# DASSAULT FALCON 7X

# SYSTEMS SUMMARY


# Airframe & Doors

**This material is to be used for training purpose only**

**Do not use it for flight!**

**Please note that this document is not affiliated in any way with any aircraft manufacturer.**

## ACRONYMS

| | |
|---|---|
| **APU** | Auxiliary Power Unit |
| **CAS** | Crew Alerting system |
| **CB** | Circuit Breaker |
| **IRS** | Inertial Reference System |
| **MDU** | Multi Display Unit |
| **RAT** | Ram Air Turbine |
| **SSPC** | Solid State Power Controllers |

## INTRODUCTION

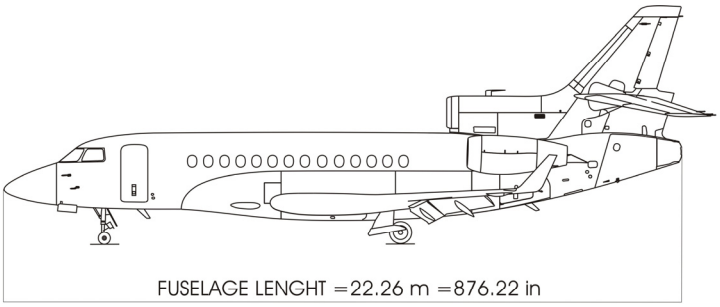
The FALCON 7X is a tri-engine long range business jet (19 passengers maximum).

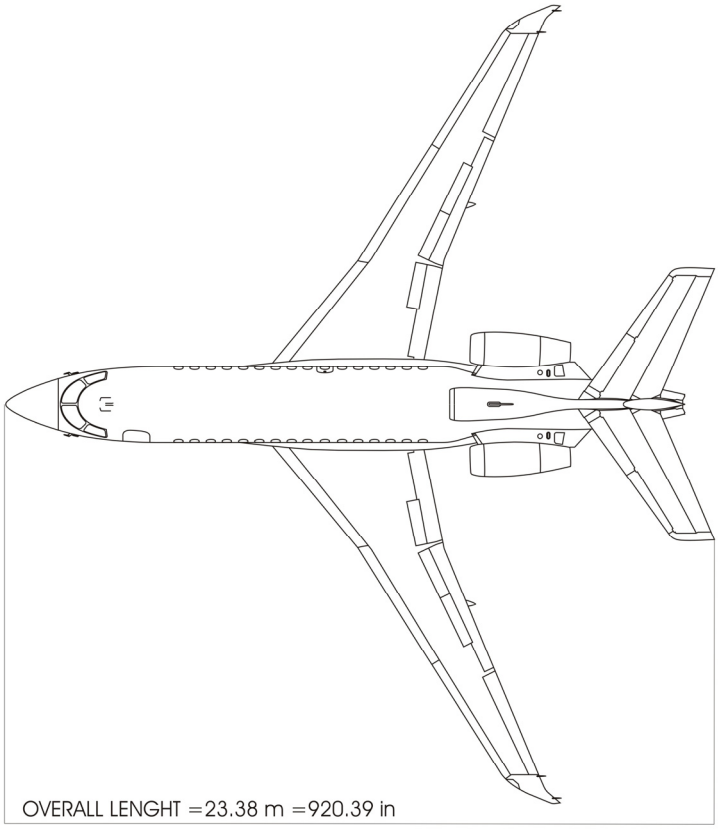
The particular structural features of FALCON 7X compared with the other aircraft in the FALCON family are:

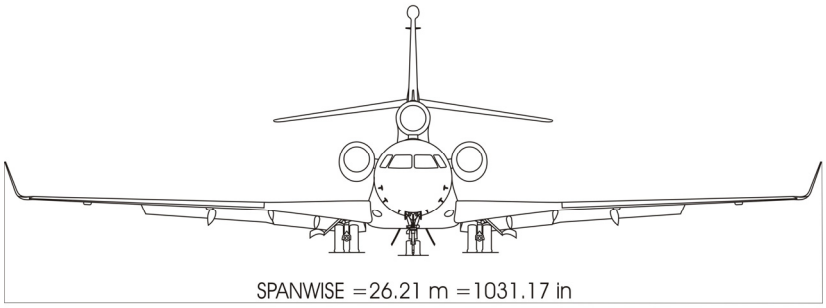
- A fuselage longer than the falcon 900EX but with a similar diameter,
- The new design of wings fitted with winglets,
- The windshields structure.

The main airplane structure consists of fuselage, wings, power plant pylons, landing gear and empennage.

## AIRFRAME OVERALL DIMENSIONS

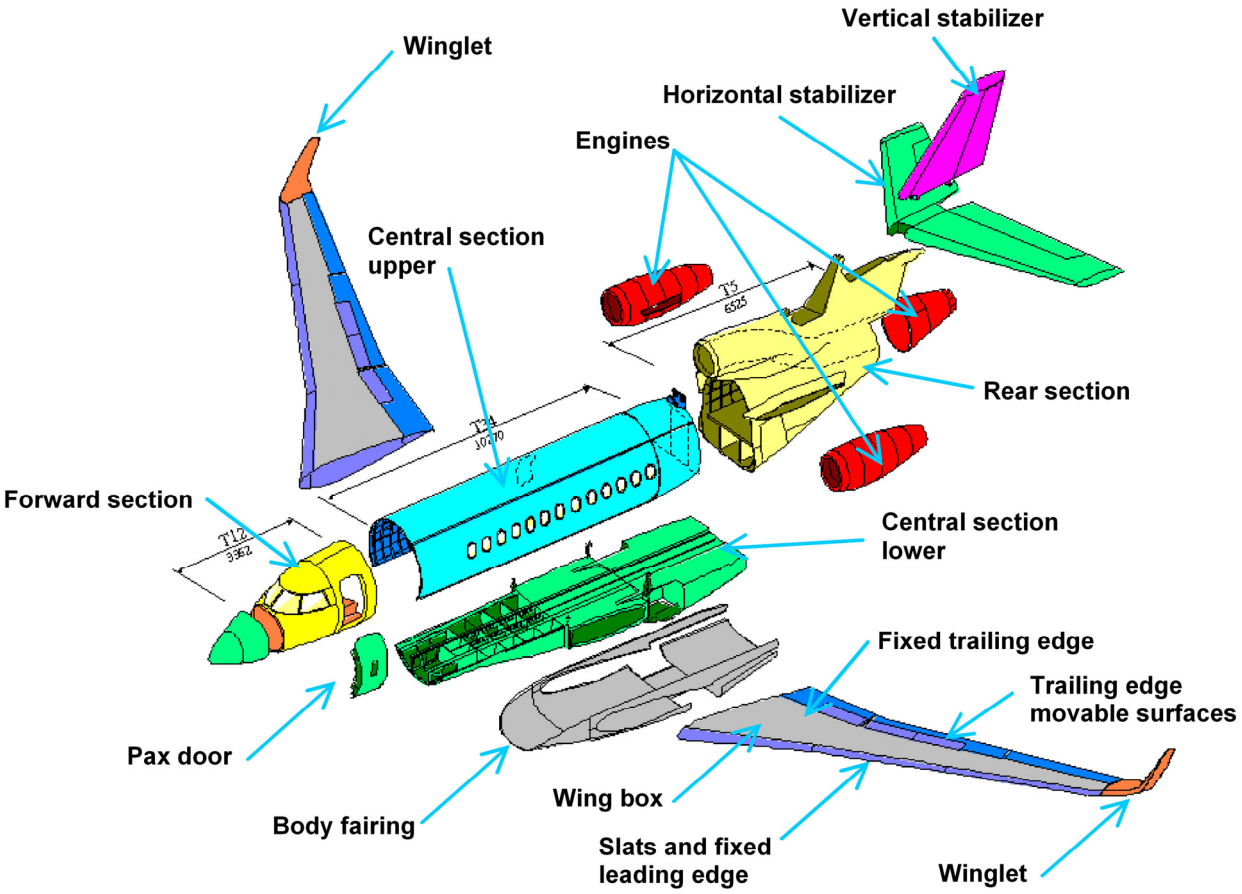


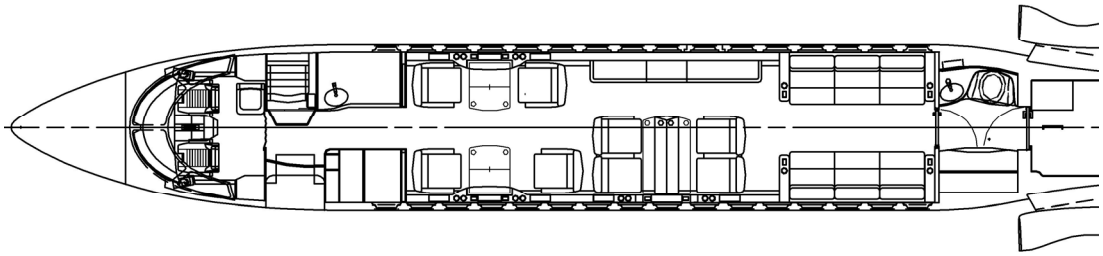

**AIRFRAME OVERALL DIMENTIONS**

## AIRFRAME GENERAL LAYOUT

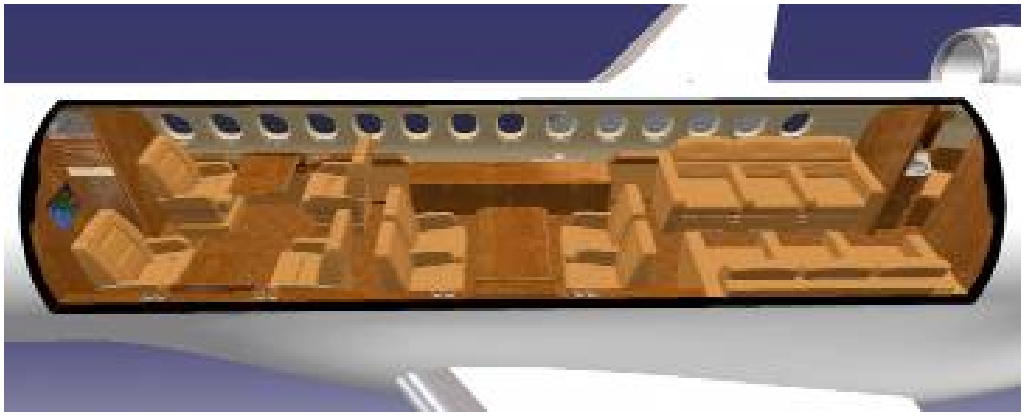



AIRPLANE STRUCTURE OVERVIEW

## CABIN OVERVIEW



**CABIN AND COCKPIT OVERVIEW**

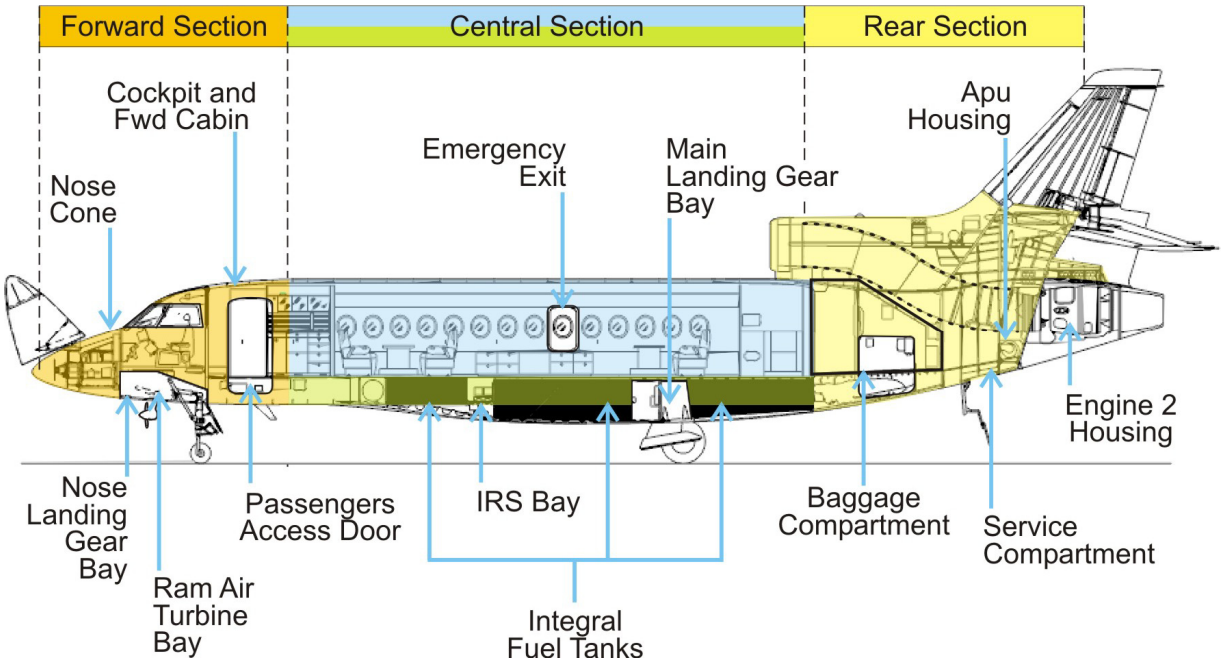


**EXAMPLE OF PASSENGER CABIN ACCOMODATION**

## FUSELAGE

The Falcon 7X fuselage is composed of three main sections:

| FORWARD SECTION | CENTRAL SECTION | REAR SECTION |
|---|---|---|
| Nose Cone<br>Cockpit<br>Forward Cabin<br>Passengers Access Door<br>Nose Landing Gear Bay<br>Ram Air Turbine Bay | **LOWER SECTION**<br>Wing Center Section (integral fuel tank)<br>IRS Equipment Bay<br>Main Landing Gear Bays<br>Fuselage integral fuel tanks<br>Body Fairing<br><br>**UPPER SECTION**<br>Main part of the Passenger Cabin<br>Emergency Exit Door | Baggage Compartment<br>Service Compartment<br>APU Housing<br>Engine 2 Housing<br>Pylons for the two outboard engines<br>Fin and horizontal stabilizer attachments |



