZARDS

WARNING

MAIN ROTORS: Never approach the aircraft unless cleared to do so both by the pilot and the director. When cleared, approach at 90° from the starboard side of the aircraft and keep your head covered.

BLADE SAIL AND SWOOP: Never enter the rotor disc when the rotors are being engaged or shut down.

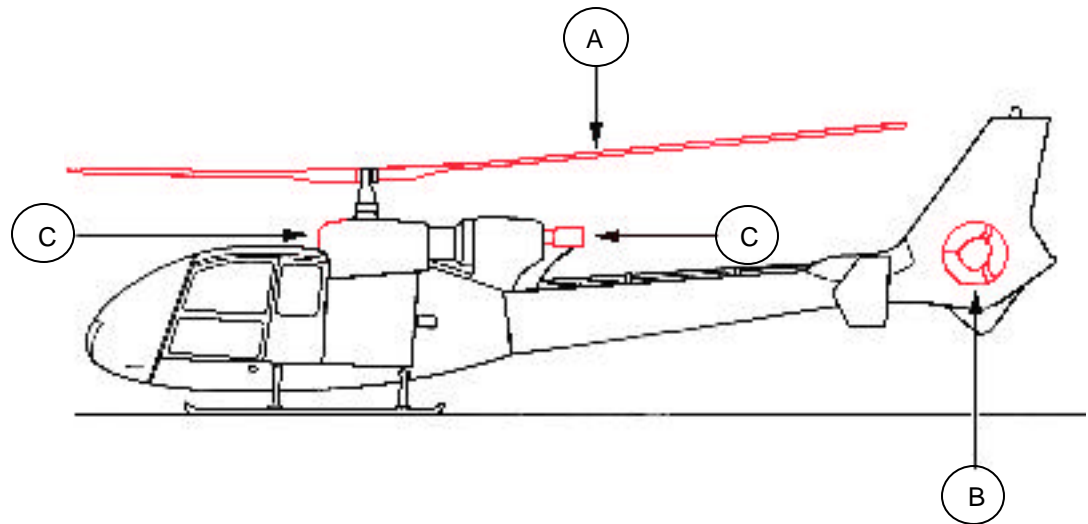
MANHANDLING: This aircraft is very fragile so only the handgrips provided are “push” areas. No other part of the aircraft is to be used for manhandling purposes.

DANGER AREAS

A	Main rotor disc. Beware of blade sail and swoop. Never approach aircraft unless signalled to do so by the director and pilot.
B	Tail rotor fan (enclosed but dangerous). Do not approach from the tail of the aircraft. Be always within view of the pilot.
C	Beware of engine intakes and exhausts.

GAZELLE HT3

T.O. 00-105E-9



SPECIAL TOOLS/EQUIPMENT

Power Rescue Saw

Crash Ax

AIRCRAFT ENTRY

1. NORMAL ENTRY

- To open forward main doors, push button, turn door handle, and pull out forwards.
- To open rear doors, forward main doors must be accessed, operate interior door handle.

2. EMERGENCY ENTRY

NOTE:

Doors are not equipped with pyrotechnics. Jettisoning doors means to separate doors from aircraft.

- To jettison forward door, lift door handle upwards.
- To jettison rear doors, forward main doors must be accessed, lift interior door handle upwards.

3. CUT-IN

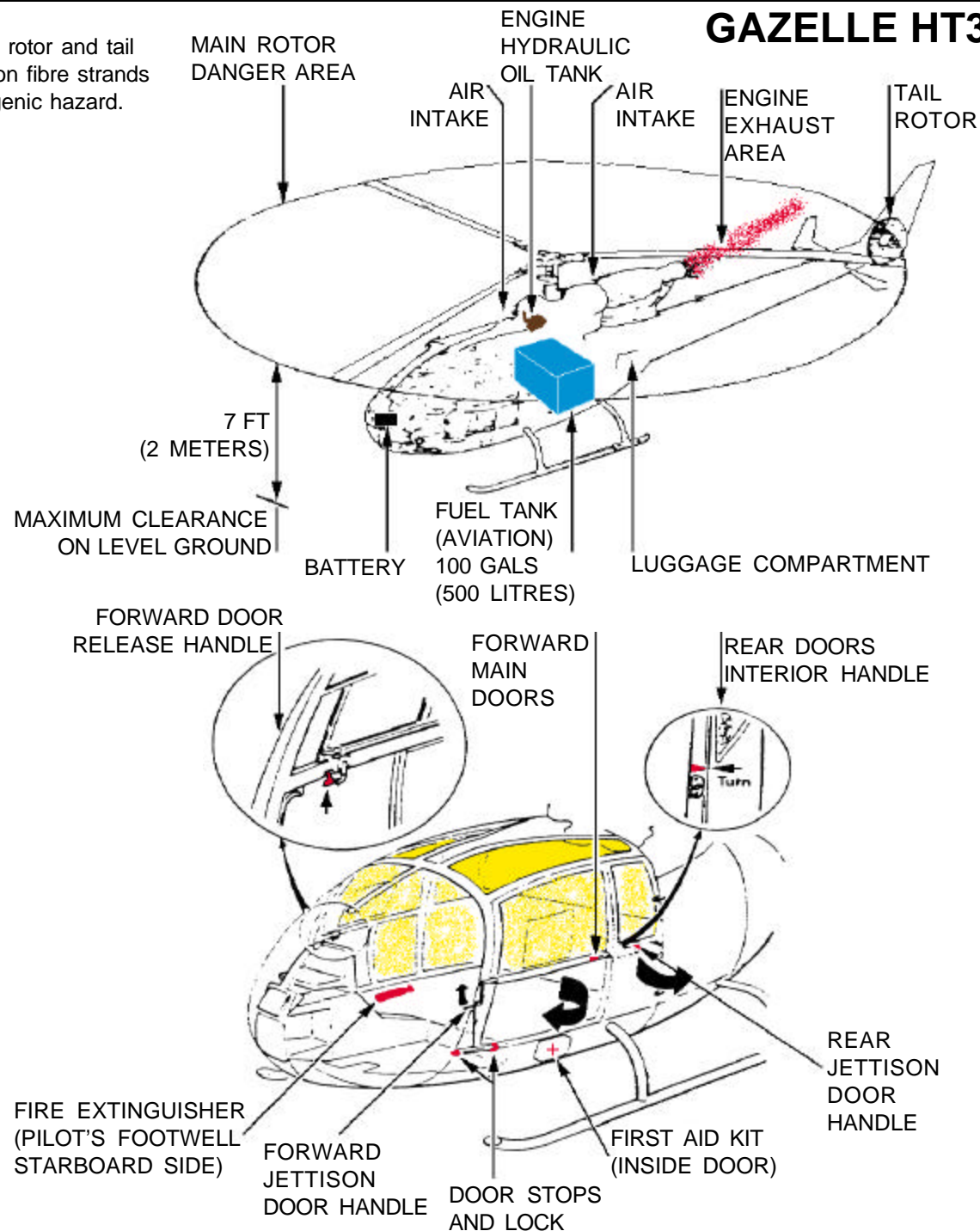
- Cut-in fuselage as required.

OTHER HAZARDS:

Weapons may be carried in Light Fire Power, Support Role, eg: Machine Guns, Rockets, Missiles, Chaff Dispensers, etc.

NOTE:

Rubber covering on main rotor and tail rotor tie bar contain carbon fibre strands and may pose a carcinogenic hazard.

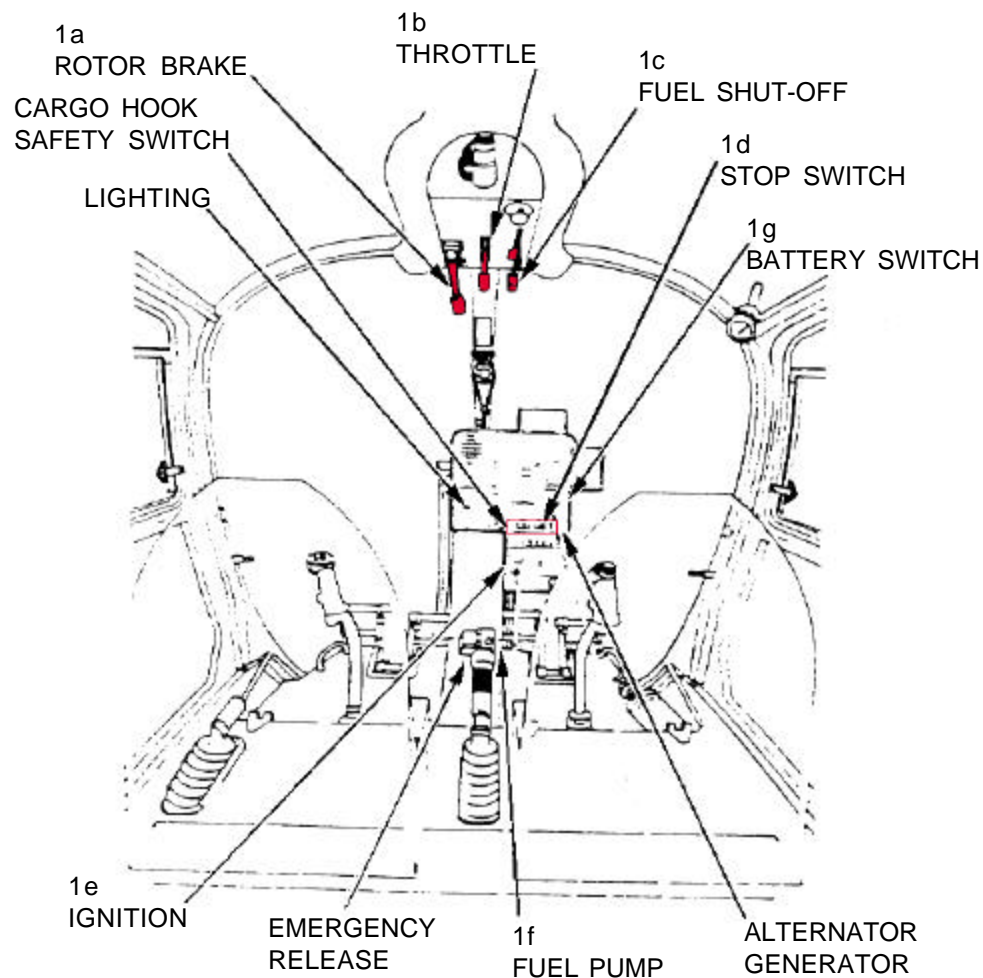


ENGINE SHUTDOWN

GAZELLE HT3

1. ENGINE SHUTDOWN

- a. Gently apply rotor brake, located on overhead control panel.
- b. Retard throttles, located on overhead control panel, to the OFF position.
- c. Pull the fuel shut-off switch, located on the forward center panel, to the AFT position.
- d. Place stop switch, located on the forward center panel, to the STOP position.
- e. Place Ignition switch, located on the forward center panel, to the OFF position.
- f. Place the fuel pump switch, located on the forward center panel, to the OFF position.
- g. Place the battery switch, located on the forward center panel, to the OFF position.



NOTE:

Flare safety pin is removed for flight.
Insert to make firing button inoperative.

AIRCREW EXTRACTION AND EMERGENCY ACTIONS

1. AIRCREW EXTRACTION

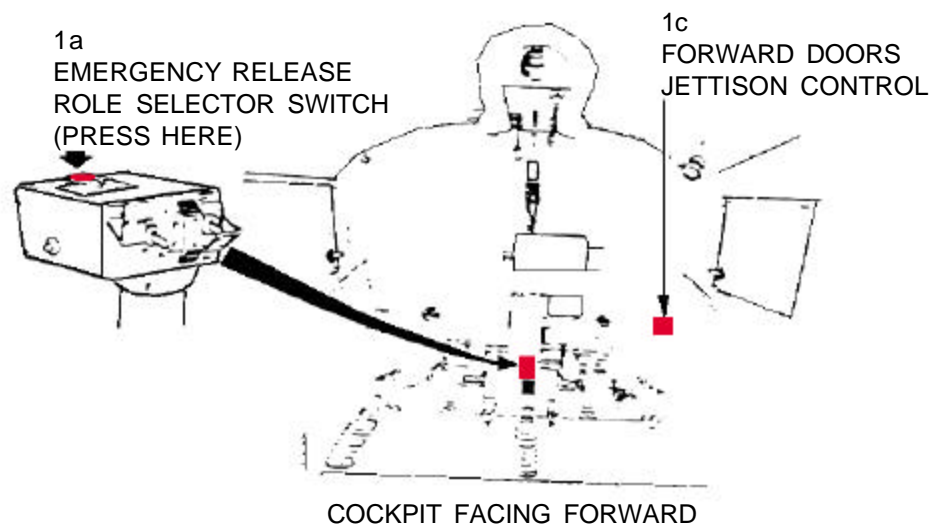
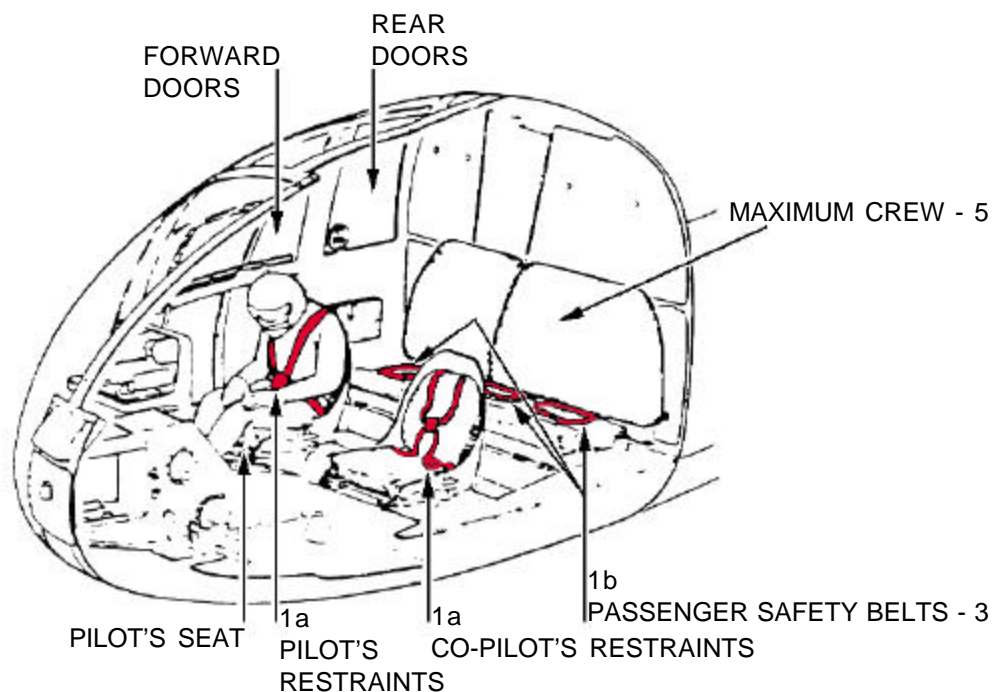
- a. Release crew from seats by disconnecting five point system for safety belts and harness restraint straps, setting straps aside, and removing crew.
- b. Release passengers from seats by disconnecting safety belts, setting belts aside, and removing passengers.

