

H 160

Emergency access and rescue from helicopter



IMPORTANT NOTE

This Ground rescue booklet provided by Airbus Helicopters gives general and safety information concerning the H 160. This document shall only be considered as a support for users to prepare their own documentation.

It will not be systematically updated in line with the aircraft modification process.

Depending on the country and the modification status of the helicopter, systems may differ in their location.

This information booklet is provided free of charge by Airbus Helicopters. Wide-spread dissemination to firefighters and rescue teams around the world is strongly encouraged. Copies can be downloaded from the Airbus Helicopters web site.

Original issue: February, 2021

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1 GENERAL INFORMATION

MAXIMUM GROSS WEIGHT

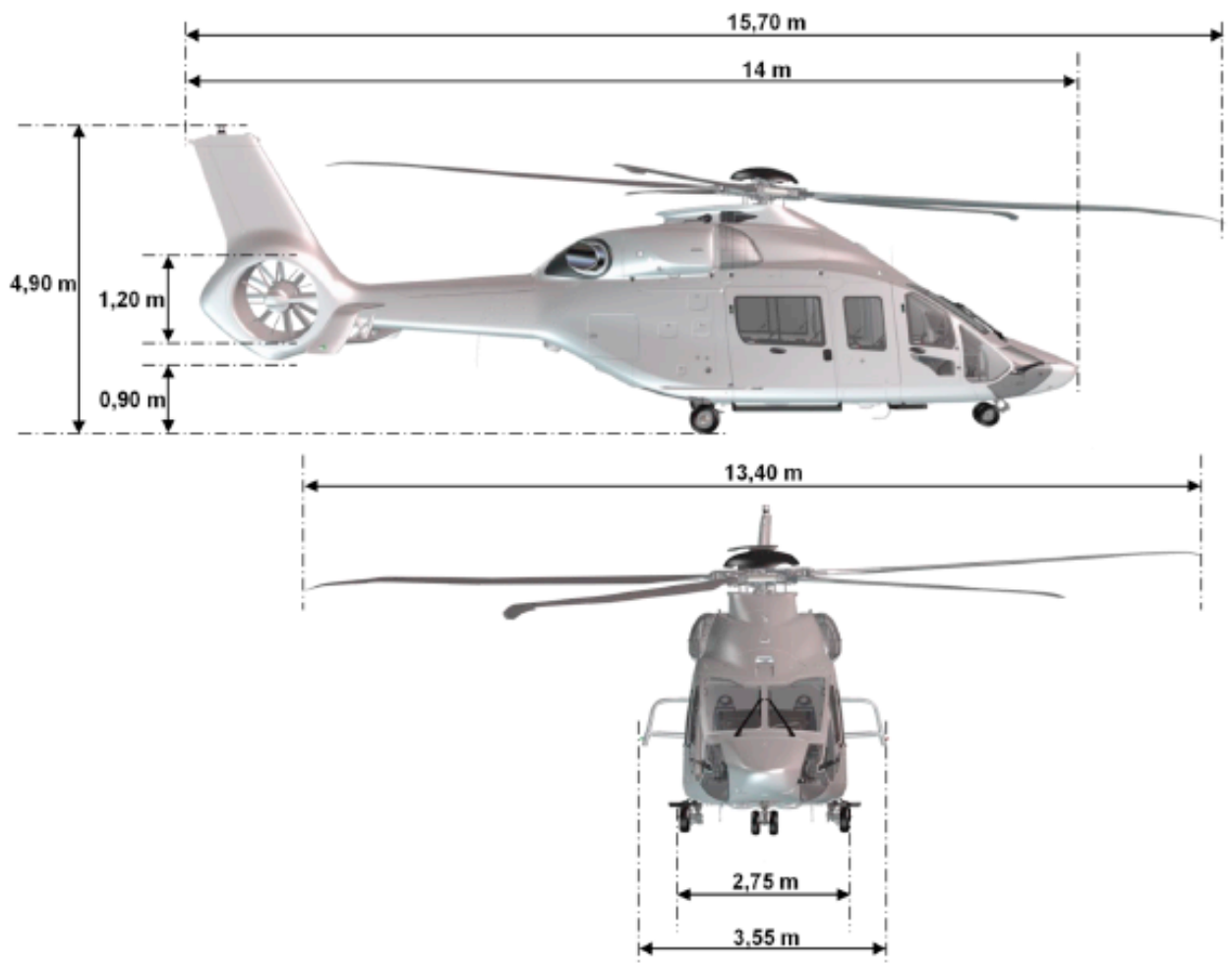
- On the ground6100 kg

OCCUPANCY

- Crew one or two pilots
 - Passenger transport..... up to 12 Pax

DIMENSIONS

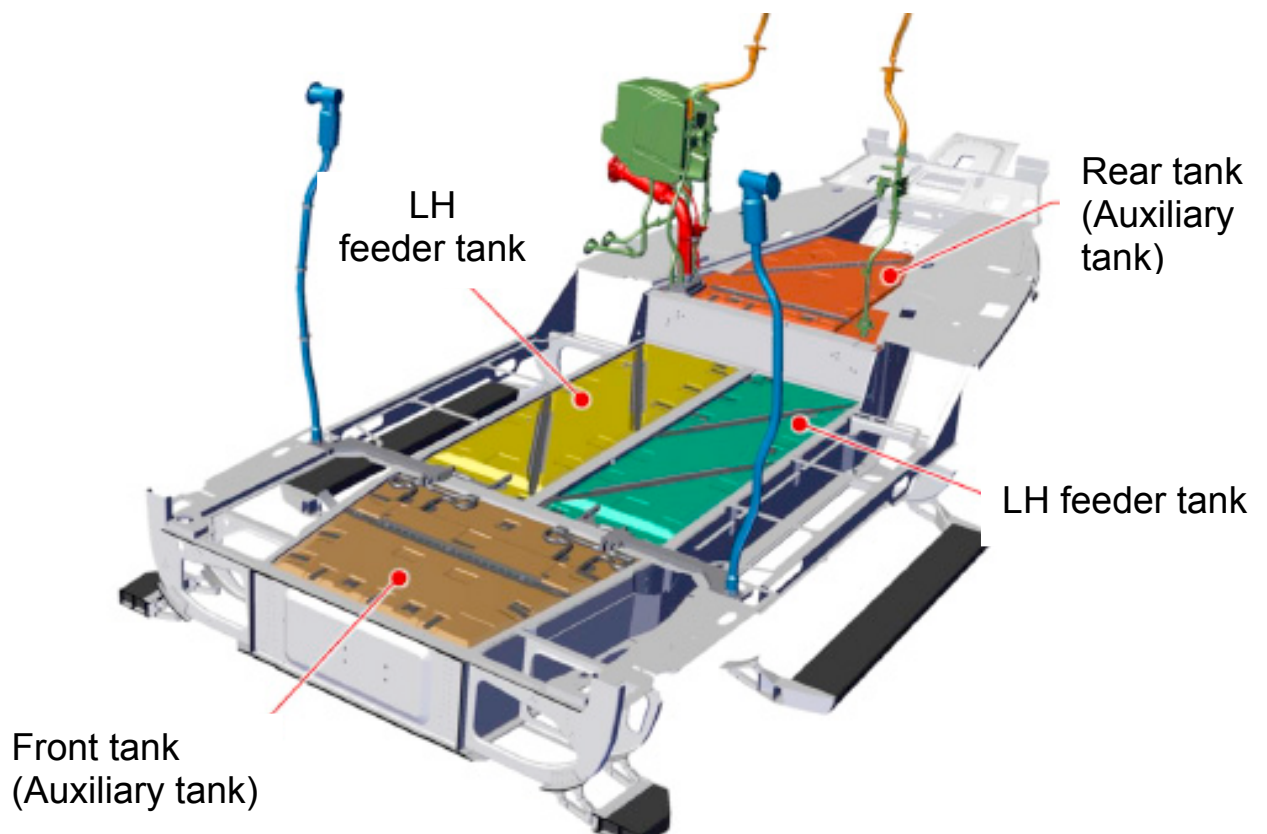
- Fuselage length 14.00 m
 - Fuselage width..... 2.75 m
 - Rotor diameter 13.40 m



POWERPLANTS Two SAFRAN ARRANO 1A

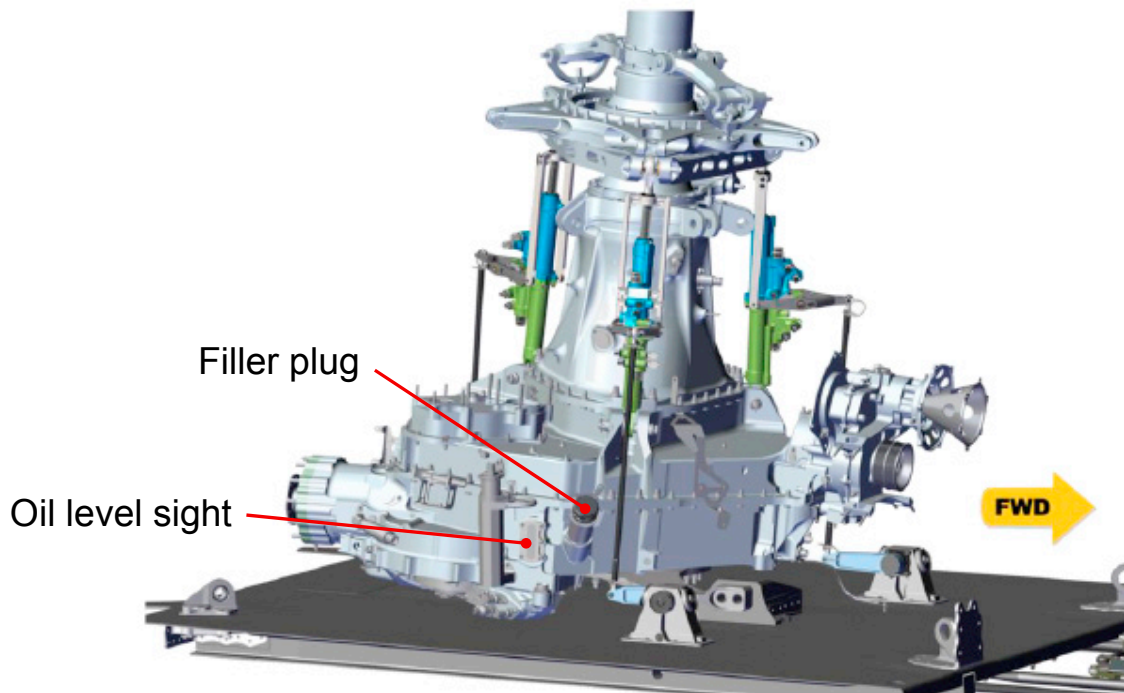
FUEL CAPACITY

- With gravity or pressure refueling..... about 1400 L (1120 kg)

