

DIMENSIONS AND AREAS, MAJOR COMPONENT LOCATIONS

2A-06-10: General

The Gulfstream V is powered by two BMW / Rolls Royce BR710 high bypass ratio turbofan engines mounted on pylons located on the aft upper fuselage. The aircraft is supported by a fully retractable tricycle landing gear.

The fuselage is of semimonocoque metal construction. All areas are pressurized with the exception of the nose radome and aft equipment (tail) compartment. The fuselage is divided lengthwise into an above-floor section and a below-floor section.

The wing contains the integral fuel tanks in its primary structure. Forward of the fuel tanks, on the leading edge, wing anti-icing ducts and landing lights are installed. Aft of the fuel tanks, on the trailing edge, primary and secondary flight controls are installed. The primary flight controls are the ailerons, with the left aileron having an adjustable trim tab. Secondary flight controls include the flaps (one per side) and spoilers (three per side). Winglets are installed at the outboard end of each wing to aid in drag reduction and improve fuel economy. Also contained within the wing is the main landing gear supporting structure.

The tail section of the aircraft consists of a fixed vertical stabilizer and an adjustable horizontal stabilizer. Primary flight controls contained within the tail section are left and right elevators attached to the trailing edge of the horizontal stabilizer, and a rudder attached to the trailing edge of the vertical stabilizer. The elevators have adjustable trim tabs incorporated, whereas rudder trim is accomplished by displacement of the entire surface.

The Dimensions, Areas and Major Component Locations section is divided into the following subsections:

- 2A-06-20: Principal Dimensions
- 2A-06-30: Entrances, Exits and External Access Doors
- 2A-06-40: Flight Crew Station Components

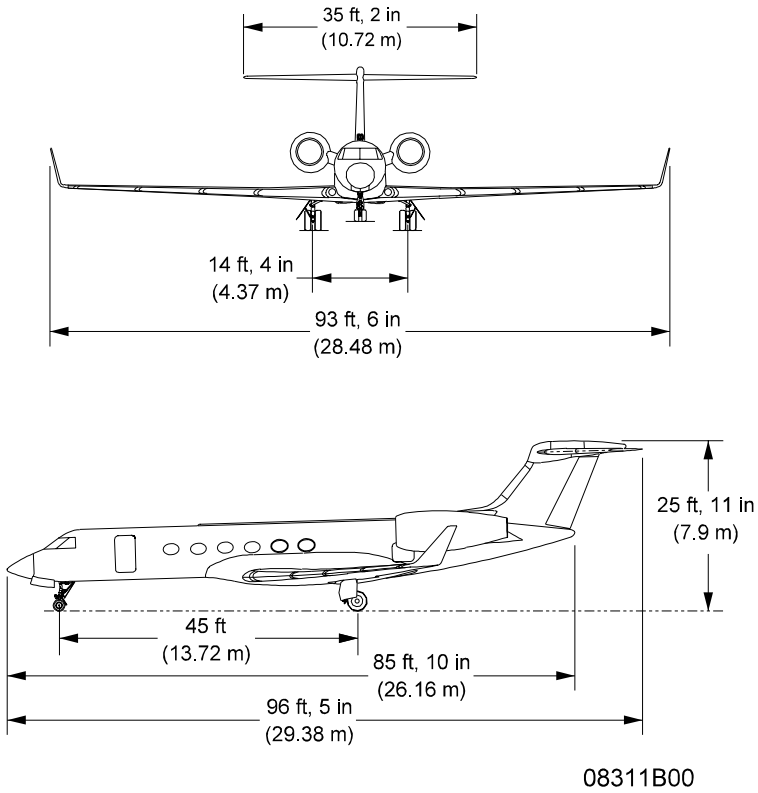
2A-06-20: Principal Dimensions

1. Dimensions, Areas and Distances:

See Figure 1 through Figure 4 for principal dimensions, areas and distances.