2. EMERGENCY ACTIONS

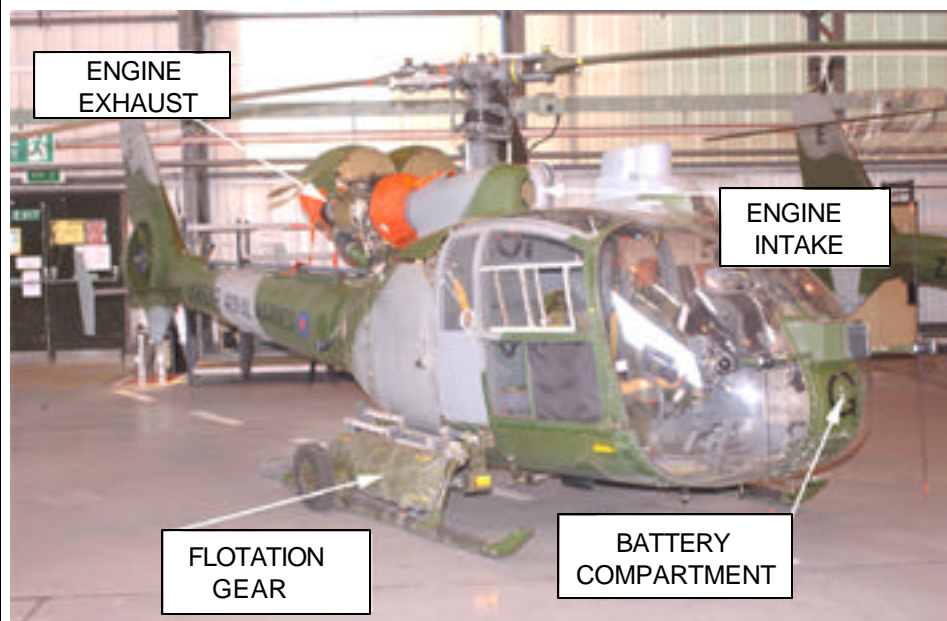
- a. Press the emergency release role selector switch, located on center control.
- b. For armament, jettison armament and set to OFF position.
- c. To internally jettison forward doors, press down on door handle and push out door.

GAZELLE HT3

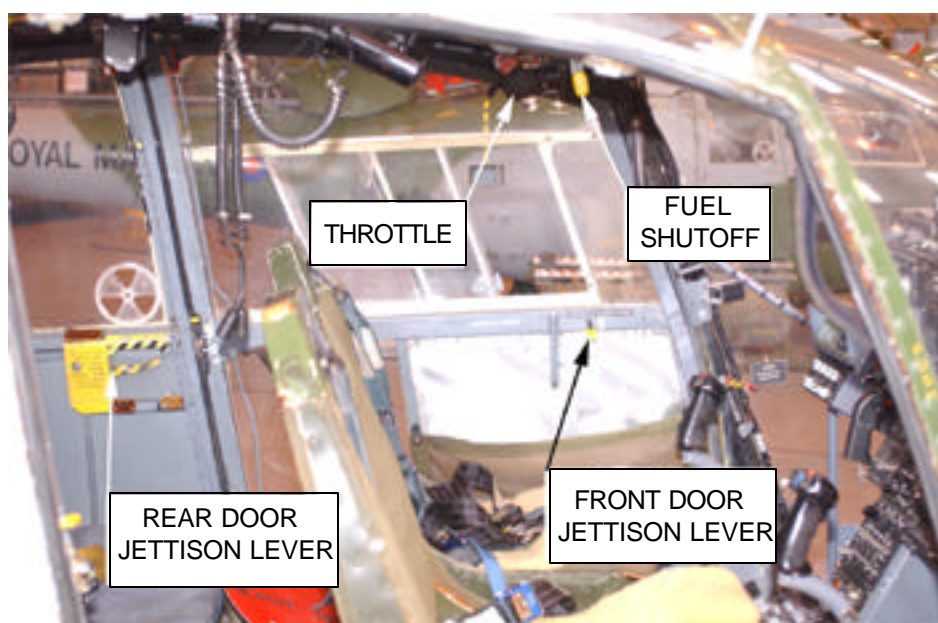
T.O. 00-105E-9

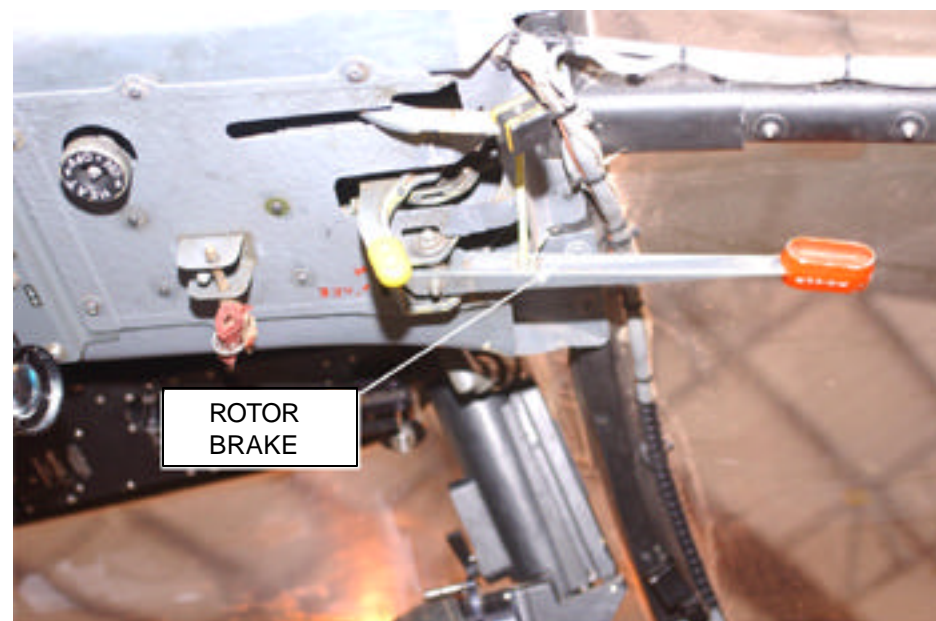


AIRCRAFT FAMILIARIZATION



GAZELLE HT3





The aircraft information is pending release.

SPECIAL TOOLS/EQUIPMENT

Power Rescue Saw
Crash Ax
Fire Drill II

AIRCRAFT ENTRY

NOTE:

The aircraft information is located in Chapter 9 containing US Air Force and Chapter 13 containing US Army aircraft.

1. NORMAL ENTRY

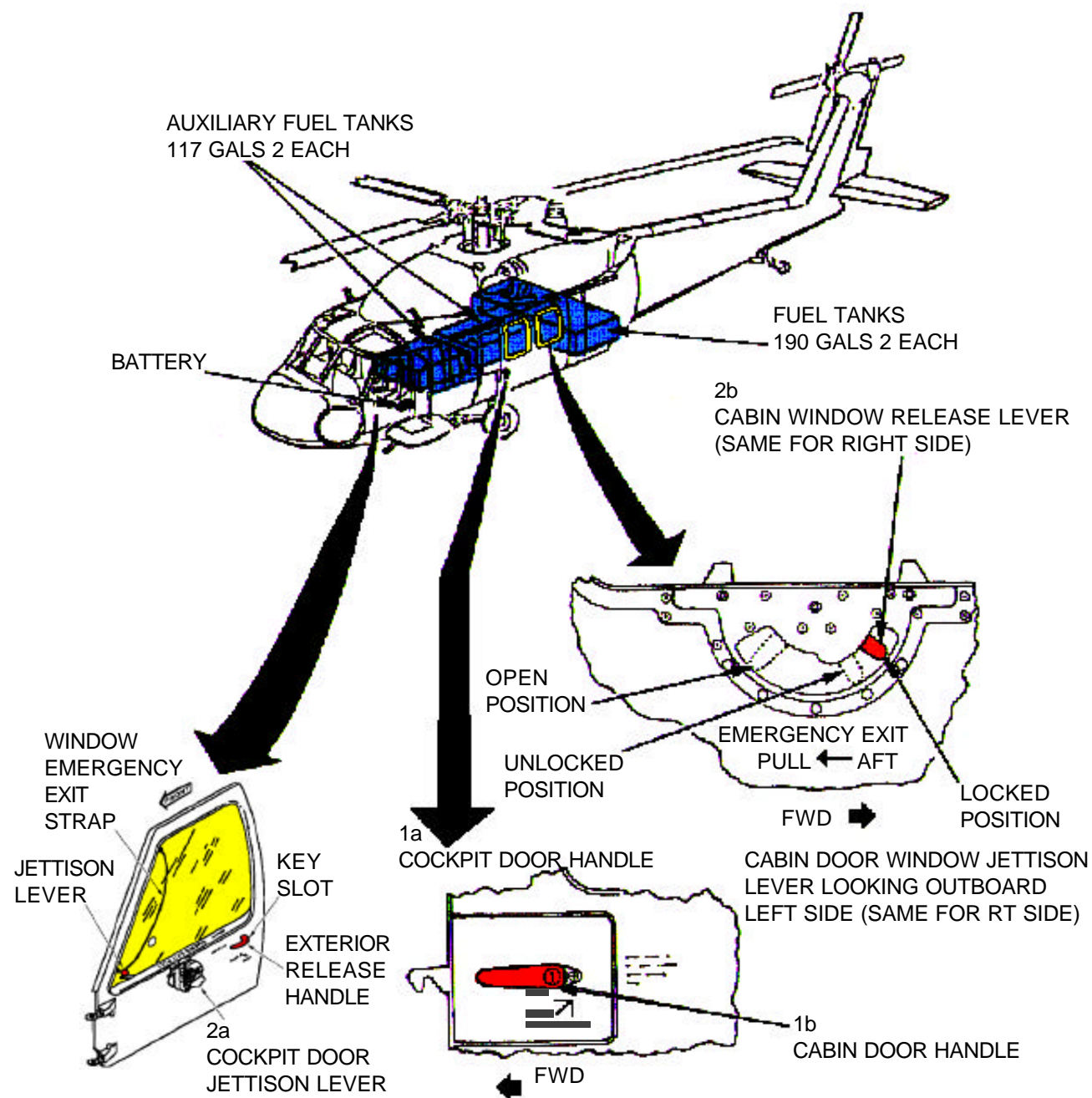
- a. Turn cockpit door handle counterclockwise to the open position to open door.
- b. Turn cabin door handle counterclockwise to the open position and slide door aft.

2. EMERGENCY ENTRY

NOTE:

Doors are not pyrotechnically equipped.

- a. Break window in cockpit door and pull jettison lever aft to release door hinges.
 - b. Break window in cabin door and rotate emergency handle, located below forward window, to the aft open position. Push bottom of window out to remove window. Both cabin windows on side operate this way.
3. CUT-IN
- a. Break window or windshield as required.



ENGINE SHUTDOWN AND AIRCREW EXTRACTION

1. ENGINE SHUTDOWN

NOTE:

Battery switch must be in the ON position. To activate the installed fire extinguishing system, one T-handle must be pulled (agent is discharged to last T-handle pulled). Then, reposition the fire extinguisher switch from OFF to MAIN or RESERVE.

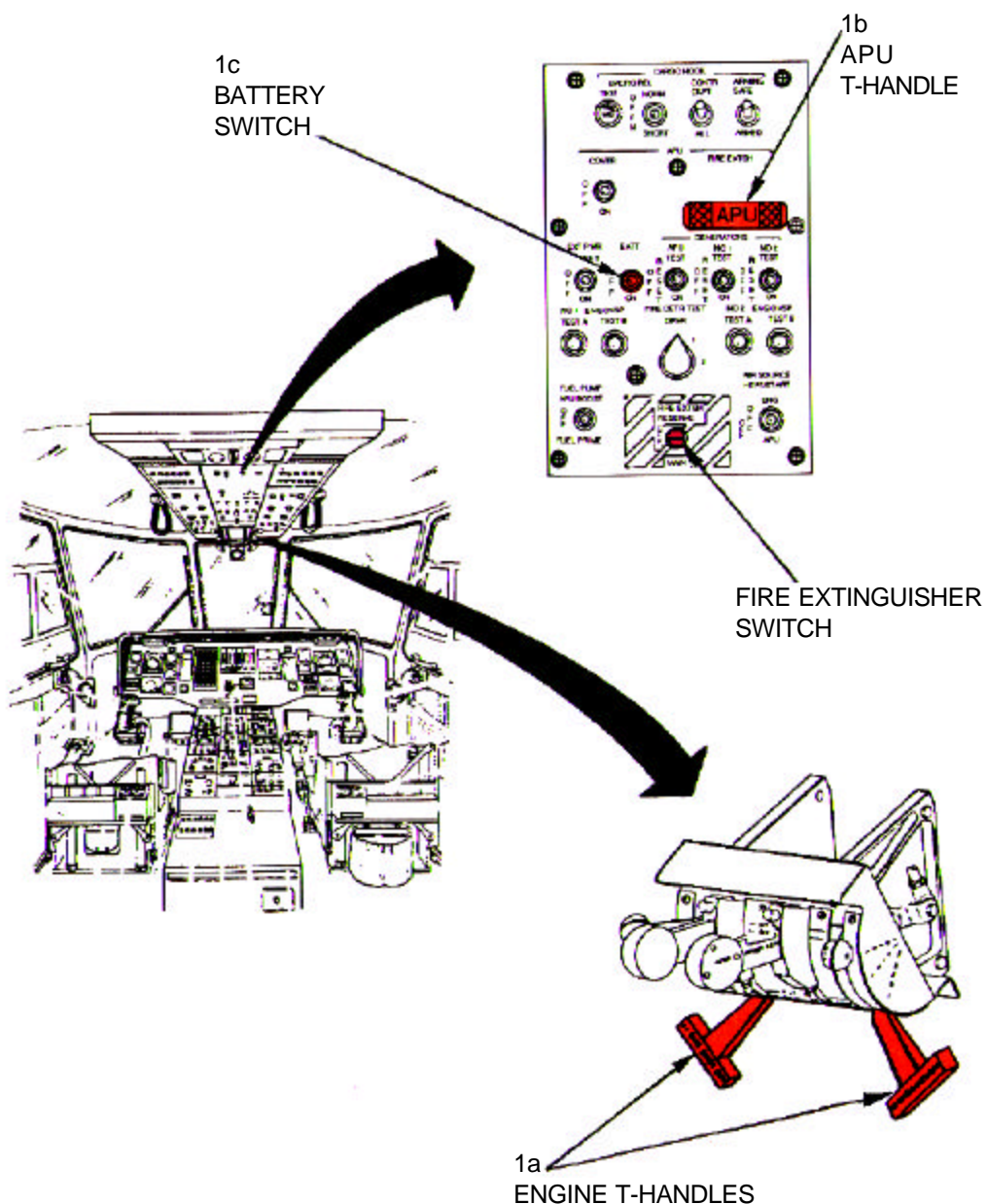
- Pull engine emergency T-handles, located on control quadrant, FULL AFT, to cut off fuel flow.
- Pull APU T-handle, located on overhead console, DOWN.
- Place battery switch, located on overhead console, to the OFF position.