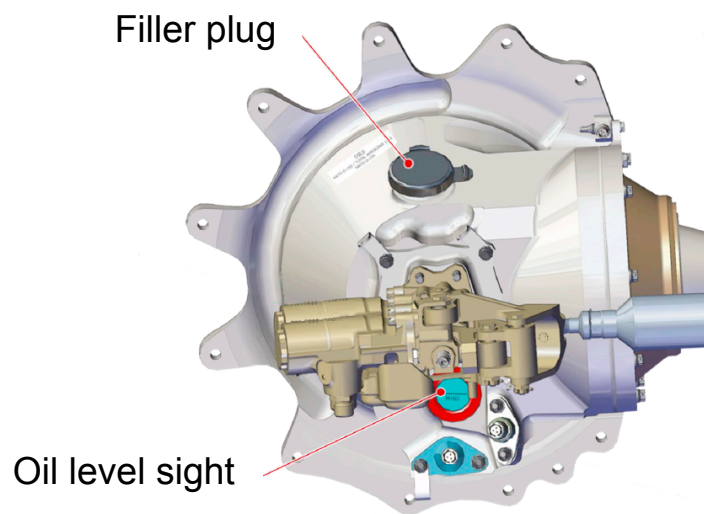


OIL CAPACITY

- Main gear box Max. level = 25.20 liters

**Main Gear Box**

- Tail gear box Max. level = 0.550 liters

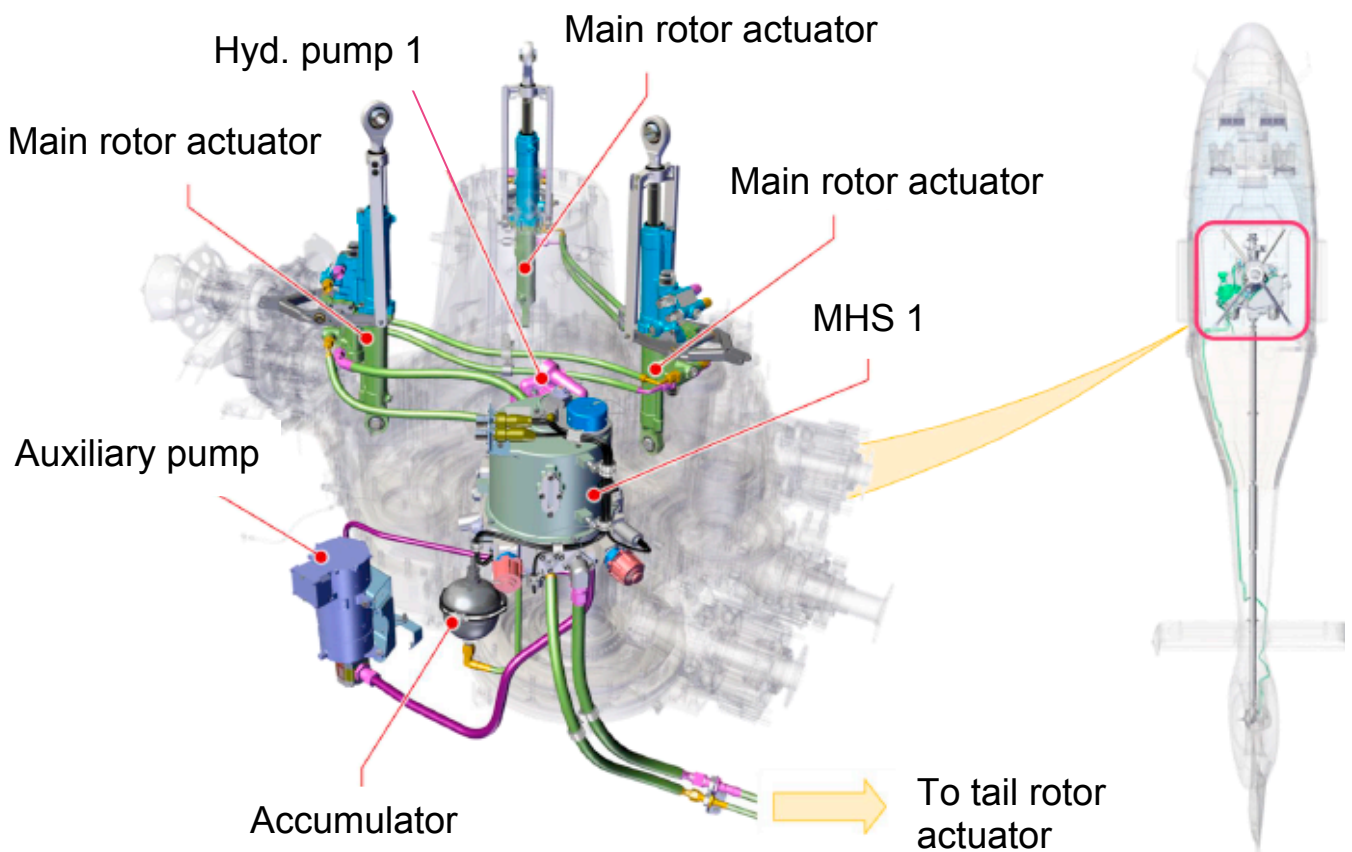
**Tail Gear Box**

HYDRAULIC FLUID CAPACITY

- Types of oil:
MIL-PRF-83282 Aero-Shell Fluid 31
(Flash point 238° C - Fire point 251°C)
or
MIL-PRF-87257
(Flash point 170° C - Fire point 180°C)