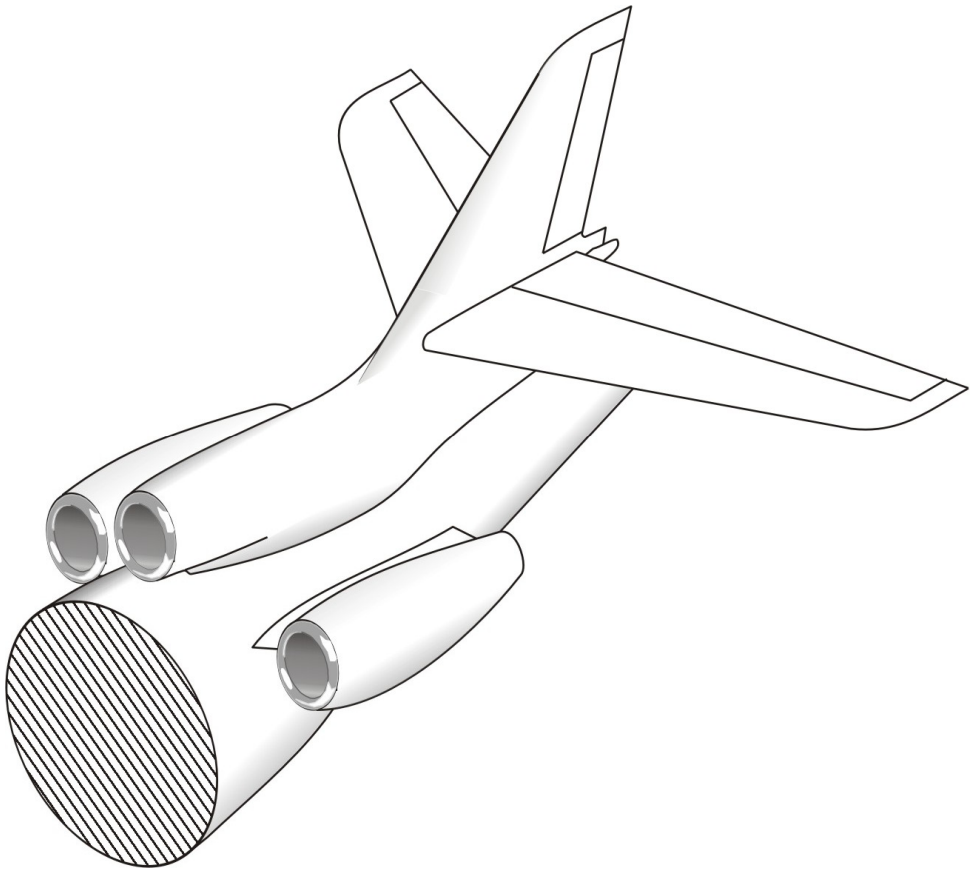

**FUSELAGE LAYOUT**

## EMPENNAGE

The empennage consists of the horizontal and vertical stabilizers.

The horizontal stabilizer is mounted midway on the vertical fin, away from disrupted airflow caused by the engines No 1 and 3 exhausts.

The entire horizontal stabilizer lift angle is adjustable for pitch trim and actuated by an electrically operated jackscrew.



**VERTICAL FIN AND HORIZONTAL STABILIZER**

## WINGS

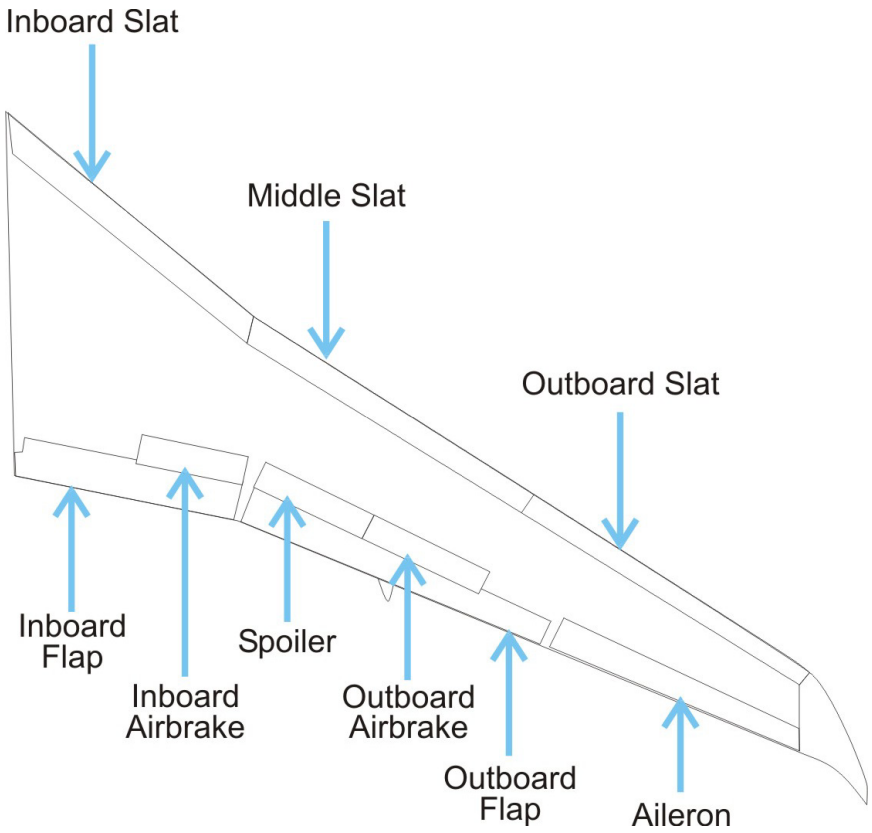
The FALCON 7X has two swept-back wing assemblies fitted with winglets.

Each wing is connected to the fuselage center lower section also named wing center section by a piano type attachment.

The main landing gear is hinged and locked onto the wing.

Each wing is composed of:

| FIXED STRUCTURE | MOVABLES ELEMENTS |
|---|---|
| Wing box (primary structure)<br>Leading edge<br>Trailing edge<br>Winglets | 3 anti-iced Slats (Slat 1 Inboard, Slat 2 Middle & Slat 3 Outboard)<br>1 Aileron (primary flight control system)<br>1 Spoiler (primary flight control system)<br>2 Airbrakes (Airbrake 1 Inboard & Airbrake 2 Outboard)<br>2 Flaps (Inboard & Outboard Flap)<br>1 Main Landing Gear Door |




**WINGS MOVABLE ELEMENTS**

## DESIGN PRINCIPLE

The airframe was designed considering the following design principles:

- With regard to efficiency :
  - New design of wings fitted with winglets increasing the range,
  - New design of windshields increasing pilots frontal and lateral visibility.
- With regard to reliability:
  - The structural design of the 7X airplane conforms to a fail safe structural design concept and meets fatigue and damage tolerance requirements,
  - The airplane mainly employs high-strength aluminum alloys in its structure,
  - The structure also includes other high technology materials such as titanium, corrosion resistant steel, and carbon composites for primary structures, fiberglass and Kevlar for the secondary components.
- With regard to safety :
  - Airframe is protected from structural damages following:
    - A bird strike with honeycomb shields and reinforced leading edge,
    - A crash landing with friction pads and crash pads (protection of fuselage integral fuel tank),
    - An engine fire and Engine rotor burst with firewall and rotor burst shield,
    - A depressurisation with pressure balance panels avoiding floor collapse.
- With regard to comfort :
  - Fuselage longer than the Falcon 900EX but with a similar diameter,
  - Accomodations for 19 passengers on long range flights,
  - Forward and aft lavatories.
- With regard to maintenance:
  - Multiple access panels.

## FUSELAGE

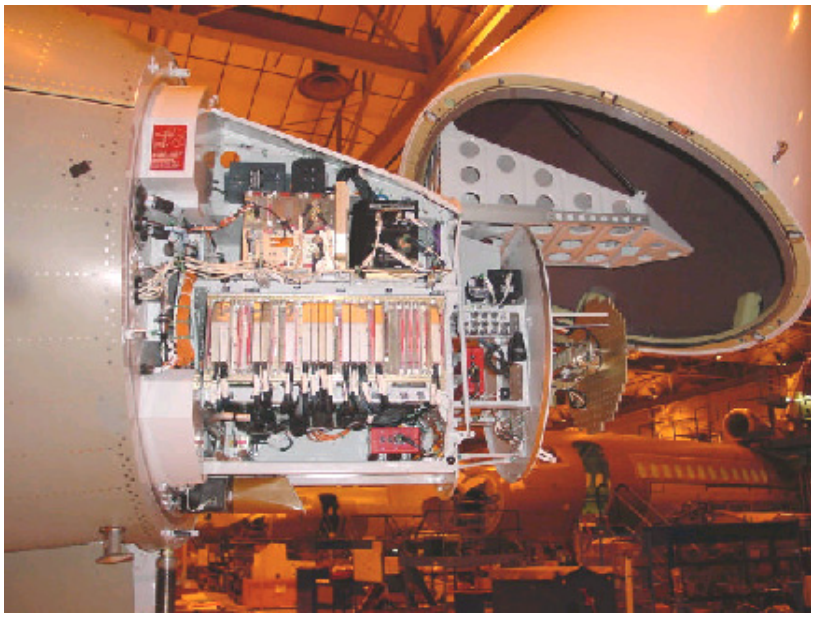
### FORWARD SECTION

The forward section is composed of:

- A nose cone composed of two composites parts and where are located:
  - The avionics rack,
  - The radar.
- A cockpit section including:
  - The pilots arrangement,
  - The cockpit windshields and lateral windows,
  - The nose landing gear bay,
  - Ram Air Turbine (RAT) bay,
  - The forward cabin section with the passenger access door.

#### Nose Cone

The nose cone is a composite structure. It is pressurized and can be slid forward and locked or lifted for better access and locked in open position by a compensating rod. The nose cone houses avionics rack, radar and other optional equipment.



**NOSE CONE OVERVIEW**

**Pilots Arrangement**

- *.Refer to ATA 25_2 INTERIOR ACCOMODATION  for supplementary information*

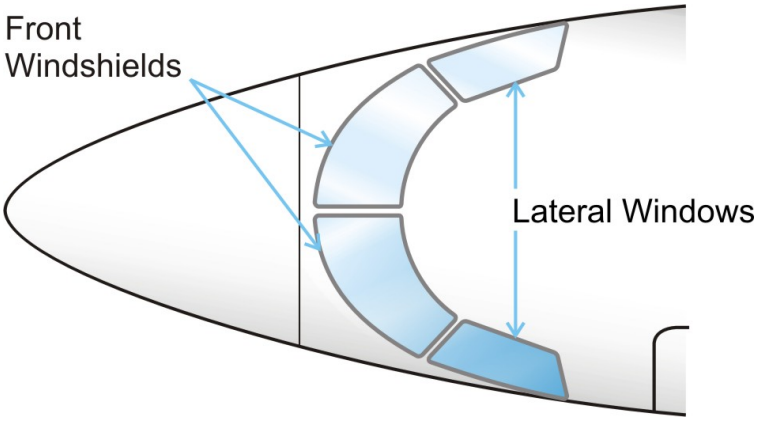
**Cockpit Windshields and Lateral Windows**

The cockpit design includes two front windshields and two side windows.

The front windshields are single curved and the lateral windows are double curved.

There is no opening window and no windshield wiper.

- *Refer to ATA 30_2 ICE AND RAIN PROTECTION for supplementary information*




**COCKPIT WINDSHIELDS AND LATERALS WINDOWS**

### Nose Landing Gear Bay

The landing gear bay is composed of two bulkhead pressure webs and one upper bulkhead pressure floor.

The webs include 4 spherical bearings to attach the nose landing gear system (2 for the drag brace and 2 for the gear leg).

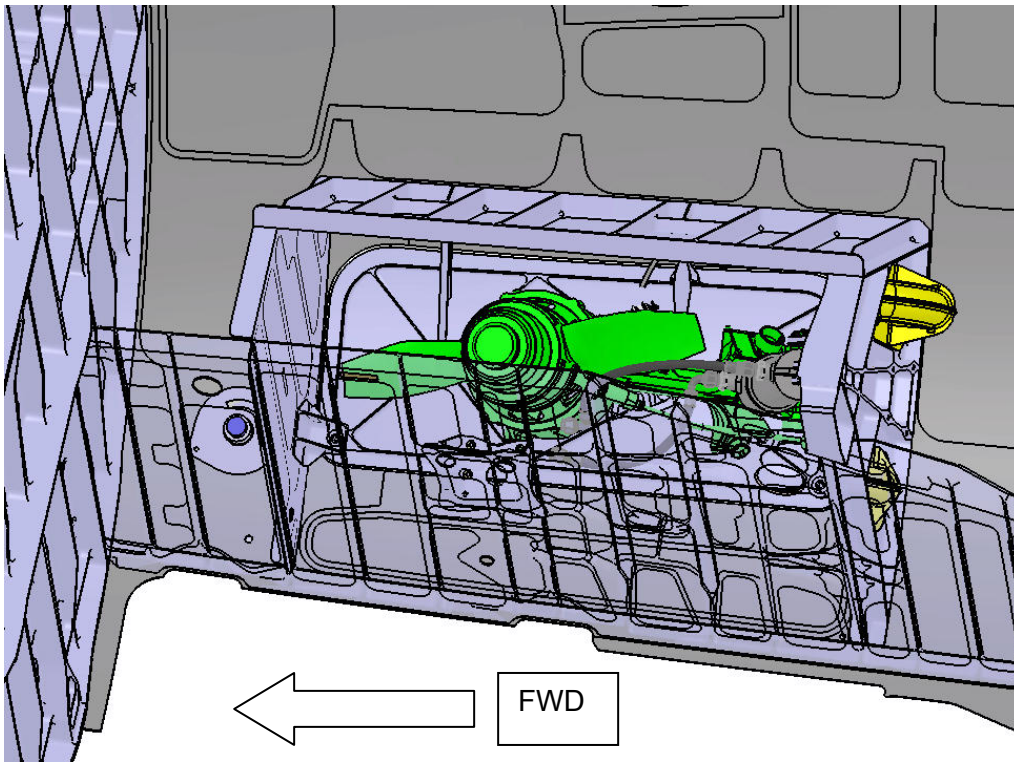
The upper panel supports the hook that locks the gear in retracted position.