2. AIRCREW EXTRACTION

- Release all lap belts and shoulder harnesses from aircrew. All aircrew seats have a complete lap belt and dual torso restraint shoulder harness centrally attached to a rotary release buckle or a pull-up release lever.
- Disconnect personnel leads from aircrew.
- Release all lap belt and shoulder harnesses from troop seats occupants. All troop seats have a lap belt and shoulder harness centrally attached to a rotary release buckle.

H/M/S/UH-60A,G,H,J,L & S-70-28D

T.O. 00-105E-9



SPECIAL TOOLS/EQUIPMENT

Rescue Saw
Crash Ax

NOTE:

Additional information for this aircraft
is located in Chapter 13 for the MH-6.

HUGHES 300/MH-6**AIRCRAFT ENTRY****1. NORMAL AND EMERGENCY ENTRY**

- a. Open main entry doors and right and left sides of fuselage.

2. CUT-IN

- a. Cut-in fuselage/windows as required.

3. ENGINE SHUTDOWN

- a. Close throttle to idle engine speed of 1400 RPMs.

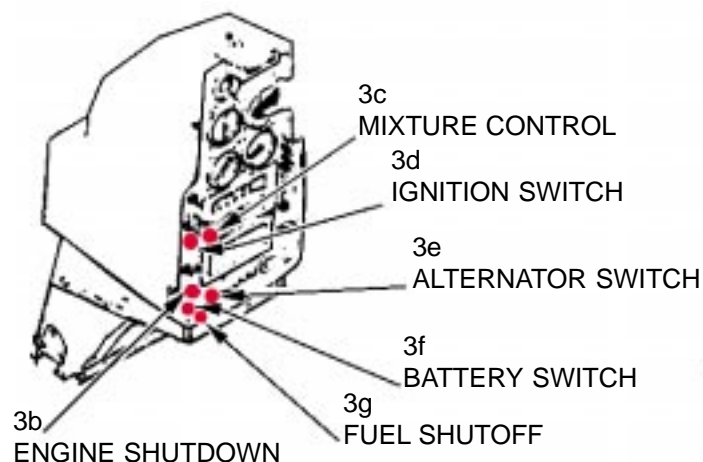
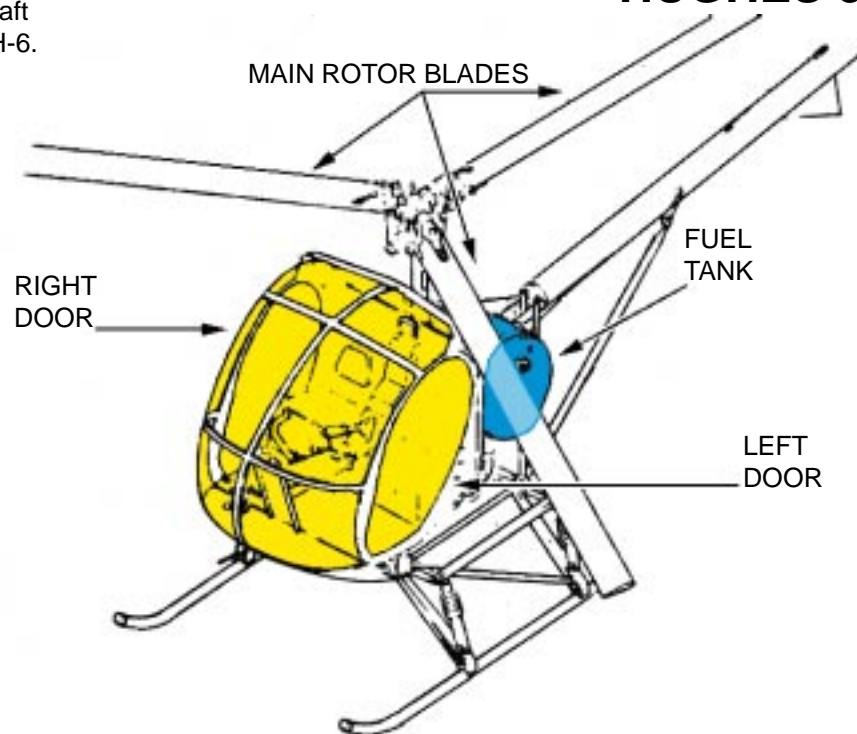
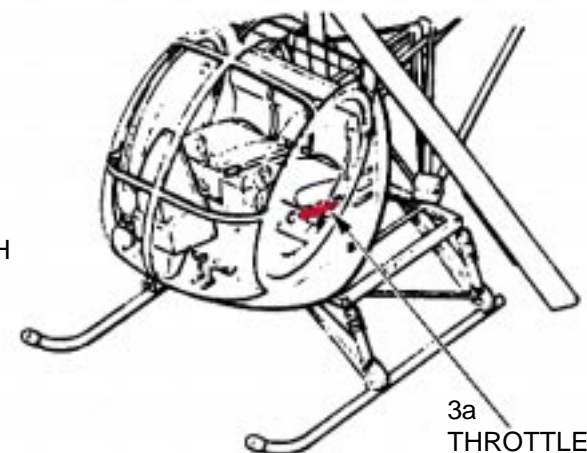
NOTE:

The following items are located on the
center console.

- b. Shut down engine after clutch is released. (Rotor will be nearly stopped.)
- c. Place mixture control in IDLE CUTOFF position.
- d. Place ignition switch in OFF position.
- e. Place alternator switch in OFF position.
- f. Place battery switch in OFF position and all remaining switches in OFF position.
- g. Place fuel shutoff valve in CLOSED position.

4. AIRCREW EXTRACTION

- a. Release restraints from crew, set aside restraint straps and remove crew.

**CENTER CONSOLE**

The aircraft information is located in Chapter 13
containing US Army aircraft.

AIRCRAFT HAZARDS

NOTE:

Hazardous cargo may be carried in cabin, or slung externally - glass fibre panels, asbestos, strobe lights, beryllium.

OTHER HAZARDS:

Acids - Batteries
 Asbestos
 Beryllium + Beryllium Oxides
 Bromochlorodifluoromethane - Fire Extinguishant
 Dimethylformamide - Strobe Power Pack
 Fluorolastomers - Burnt Seals
 Lithium - Batteries
 Sonar Locator Beacon(s) - Lithium Battery
 Tritium Light Sources - Beta Lights
 Weapon Load
 Windscreen Wash Fluid AL-36
 Zinc Selenide

Fuel: AVTUR

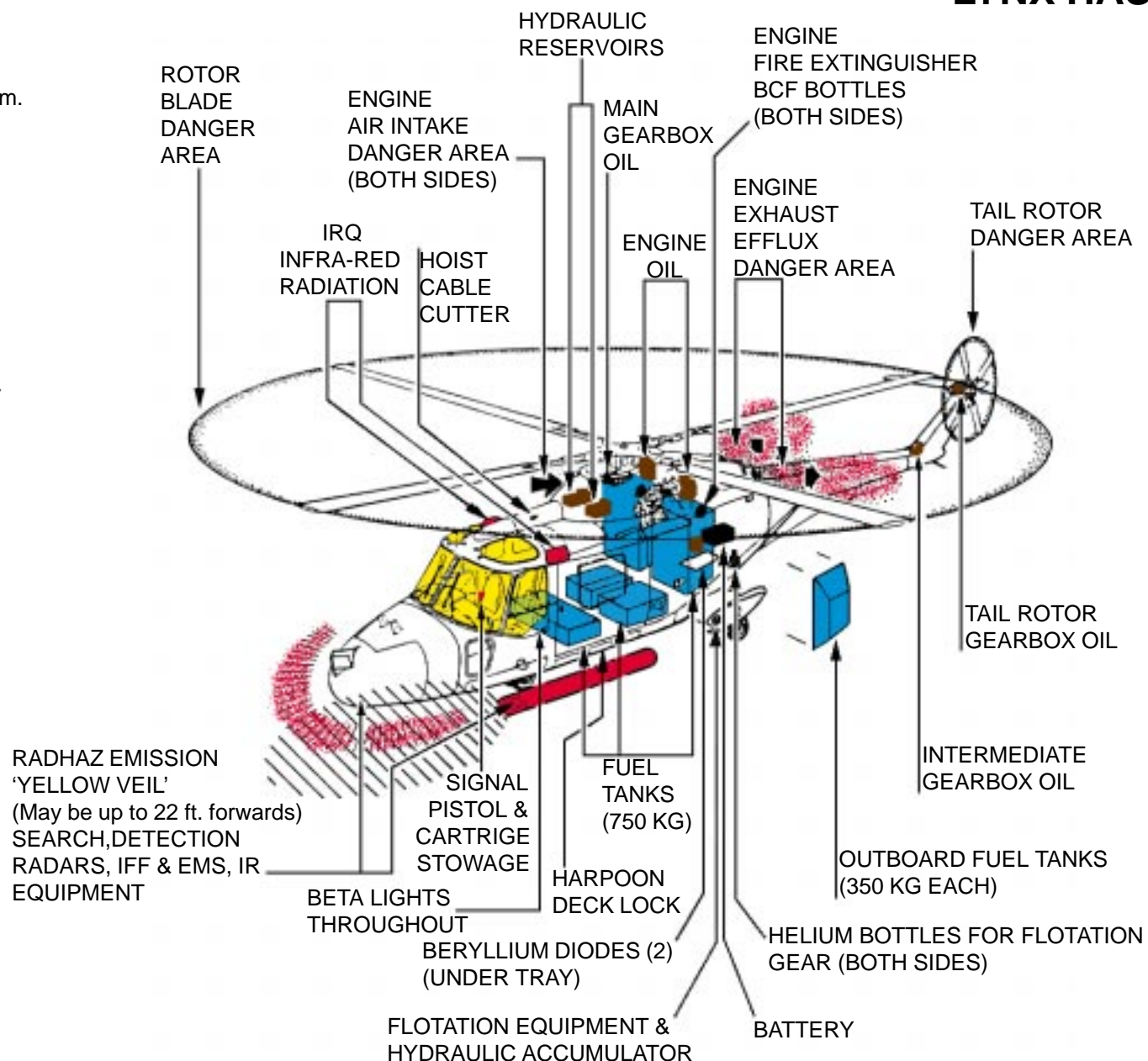
Hydraulic Oil: OM-15

HP Gases: Nitrogen

Engine Oil: OX-38/OEP-70/OEP-215

Oxygen: NIL

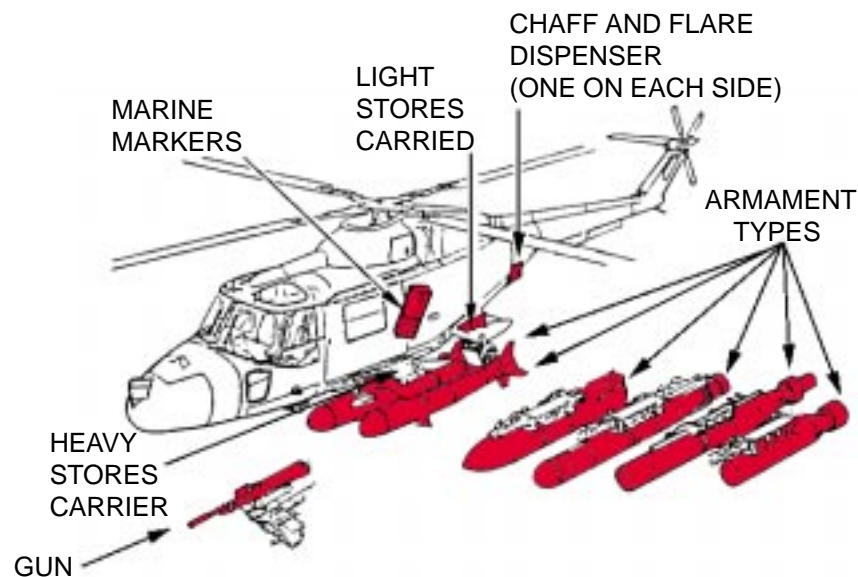
LYNX HAS 3



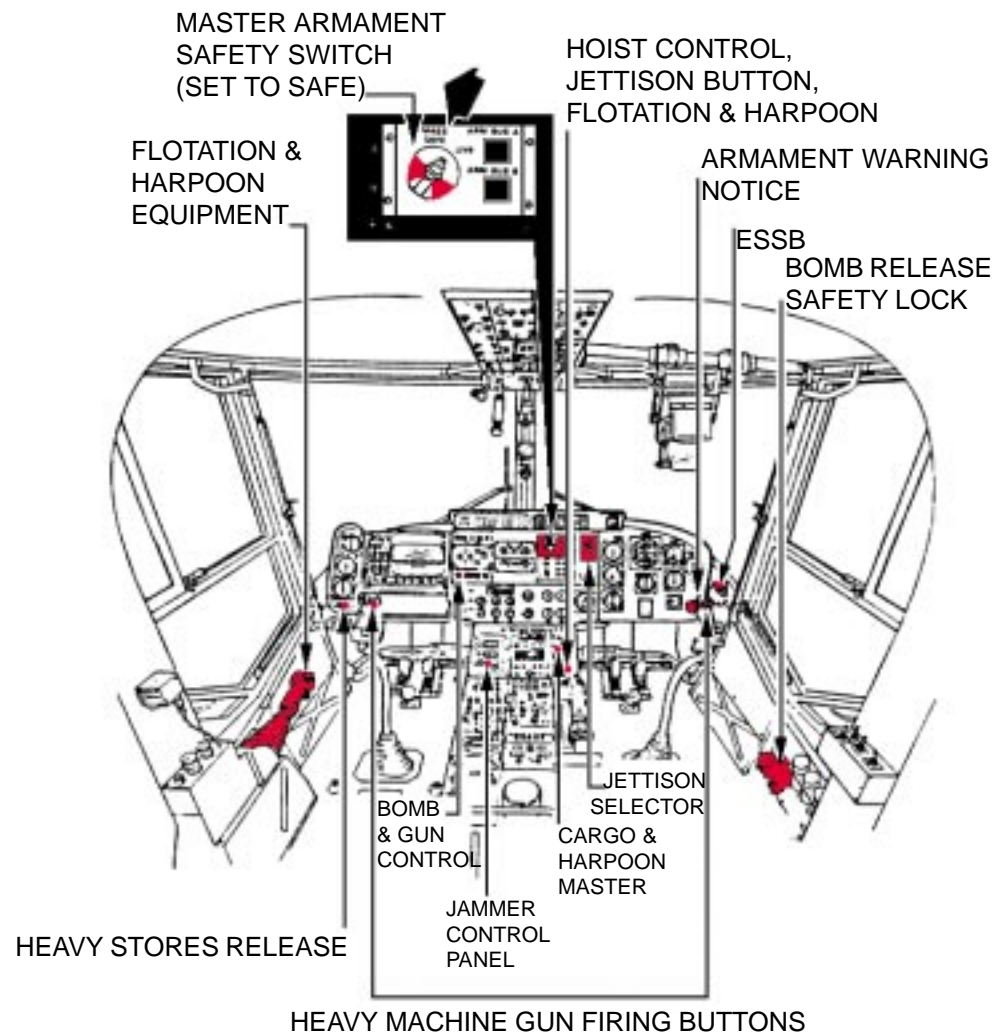
AIRCRAFT ARMAMENT

NOTE:

Armament may include bombs, missiles, torpedos, depth charges, and heavy machine guns - also flares, marine markers, and smoke (light stores).