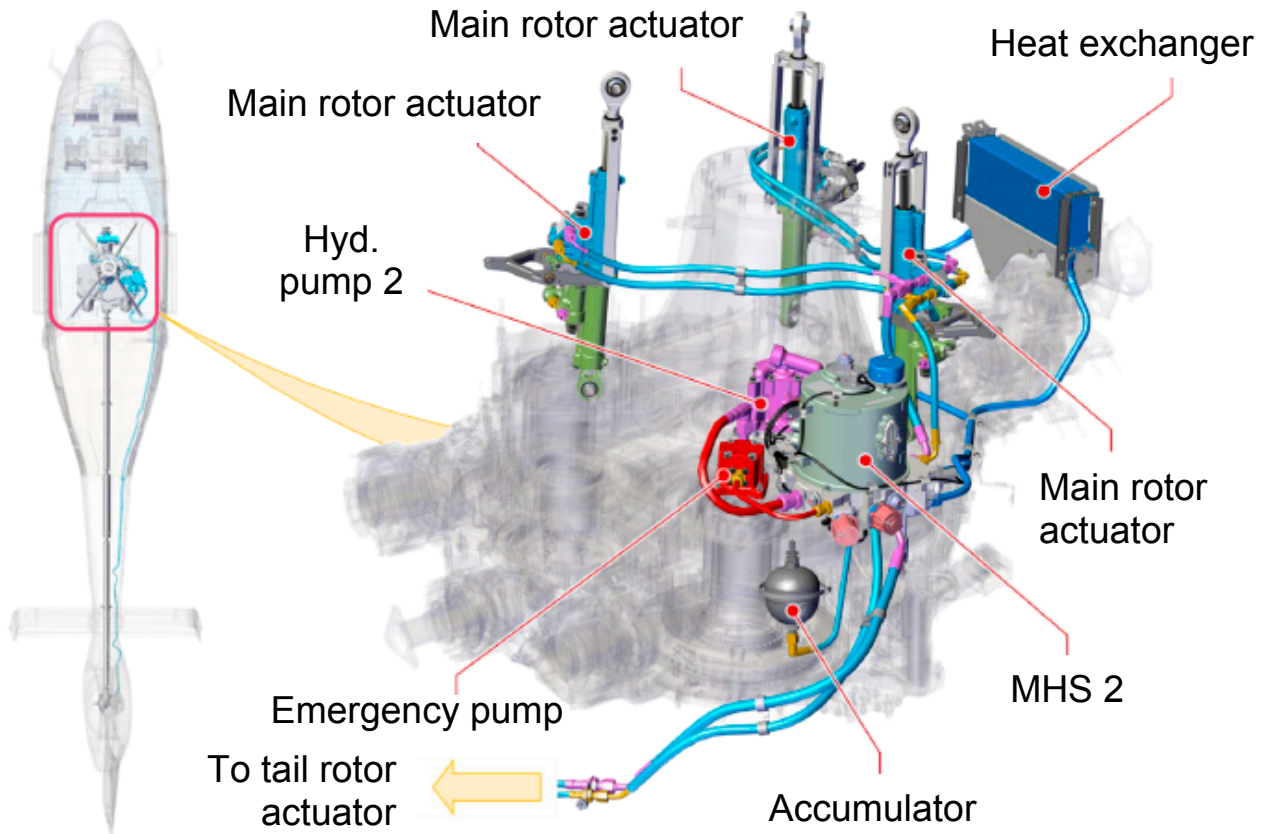
- LH side

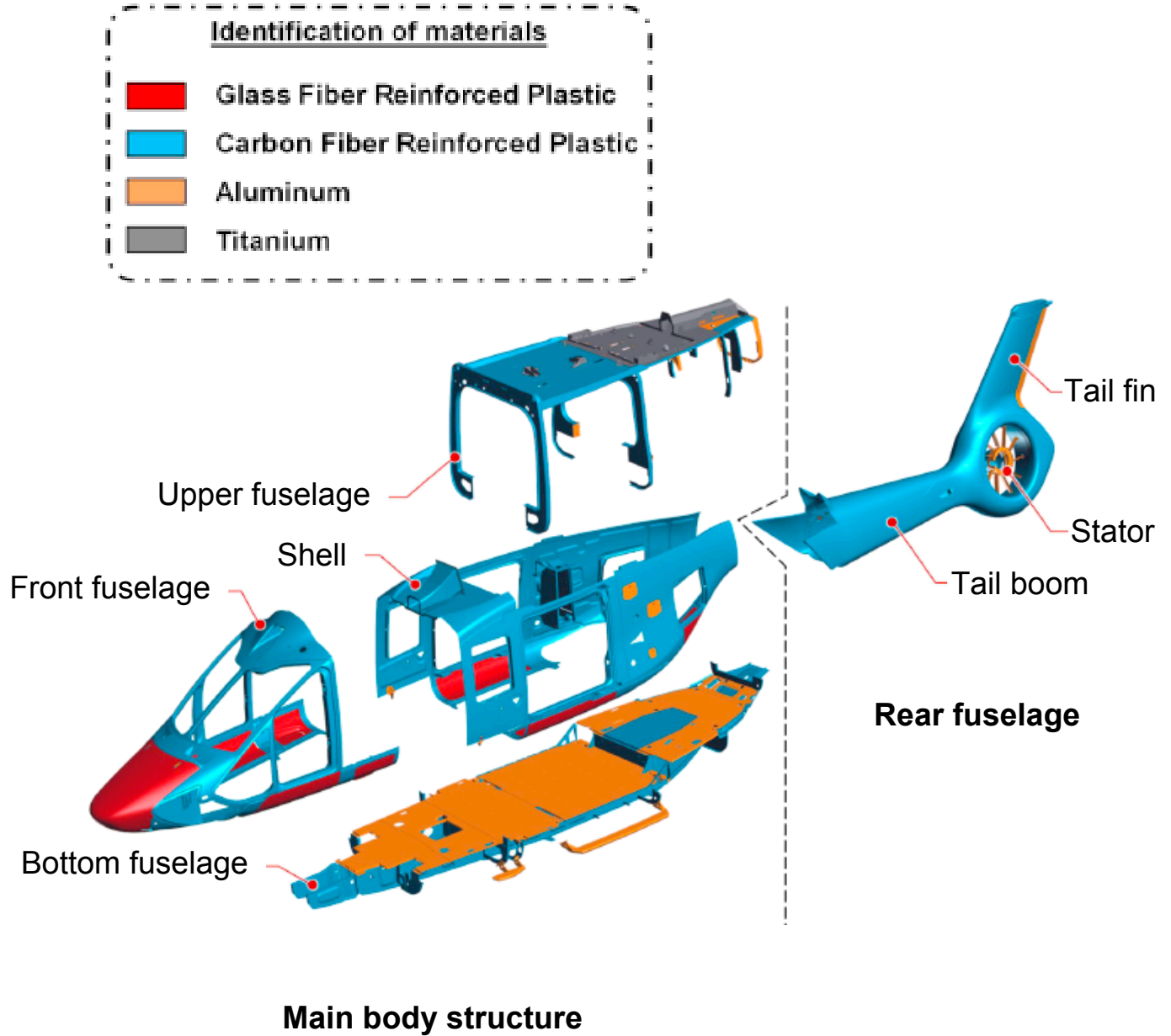
- MHS1 hydraulic tank capacity: up to 2.4 liters



- RH side

- MHS2 hydraulic tank capacity: up to 2.2 liters

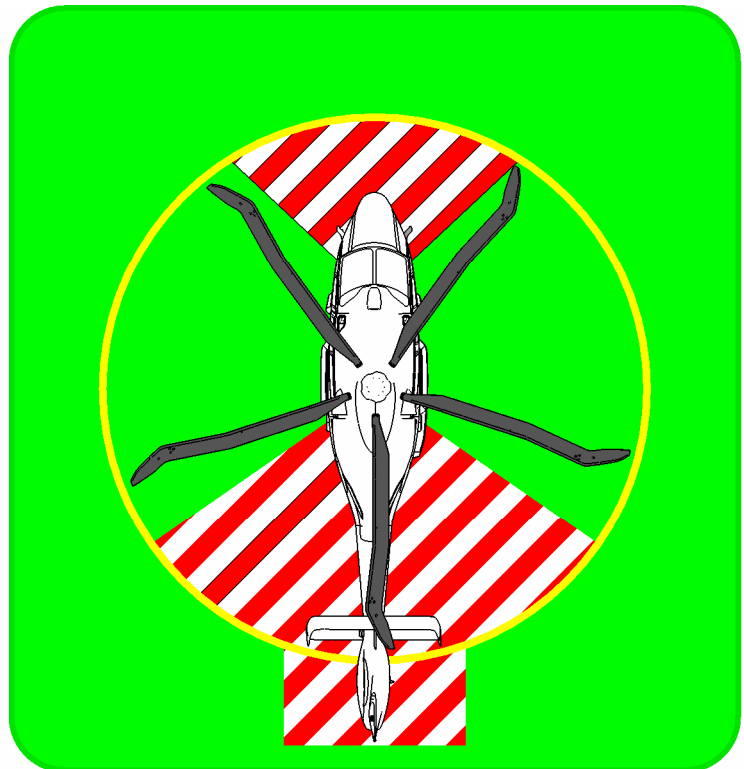


COMPOSITE USAGE

2 SAFETY INFORMATION - OUTSIDE THE AIRCRAFT

AIRCRAFT MAY BE CHARGED WITH STATIC ELECTRICITY. WEAR GLOVES AND IF POSSIBLE DISCHARGE THE AIRCRAFT BY ESTABLISHING AN ELECTRICAL GROUND.

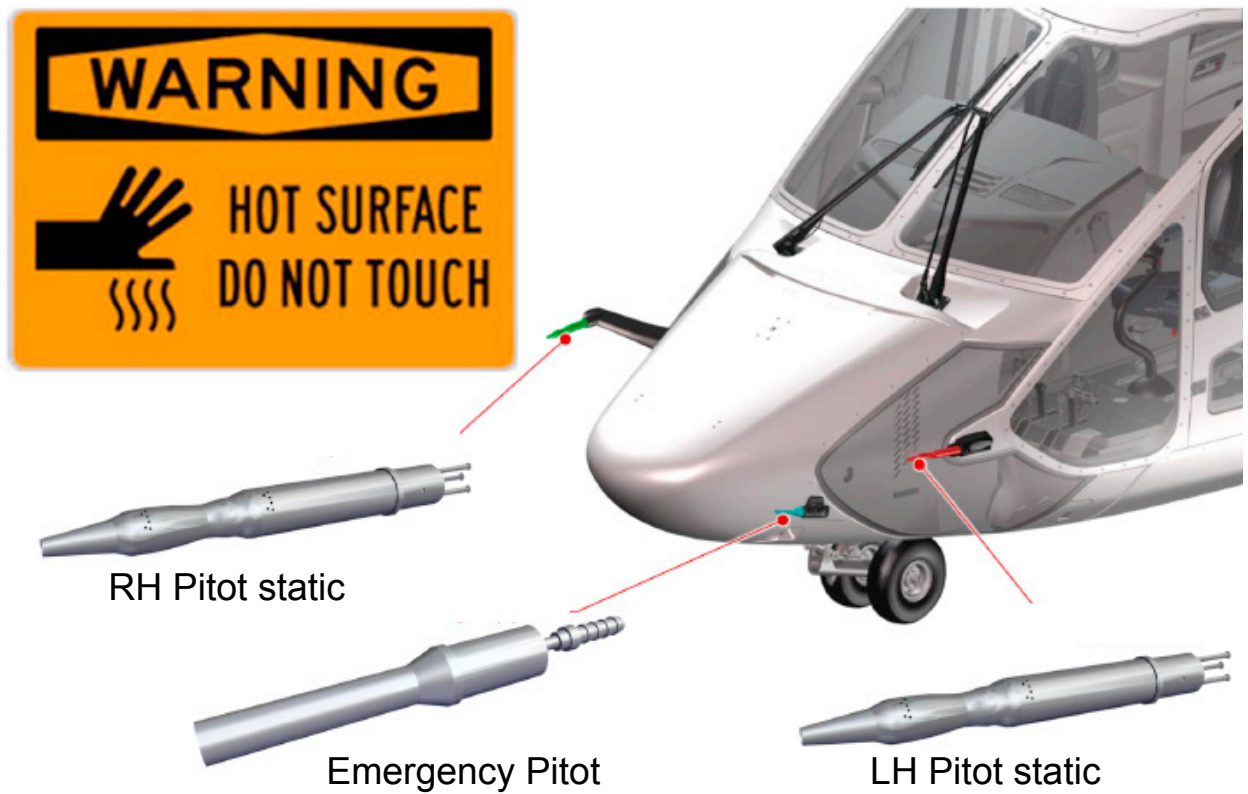
DANGER AREA WITH ROTOR TURNING



EMERGENCY FLOATATION GEAR**FRONT/SPONSON BALLOONS MAY INFLATE.**

PITOTS

PITOTS ARE HEATED IN FLIGHT AND CAN CAUSE BURNS.