- *Refer to ATA 32_1 -LANDING GEAR for supplementary information*

### Ram Air Turbine Bay

The Ram Air Turbine bay is located on the right hand-side of the nose landing gear bay.

It is composed of one bulkhead pressure web, one upper bulkhead pressure floor and two bulkhead pressure frames. The door is attached to the RAT through a link rod.




**RAM AIR TURBINE RETRACTED VIEW**

## CENTRAL SECTION

The central section of the fuselage is composed of:

- An upper section with:
  - Passengers cabins (forward and aft lounges).
- A lower section with:
  - Wing center section, which is an integral fuel tank,
  - Forward integral fuel tank,
  - Rear integral fuel tank,
  - Main landing gear bays,
  - IRS equipment bay.
- A body fairing.

### Passenger Cabin

The passenger cabin extends from the flight deck partition to the rear lavatory. It is thermally insulated and is equipped with side and ceiling panels, consoles, window trim panels, and passenger service units (oxygen masks, gaspers, passenger ordinance signs, and reading lights).

Interior seating arrangements are available for up to 19 passengers. Interior arrangements and furnishings vary among airplanes because of customer requirements and preferences.

The items, which can be customized and tailored for customers, include:

- The arrangement of decorating elements (furniture, partitions, seats, sofas) The material used for trim paneling,
- Cabin equipment (galley, stereo, video, refrigerator, bar, tables),
- Cabin lighting,
- Location of front and/or rear lavatory and the cabinetry,
- Miscellaneous customer airplane certified equipment.

**CABIN LAYOUT**

- **Cabin windows**

  The passenger cabin features twenty-eight elliptical windows formed of two stretched acrylic material panels.

  The ninth window aft on the right side is installed in the emergency exit door.

- **Emergency exit**

  An emergency exit is located on the right side of the cabin at the ninth window, over the wing.

➢ *Refer to ATA 52 DOORS for supplementary information*

**Wing center section**

The wing center section is the extension of the wing into the fuselage.

The wing center section introduces the moment due to wing bending into the fuselage and also serves as an integral fuel tank.

The upper panel of the tank constitutes the lower boundary of the pressurized area

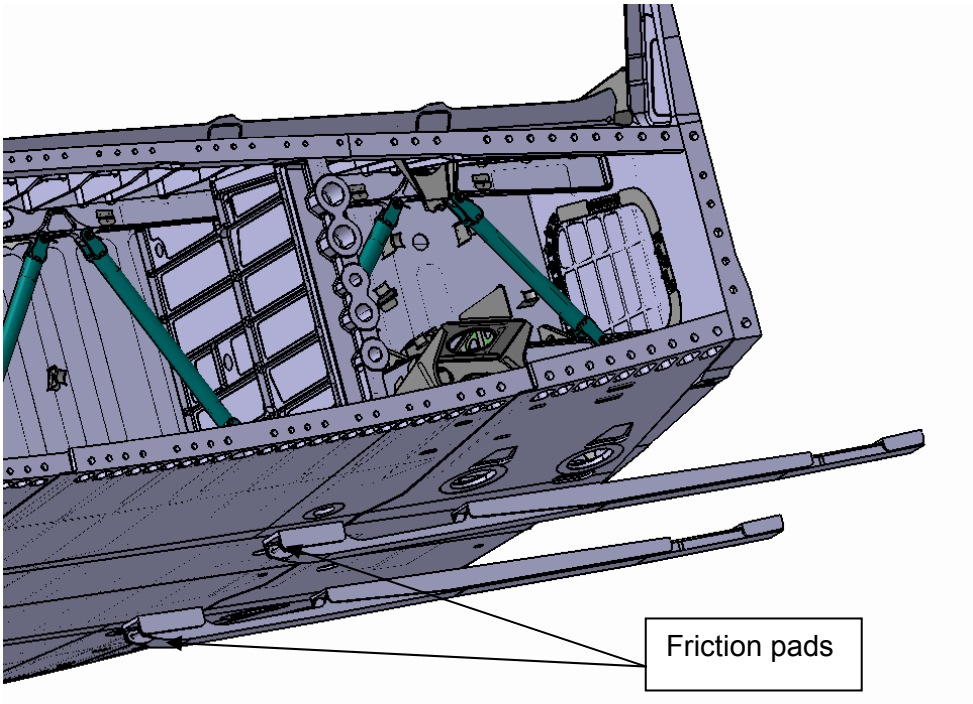
The lower panel is fitted with friction pads allowing the airplane to stop after an emergency landing without land gear extension.

**Forward and rear integral fuel tank**

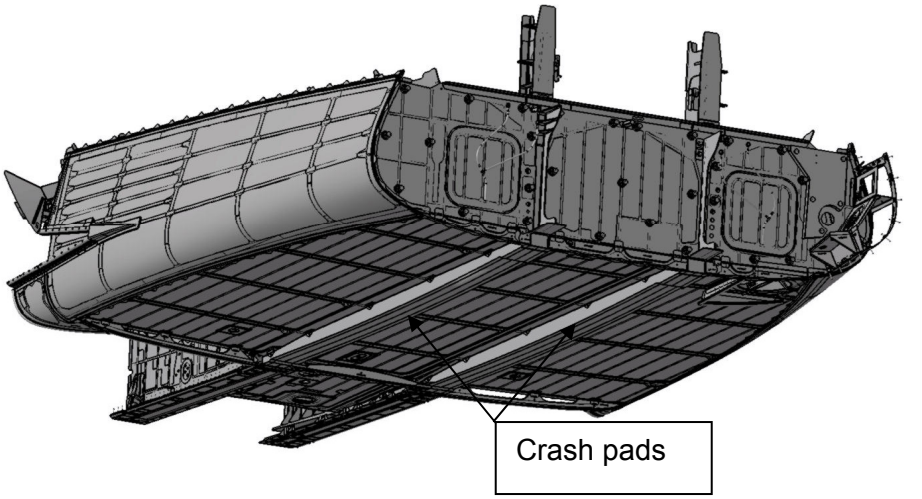
The forward and rear lower section each includes an integral fuel tank.

The upper panels of the fuselage fuel tanks constitute the lower boundary of the pressurized area.

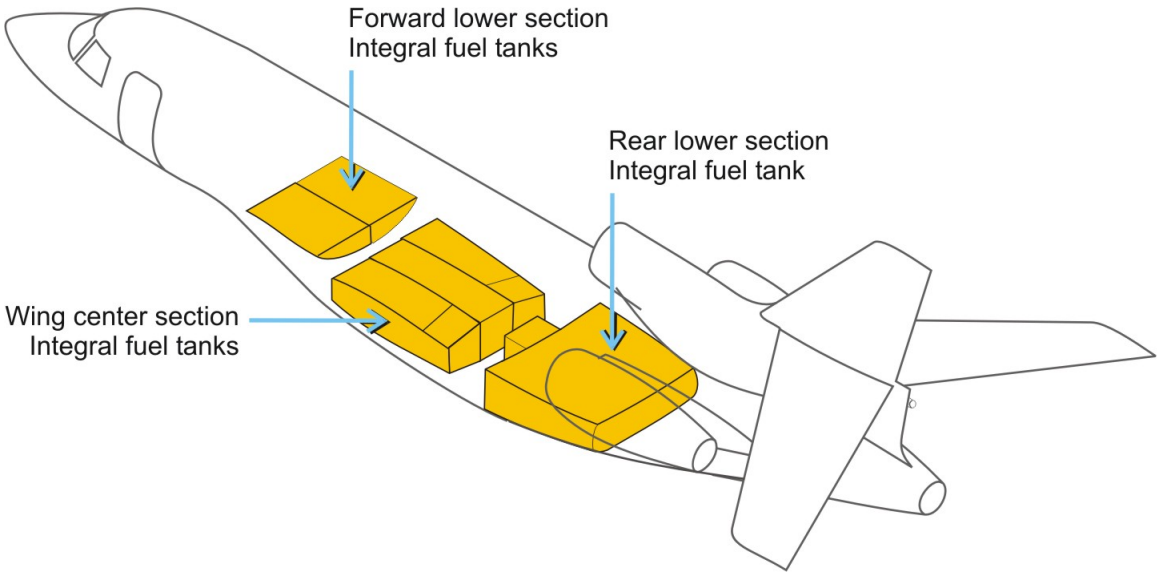
The rear fuel tank lower panel is fitted with crash pads (honeycomb structure) absorbing vertical energy in case of an emergency landing with main landing gear retracted.




**FRICTION PADS**




**CRASH PADS**




**FUSELAGE FUEL TANKS LOCATION**

### Main landing gear bays

➢ *Refer to ATA 32 - Landing gear and braking system for supplementary information.*

### IRS equipment bay

A pressurized area between the forward and center fuel tanks allows installation of specific layout as the IRS.

The bay is fitted with an external access door.

### Body fairing

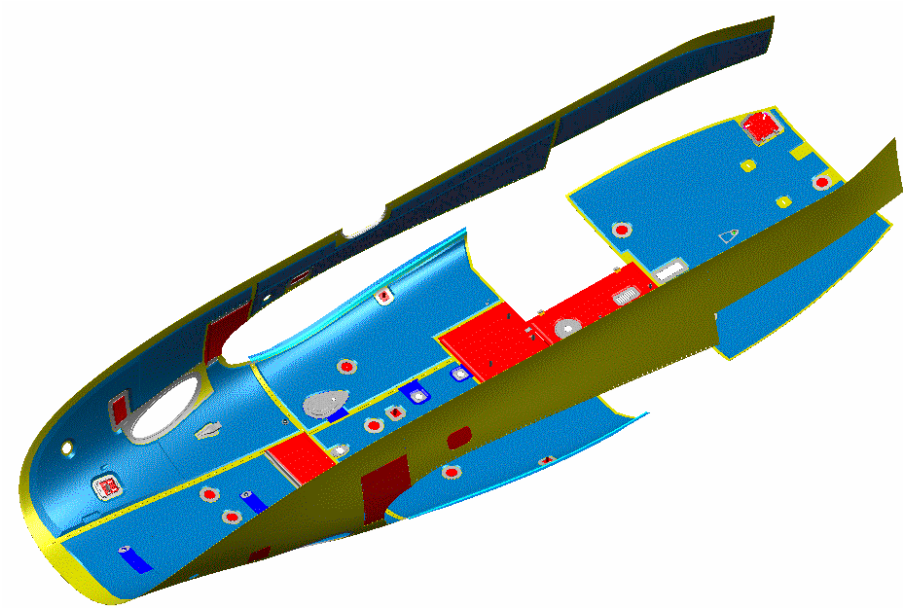
The body fairing covers a part of the lower outer surface of the fuselage.

It is attached to the lower and upper fuselage sections and to the wings.

The cavities between the body fairing and the structural fuselage sections are used to install various systems such as fuel system, hydraulic system, landing lights and navigation systems.

Various communication and navigation antennas are installed on the fairing.

The fairing features access doors, venting and drain holes.



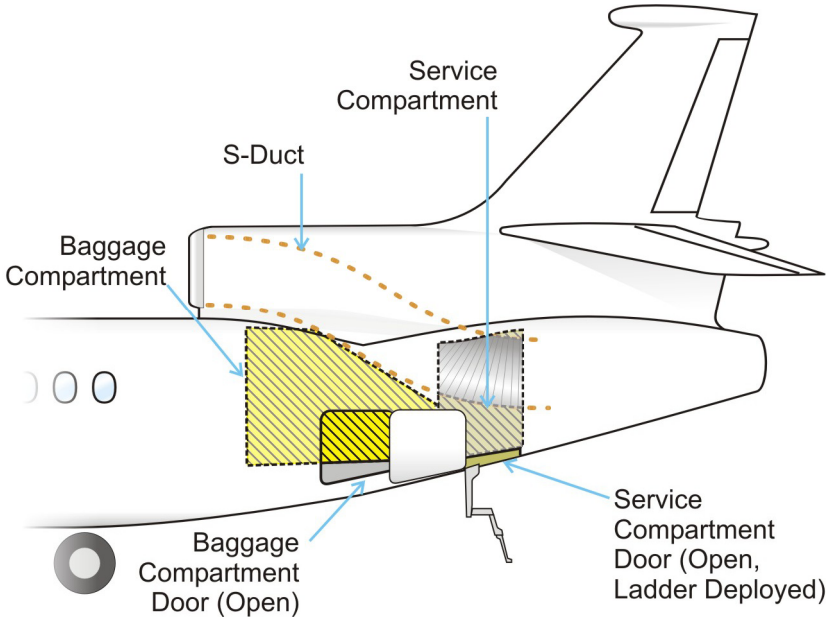
**BODY FAIRING**

## REAR SECTION

The rear section carries the three engines, the auxiliary power unit, the empennage, and all mounts for aircraft system installation.