LYNX HAS 3



SPECIAL TOOLS/EQUIPMENT

Power Rescue Saw
Crash Ax

LYNX HAS 3

AIRCRAFT ENTRY

1. NORMAL ENTRY

- a. Turn external entry door handles up, pull forward door out and forwards. Slide rear door aft.
- b. To open windows in rear doors, pull down release handle, pull windows outwards. (A blade may have to be inserted between frame and door.)

2. EMERGENCY ENTRY

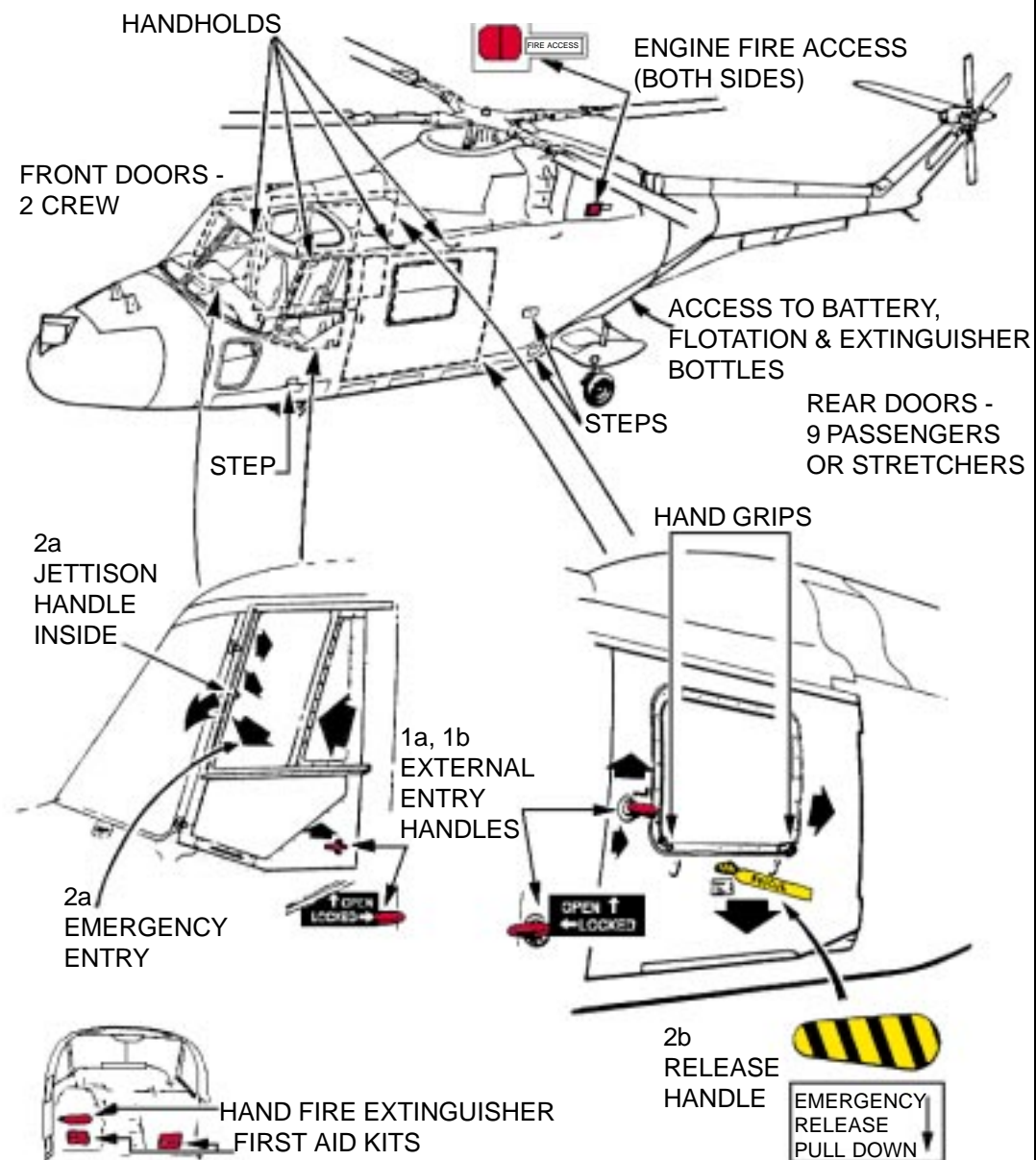
- a. For forward door, slide window aft, push jettison forward and down. Pull outwards.

3. CUT-IN

- a. Cut-in fuselage as required.

NOTE:

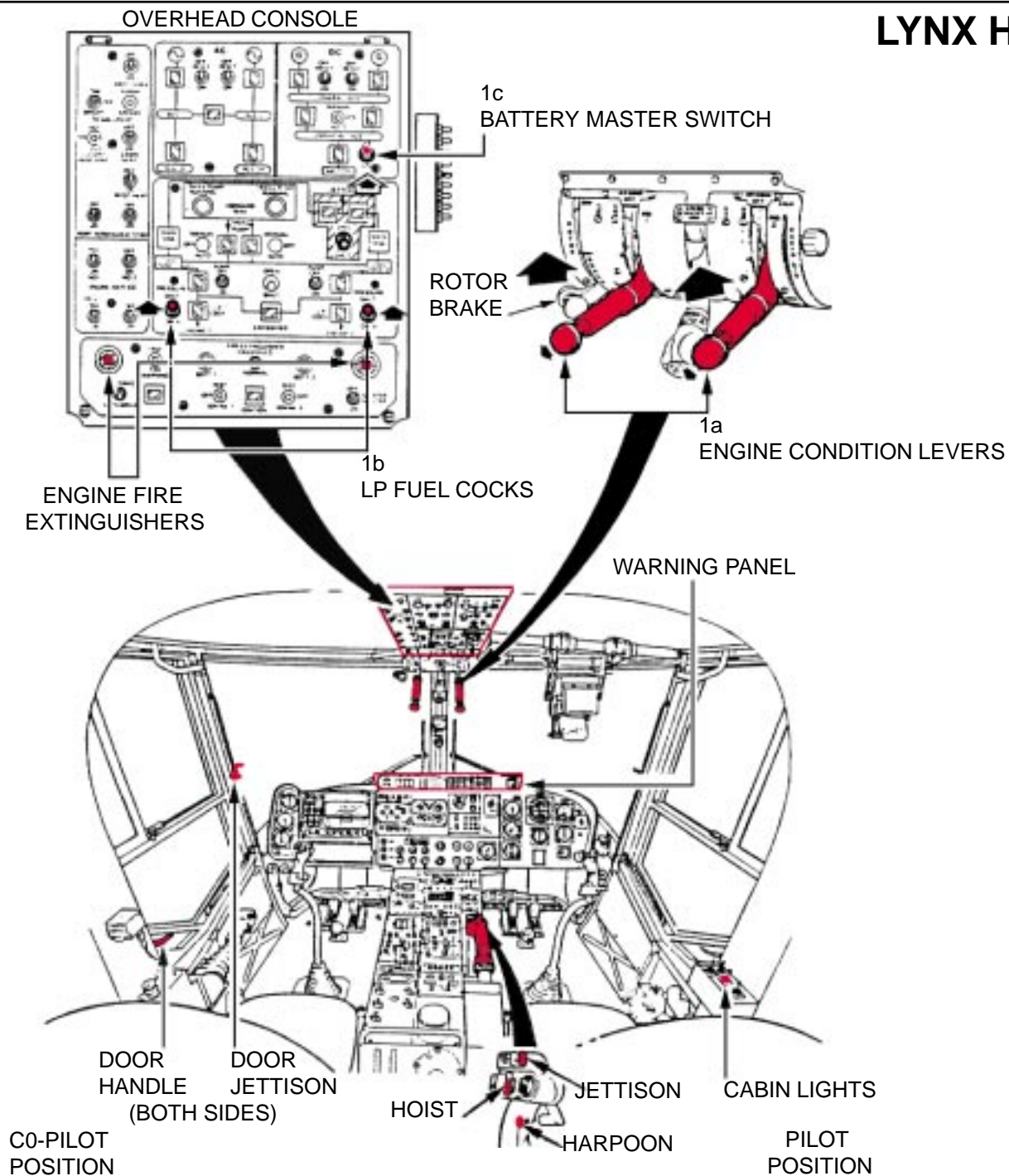
Winch in main cabin may be swung out of way by pulling down cord on starboard side.



ENGINE SHUTDOWN

1. ENGINE SHUTDOWN

- Raise engine condition levers, located on overhead control console, UP (aft) to HP COCK OFF position.
- Place LP fuel cocks, located on overhead control console, aft to SHUT position.
- Place battery master switch, located on the overhead control console, to OFF position.



LYNX HAS 3

AIRCREW EXTRACTION AND EMERGENCY EXIT DOORS

1. AIRCREW EXTRACTION

- Release crew in forward seats by releasing the QRF harness connection and other associated connections.
- Release crew in mid cabin seats by releasing restraint harnesses and other associated connections.
- Release crew in rear seats by releasing restraint harnesses and other associated connections.

2. EMERGENCY EXIT DOORS

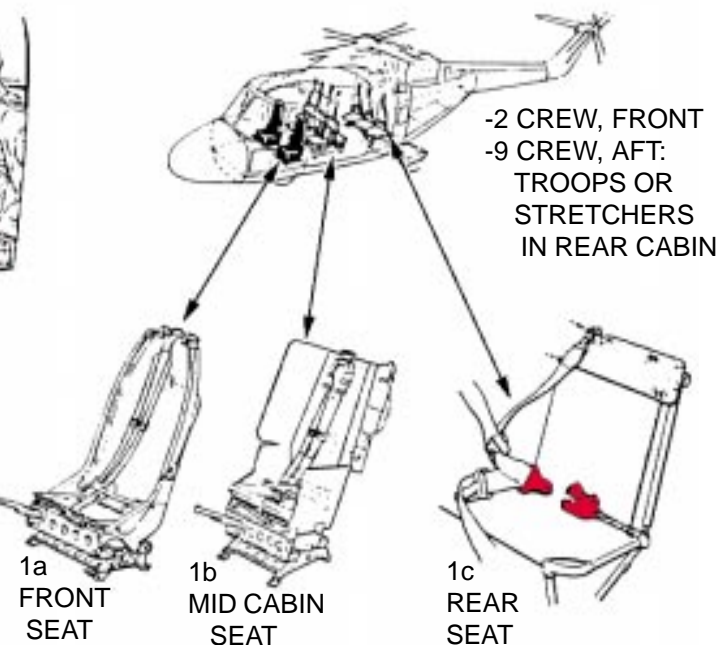
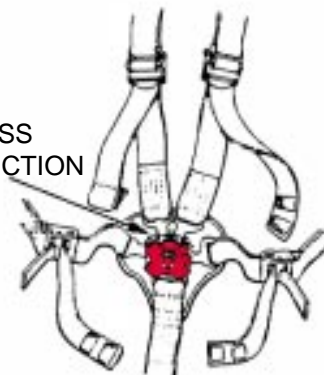
NOTE:

Exit doors can be jettisoned to make extraction of crewmembers faster.

- For front doors, push jettison forward and down, then push door out.
- For rear cabin doors, push jettison lever, located at bottom center of window, aft, then push window out.