LUGGAGE HOLD

The vast luggage hold is accessible from both sides of the helicopter.

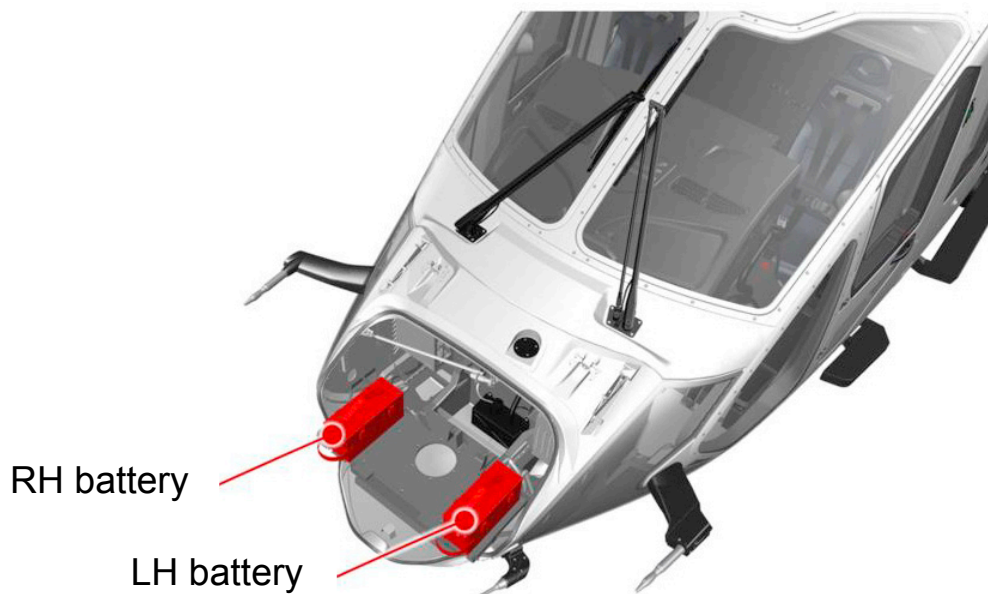


RH cargo door
(closed)



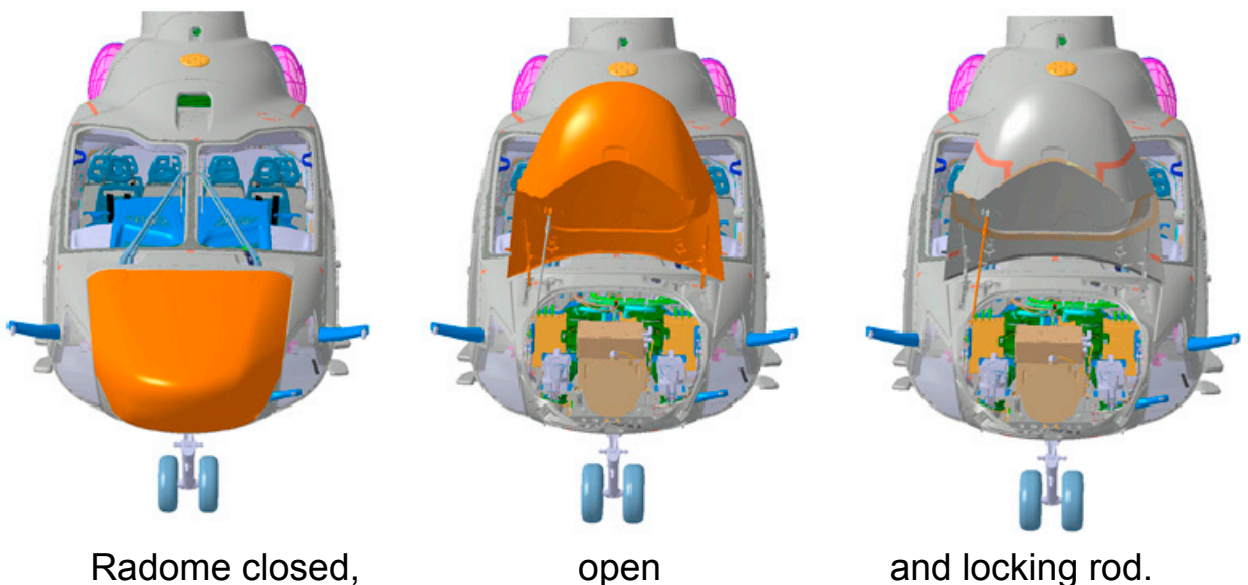
RH cargo door
(open)

BATTERIES



If batteries have to be removed from the aircraft:

- Make sure the aircraft is not energized,
- Connect the grounding cable from the grounding point to the aircraft grounding point,
- Open the 2 lower latches and the 2 upper latches.
- Slide the radome frontwards with the use of the handle in lower part of the radome,
- Rotate the radome upwards,
- Take the rod out of its rod retainer and place it in the locking retainer installed on radome to secure the open position.



- Disconnect the electrical connectors.
- Close the radome cowling.
- Disconnect the grounding cable from the aircraft grounding point.

GROUND POWER UNIT (GPU) PLUGGING



FIREFIGHTING RECOMMENDATIONS

GENERAL

- 1) GROUND STAFF MUST BE IN CONTACT (RADIO / VISUAL SIGNS) WITH THE AIRCREW IN ORDER TO COORDINATE AND SECURE THE INTERVENTION.**
- 2) GROUND STAFF MUST WEAR ADEQUATE PROTECTIVE EQUIPMENT.**

FIRE AROUND THE AIRCRAFT

If possible wait for the rotor full stop.

FUEL LEAKAGE ALONG THE AIRCRAFT STRUCTURE AND/OR PRESENCE OF FIRE ON GROUND MUST BE FOUGHT FIRST WITH FOAM.

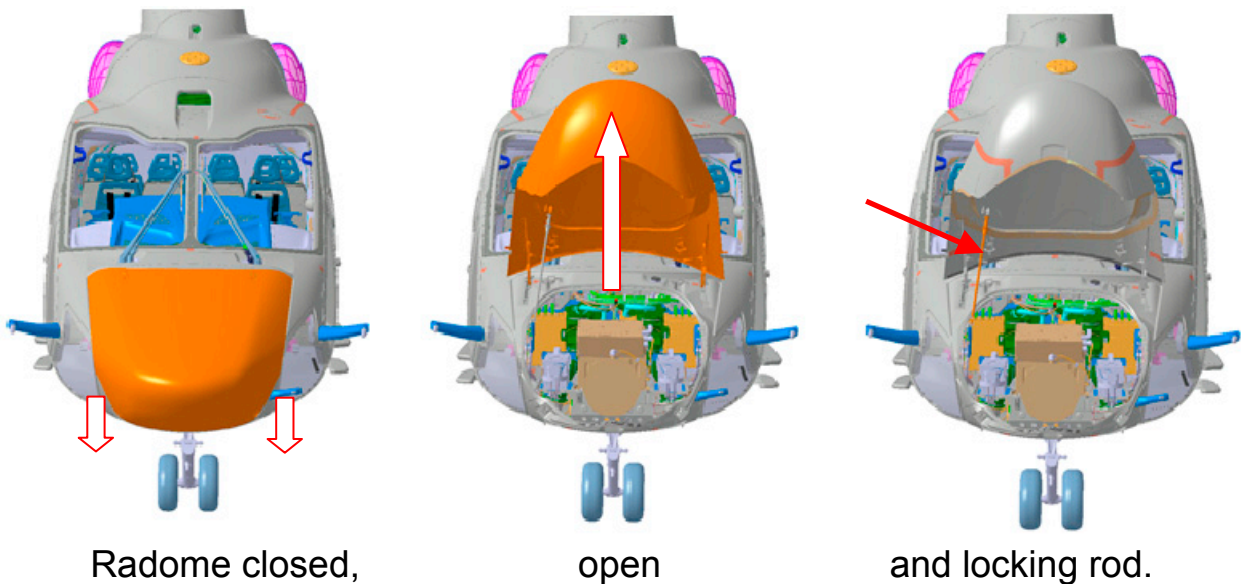
- Cool with foam or water spray external adjacent structures.

FIRE IN THE FRONT COMPARTMENT

SLOWLY OPEN THE FRONT COMPARTMENT (RADOME) COWLING TO AVOID A SUDDEN SUPPLY OF OXYGEN AND A FLASH-OVER.

Radome opening procedure:

- Open the 2 lower latches and the 2 upper latches.
- Slide the radome frontwards with the use of the handle in lower part of the radome.
- Slowly rotate the radome upwards.
- Take the rod out of its rod retainer and place it in the locking retainer installed on radome to secure the open position.



- Saturate the compartment with the extinguishing agent (gaseous extinguisher recommended).

FIRE IN THE ENGINE COMPARTMENT

- 1) WAIT FOR ENGINES AND ROTOR TO COME TO A COMPLETE STOP.
- 2) THE TEMPERATURE OF THE ENGINE EXHAUST NOZZLE COULD BE VERY HOT (UP TO 600°C).



- Spray the extinguishing agent (gaseous extinguisher recommended) between engine exhaust and engine nozzle.
- Proceed in circular movements until saturation.

