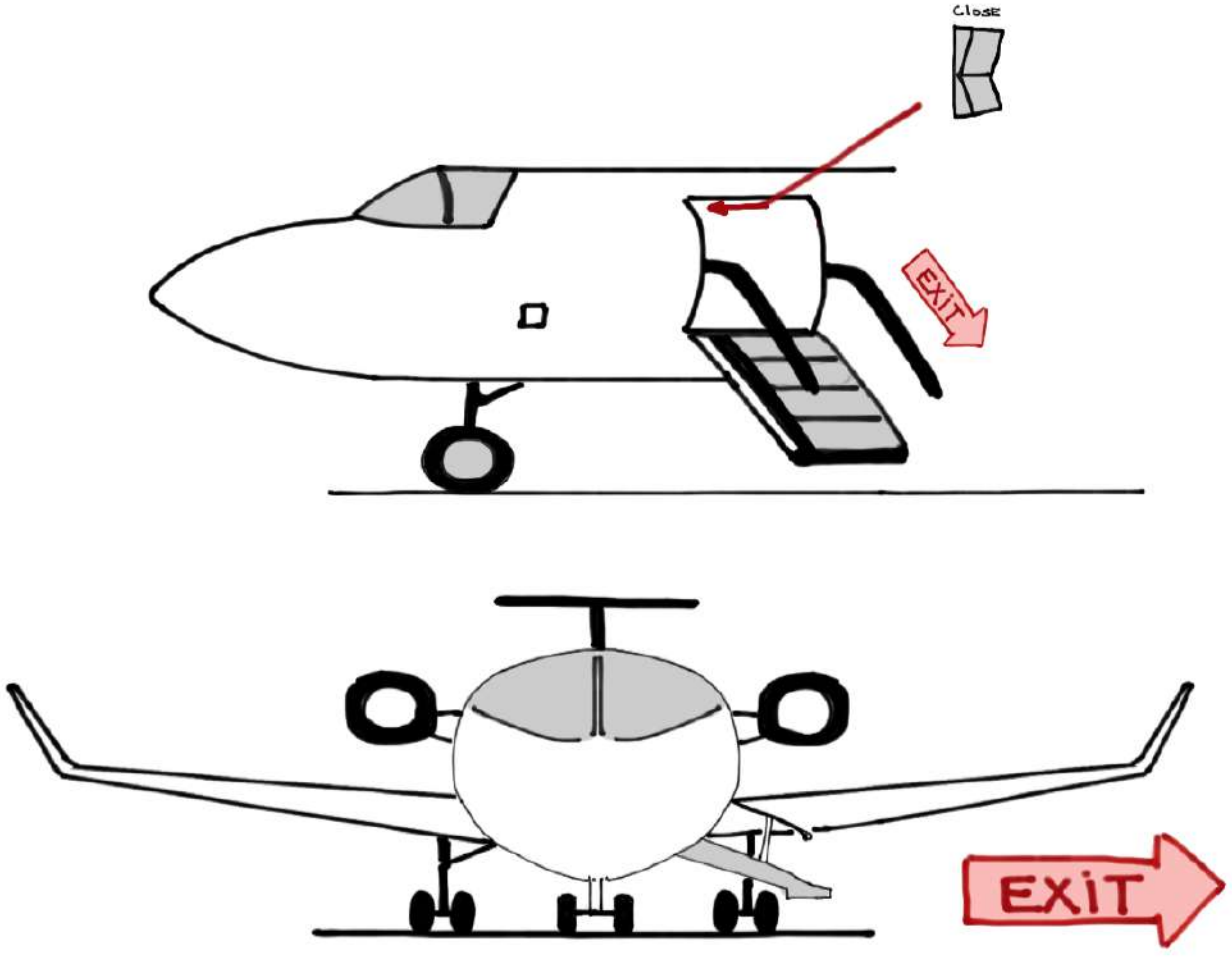
G500 DOOR SYSTEM



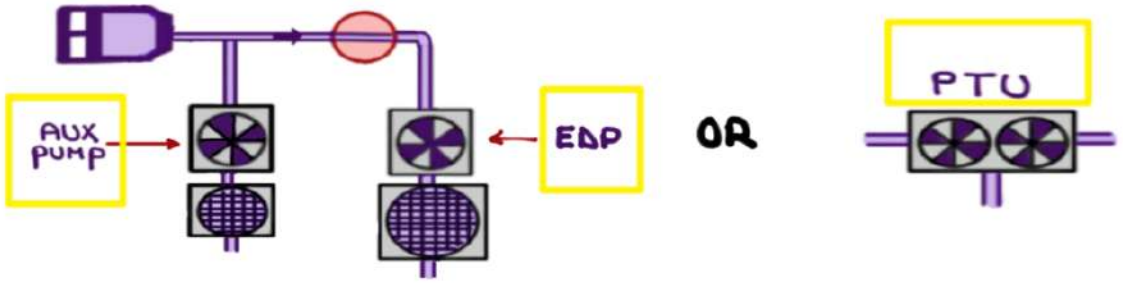
For study purposes only

① Main Entrance Door (MED)

- Primary means of access to the aircraft
- Controlled by a two (2) channel computer
- Electrically operated
  - OPEN/CLOSE
  - OPEN

L MAIN BATT
R MAIN BATT
FWD E-BATT

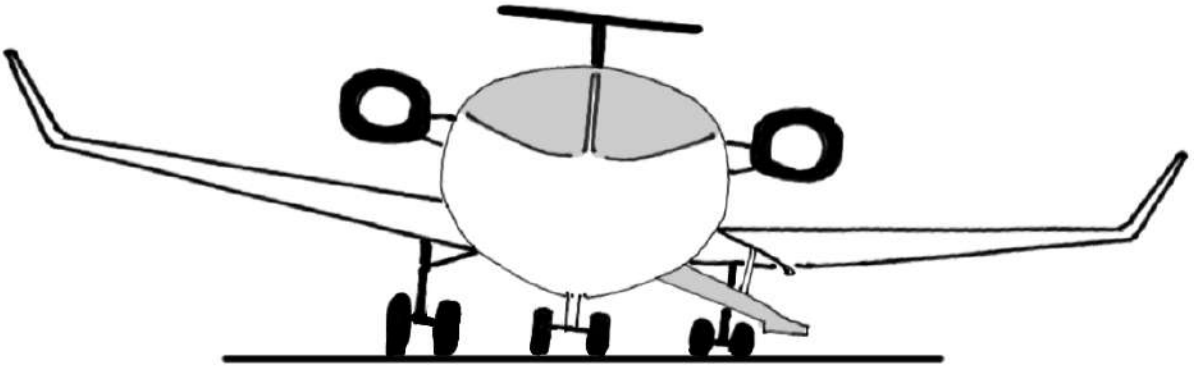
- The MED is electrically
  - Latched and Locked
  - Unlatched and unlocked
- Door is closed with Hydraulic System pressure



- If AUX pump is used to close the MED it will Turn ON and OFF automatically

- If MED is closed with Hydraulic fluid pressure Trapped fluid allows the MED to gently free fall outward until the door and stairwell are fully extended

- The MED, when fully opened, does not touch the ground regardless of tire or strut failure