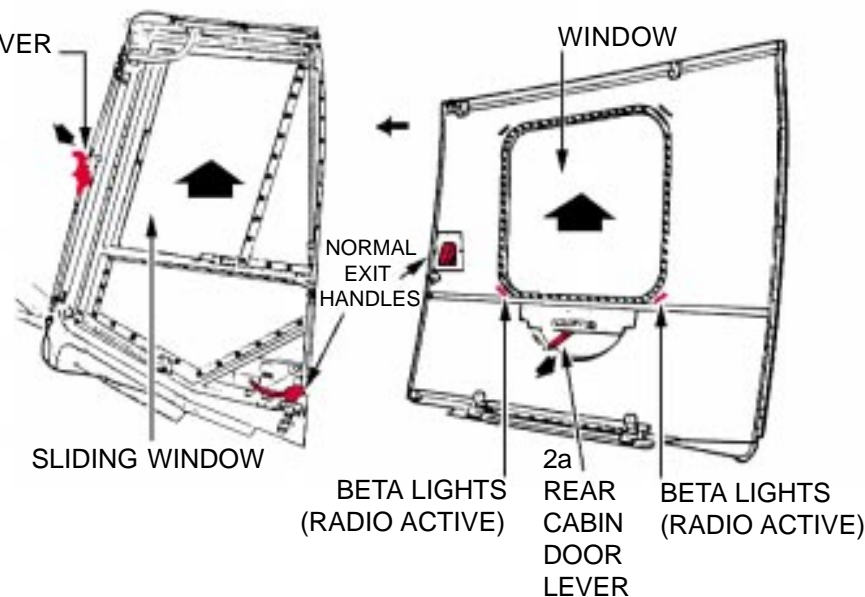
1a
QRF
HARNESS
CONNECTION



-2 CREW, FRONT
-9 CREW, AFT:
TROOPS OR
STRETCHERS
IN REAR CABIN

EMERGENCY EXITS

2a
JETTISON LEVER



LYNX HAS 3

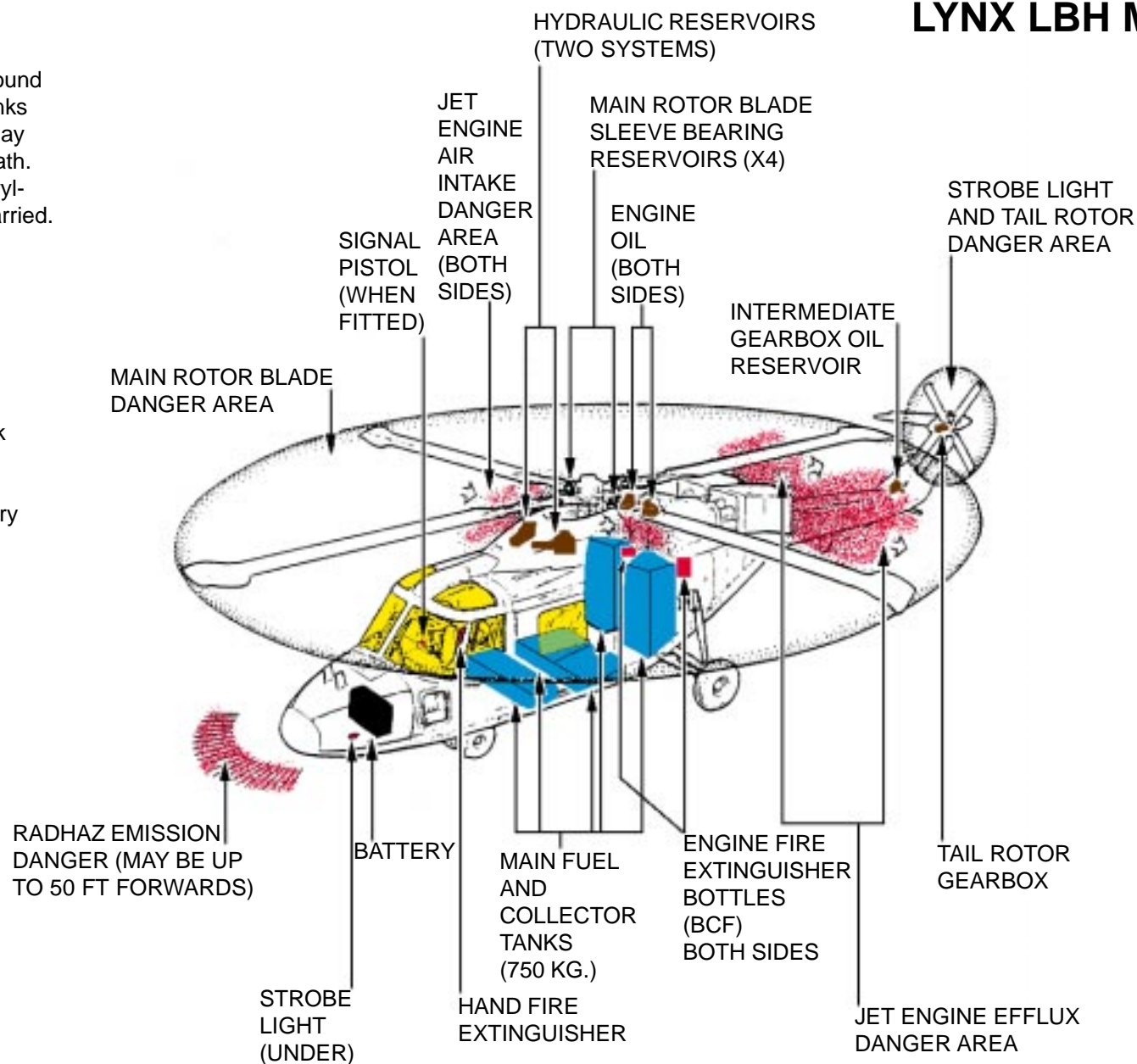
AIRCRAFT HAZARDS

NOTE:

Beta lights (radio active beryllium) around doors and windows. Auxiliary fuel tanks may be in cabin. Hazardous cargo may be carried in cabin, or slung underneath. Glass fibre panels, asbestos, and beryllium components. No armament is carried.

OTHER HAZARDS:

Acids - Batteries
 Asbestos
 Beryllium + Beryllium Oxides
 Bromochlorodifluoromethane -
 Fire Extinguishant
 Dimethylformamide - Strobe Power Pack
 Fluorolastomers - Burnt Seals
 Lithium - Batteries
 Sonar Locator Beacon(s) - Lithium Battery
 Tritium Light Sources - Beta Lights
 Weapon Load
 Windscreen Wash Fluid AL-36
 Zinc Selenide
 Fuel: AVTUR
 Hydraulic Oil: OM-15
 HP Gases: Nitrogen
 Engine Oil: OX-38/OEP-70/OEP-215
 Oxygen: NIL



LYNX LBH MK9

SPECIAL TOOLS/EQUIPMENT

Power Rescue Saw
Crash Ax

LYNX LBH MK9

AIRCRAFT ENTRY

1. NORMAL ENTRY

- a. Turn external entry door handles up, pull forward door out and forwards. Slide rear door aft.
- b. To open windows in rear doors, pull down release handle, pull windows outwards. (A blade may have to be inserted between frame and door.)

2. EMERGENCY ENTRY

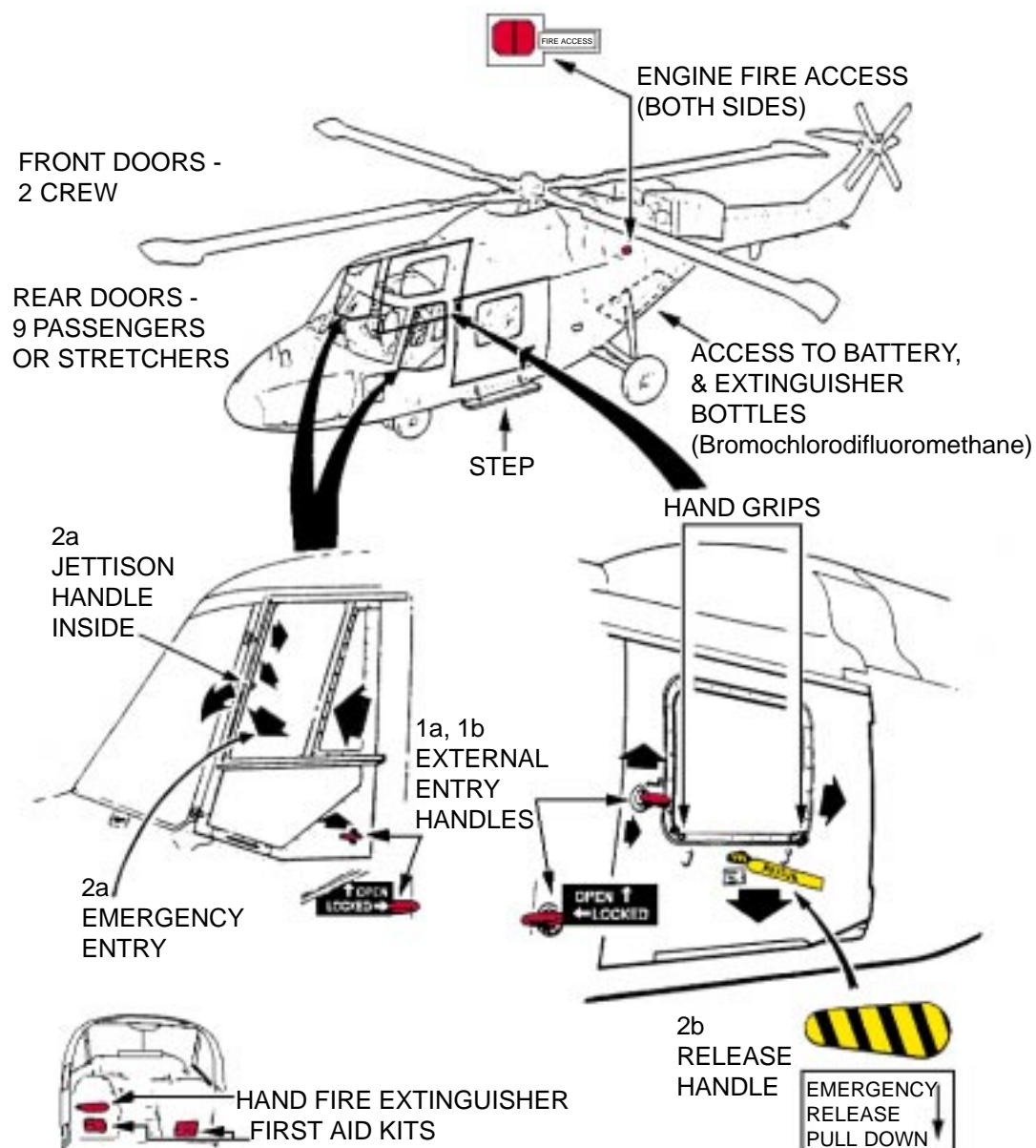
- a. For forward door, slide window aft, push jettison forward and down. Pull outwards.

3. CUT-IN

- a. Cut-in fuselage as required.

NOTE:

Winch in main cabin may be swung out of way by pulling down cord on starboard side.

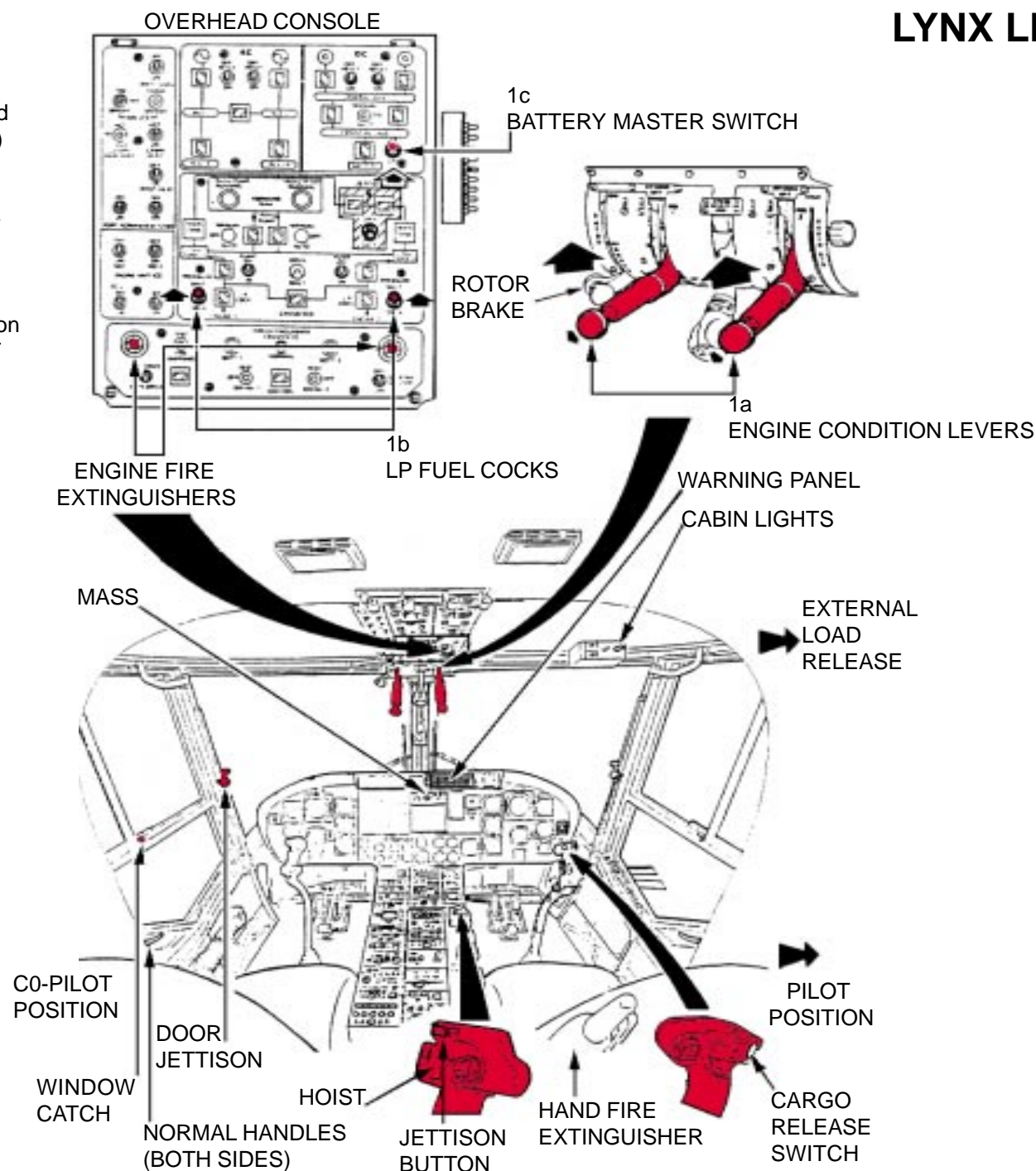


ENGINE SHUTDOWN

1. ENGINE SHUTDOWN

- Raise engine condition levers, located on overhead control console, UP (aft) to HP COCK OFF position.
- Place LP fuel cocks, located on overhead control console, aft to SHUT position.
- Place battery master switch, located on the overhead control console, to OFF position.

LYNX LBH MK9



AIRCREW EXTRACTION AND EMERGENCY EXIT DOORS

1. AIRCREW EXTRACTION

- Release crew in forward seats by releasing the QRF harness connection and other associated connections.
- Release crew in mid cabin seats by releasing restraint harnesses and other associated connections.
- Release crew in rear seats by releasing restraint harnesses and other associated connections.