FIRE IN THE MAIN GEAR BOX (MGB) COMPARTMENT

**WAIT FOR ENGINES AND ROTOR
TO COME TO A COMPLETE STOP.**

Possible access for extinguishing

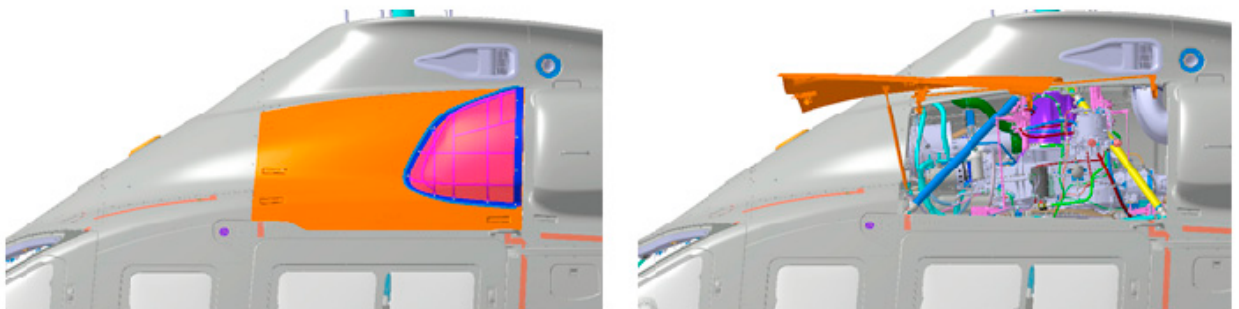


- Spray the extinguishing agent through the easiest available opening (gaseous extinguisher recommended) to saturate the MGB compartment.

DO NOT TRY TO OPEN THE COWLINGS

- In case of severe flash-over, use foam.

Views of the MGB cowlings in closed and open position (for information)



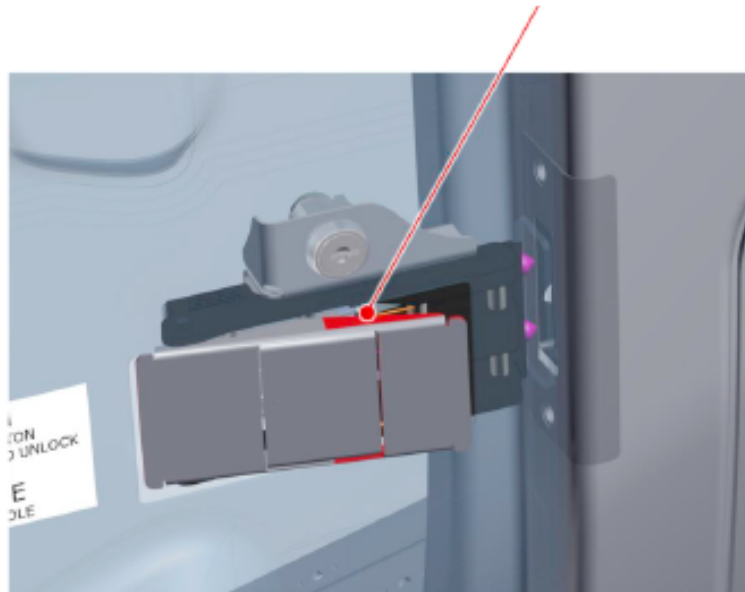
FIRE IN THE LUGGAGE HOLD

REMINDER: DO NOT TRY TO OPEN THE LUGGAGE HOLD WITH THE ROTORS SPINNING.



RH cargo door (closed)

Cargo door open: visible red flag
on the locking device handle

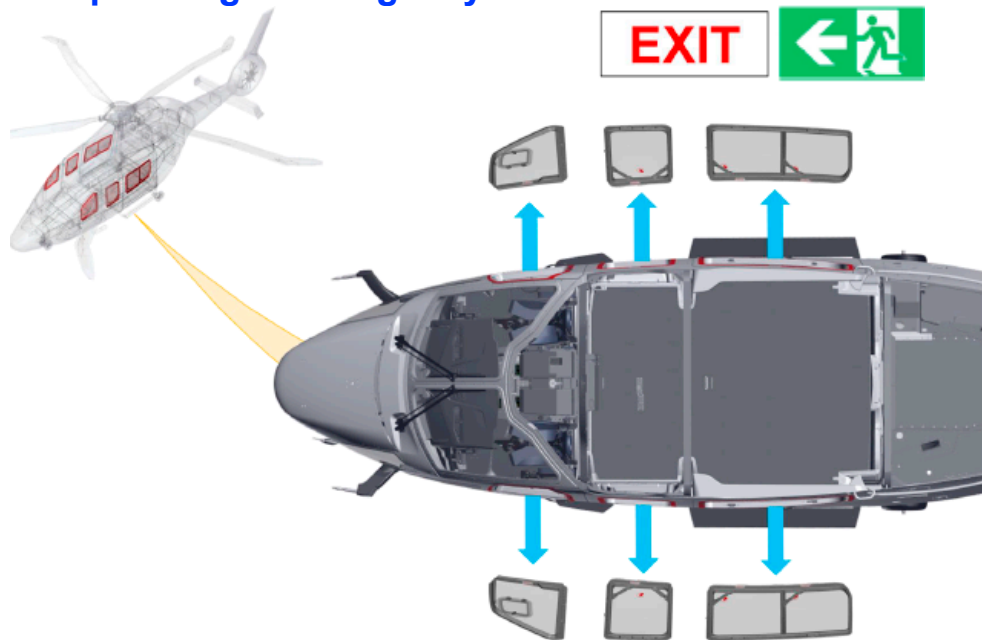


RH cargo door (open)

- Saturate the luggage hold with the extinguishing agent (gaseous extinguisher recommended).

EMERGENCY ACCESS

- Crew and passenger emergency exits:



COCKPIT DOORS



LH cockpit door

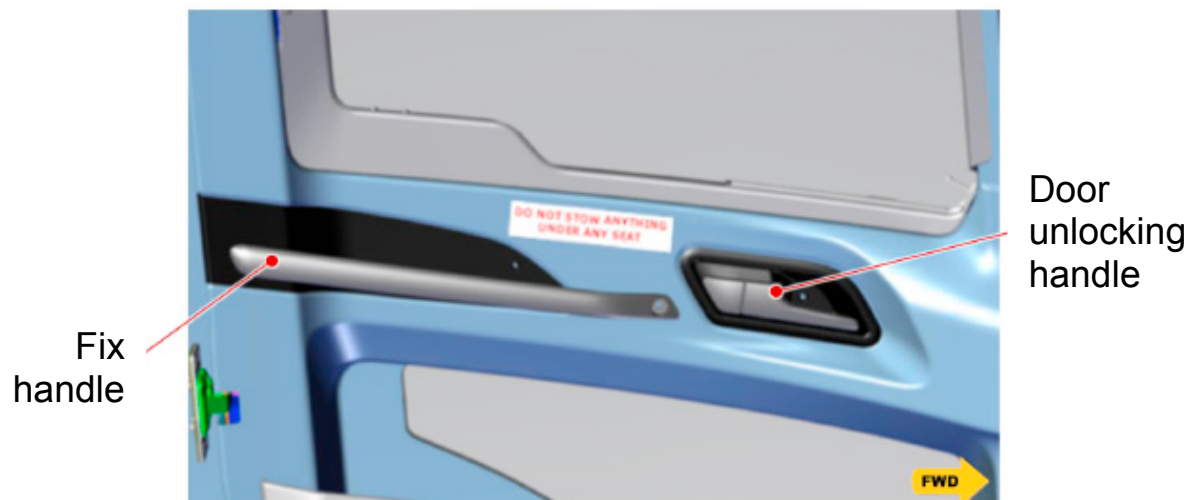


RH cockpit door

External components:



Internal components:



Procedures to use the crew emergency exits (Cockpit windows):**- Jettison from outside (all windows):**

Push the red button



Handle Ejection



Unroll the safety strap



Unlock the jettisonable window

- Jettison the cockpit window from inside:

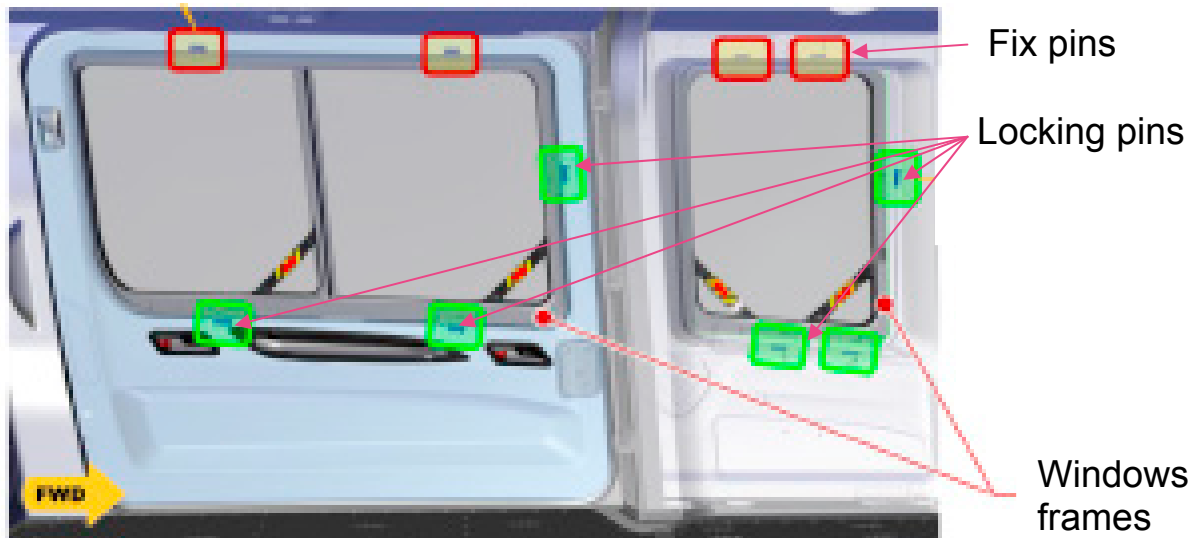
Set free the handle



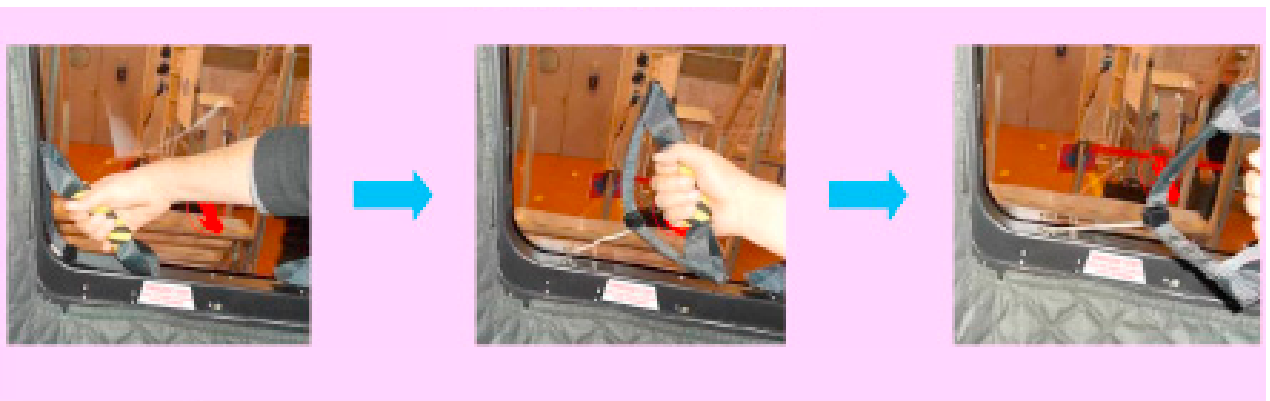
Unroll the safety strap



Unlock the jettisonable window

CABIN WINDOWS

Procedures to use the cabin emergency exits:

- Jettison from outside (all windows): Refer to previous page.
- Jettison intermediate and cabin windows from inside:



Set free the handle
and break the
breakable parts

Unroll the safety
strap

Unlock the
jettisonable window

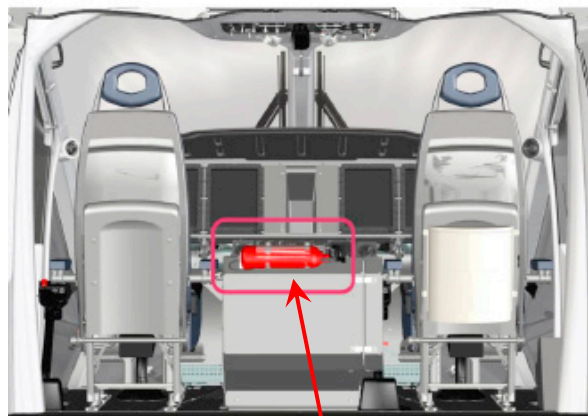
3 SAFETY INFORMATION - INSIDE THE AIRCRAFT

EXTINGUISHER LOCATIONS

In the RH cabin (2nd seat row)

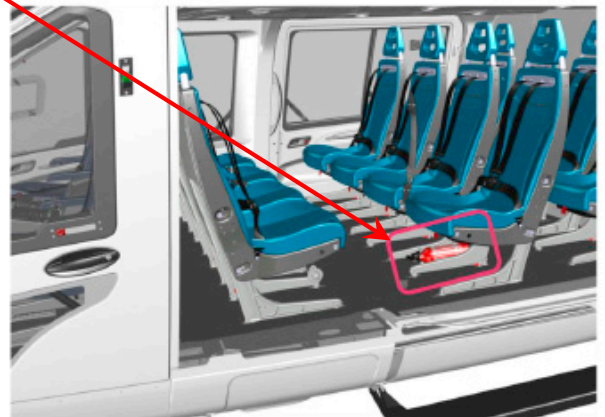


Front view



In the cockpit

Cabin view



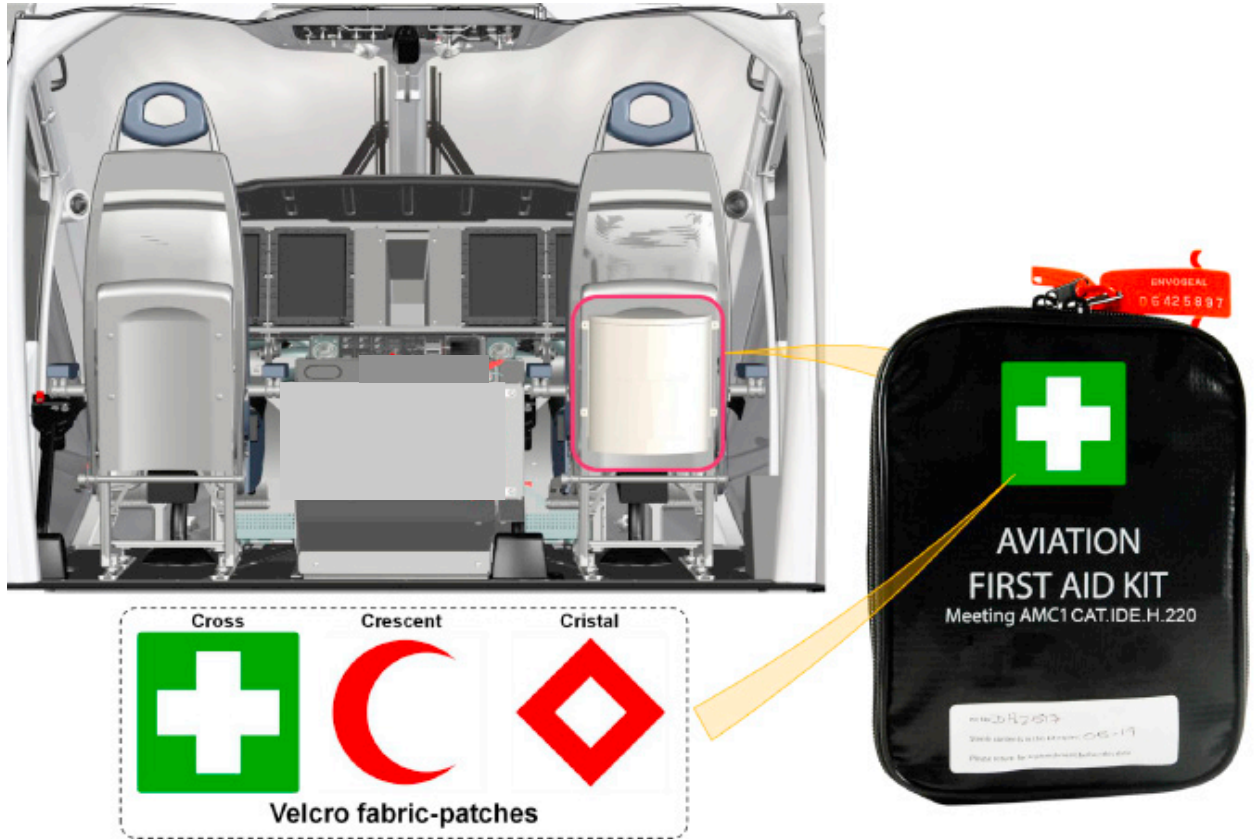
Portable fire extinguisher

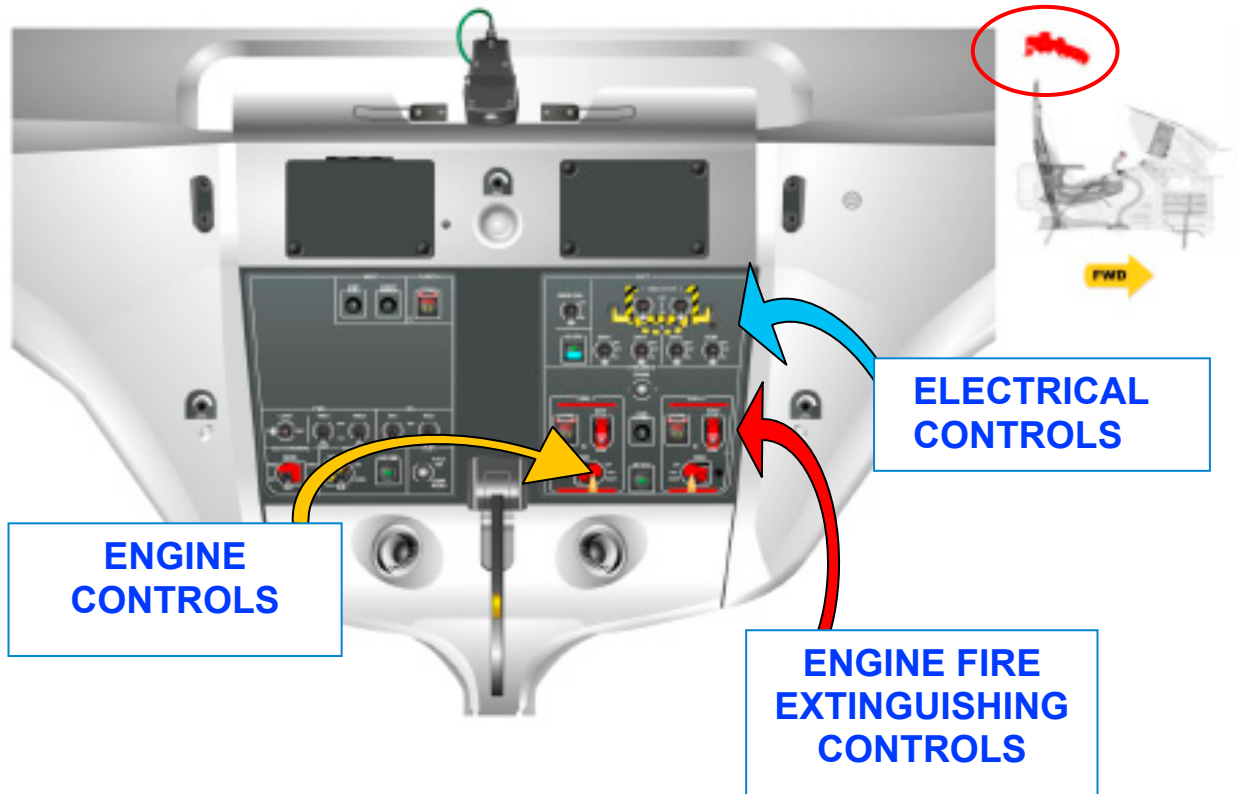
Pressure gauge



FIRST AID KIT LOCATION

- In the back of the pilot seat as shown hereafter:

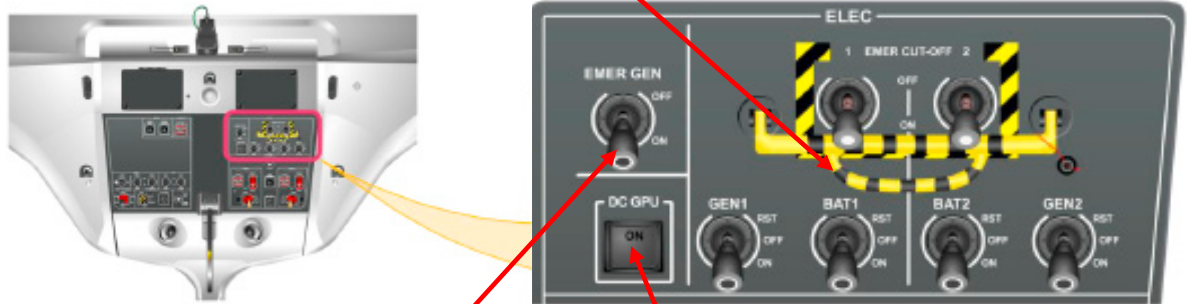


COCKPIT LAYOUT

THE FOLLOWING PROCEDURES ARE TO BE USED IN CASE OF EMERGENCY ON GROUND ONLY IF PILOTS ARE INCAPACITATED.

ELECTRICAL SHUTDOWN

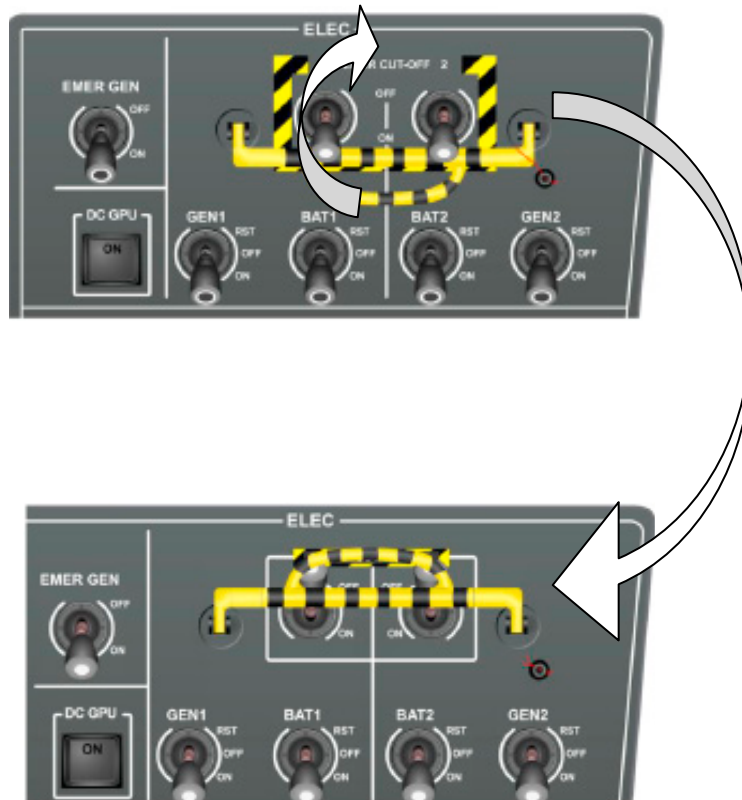
- EMERGENCY CUT-OFF (ECO)



Emergency GENE switch

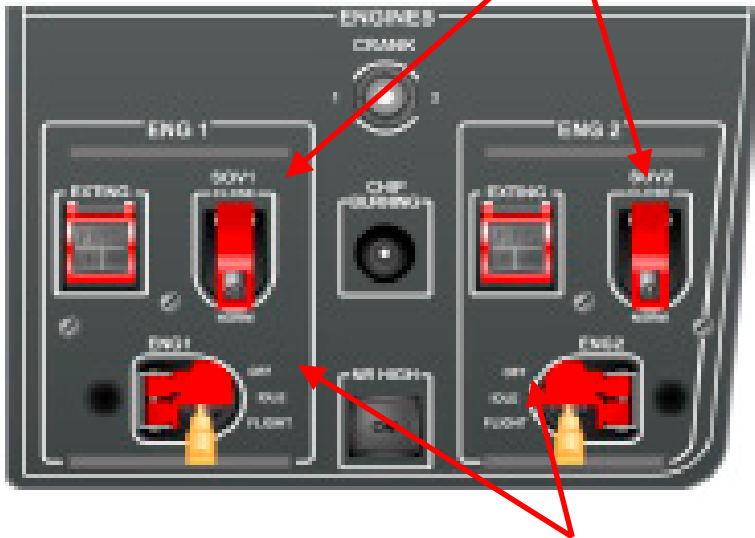
DC GPU control

- Pull the Emergency Cut-Off (ECO) to deactivate the electrical power.



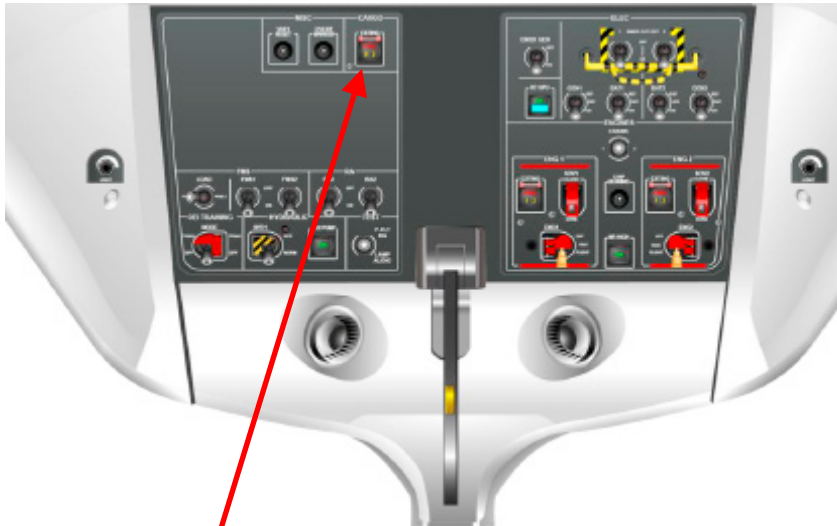
ENGINE SHUTDOWN

-Either SOV (1 or 2) **CLOSE** / NORM control switches.



-or ENG (1 or 2) **OFF** / IDLE / FLIGHT control switches

- **Pull** general ECO handle or,
- Engine control switches **OFF** or,
- LH+RH fuel SOV switches **CLOSE**

CARGO FIRE EXTINGUISHER GUARDED PUSHBUTTON

- **LIFT** the guard and **PRESS** to extinguish, then:



as soon as the bottle 2 is empty.

ROTOR BRAKING

ENGINES MUST BE STOPPED BEFORE APPLYING ROTOR BRAKE.



NR < 50% ==> ROTOR BRAKE CAN BE APPLIED.

Display on VMS-MAIN page



or

on FND:

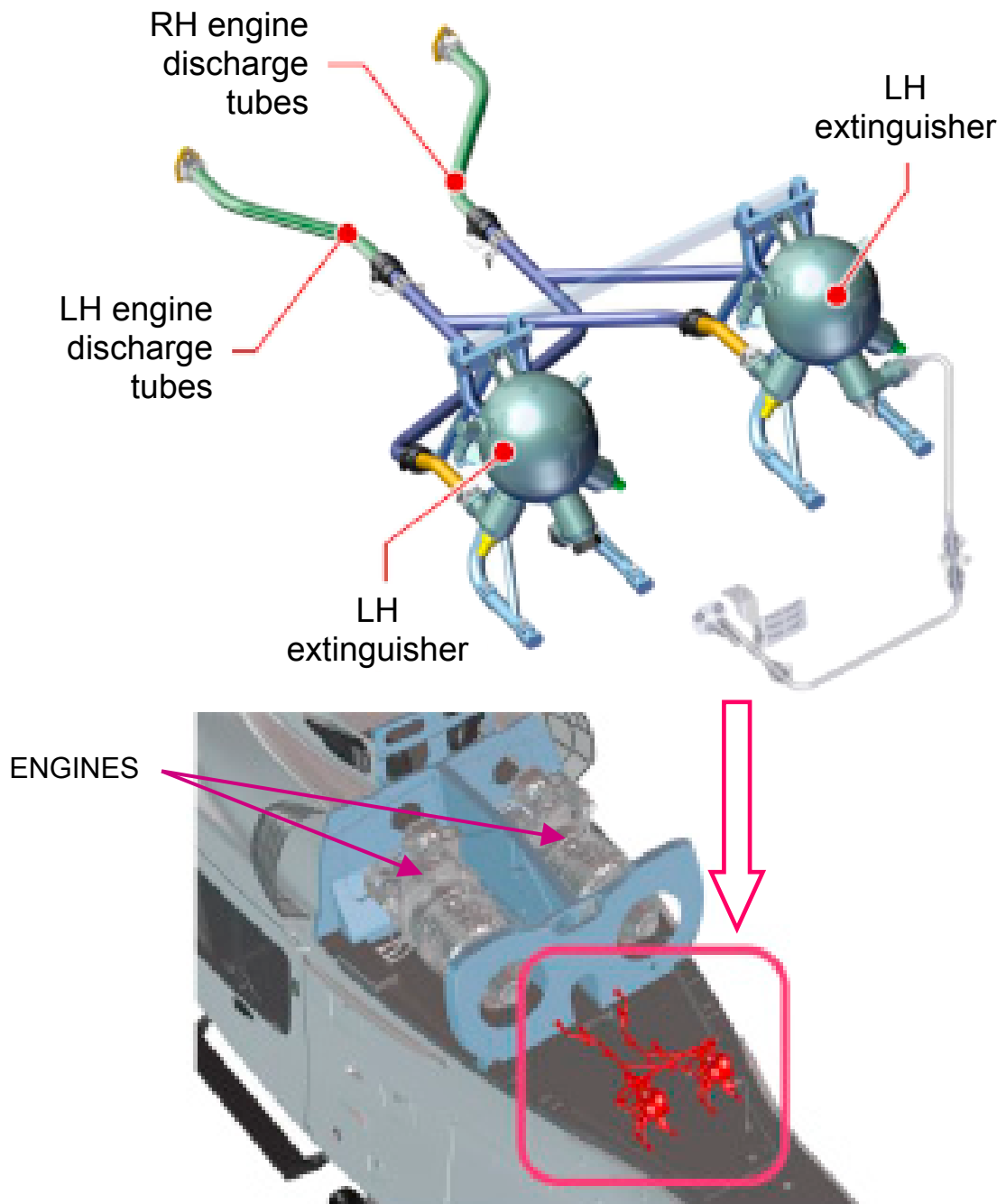


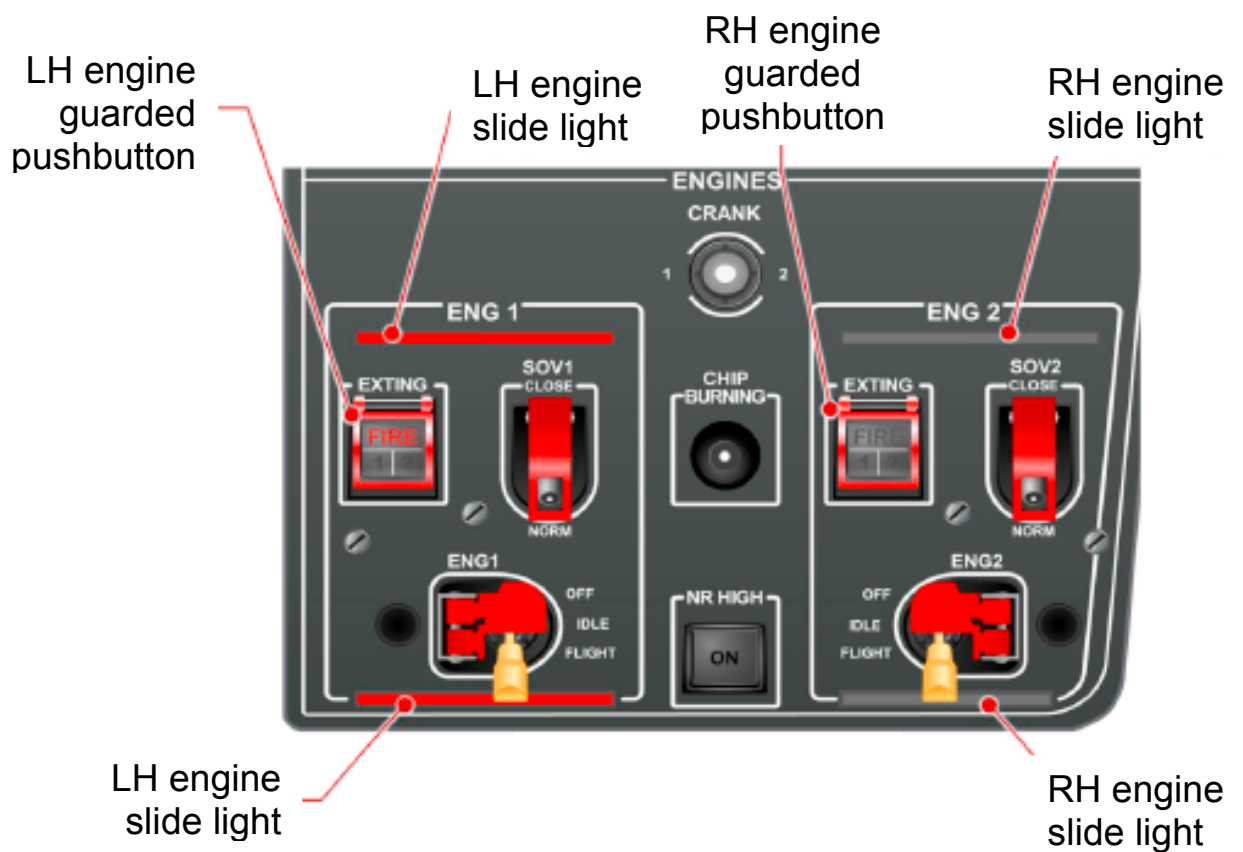
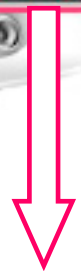
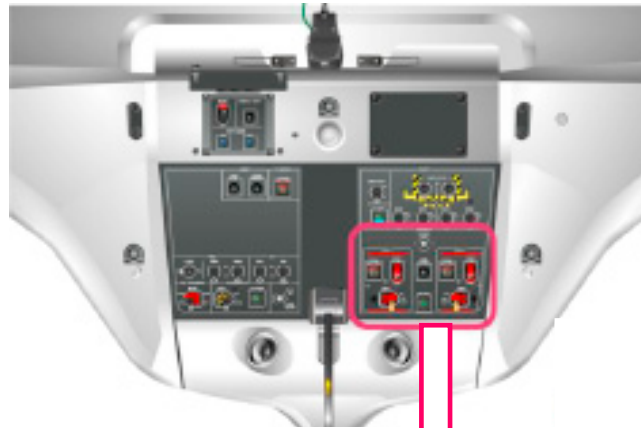
FND


 No **ROTOR BRAKE** message

ENGINE FIRE DETECTION AND EXTINGUISHING SYSTEM

The system comprises detection and extinguishing circuits with two Halon fire extinguishers.





ENGINE 1 OR 2 FIRE WARNING LIGHTS



Steady:
Fire detected



Flashing:
Fire detected and
extinguishing
conditions are met



Fire detected with
1st bottle empty



Both bottles empty

PROCEDURE IN CASE OF ENGINE FIRE DETECTION

Fight fire from outside with a ground fire extinguisher if possible.

Otherwise, use the "IN FLIGHT" fire extinguisher following procedure.

PARK BRAKE ON

On affected engine:

- Fuel SOVCLOSE:

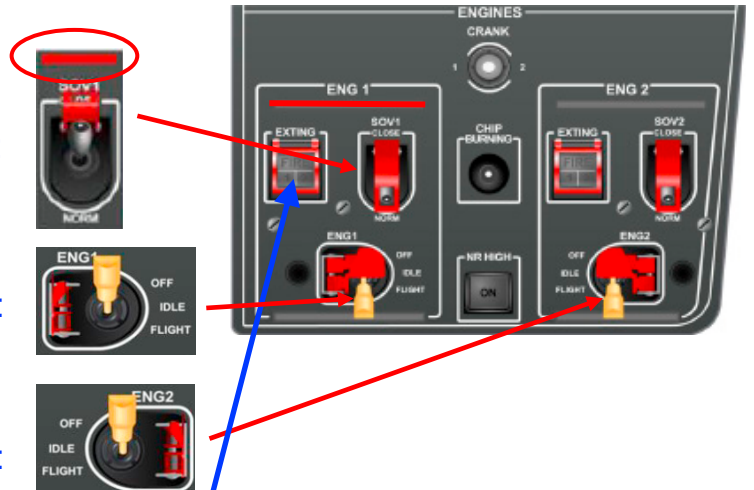
- Engine control switch.....OFF:

Other engine:

- Engine control switch.....OFF:

Rotor brake:

- Apply.....NR below 50%



PRESS.....1ST SHOT:



If starts blinking again after 1 min:

PRESS.....2ND SHOT:



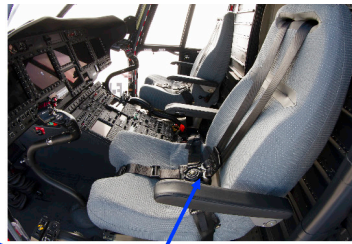
ECSOFF
 Rotor brake (NR below 50%)..... APPLY
 DC GPU (if coupled).....OFF
 BAT1 + BAT2.....OFF
 Aircraft evacuation.....PERFORM

PROCEDURE IN CASE OF ELECTRICAL FIRE/SMOKE DETECTION

1. PARK BRAKEON
2. EMER CUT OFF 1+2PULL OFF
3. ENG1 + ENG2 OFF
4. DC GPU (if coupled) OFF
5. BAT1 + BAT2 OFF
6. Emergency evacuation PERFORM
7. GPU (if connected) DISCONNECT PLUG
8. Fire IDENTIFY and EXTINGUISH if possible
9. Avoid as much as possible inhaling smoke and/or extinguisher agent.

SAFETY BELTS

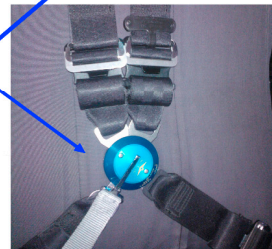
- Crew seats:



Turn to unlock

OR

Lift to unlock



To release the buckle:

- Release the mechanism by twisting the actuator in either direction until the latches are released and ejected from the box.
- Release the mechanism of the dual motion buckle by pushing the yellow button and then by twisting the lever in either direction until the latches are released and ejected from the box.

- Passengers seats:



To release the buckle:
• Lift or turn to unlock