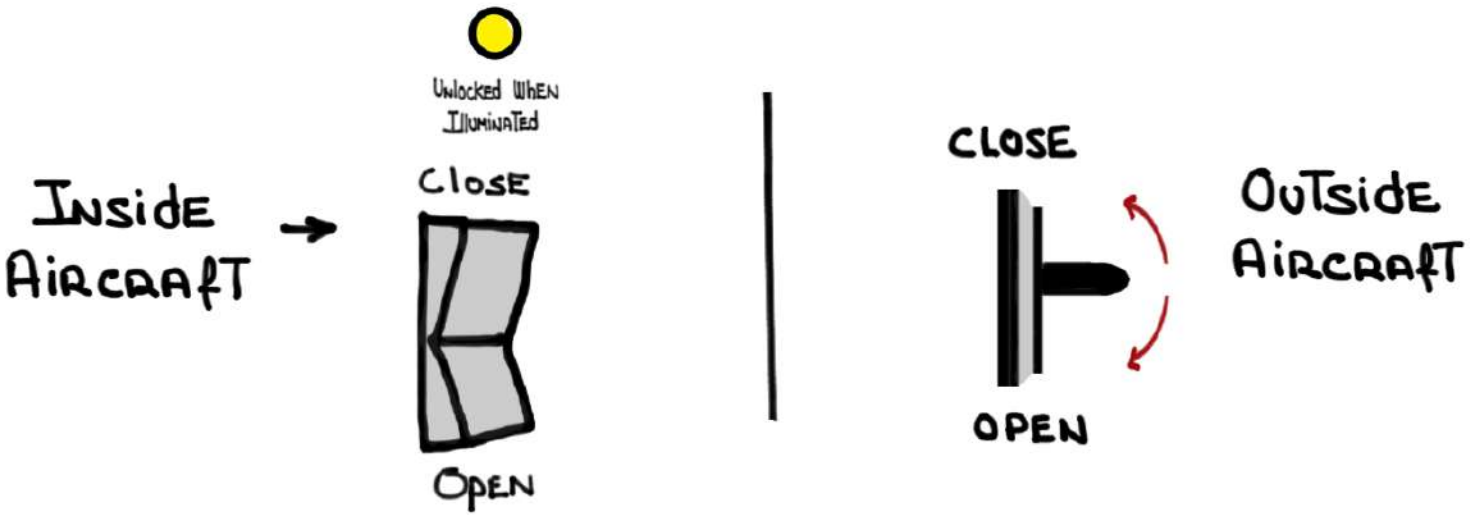


- Ensure cabin is unpressurized before opening MED

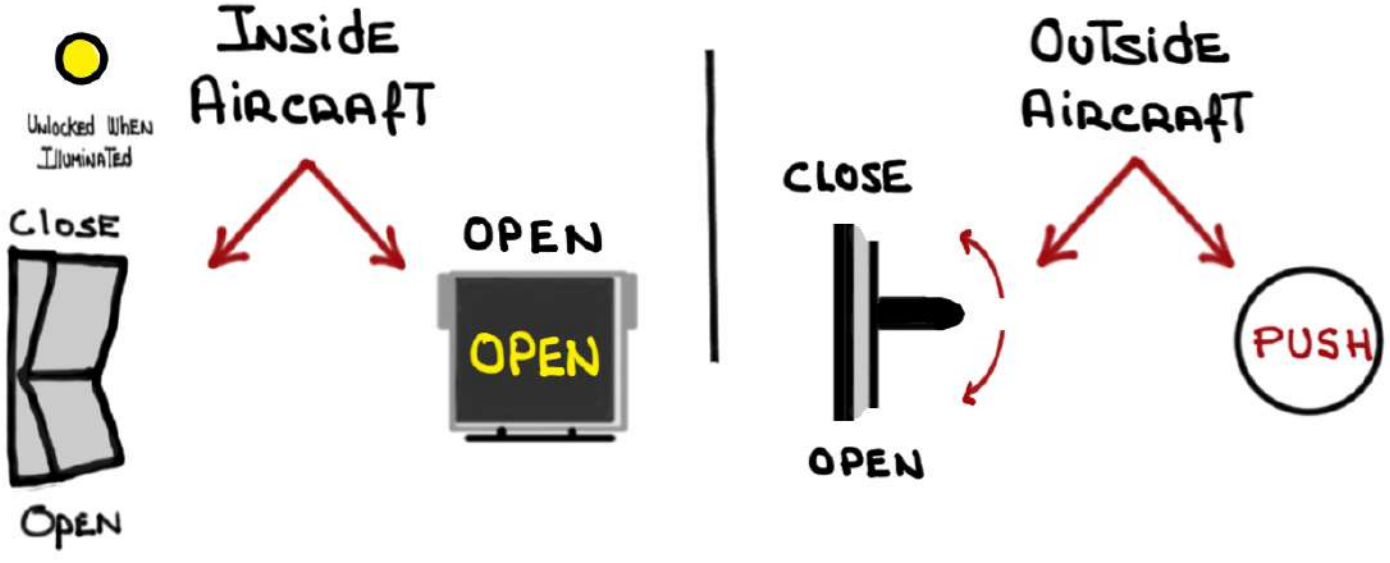
- A viewing port is used to ensure the area outside is clear before opening of the MED

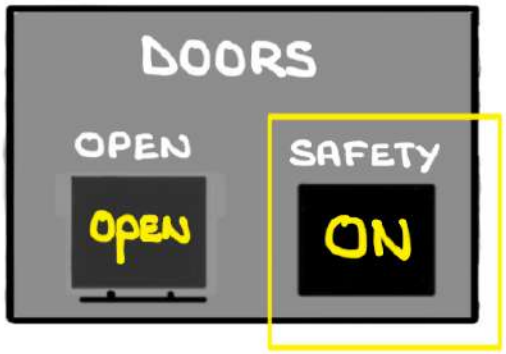
- The viewing port is also used to check for FIRE in the event of an emergency

- There are Two (2) DOOR CLOSE Switches



- There are four (4) DOOR OPEN Switches





- A Door Safety switchlight removes electrical power from the MED. It can also be used to interrupt a door closing operation

- MED CAS messages:

Takeoff Config-MED

MED is not completely closed and the power levers have been advanced for Takeoff

---

Main Door

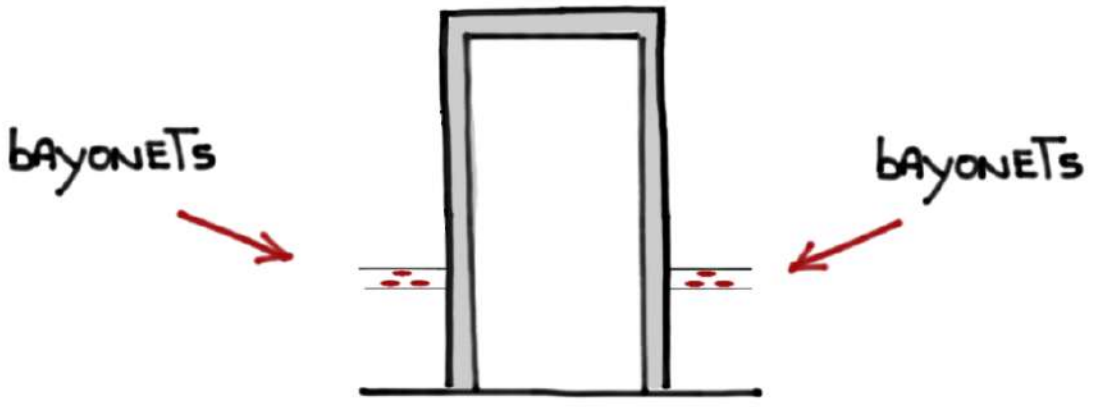
MED is not fully closed, latched and locked and parking brake set (ground)

Main Door

MED is not fully closed, latched and locked and parking brake not set (ground)

MED is not fully closed, latched and locked (Air)