The rear section is composed of:

- The aft fuselage, divided in two parts:
  - A pressurized baggage compartment with a baggage door,
  - A non-pressurized service compartment with a service door,
- Engine mount pylons, for lateral engines,
- One internal engine location with S-duct air inlet,
- The vertical stabilizer stub, which is the lower portion of the vertical fin, interfacing with the horizontal stabilizer.




**REAR SECTION AND S-DUCT**

### Baggage compartment

The pressurized baggage compartment is located in the forward part of the rear section and is accessible in-flight through the door located in the aft partition of the lavatory.

This baggage door is monitored in latched position and must be closed above 40,000 ft for compliance with high altitude operation requirements.

A left external door provides ground access to the baggage compartment.

### Service compartment

The unpressurized service compartment is located immediately aft of the baggage compartment and houses hydraulic, air conditioning and miscellaneous components.

Access to the service compartment is made through a door with an attached ladder on the left underside of the airplane.

The service compartment gives access to the S-duct door.

## EMPENNAGE

### HORIZONTAL STABILIZER

The horizontal stabilizer is an all movable structure installed on top of the fin stub and underneath the vertical stabilizer.

It is attached to the fin stub by means of the main rear hinge fitting and the front connection to the trim actuator.

### VERTICAL FIN

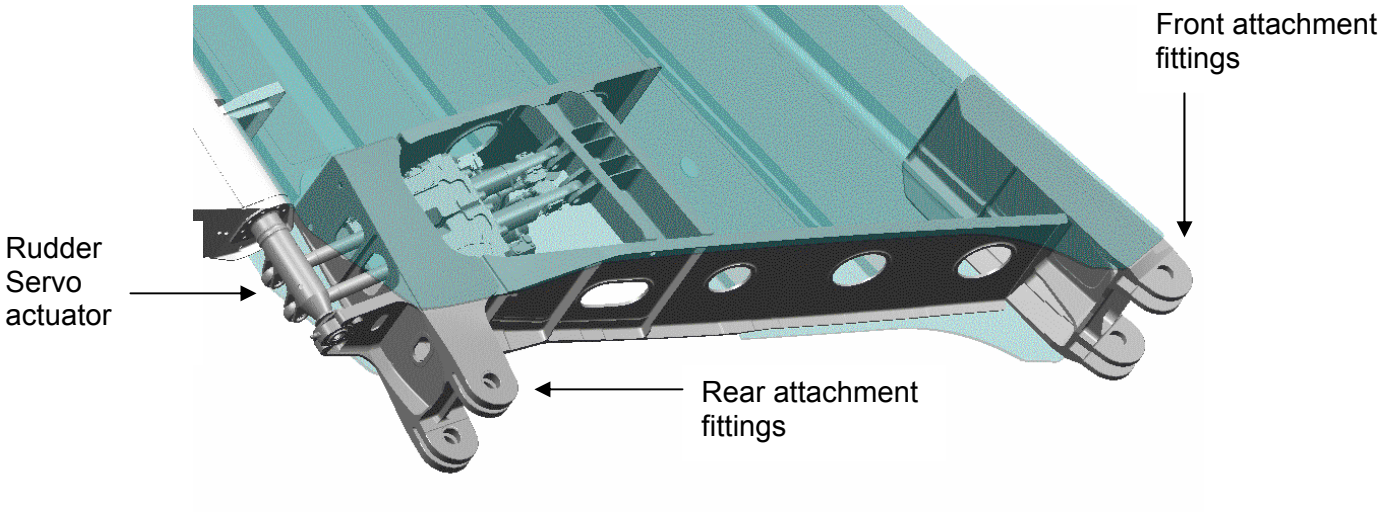
The fin is constituted by a torsion box on witch is installed:

- The leading edge,
- The satcom antenna,
- The rudder ,
- A lower fairing.

The fin box is attached to the airframe by four points:

- 2 points on the front spar,
- 2 points on the rear spar.

The rudder is activated by a servo actuator in the root of the fin.




**VERTICAL FIN FRONT AND REAR ATTACHMENT FITTINGS**

## WING

### WING BOX

The wing box is an assembly of spars, ribs and skin panels.

The wing box is the primary structure of the wing and acts first as a structure box, withstanding inertia loads and aerodynamic drag and lift.

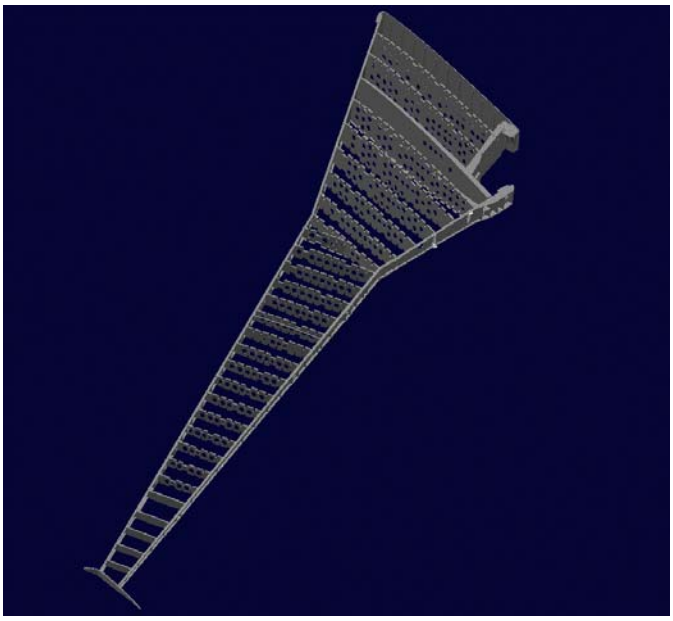
It receives also ground loads coming from the main landing gear and jacking points.

Wing loading is transmitted to the fuselage by a piano type attachment.

A large section of the wing box is a fuel tank, divided in three compartments.

The fixed leading edge structure is located in front of the box forward spar and attached to it.

The fixed trailing edge structure is located behind the wing box aft spar and attached to it.

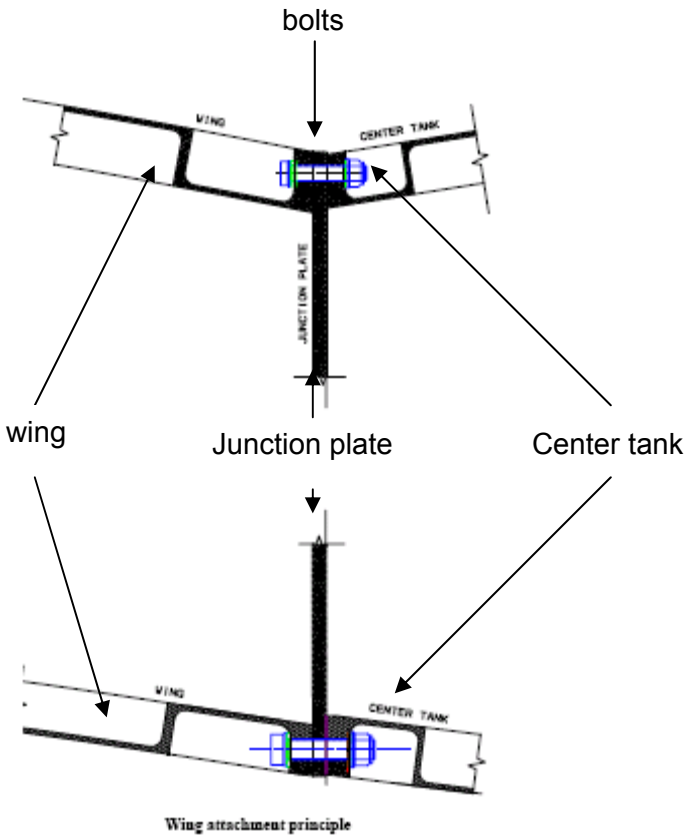


**WING BOX ASSEMBLY**

## FUSELAGE AND WING ROOT CONNECTION

Each wing is connected to the fuselage by the means of 112 tension bolts of different sizes (piano type attachment).

Wings can be removed on de field if necessary.




**WING PIANO TYPE ATTACHMENT**

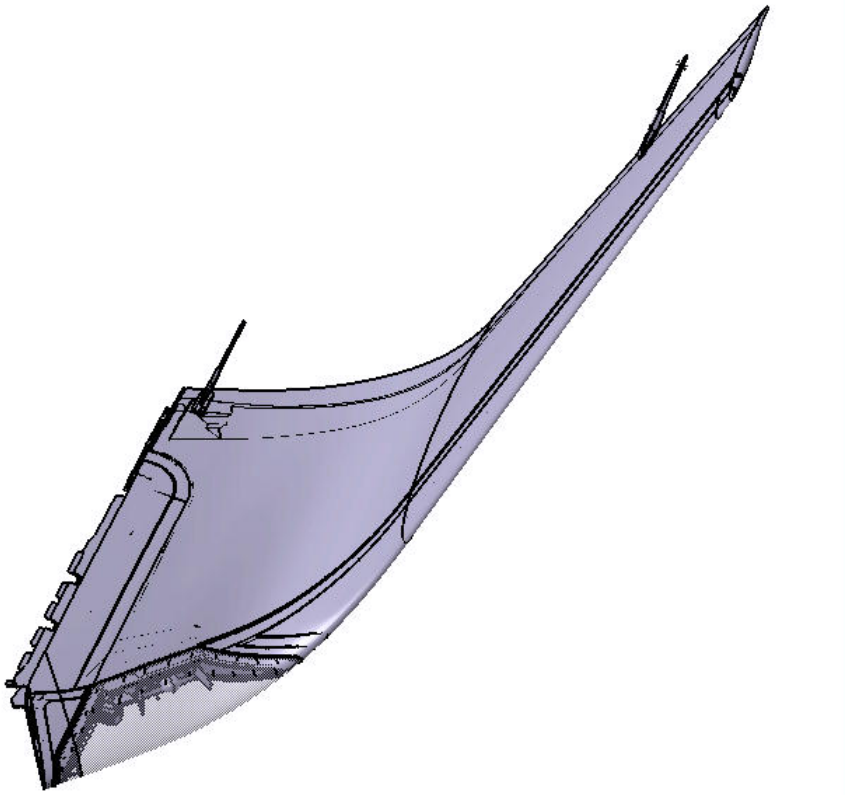
## WINGLET

The winglet is attached to the wing box structure and is composed of:

- A torsion box made of foam with structural adhesive,
- An upper and a lower skin made of carbon fiber,
- Carbon fiber blocks ribs in junction with the wing box.

The winglet is equipped with the navigation/anti-collision lights transparent cover and two static dischargers.

The winglet leading edge is not anti-iced.



**WINGLET VIEW**

## STRUCTURAL PROTECTIONS

Airframe is protected from structural damages by means of different features:

- Honeycomb shield are attached to the fuselage frame 1 in order to withstand bird strike loads,
- The fuselage floor substructure includes movable parts to equalize pressure between under floor and over floor areas in case of cabin sudden loss of pressure,
- Friction pads and vertical energy absorber pads (crash pads) are fitted under the fuselage integral fuel tanks in order to protect them in case of crash landing,
- Each wall of the centre section integral fuel tank in interface with the cabin, is isolated by a fume proof enclosure directly in contact with the walls,
- Firewalls between engines 1 and 3 and they pylons ensure fire protection shields for rear fuselage,
- A reinforced leading edge structure protects the engines pylons from bird strike impact.
- A rotor burst shield protects the vertical stabilizer critical parts (protection against engine 2 rotor burst).

## INTRODUCTION TO DOORS

The falcon 7X fuselage doors include the following doors:

- Passenger door,
- Emergency exit door,
- Cabin to baggage compartment door,
- Baggage compartment external door,
- Service compartment access door,
- S-duct access door,
- IRS access door,
- RAT door,
- Refueling control panel door,
- Servicing and maintenance multiple access doors (no description).