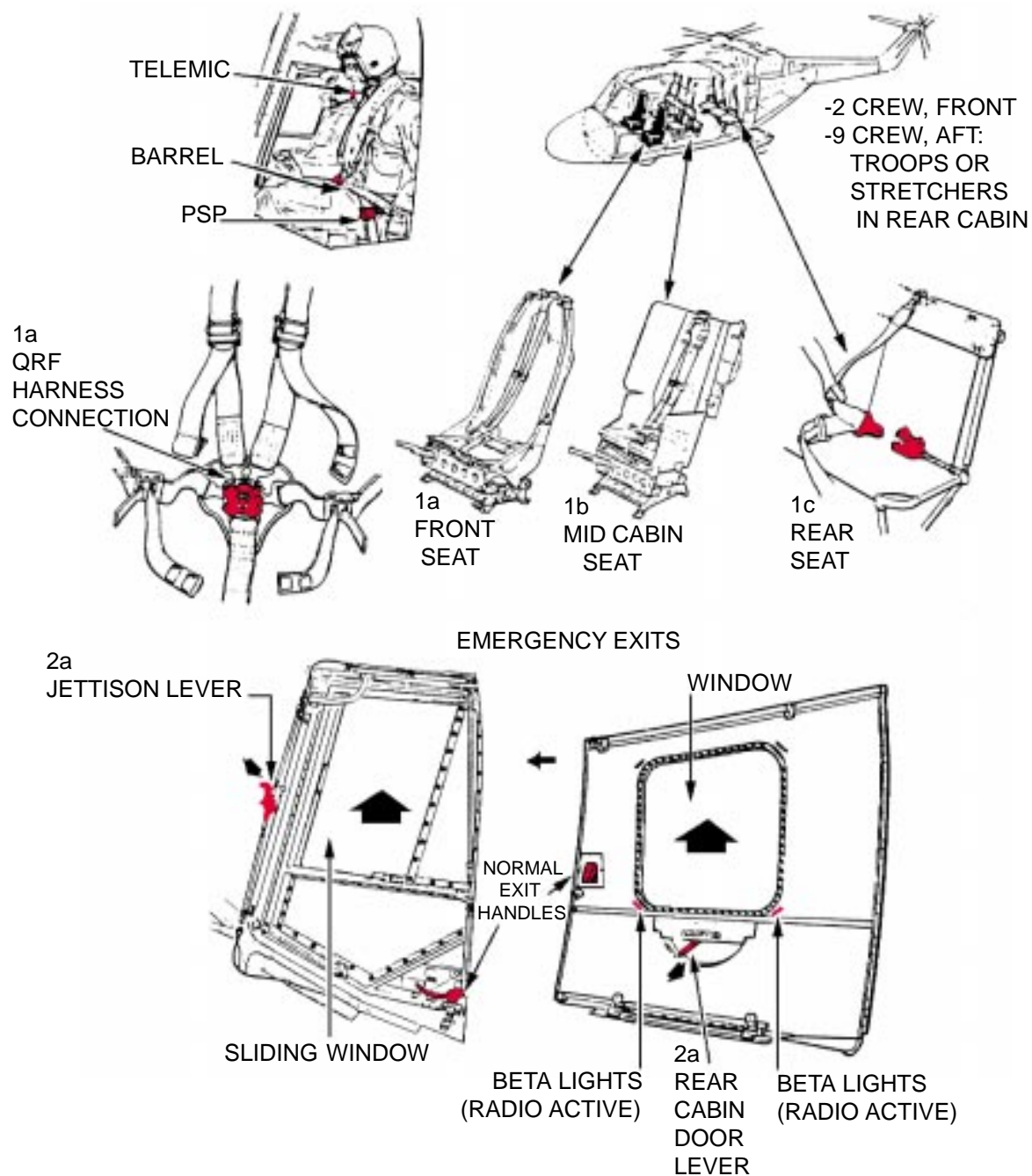
2. EMERGENCY EXIT DOORS

NOTE:

Exit doors can be jettisoned to make extraction of crewmembers faster.

- For front doors, push jettison forward and down, then push door out.
- For rear cabin doors, push jettison lever, located at bottom center of window, aft, then push window out.

LYNX LBH MK9



AIRCRAFT PAINT SCHEME

LYNX MK 3

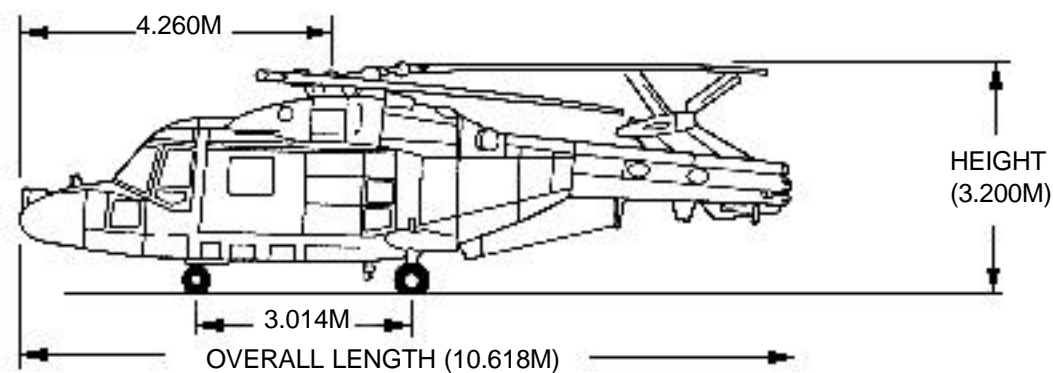
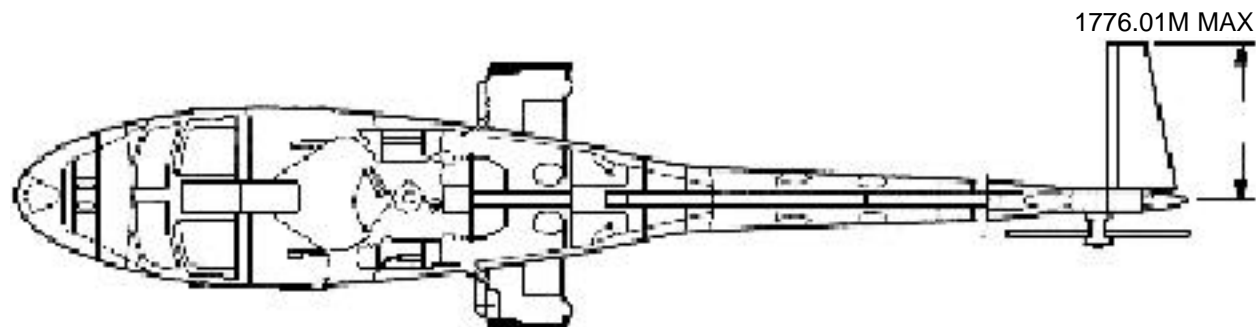
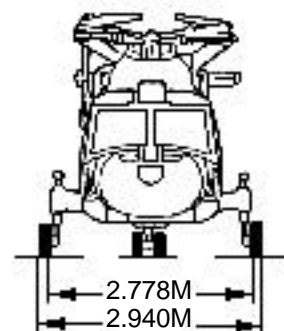


LYNX MK 3 (RN)

AIRCRAFT DIMENSIONS

BLADES FOLDED

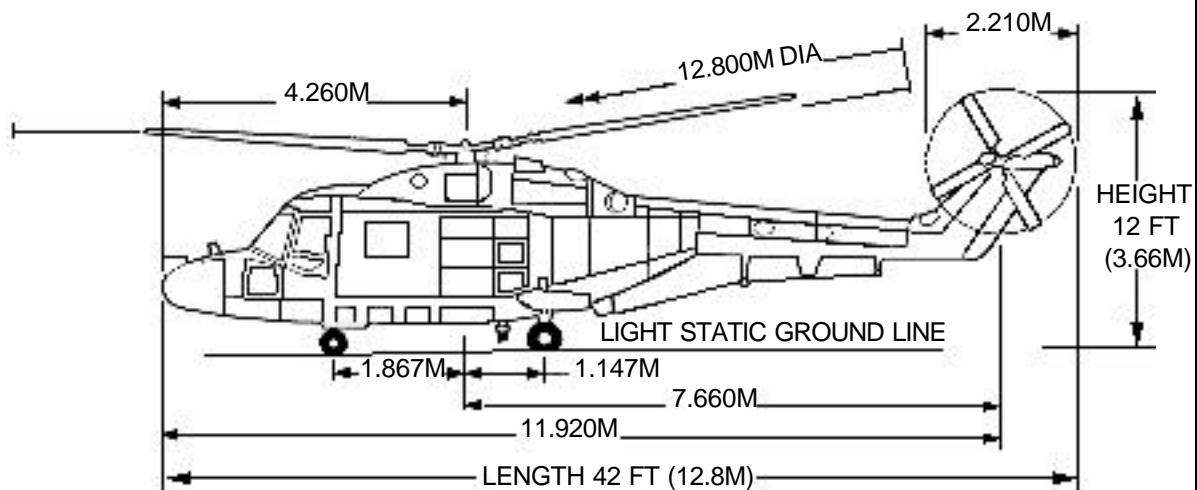
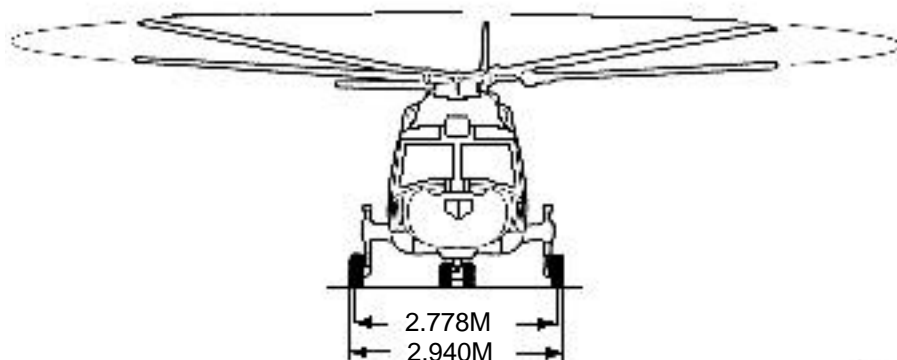
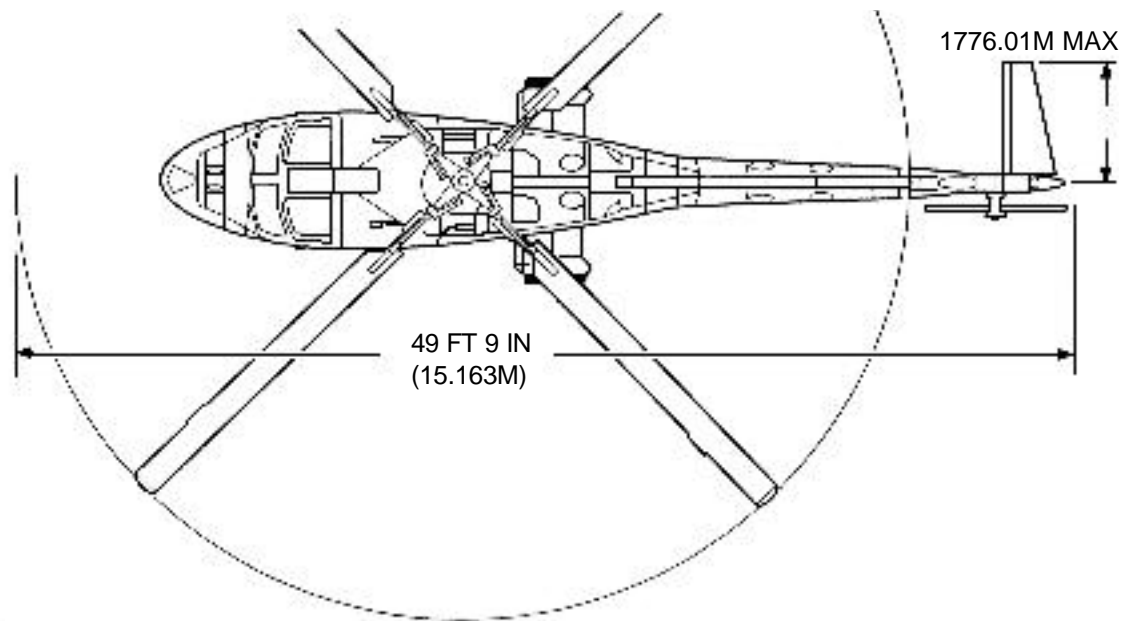
LYNX MK 3



AIRCRAFT DIMENSIONS

BLADES SPREAD

LYNX MK 3



AIRCRAFT DATA AND HAZARD LIST

LYNX MK 3

AIRCRAFT DATA

Single Rotor Helicopter
Two Rolls-Royce Gem 41-1turboshaft
Military Freight/Passenger:
2 crew Maximim
10 passengers
Aircraft Weight: 8,000 lbs. (3,620 Kgs)

WARNING

Fires resulting from this type of aircraft crash may produce toxic fumes which are hazardous to health.

Personal Protective Equipment
(recommendations made by the GRB RAF
Royal Navy to be worn at crash site):

Service issue overalls and gloves and Civil
Emergency Services normal uniform with
overall required.

Appropriate weather protection.

Safety helmet (as required).

Half-face (ori-nasal) mask. Examples:

3M Disposable Mask 22G/1321426

Sabre Half Mask 22G/4220-99-865-4140

Baxter Half Mask 22G/4220-99-865-4149

HAZARD LIST

HAZARD TYPE	ITEM	QUANTITY	LOCATION
Acid - Sulphuric			On Aircraft
AL 36 Windscreen Wash Fluid			On Aircraft
Asbestos			On Aircraft
Avtur F-34 Fuel	Fuel	Internal 973 L External 2X436 L	Fuel Tanks
Beryllium - Beriliua (Beryllium Oxides)			On Aircraft
Bromochlorodifluoro - Methane (BCF)			On Aircraft
Composite Materials (Man Made Minerals)	Airframe Materials		Carbon Fibre Rotor Blades
Dimethylformamide			Strobe Power Packs
Flourolastomers			Burnt Seals
Gaseous Tritium Light Sources	Lights		Beta Lights
Lithium (Non Rechargeable Batteries)	Batteries		Batteries
OEP-215	Engine Oil	6.8 L	Engine
OEP-70	Engine Oil	6.8 L	Engine
OM-15	Hydraulic Oil	20 L	Hydraulic System
OX-38	Engine Oil	6.8 L	Engine
Oxygen		Nil	
Sonar Locator Beacon(s)	Sonor Beacon	1	On Aircraft
Weapon Load (if fitted)	Weapon(s)	Mission Variable	Stub Wings

AIRCRAFT HAZARDS, BRAKING, MOVING, SECURITY AND LASHING

LYNX MK 3

1. HAZARDS

WARNING

- A Although having a "rigid" rotor, there is still blade sail and swoop to be aware of. NEVER approach the aircraft without permission from the Incident Commander/Director and pilot.
- B Never approach the aircraft from the tail; always approach within full view of the pilot when cleared to do so by the Incident Commander/Director and pilot.
- C Beware of engine intakes and exhausts.
- D The flotation system is housed internally so does not constitute an external hazard, but can be after entry.
- E Beware of external-fitted weapons, especially Heavy Machine gun Pods (HMPs).