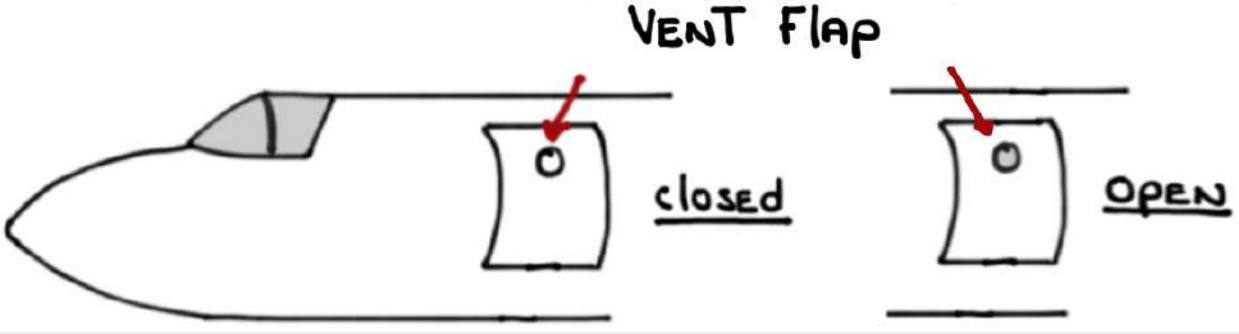
- MED LATCHED AND LOCKED INDICATIONS (BAYONETS)



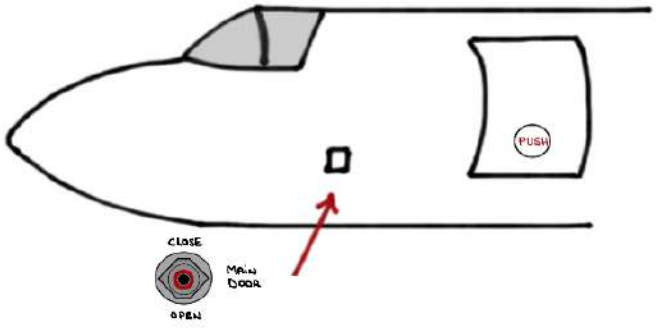
- WHEN THE MED is closed with LATCHES AND locks ENGAGED, THE VENT flap PREVENTS THE DOOR FROM OPENING WHEN CABIN PRESSURE is ≥ TWO (2) PSI

- WHEN THE MED is OPEN (LATCHES AND LOCKS NOT ENGAGED) CABIN PRESSURIZATION is LIMITED TO A MAXIMUM 0.5 PSI

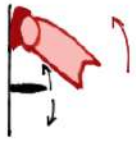
- AN MED VENT FLAP is MECHANICALLY LINKED TO THE lock ACTUATOR which will VENT REMAINING CABIN PRESSURE WHEN THE locks ARE RELEASED



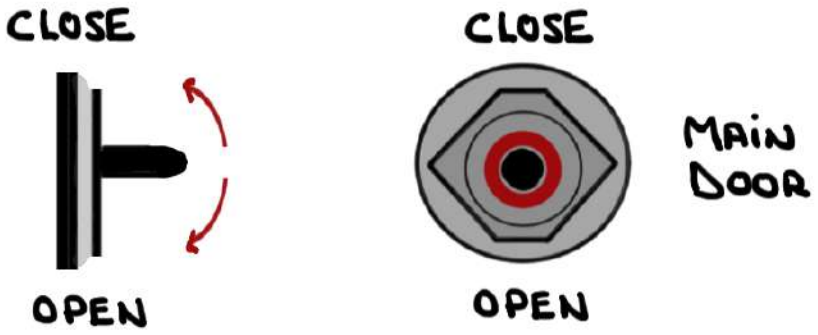
MED Switches - Outside Aircraft



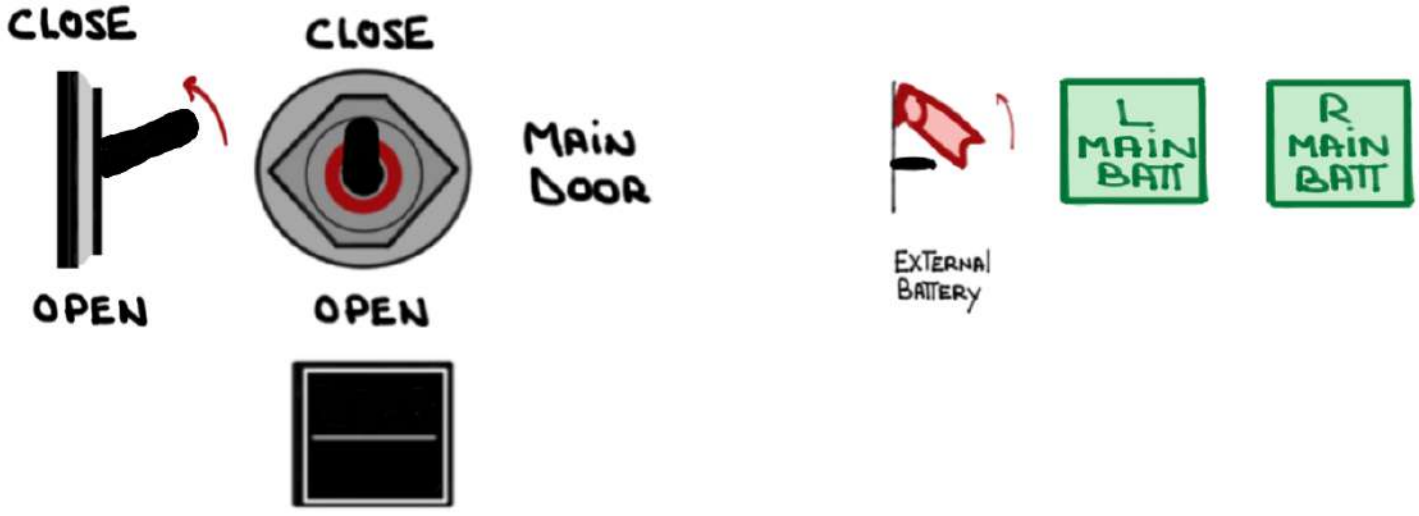
- Located in the Security / Ground Service Panel
- Must be unlocked ~~MAINTAINED~~ for flight
- Only switch outside the aircraft that can OPEN/CLOSE
- RED guarded External Battery switch connects both main batteries for door opening and closing