## FLIGHT DECK OVERVIEW

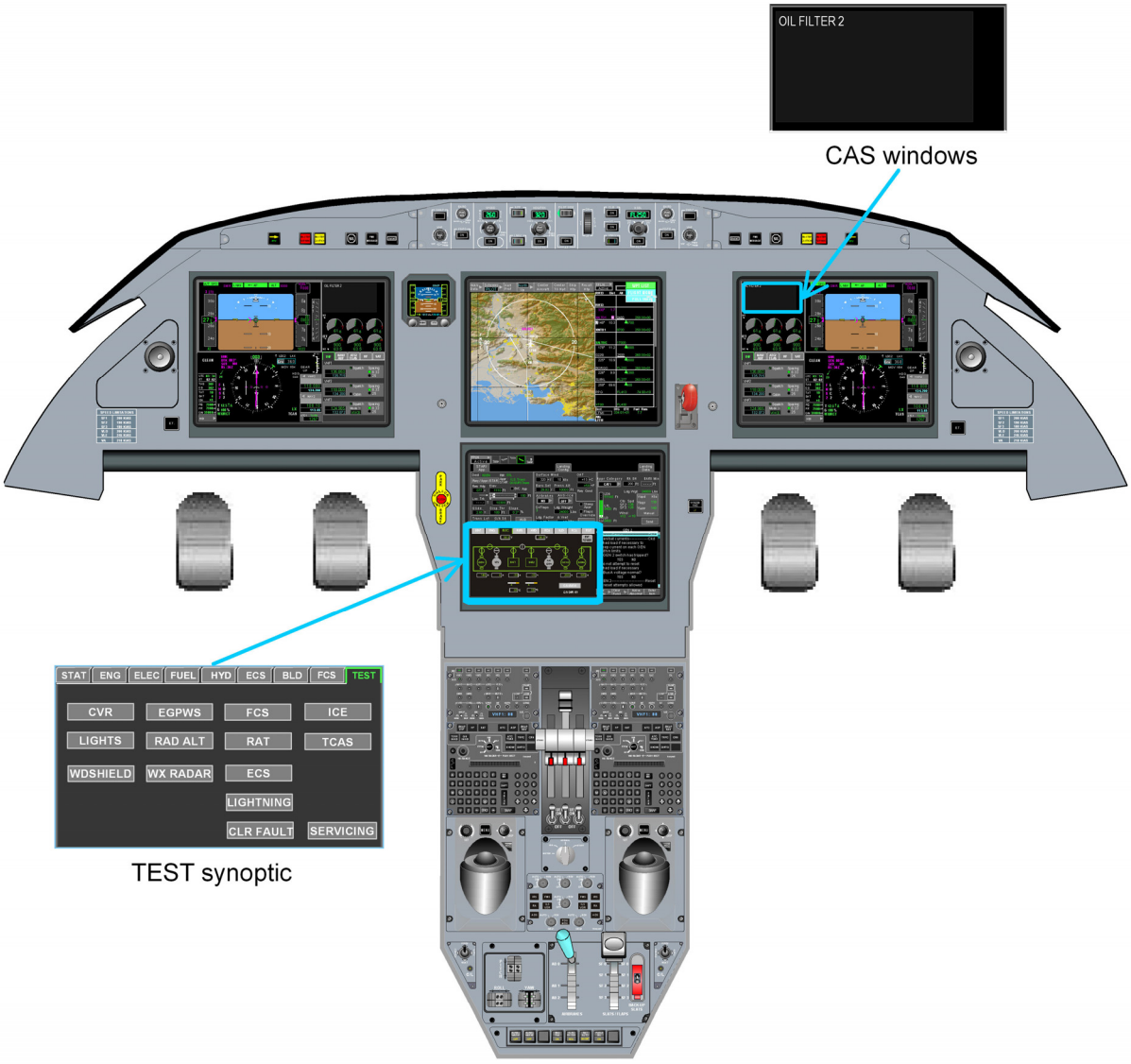
### CONTROLS

No dedicated control is available in the cockpit for the doors system.

### INDICATIONS

Cockpit indications related to the doors system are displayed on:

- The ENG-CAS window for CAS messages,
- The TEST Synoptic page through the SERVICING window.




**FLIGHT DECK OVERVIEW**

## PASSENGER DOOR

### DESCRIPTION

The passenger door is located on the fuselage forward LH side and corresponds to a type I emergency exit.

The door latch and unlatch is performed manually.

The door opens outwards in a vertical movement downwards and includes an integral staircase with a telescopic hand-rail.

The door opening is damped by a pneumatic actuator and a geared electrical motor acting as a brake.

The door closing is performed by the same geared electrical motor.

Electrical lifting may be controlled by pushbuttons either from inside or outside the airplane.

In case of an electrical motor failure, door closing is possible with external manual assistance or from the inside using a cord attached to the unlocking handle, in all cases the manual opening remains possible.

Indication of the door status is provided by two proximity detectors, one micro-switch and visuals indicators.


**PASSENGER DOOR**

**OPERATION**

The door can be open for evacuation even with a collapsed landing gear, in this case the door is used in the horizontal position in order to evacuate the airplane.

**Outside operation:**

Door opening procedure:

- Grip the handle by pushing a safety catch located in the center of the handle,
- Rotate the control handle upwards,
- Pull the control handle and guide the movement of the door manually.

Door closing procedure:

- Hold down the exterior DOOR LIFT pushbutton,
- Release the pushbutton when door closed (the door in maintained against its stops for 2 seconds),
- Latch the door by operating the exterior control handle fully down in the locked position.

**Inside operation:**

Door opening procedure:

- Rotate the interior control handles upwards (hard point at the beginning of the movement indicates unlocking of the door),
- Rotate the control handle upwards until opening of the door (rotation = 230°).

Door closing procedure:

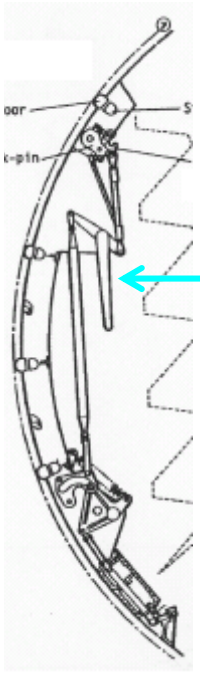
- Hold down the exterior DOOR LIFT pushbutton,
- Release the pushbutton when door closed (the door in maintained against its stops for 2 seconds),

**Closing procedure in Manual mode:**

Door closing is possible with external manual assistance or from the inside using a cord attached to the unlocking handle,

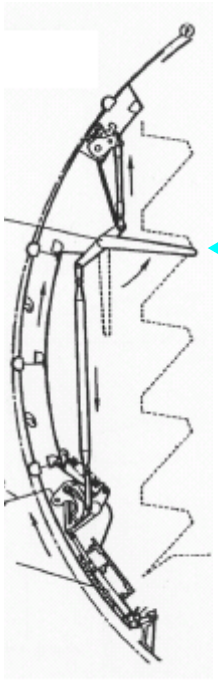
Latch the door by operating the exterior or interior control handle fully down in the locked position.

**DOOR CLOSED AND LOCKED**



Interior Control Handle

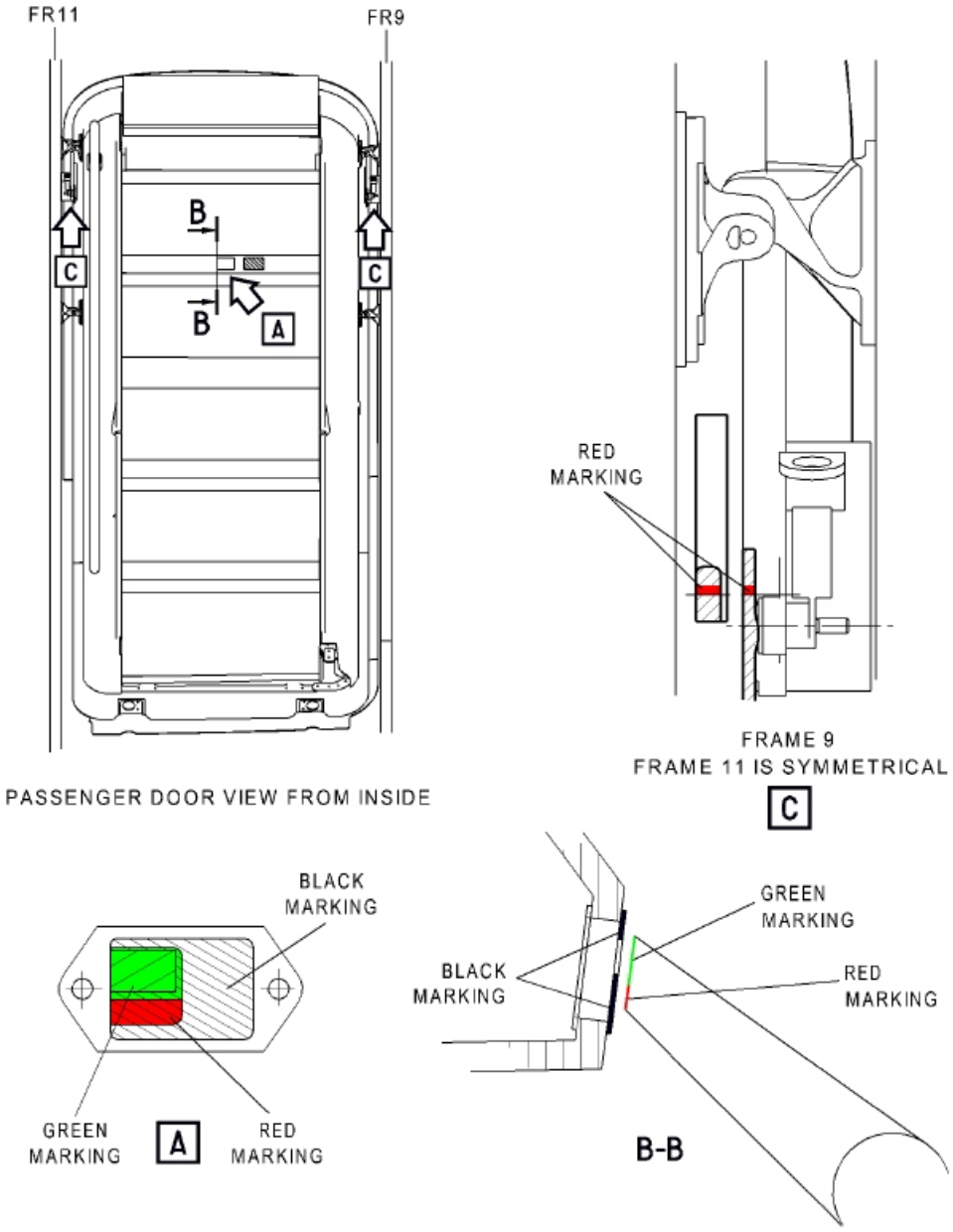
**DOOR UNCLOSED IN HIGH POSITION**



Interior ControlHandle

Exterior Control Handle

**PASSENGER DOOR CONTROL MECHANISM**




**PASSENGER DOOR VIEW FROM INSIDE**

## EMERGENCY EXIT DOOR

### DESCRIPTION

A type III emergency over wing exit is located on the right side of the cabin at the ninth window aft.

The exit is a removable panel including a conventional window in the center and a quick-release mechanism at the upper part.

Unlocking is controlled from the inside with a handle and from the outside by means of a pushbutton connected to the inside handle.

The Indication of the door status is provided by a proximity detector.

A REMOVE BEFORE FLIGHT pin can be installed for ground security to prevent a hatch opening.

### OPERATION

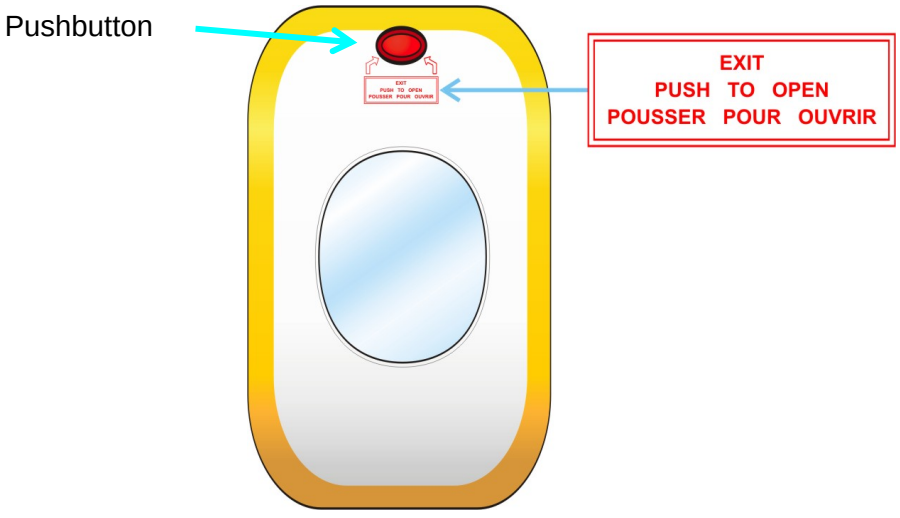
#### Opening procedure from outside

The pushbutton is protected by a plexiglas cover.

Once the plexiglas cover has been broken, the pushbutton is depressed causing the emergency exit door to unlock and open.

An instruction marking is bonded on the door, below the push button, with the following text:

- EXIT
- PUSH TO OPEN



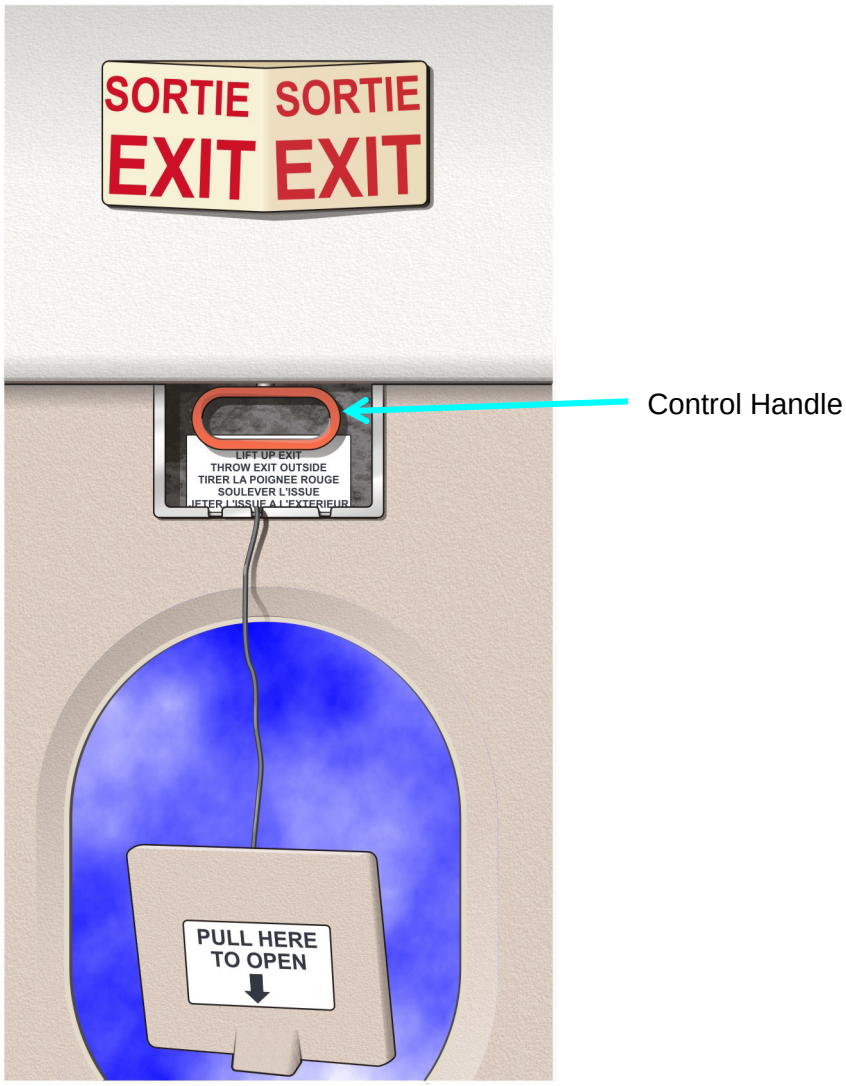

**EMERGENCY EXIT EXTERIOR VIEW**

**Opening procedure from inside**

Pulling the handle causes the emergency exit door to unlock and open.