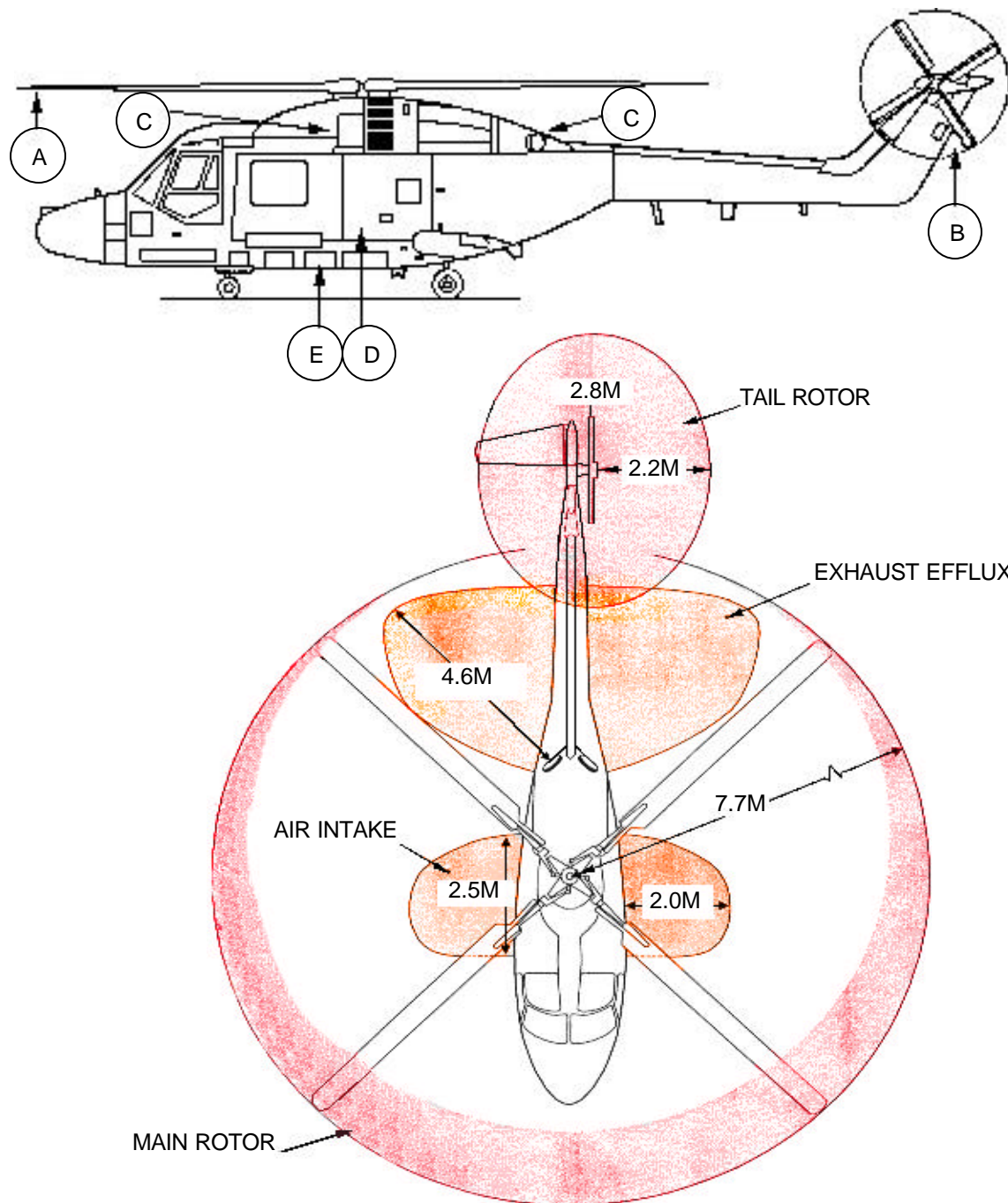
2. BRAKING

CAUTION

This aircraft is very fragile, only push on the undercarriage, main frames or handholds.

NOTE:

There is no normal braking system on this aircraft. A parking brake, comprising a wheel lock arrangement, must never be applied when the aircraft is moving. "Chocks in hand" must be ordered to any move. A brakeman is used to man the cockpit, but is only to apply the parking brake in an extreme emergency.



AIRCRAFT HAZARDS, BRAKING, MOVING, SECURITY AND LASHING-Continued

NOTE:

Hazardous cargo may be carried in cabin, or slung externally - glass fibre panels, asbestos, strobe lights, beryllium.

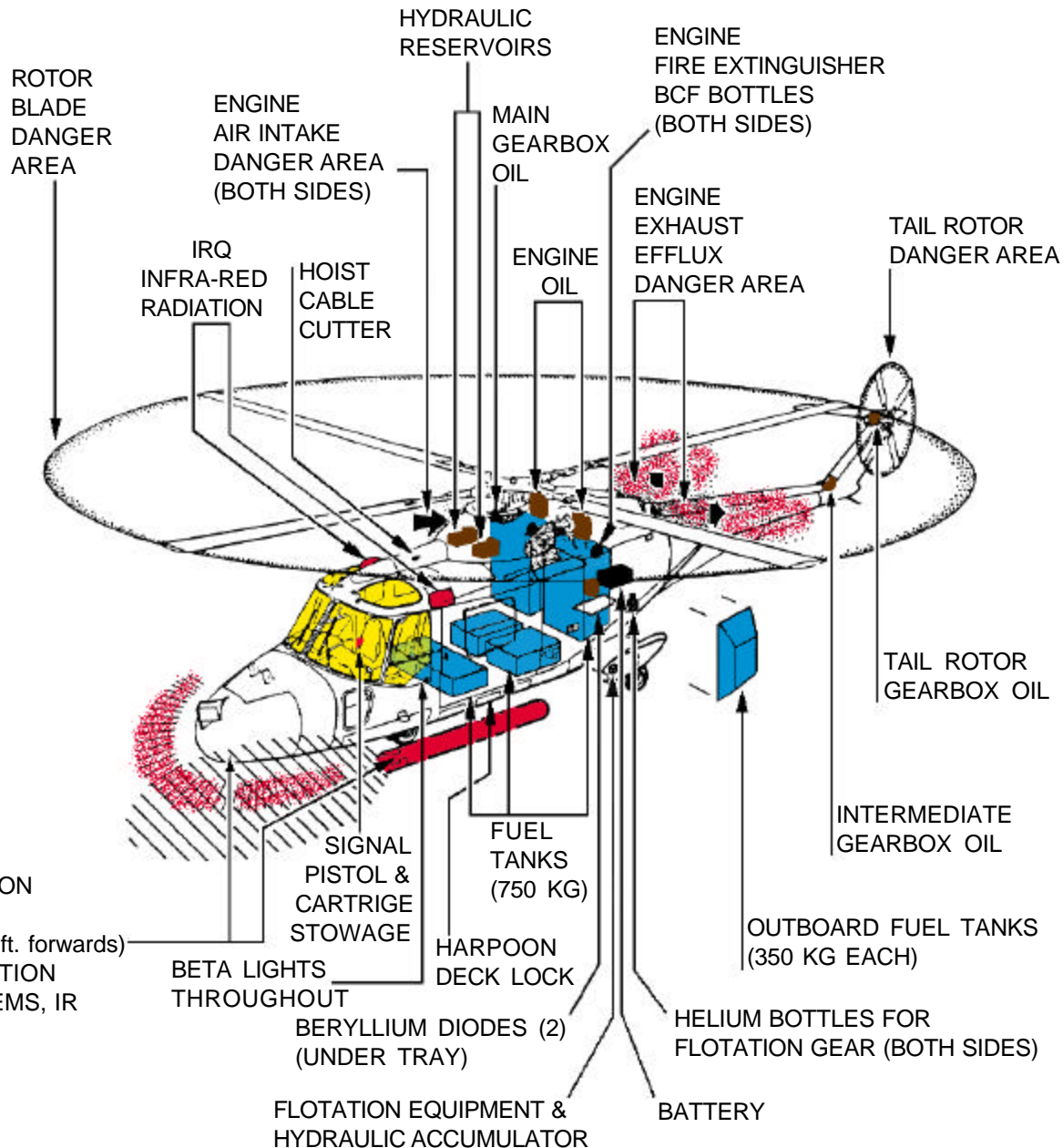
3. MOVING

In the event of a Lynx recovery to a CVS, it is unlikely that the correct mechanical handling equipment will be available. A specialized version of the EN mechanical handler is available for use in small ships, but the EN on CVS may not be modified. The Lynx is therefore best manhandled if a move is required on a CVS, using the security/lashing requirements of a FF/DD flight deck as a guide.

4. SECURITY AND LASHING

The minimum standard to which Lynx aircraft are to be secured and lashed ships for various conditions of ship pitch and roll dependent on location. In all sea states, lashings are to remain on until immediately prior to aircraft launch and are to be re-applied immediately after land on unless green deck operations are being conducted. The ship is to remain on a steady flying course while lashings are removed and reapplied.

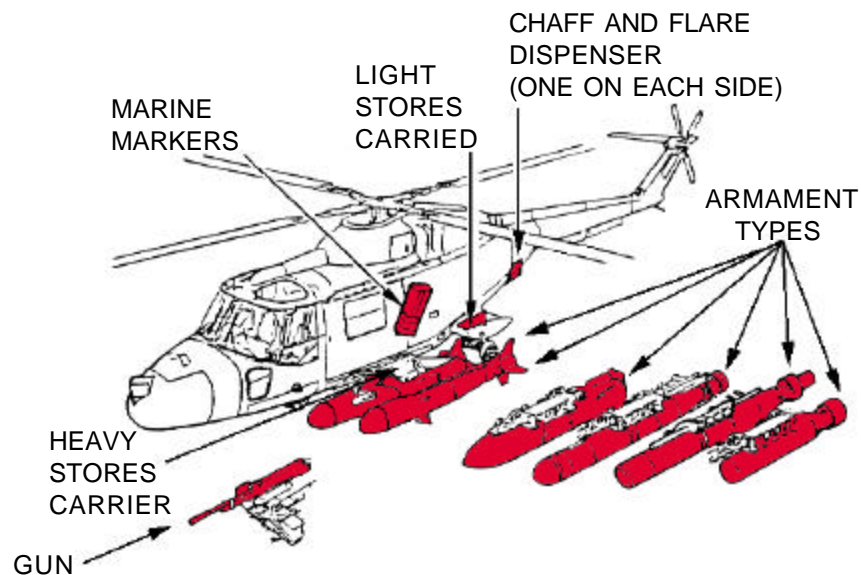
RADHAZ EMISSION
'YELLOW VEIL'
(May be up to 22 ft. forwards)
SEARCH, DETECTION
RADARS, IFF & EMS, IR
EQUIPMENT



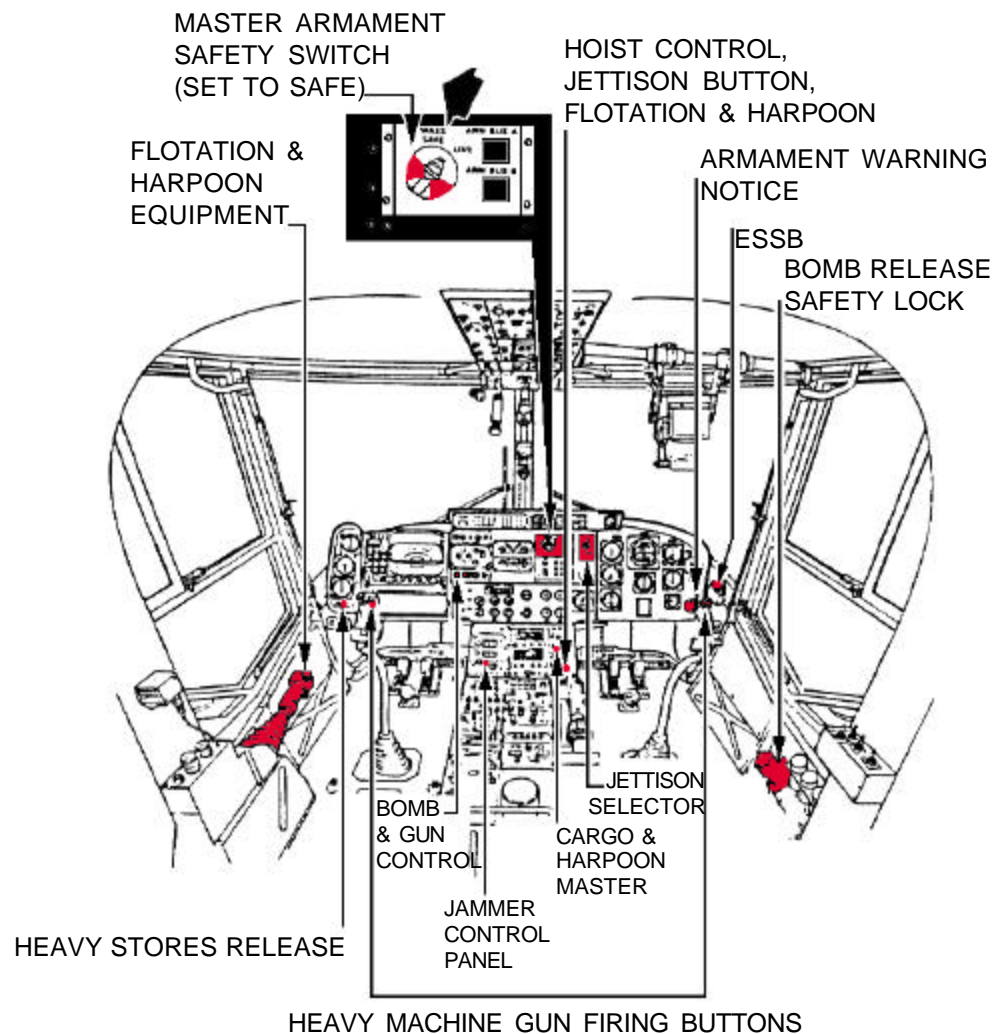
AIRCRAFT ARMAMENT

NOTE:

Armament may include bombs, missiles, torpedos, depth charges, and heavy machine guns - also flares, marine markers, and smoke (light stores).