- Three-position switch spring-loaded to the center position

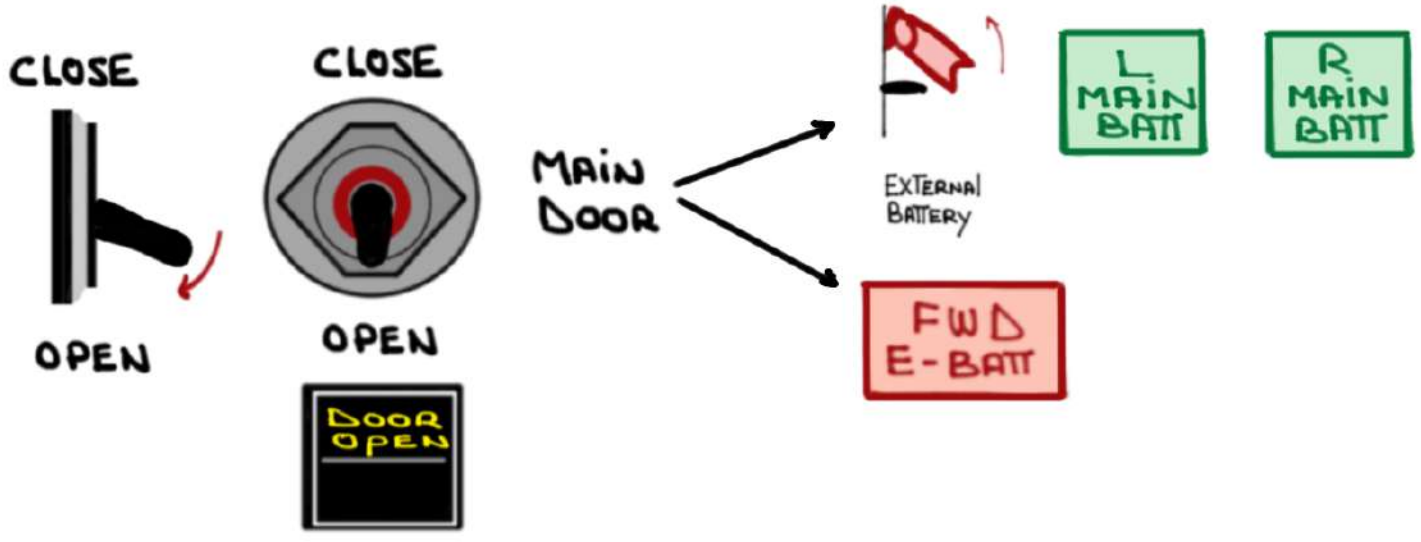


- Door Close



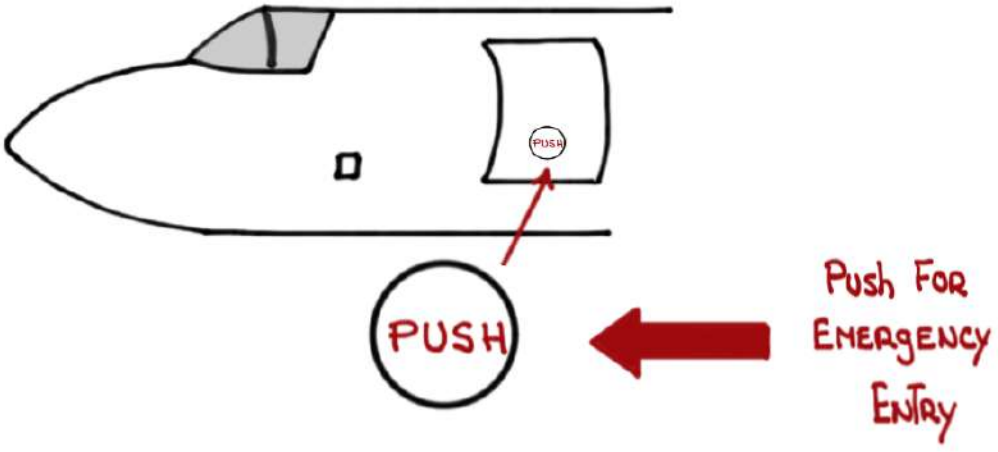
Reversible switch. You can change your mind and stop the door as it moves up

- Door Open



Switchlight below switch illuminates when MED is unlocked

MED Switches - Outside Aircraft

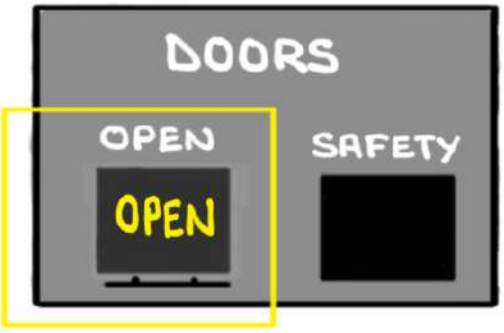


- Located outside the MED
- Used to OPEN MED by RESCUE PERSONNEL
- Must be unlocked ~~for~~ for flight
- Uses the FWD E-BATT only

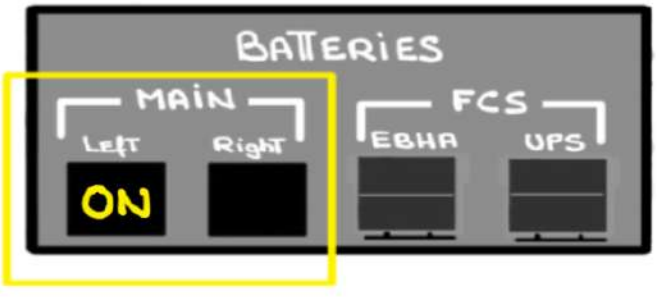
The MED is opened with this EMERGENCY ENTRY Push switch on the first flight of the day to confirm:

1. FWD E-BATT has sufficient battery charge capacity
2. Operation of the PUSH switch
3. It is unlocked ~~for~~ for flight

MED Switches - Inside Aircraft

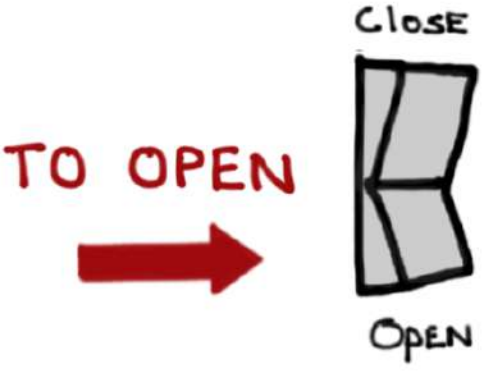


- Guarded Switch
- Located in the Cockpit Overhead DOORS PANEL
- Can be used to **OPEN** the MED from the cockpit
- Used if Main Door Switch is inoperative or in an Emergency
- Fwd E-Batt unlatches door if no other power source
- At least one (1) Main Battery must be **ON** if aircraft is unpowered

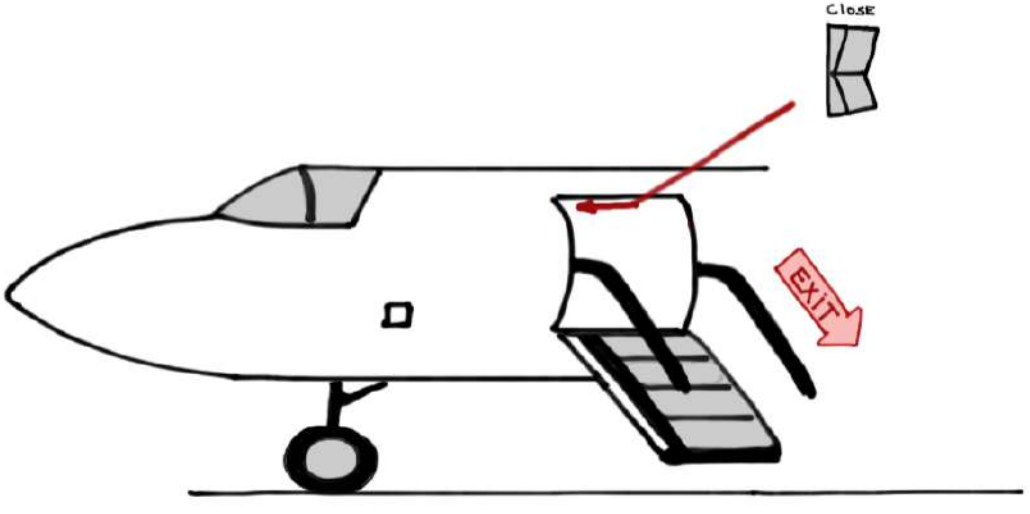


- When pressed door electrically unlatches and free-falls open

MED Switches - Inside Aircraft



- The Main Cabin Door Switch is located next to MED
- Only switch inside the cabin that can **OPEN/CLOSE** the MED
- Three-position Reversible switch spring-loaded to the center position