An instruction marking is bonded on the exit, with the following text:

- PULL HANDLE
- LIFT EXIT UPWARDS
- THROW EXIT OUTSIDE




**EMERGENCY EXIT INTERIOR CONTROL HANDLE**

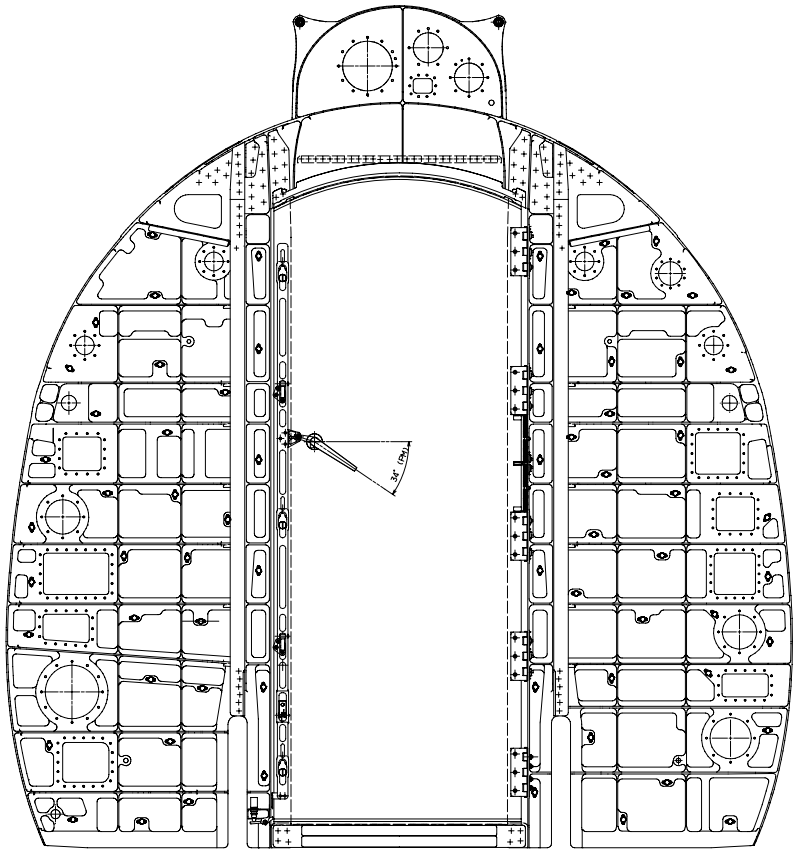
## CABIN TO BAGGAGE COMPARTMENT DOOR

### DESCRIPTION

The door permits to isolate the pressurized baggage compartment from the cabin.

As a part of the F33 Frame section which is the pressure bulkhead, above 40000 ft the door must be closed (cabin protection in case of accidental depressurization of the baggage compartment).

The Indication of the door status is provided by one micro-switch.



**CABIN TO BAGGAGE COMPARTMENT DOOR OVERVIEW**

### OPERATION

The door opens towards the inside of the toilet compartment.

The door is fully manually operated; the opening mechanism requires the operator to do a rotary movement on the handle and hold the door open.

In case of inadvertent door opening, a torsion return spring will close the door automatically.

## BAGGAGE COMPARTMENT EXTERNAL DOOR

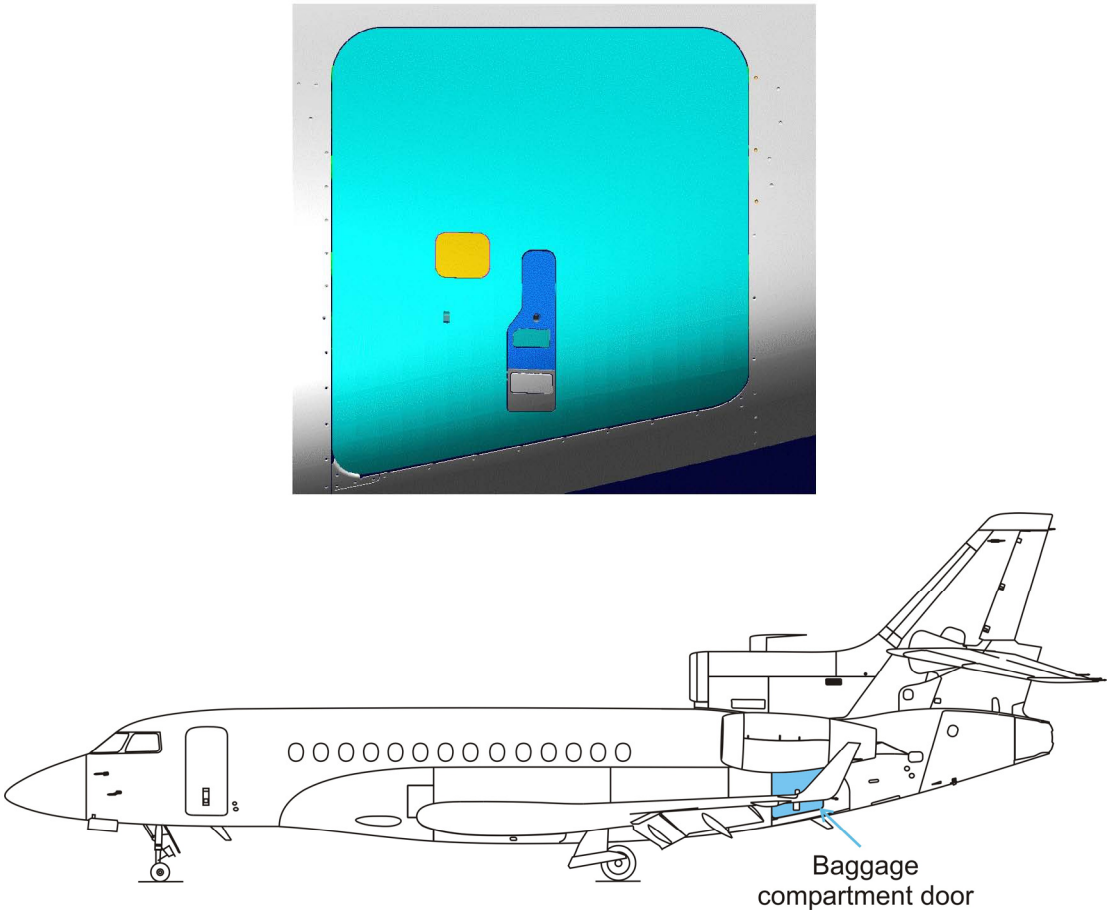
### DESCRIPTION

The baggage compartment external door is located on the rear left belly section under the side engine strut and can be only operated from outside.

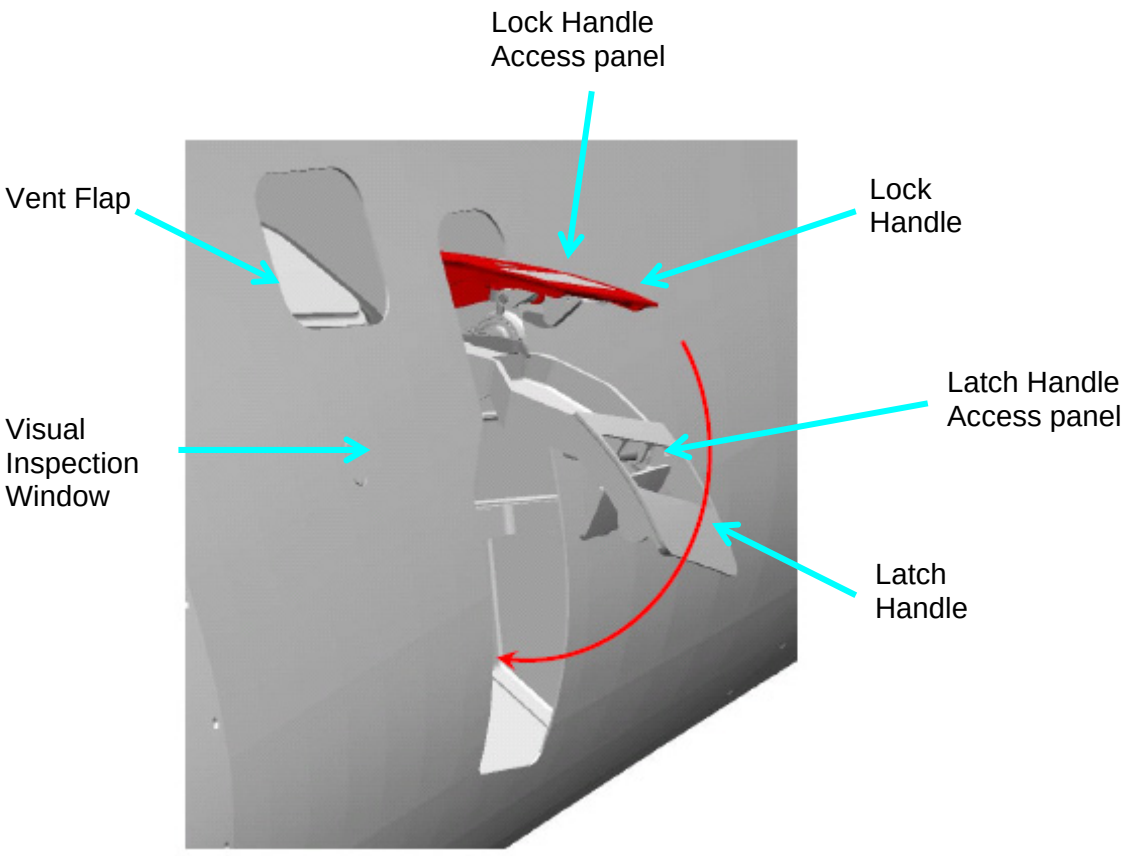
The door is a sliding aft to open type, mechanically latched and unlatched via an external handle and fully manually operated.

A vent flap controlled via the handle, enables evacuation of the compartment residual pressure.

Three sensors and a visual inspection device are installed to check the locked and latched door position.




**BAGGAGE COMPARTMENT EXTERNAL DOOR VIEW**




**BAGGAGE COMPARTMENT EXTERNAL VIEW**

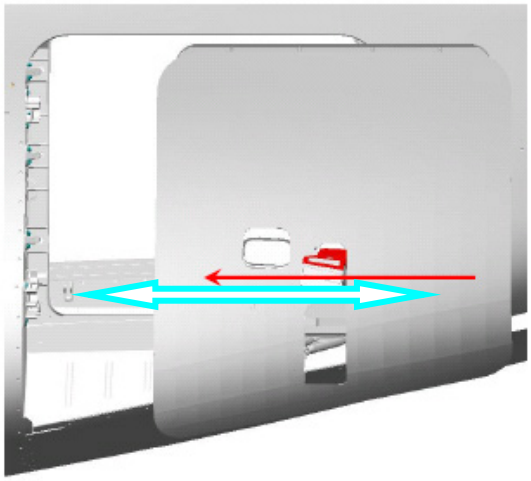
## OPERATION

### Opening procedure

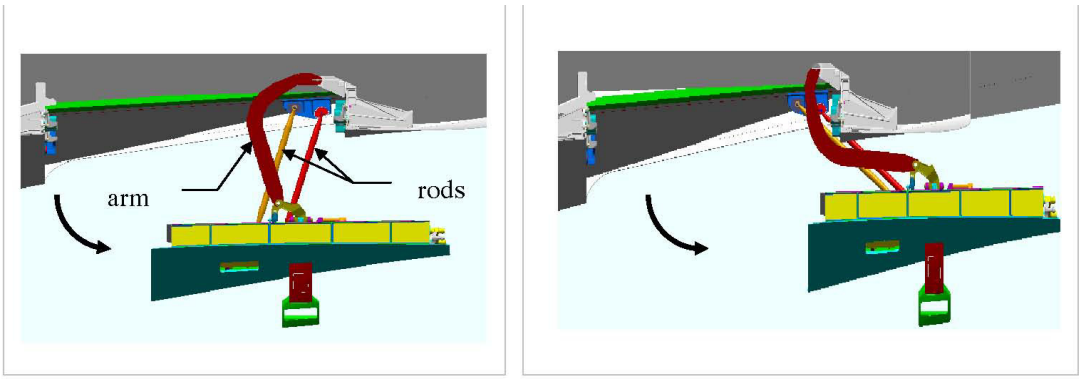
- Push on the access panel of the lock handle,
- Grasp and pull the lock handle until complete unlocking,
- Push on the access panel of the latch handle,
- Grasp and pull on the latch handle until complete unlatching,
- Move the door backwards until latching in full open position.