LYNX MK 3



SPECIAL TOOLS/EQUIPMENT

Power Rescue Saw
Crash Ax

LYNX MK 3

AIRCRAFT ENTRY

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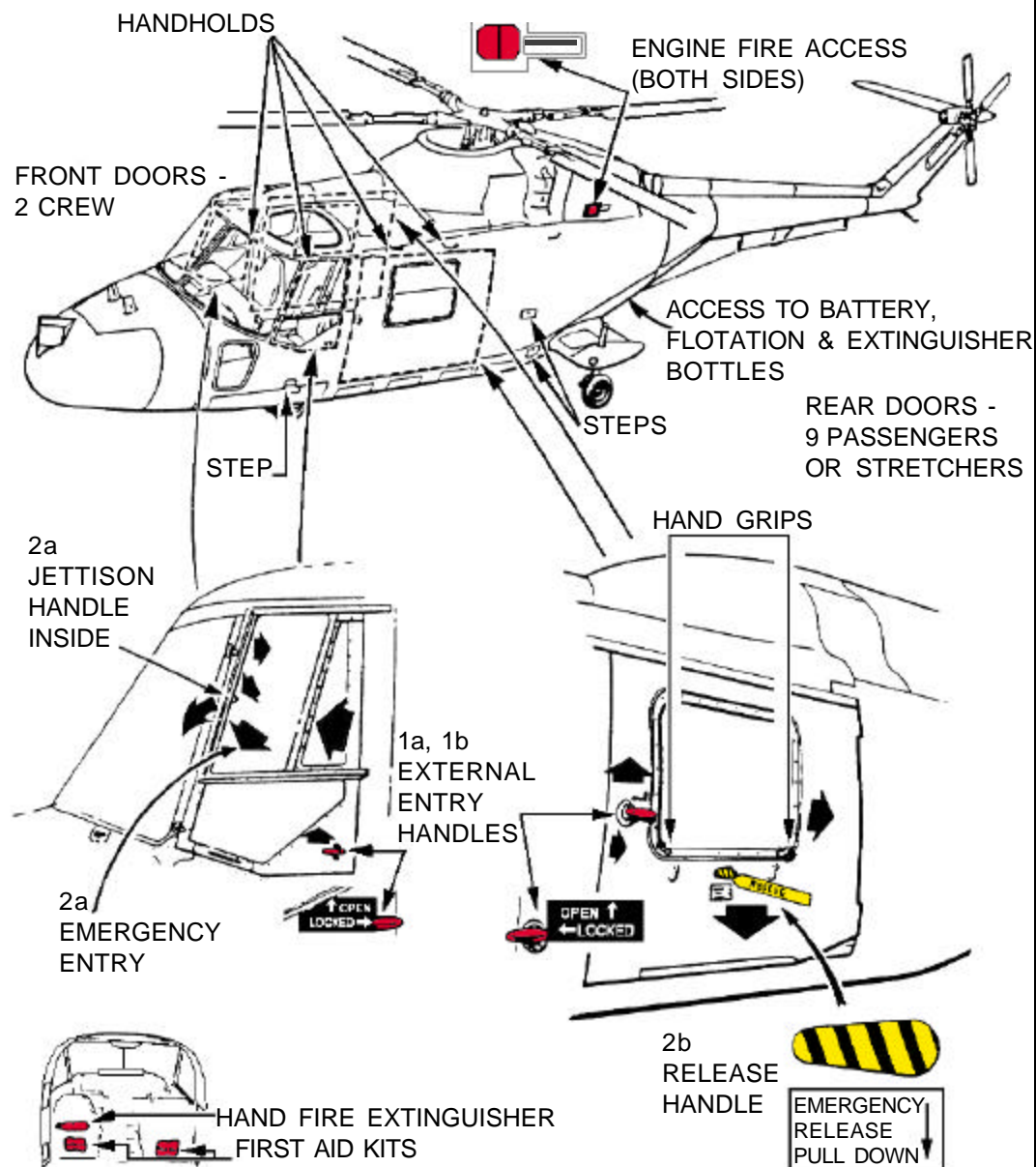
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3. CUT-IN

- a. Cut-in fuselage as required.

NOTE:

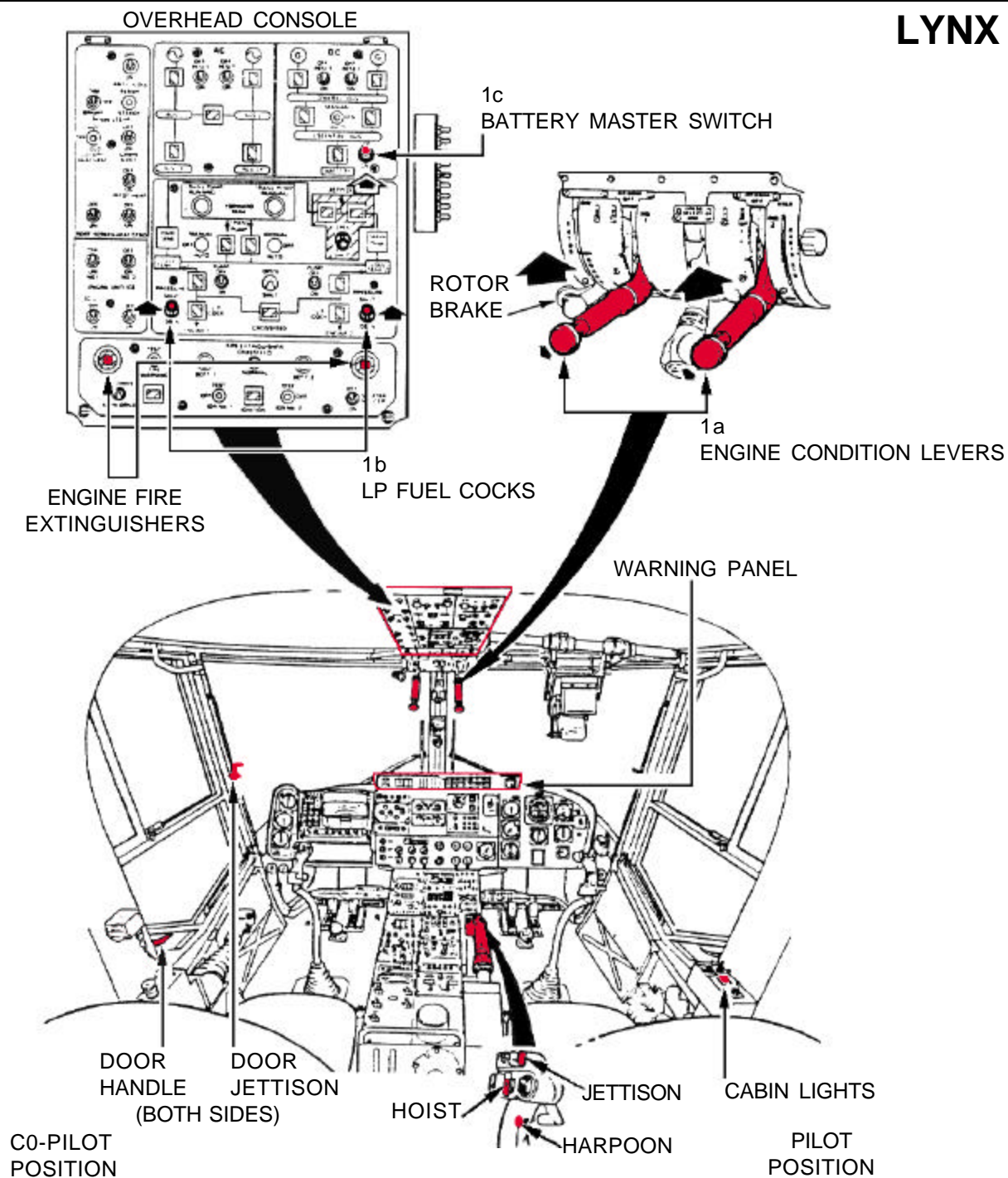
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LYNX MK 3

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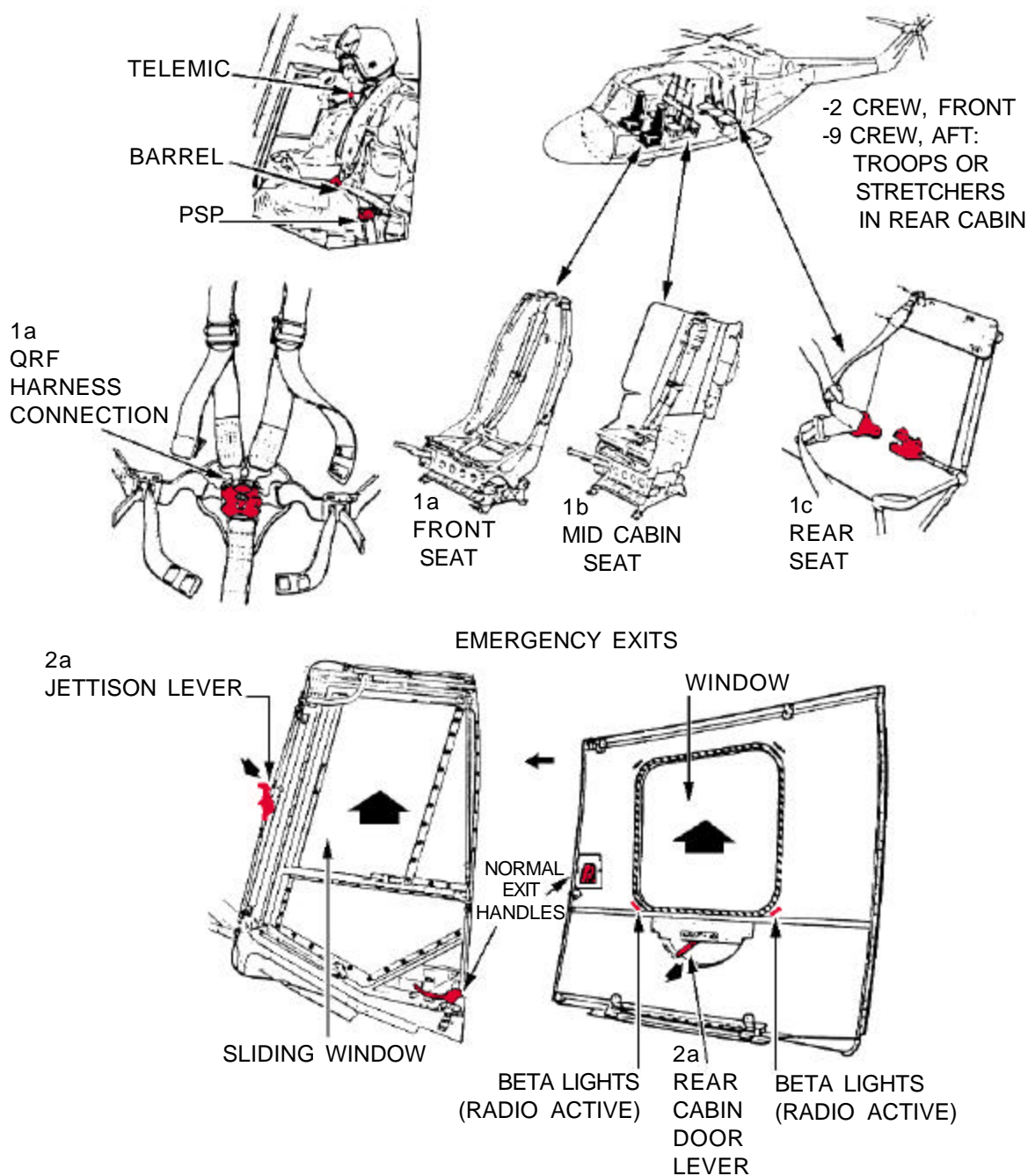
2. EMERGENCY EXIT DOORS

NOTE:

Exit doors can be jettisoned to make extraction of crewmembers faster.

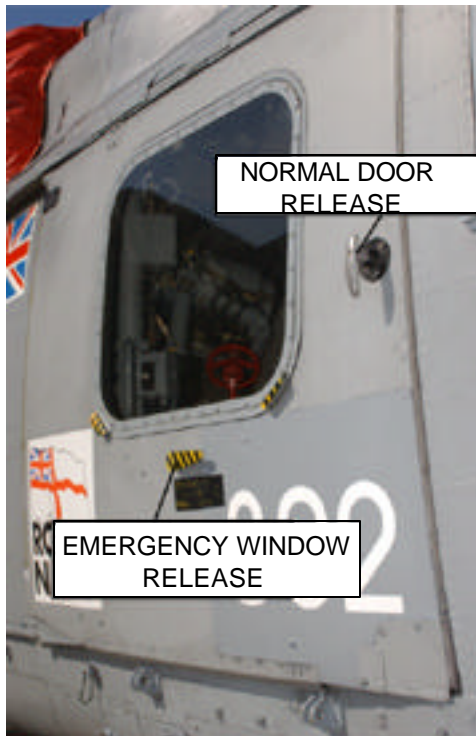
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LYNX MK 3



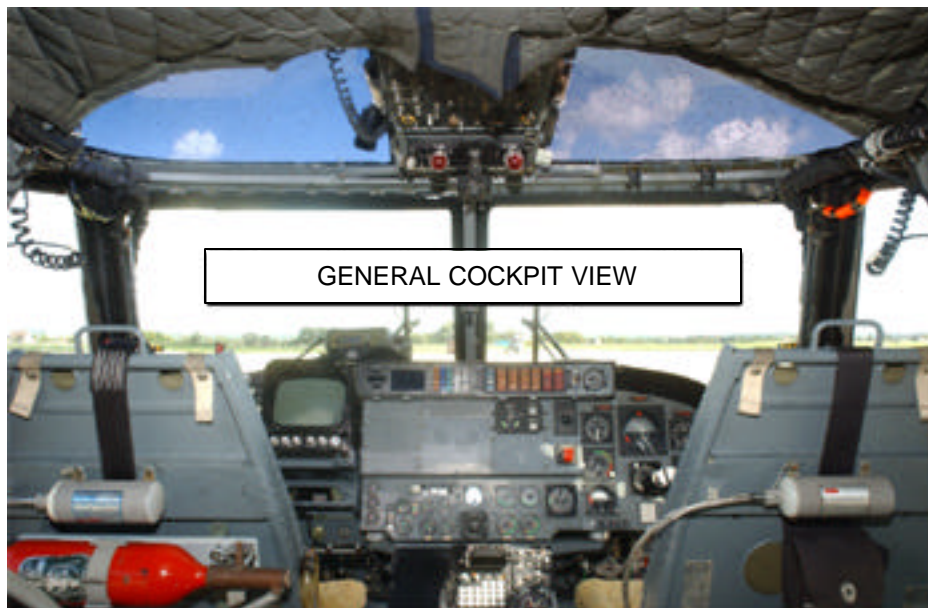
AIRCRAFT FAMILIARIZATION

LYNX MK 3



AIRCRAFT FAMILIARIZATION-Continued

LYNX MK 3



GENERAL COCKPIT VIEW



MASTER
ARMAMENTS
SWITCH



MASTER ARMAMENTS
SWITCH



BATTERY MASTER
SWITCH

ENGINE
CONDITION
LEVERS

AIRCRAFT FAMILIARIZATION-Continued

LYNX MK 3