- Door Close

At least one (1) Main Battery must be ON if aircraft is unpowered

Close

- Aux pump, powered by the Main Batteries, auto activates if Left Hydraulic System pressure is < 1,500 Psi
- Door closes and electrically latches
- Aux pump auto shuts off

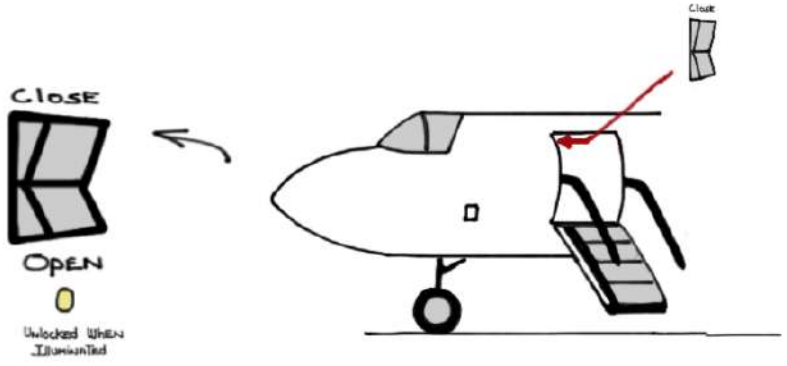
- Door Open

Open

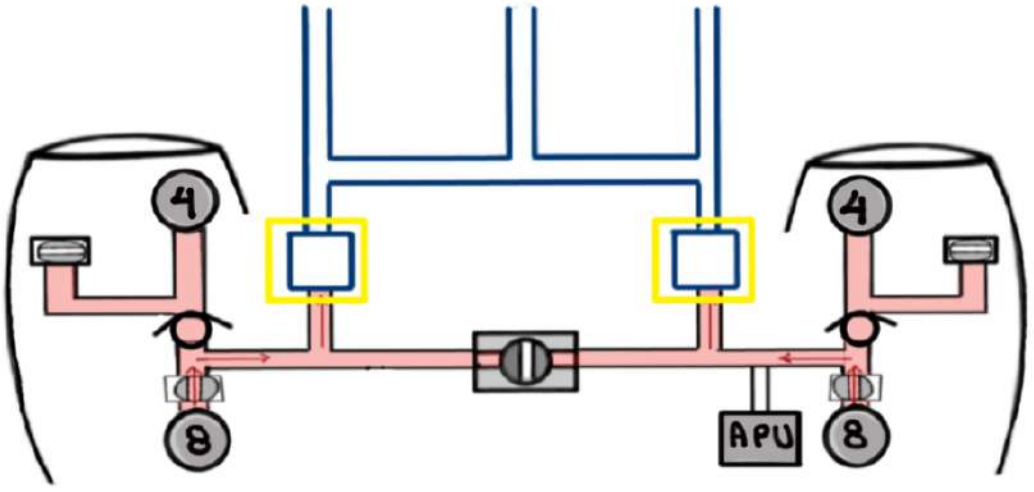
- Door electrically unlatches and free-falls open
- Light above switch illuminates when MED is unlocked
- Without other source of power it uses the FWD E-BATT To **OPEN** the MED

Main Entrance Door – ECS Packs

Selecting the MED switch to the **CLOSE** position momentarily switches OFF both Packs