### Closing procedure

- Grasp the latch handle for moving the door forward to closed position,
- Push on the latch handle downwards until latching,
- Close the lock handle until locking.



**DOOR OPERATION**




**OPEN DOOR TOP VIEW**

## SERVICE COMPARTMENT DOOR

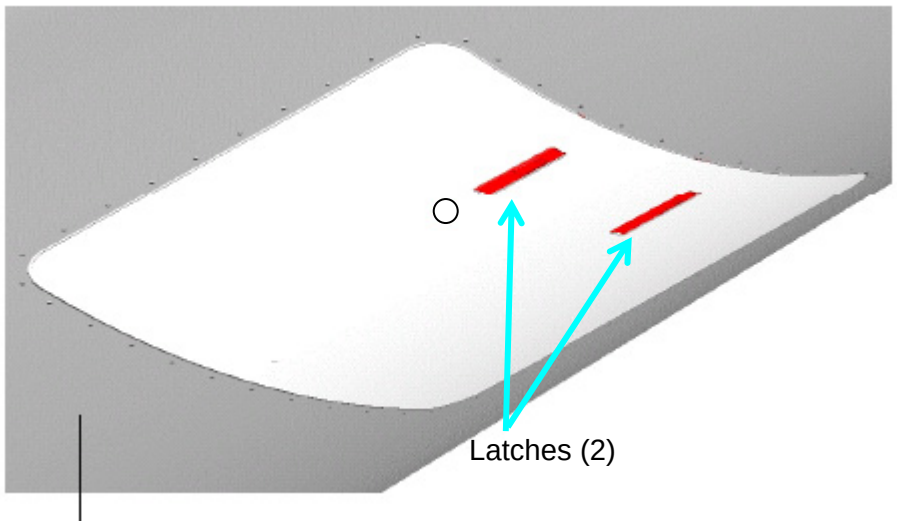
### DESCRIPTION

The service compartment door is located underside of the lower rear section.

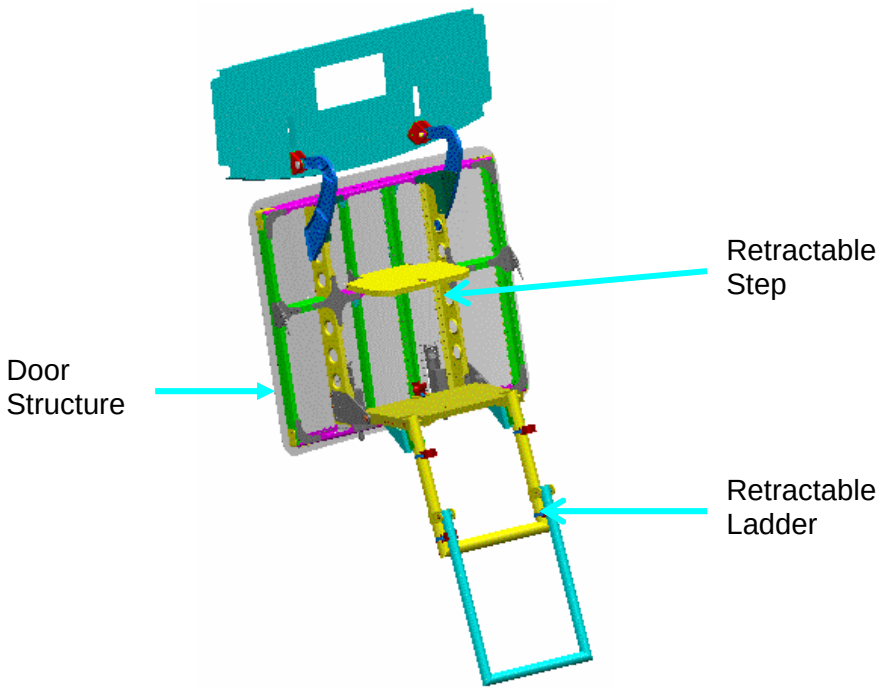
The door is manually operated and moves outwards from the fuselage.

A retractable ladder attached to the structure of the door, allows access to the compartment after opening.

The indication of the door status is provided by one sensor (switch) installed on one latch.




**SERVICE COMPARTMENT DOOR**




**SERVICE COMPARTMENT DOOR OPEN WITH LADDER DEPLOYED**

## OPERATION

### Opening procedure

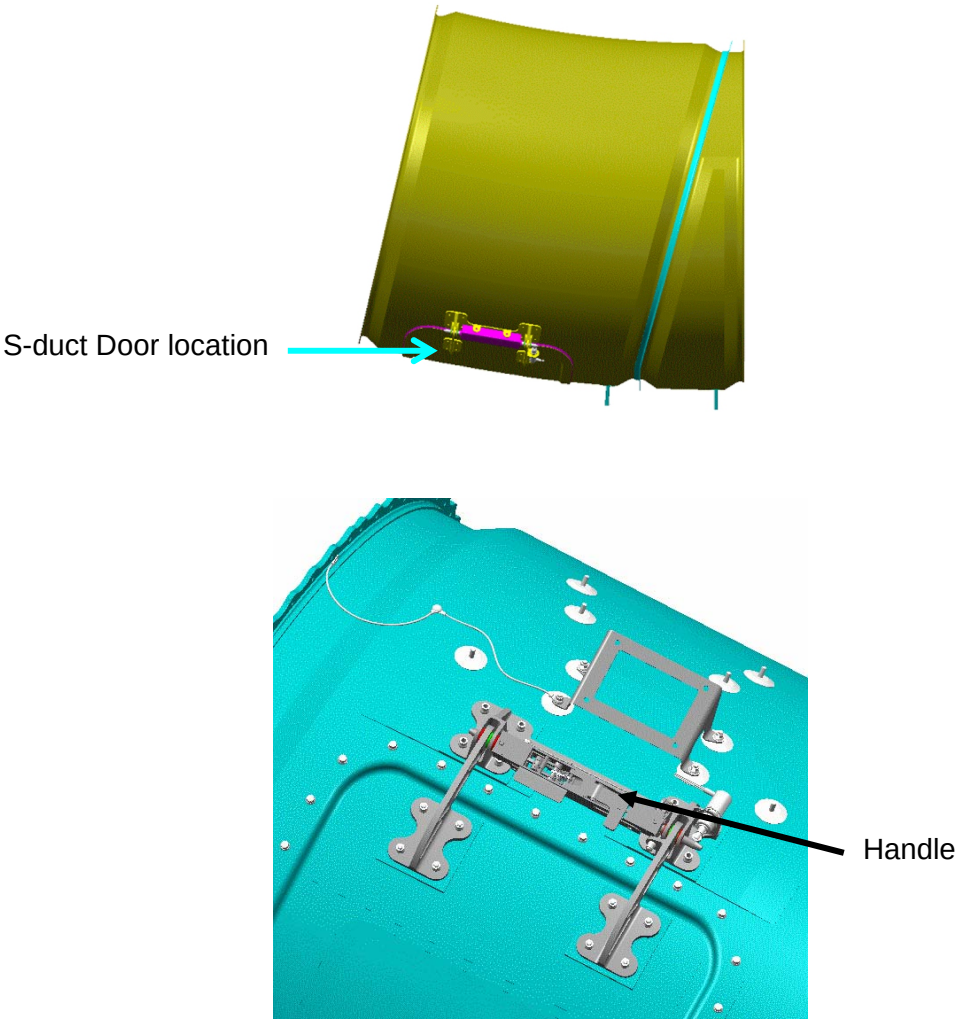
- Depress the pushbutton on each latch and pull the latch handle,
- Move the door downward in full open position,
- Move the ladder downward in full open position,
- Open the retractable step.

### Closing procedure

- Close the retractable step,
- Move the ladder upward until latching on the door structure,
- Move the door upward and push on each latch until latching S-DUCT DOOR

**DESCRIPTION**

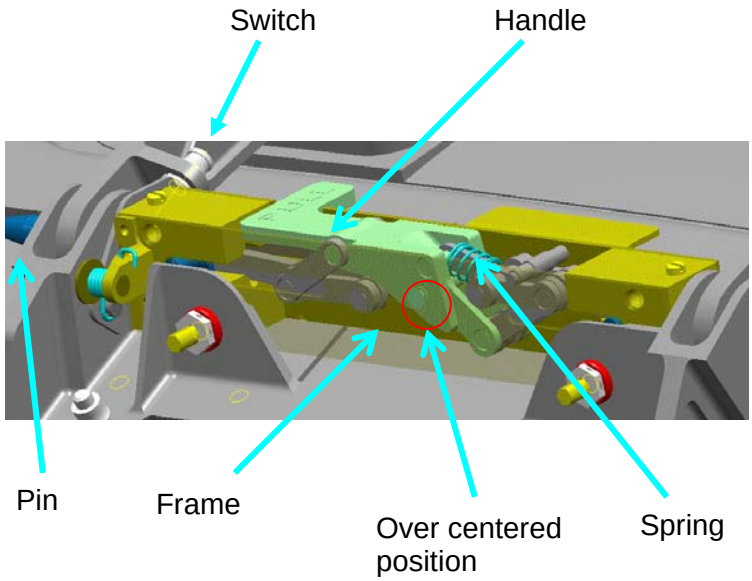
The S-duct door provides an access for inspection of the engine 2 air inlet. Access to the S-duct door is performed via the servicing compartment. Latching and unlatching is controlled by a single handle operating two pins. The indication of the door status is provided by one sensor (switch).



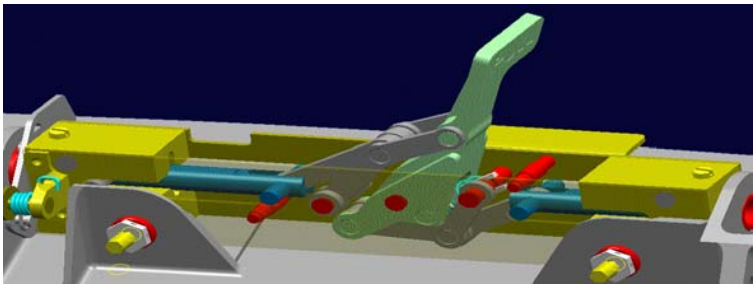

**ENGINE 2 S-DUCT DOOR**

**OPERATION**

The handle is maintained in open or closed position by a spring.
Unlatching is obtained by pulling the handle.




**CLOSED POSITION DOOR LATCHED**



**OPEN POSITION DOOR UNLATCHED**

## REFUELING CONTROL PANEL DOOR

### DESCRIPTION

This door gives access to the refueling control panel and to the fueling connector located in a non pressurized area.

The door is held closed by four secured latches and retained in open position by a pneumatic jack.

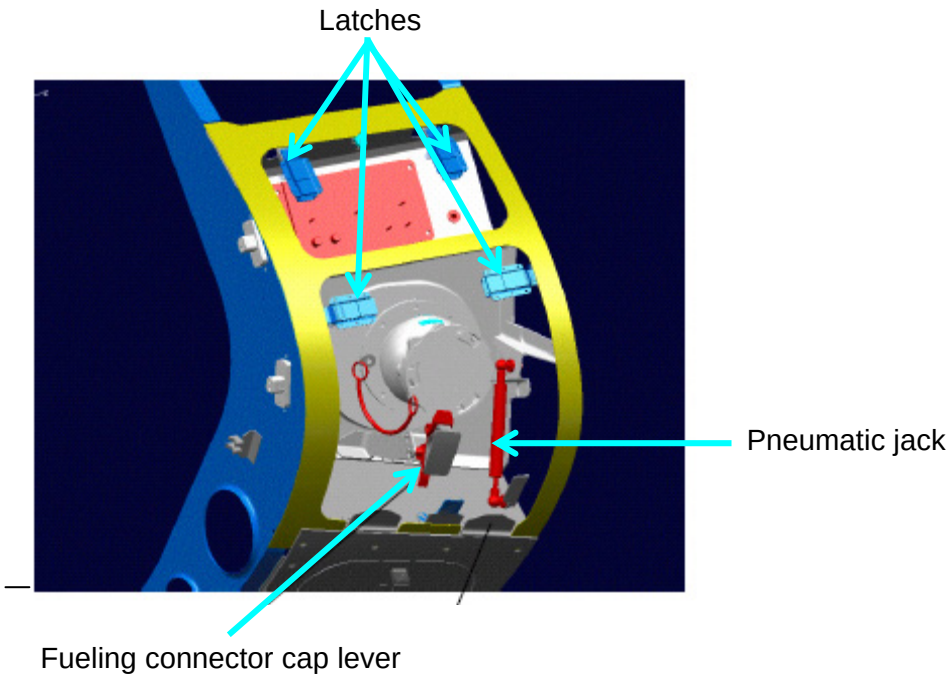
Indication of the door status is provided by one sensor (switch).

### OPERATION

To open: unlatch all four latches and rotate the door in open position.

To close: rotate the door in closed position latch all four latches.

The door cannot be closed if the fueling connector cap lever is in the lifted position.




**REFUELING CONTROL PANEL DOOR**

## IRS DOOR

### DESCRIPTION

This door is located under the fuselage and allows access to the IRS equipment compartment.