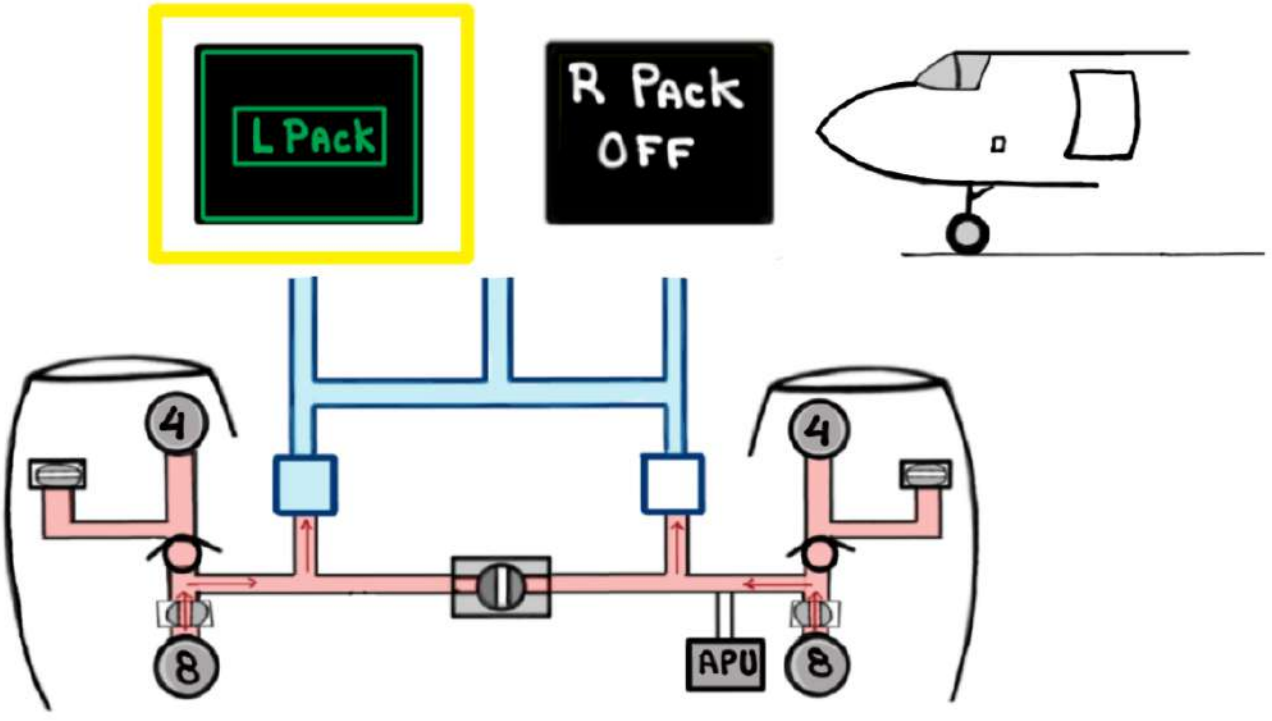


AUTO OFF

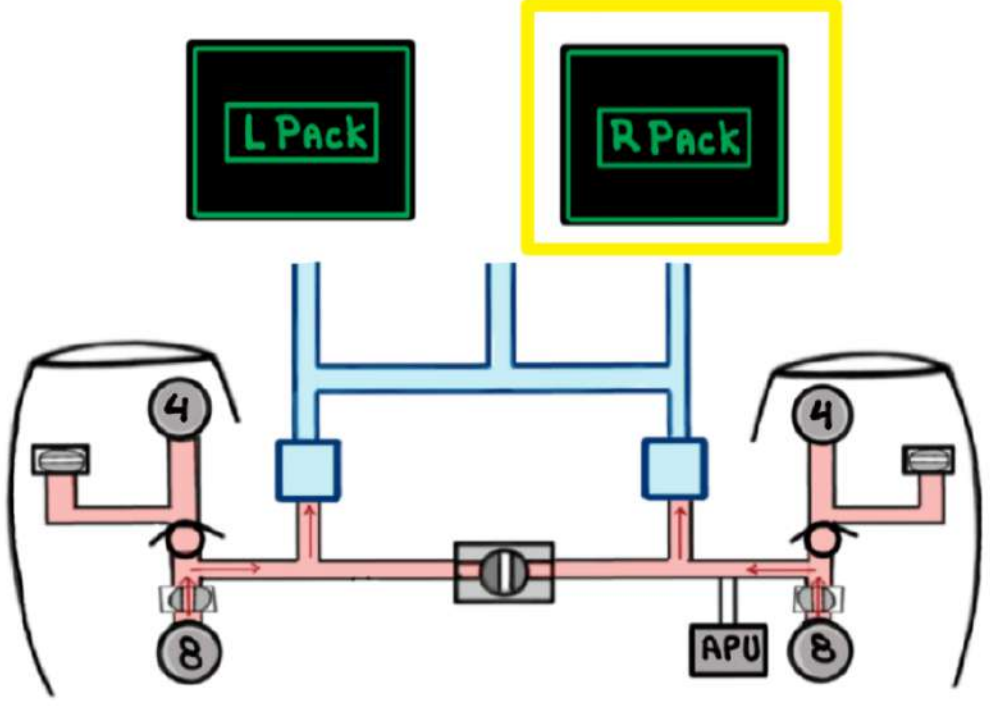


This facilitates the latching and locking of the MED by momentarily stopping cabin pressurization

ONCE THE MED is closed THE L PACK COMES ON



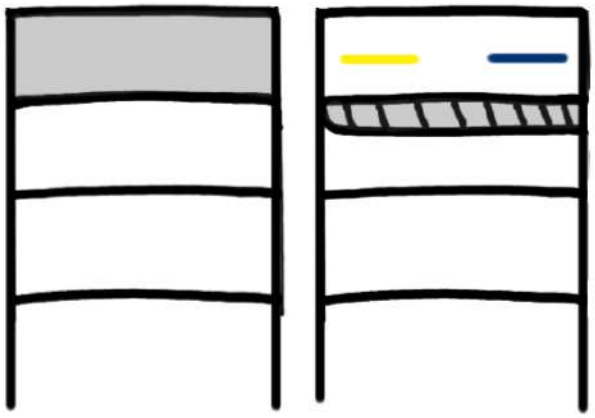
FIVE (5) SECONDS LATER THE R PACK COMES ON



Main Entrance Door
Manual Opening

- The procedure requires access to two (2) handles located behind the fourth (4TH) step

1. Open surface of 4TH step by pulling on outer edge
   Yellow and Blue handles will now be exposed



2. Pull Yellow handle to full extension until it can be rotated 90° counter clockwise (CCW)
3. Pull Blue handle until the door is unlatched

Manual opening of the door is considered a maintenance function only when no electrical power is available to open the MED.

② Acoustic Door=

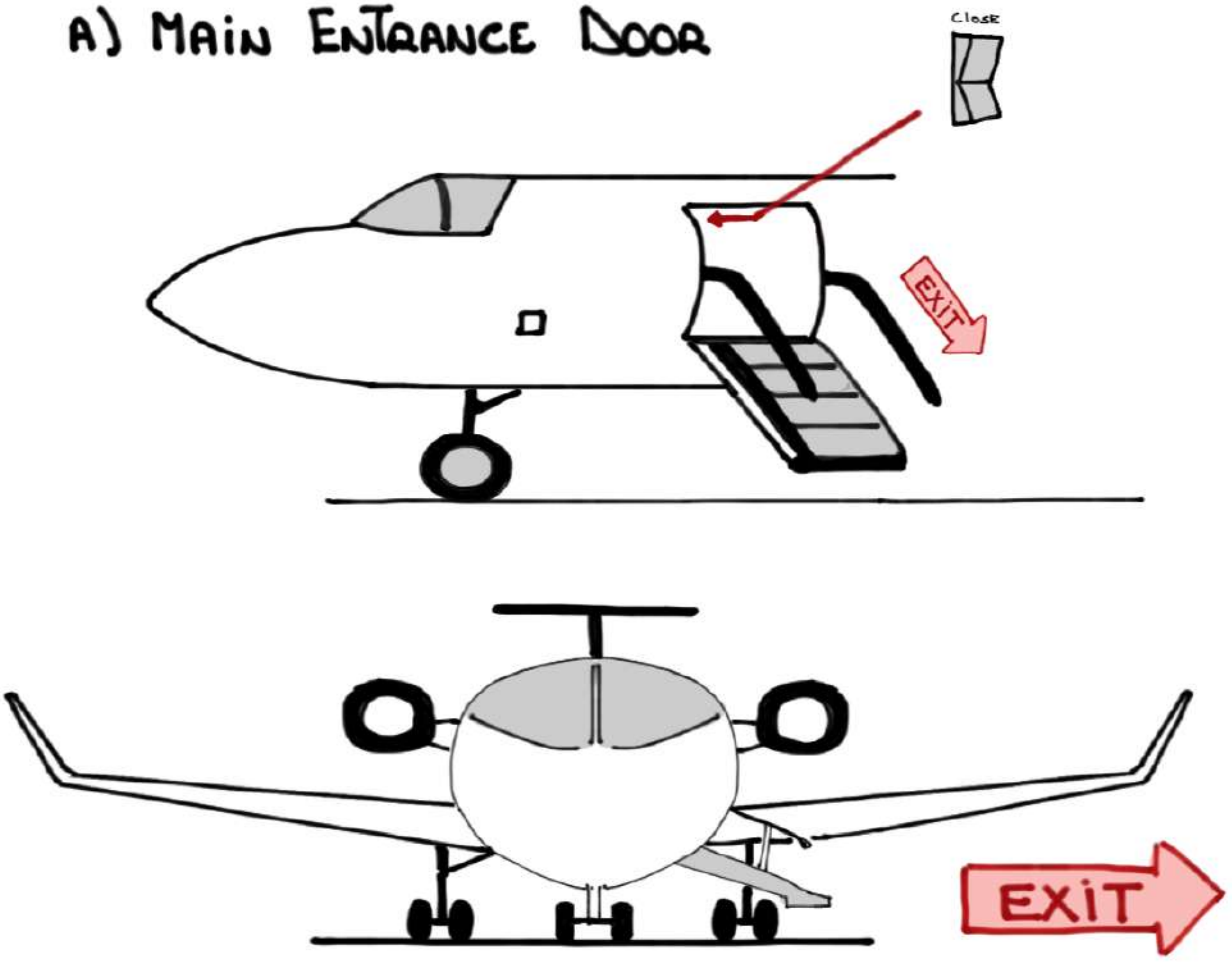
- The acoustic door reduces noise level inside the cabin during flight
- It must be open for taxi, takeoff and landing so as to not impede evacuation via the MED
- It is normally secured/confirmed open by the a cabin crew member prior/while taxiing for departure and again before landing
- It is normally closed inflight to block/reduce noise in the MED area
- It will automatically open when:
  - A) Flaps are selected from 0° to 10°, or
  - B) Landing gear is selected down during a Flaps 0° landing
- Pocket doors, between galley and passenger cabin, will also open automatically if not already latched/secured open by a cabin crew member

③ Emergency Exits:

There are Two (2) Types of emergency exits.

These are:

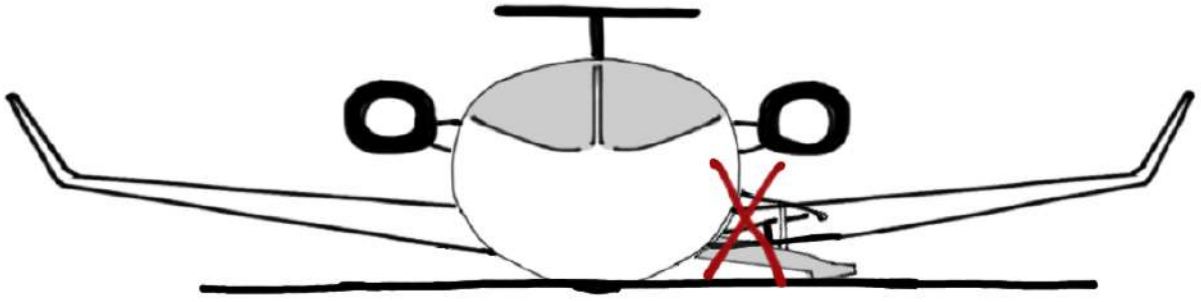
A) Main Entrance Door



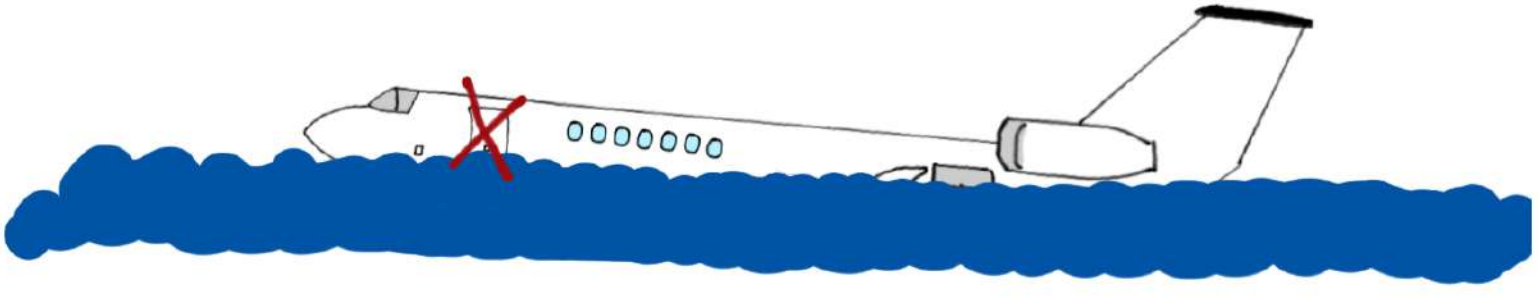
- Opened via the Main Cabin Door switch which is located next to the EMED 

- Quickest and safest way to evacuate the aircraft

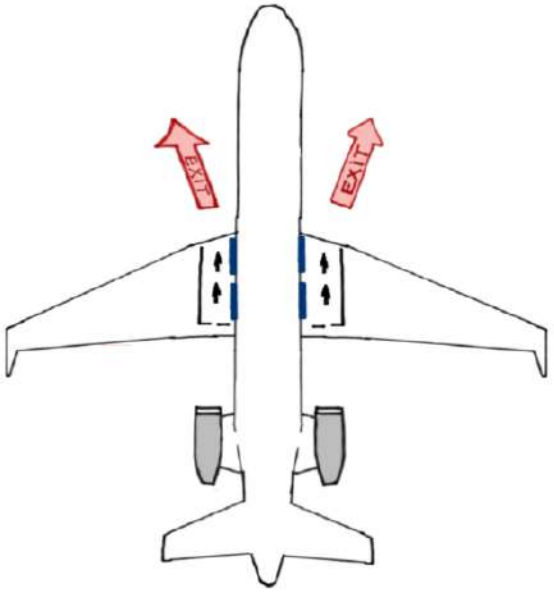
- In the event of a gear up landing the MED will not be able to open all the way due to reduced ground clearance

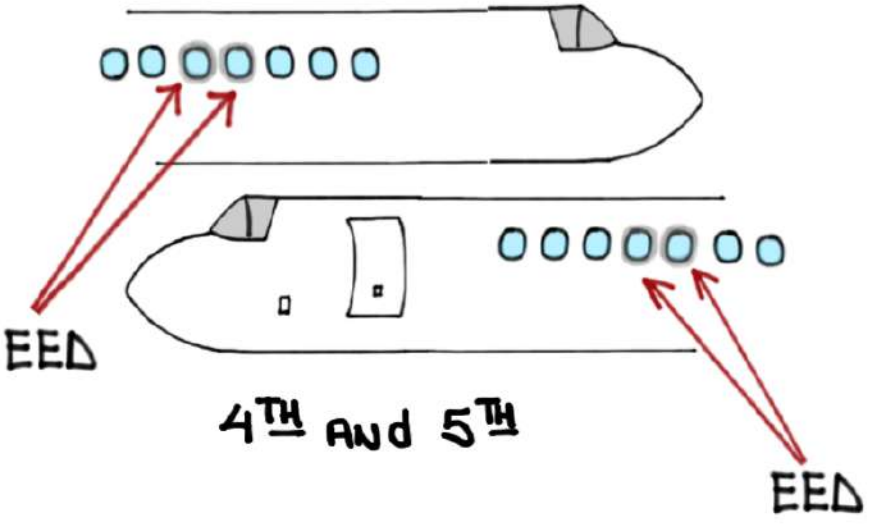


- In the event of a water landing (ditching) use the over wing exit windows



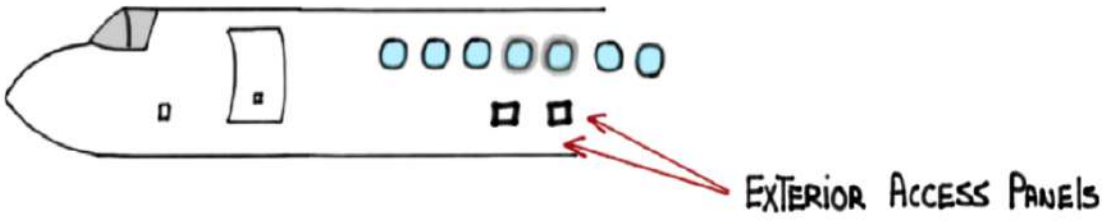
B) Four (4) over wing exit windows called Emergency Exit Doors (EED)



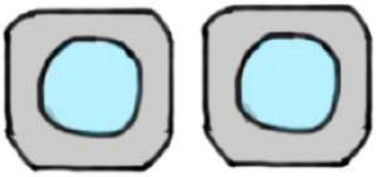


The EEDs weigh 39 lbs and are opened from inside the cabin by pulling on a T-handle.

The EEDs can also be opened from the outside



To facilitate rescue operations, and differentiate them from other windows, the EEDs have a gray ring around them

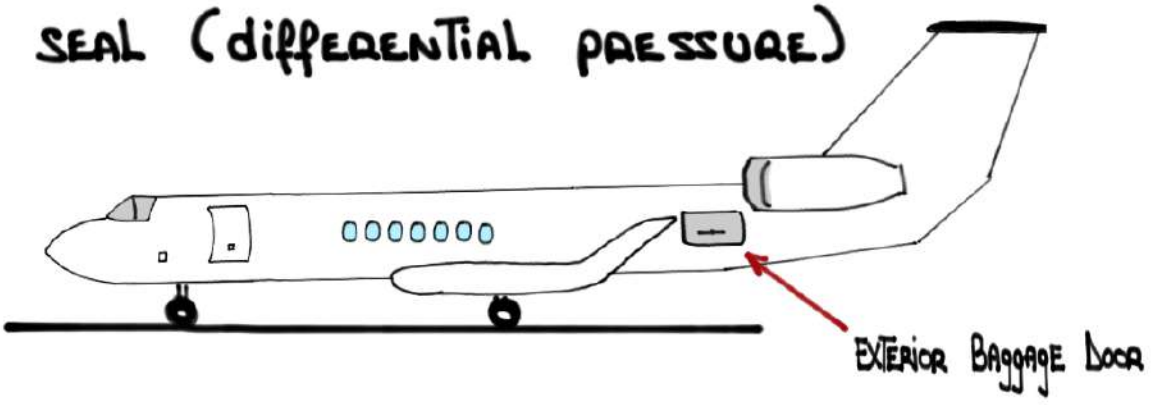


④ Baggage Doors =

- The external baggage door is a plug-type door which moves inward and upward

- It can be opened from inside/outside the aircraft

- The external baggage door uses a passive door seal (differential pressure)