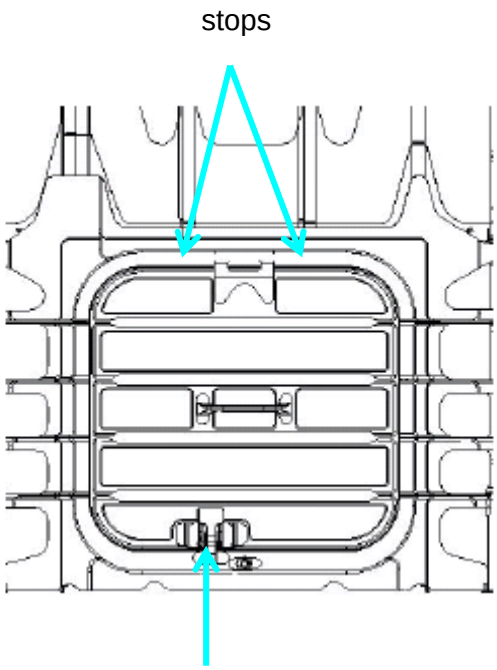
The door is held in place by two stops and a latch.

When pressurized, the cabin pressure helps in maintaining the door pressed against its frame.

There is no indication of door status.

### OPERATION

Door unlatching is obtained using a tool (screw driver) to activate the latch device while compressing the seal is compressed.




**IRS DOOR**

## RAT DOOR

### DESCRIPTION

The RAT door is linked to the RAT by means of a rod and is sized to be opened in the whole flight envelope.

The door can only be closed on ground when RAT is retracted.

### OPERATION

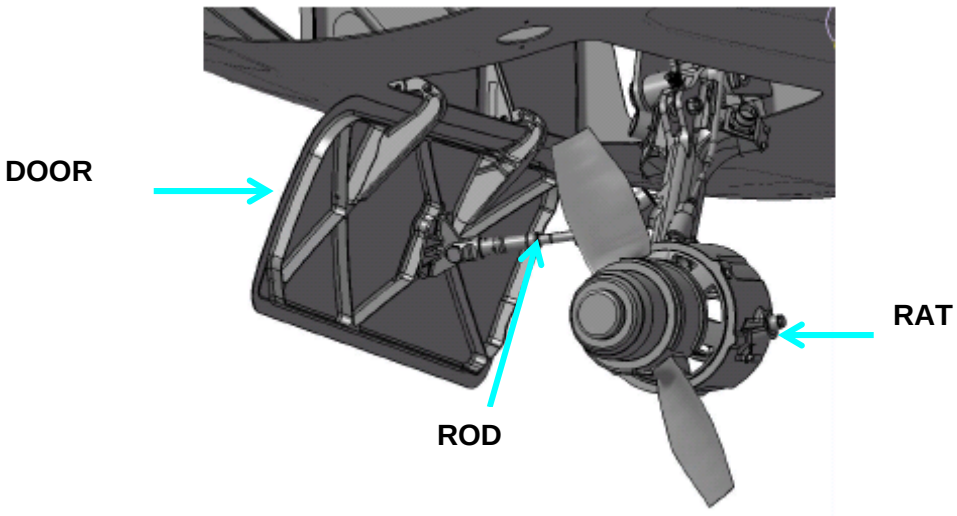
#### Opening

Since the door is linked to the RAT, the RAT deployment (provided by a loaded spring) result in simultaneous door opening.

#### Closing

The door closes while the RAT retract in the compartment by means of an hydraulic restow pump manually actuated.

➢ *Refer to ATA 24 ELECTRICAL SYSTEM for supplementary information*



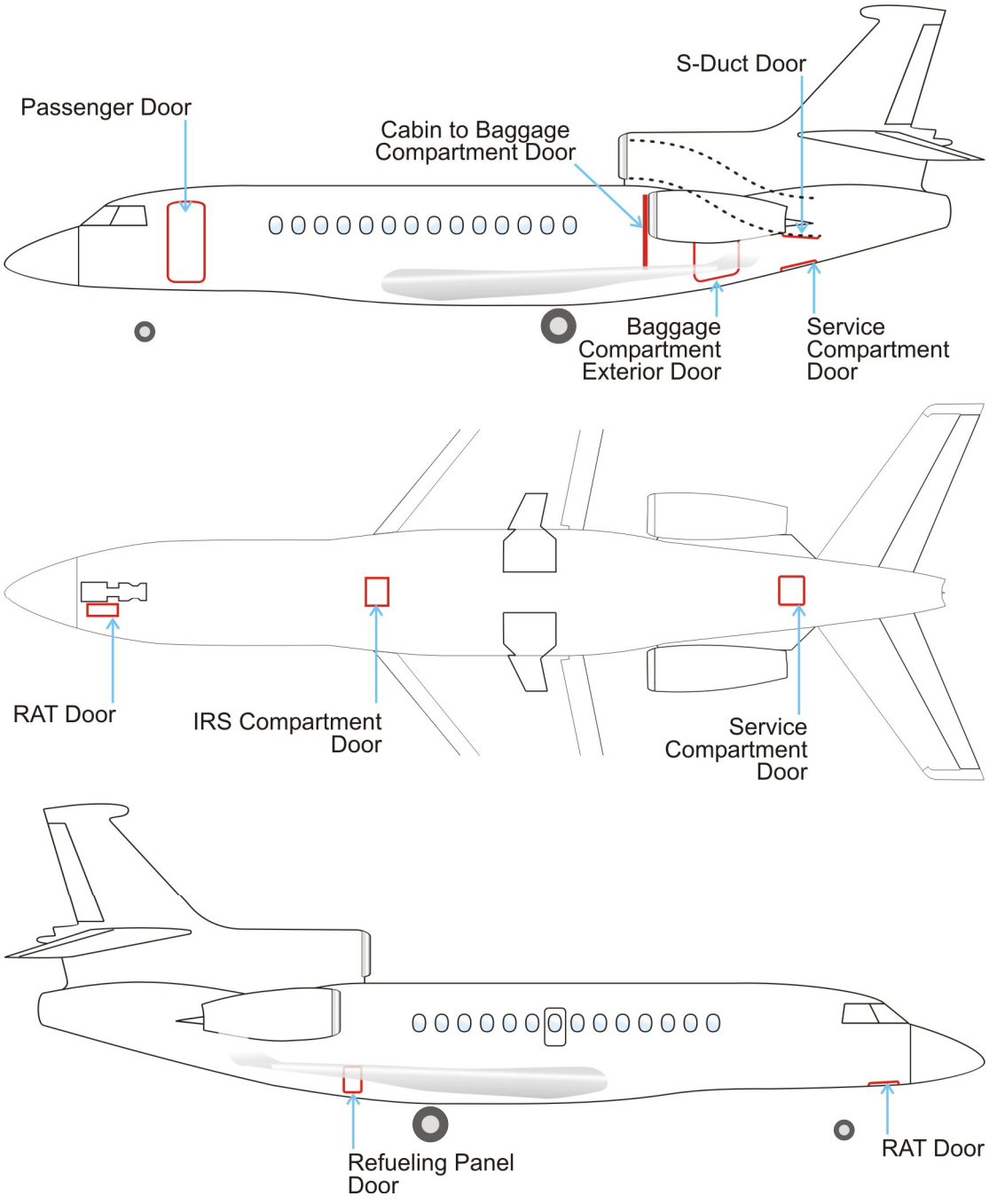

**RAT DOOR**

## DESIGN PRINCIPLE

The doors are designed considering the following design principle:

- With regard to safety:
  - All doors inducing hazard if unlocked or open are monitored and can trigger off a CAS message alert,
  - Vent flaps secure the lock mecanism when cabin pressurized for passenger door and baggage compartement external door,
  - Door lock mechanisms are secured with spring load or geometric lock,
  - The passenger door and emergency exit door opening operation is simplified with a single control device,
  - The passenger door can be opened for evacuation even with a collapsed landing gear, in this case the door is used in the horizontal position in order to evacuate the airplane:

## DOORS LOCATION




**DOORS LOCATION**

## ELECTRICAL POWER SOURCES

The following paragraph describes the power supply of the different equipment of the doors.

Electrical protection is provided either:

- By Solid State Power Controller (SSPC)
- By Circuit Breakers (CB)

| EQUIPMENT | POWER SUPPLY | TYPE OF PROTECTION |
|---|---|---|
| Passengers door motor | Battery 2 bus | CB |
| | | |

## CONTROLS

The control of doors is performed via:

- Interior and exterior pushbuttons for passenger door lift,
- Interior and exterior control handle for passenger door latch/unlatch,
- An interior pushbutton for exterior control inhibit,
- Interior control handle and exterior pushbutton for the emergency exit door,
- Exterior control handle for the baggage compartment door,
- Pushbuttons on latches (2) for the service compartment door,
- Control handle for S-duct door,
- Fixed latch for IRS compartment door,
- Secured Latches (4) for refueling control panel door,
- Manual release handle in the cockpit for RAT deployment.

## INDICATIONS

Indications related to doors are displayed on:

- An inspection window for the passenger door latch,
- An inspection window for the baggage compartment external door,
- CAS window for status of:
  - Passenger door,
  - Emergency exit door,
  - Cabin to baggage compartment door,
  - Baggage compartment external door,
  - Service compartment access door,
  - S-duct door,
  - Refueling control panel door.

**PASSENGER DOOR VISUAL INSPECTION WINDOW**

## TEST

Passenger door test can be achieved through the **DOOR TEST** and the **DOOR RST** soft keys of the SERVICING page.

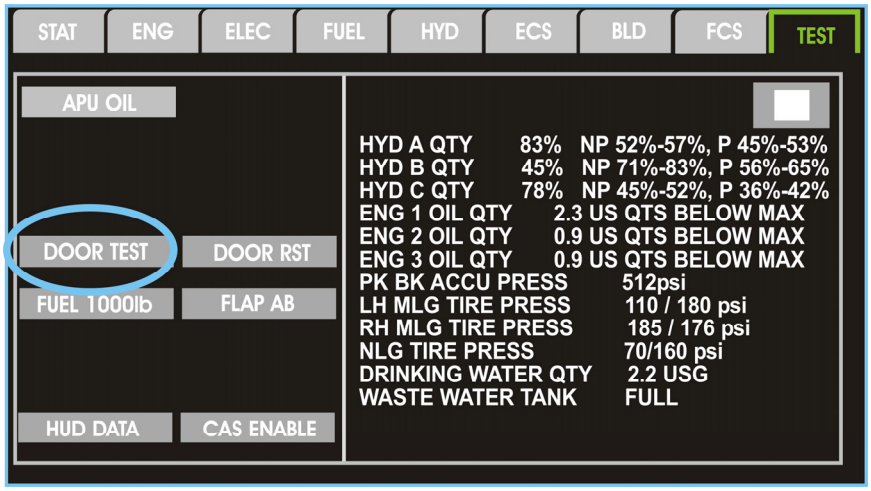
The DOOR TEST soft key is used to test:

- The DOOR LIFT pushbutton light (interior)
- The EXT LIFT INHIBIT pushbutton light

The tests are successful if the amber light of the DOOR LIFT and the white light of the EXT LIFT INHIBIT come on when the DOOR TEST soft key is selected.

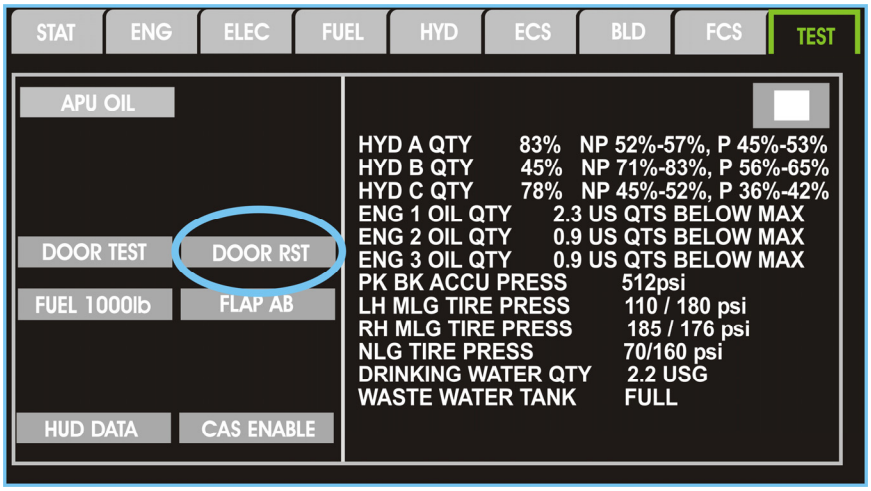
The DOOR RST soft key is used to reset:

- The DOOR LIFT pushbutton light,
- The EXT LIFT INHIBIT pushbutton light.




DOOR TEST soft key selected


DOOR LIFT and EXT. LIFT INHIBIT lighted




DOOR RST soft key selected


DOOR LIFT and EXT. LIFT INHIBIT unlighted

**MDU TEST SYNOPTIC PAGE**

## SYSTEM MONITORING

Depending of the Door type and the phase of flight, the status of the door (open, closed, unlatched, latched) is detected by proximity sensors or micro switches and a corresponding CAS message is displayed.

Doors monitored are:

- Passenger door,
- Emergency exit door,
- Cabin to baggage compartment door,
- Baggage compartment external door,
- Service compartment access door,
- S-duct door,
- Refueling control panel door.

## ACTIVE PROTECTIONS

### PASSENGER DOOR

A vent flap installed in the exterior handle mechanism performs the following functions:

- Prevents unlocking of the door if the cabin is pressurized,
- Prevents fuselage pressurization if the door is not correctly closed and latched.

### CABIN TO BAGGAGE COMPARTMENT DOOR

As a part of a pressure bulkhead, the door takes part to the structural protection.

In case of inadvertent door opening, a torsion return spring will close the door automatically.

### BAGGAGE COMPARTMENT EXTERNAL DOOR

A vent flap mechanically actuated by the control handle performs the following function:

- Prevents unlocking of the door if the compartment is pressurized,
- Prevents fuselage pressurization if the door is not correctly closed and latched.