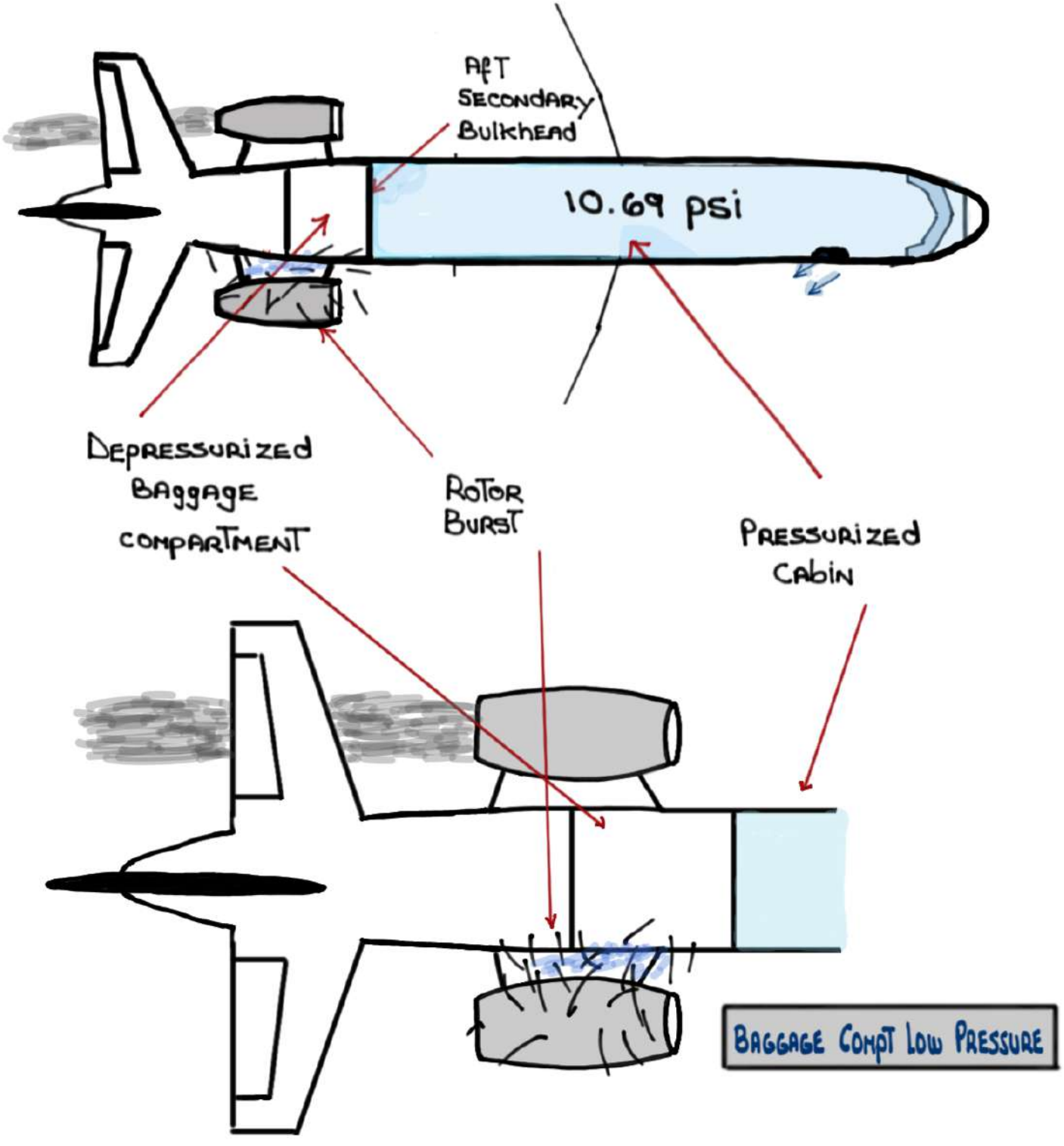
- External baggage door CAS message:

External baggage door open

CAS message is accompanied by a two-chime aural tone

- The internal baggage door allows access to the baggage compartment while inflight

- The internal baggage door serves also as a secondary pressure bulkhead in case of rotor burst



- Access To The baggage compartment is restricted To 45,000' or below (FAA)

- Internal baggage compartment CAS messages:

INTERNAL BAGGAGE DOOR

The internal baggage door is open at an altitude greater Than 40,000' (EASA) for greater Than five (5) minutes, or

The internal baggage door is open at an altitude greater Than 45,000' (FAA)

40,000'

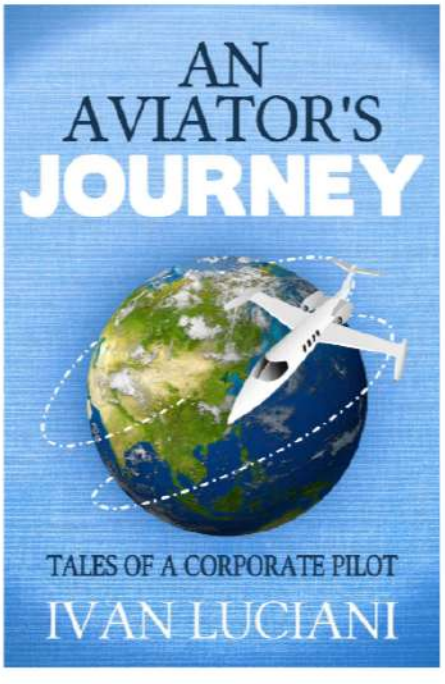
INTERNAL BAGGAGE DOOR

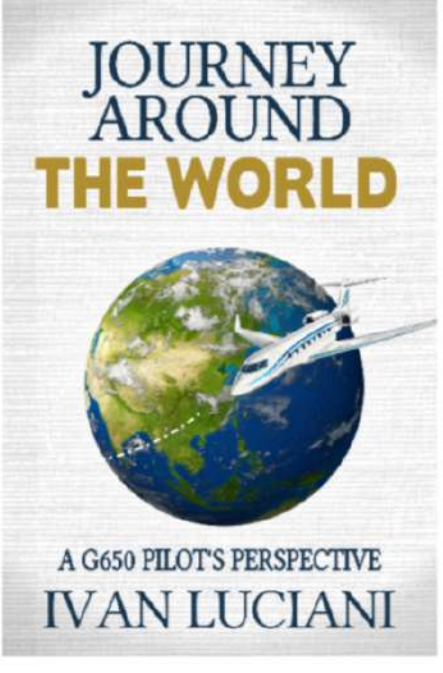
The internal baggage door is open at an altitude up To 45,000' (FAA)

REMINDER: these system notes are intended for study purposes only. Always refer to official Gulfstream manuals and other approved references when operating your aircraft.

NOTE: these system notes are updated from time to time and what is posted on Code450.com will always be the most recent version.

Questions, comments or errors...please do send me an email: ivan.luciani@gmail.com





Thank you!