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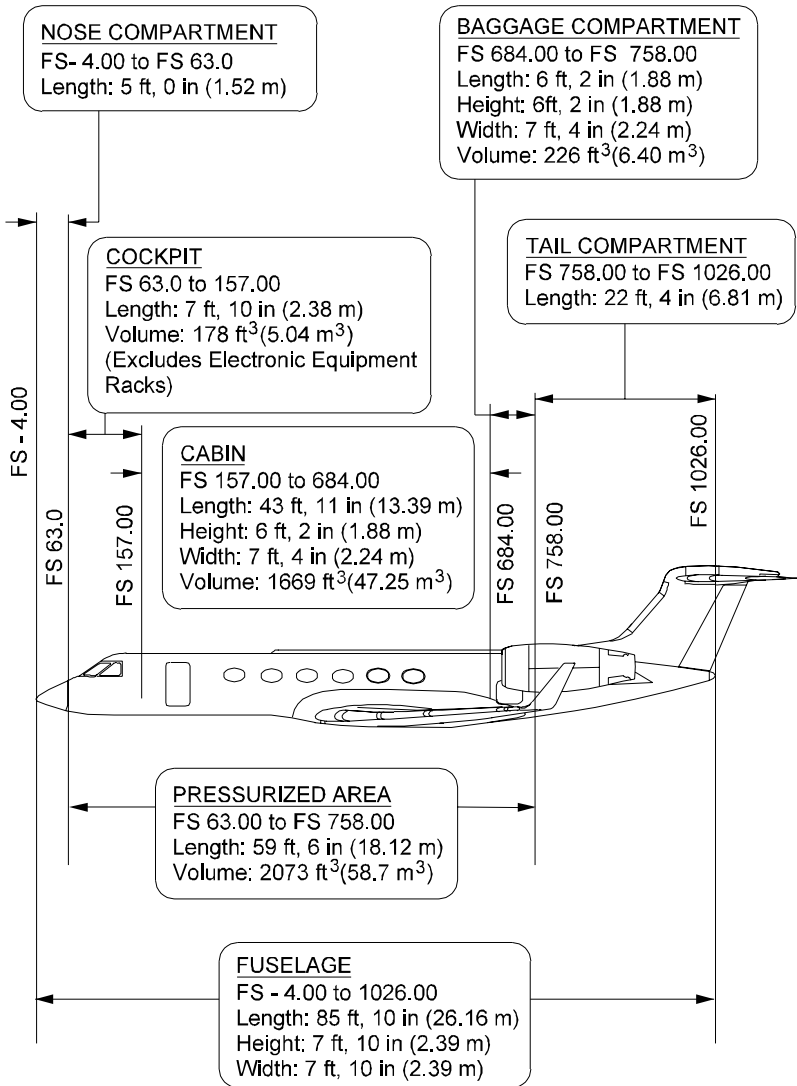
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Exterior Dimensions and Areas
Figure 1

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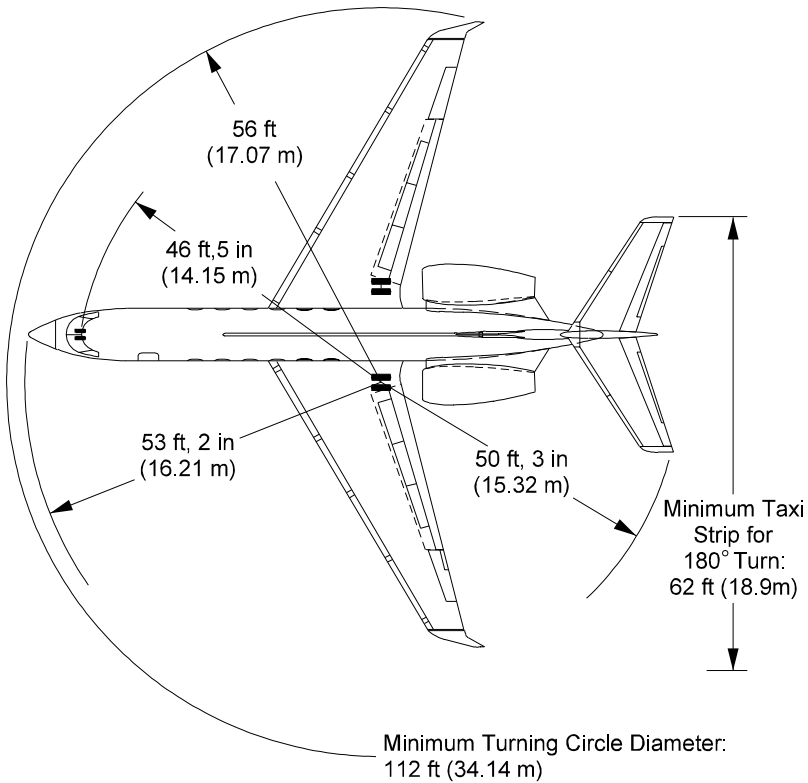


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Fuselage Dimensions and Areas
Figure 2

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NOTE:

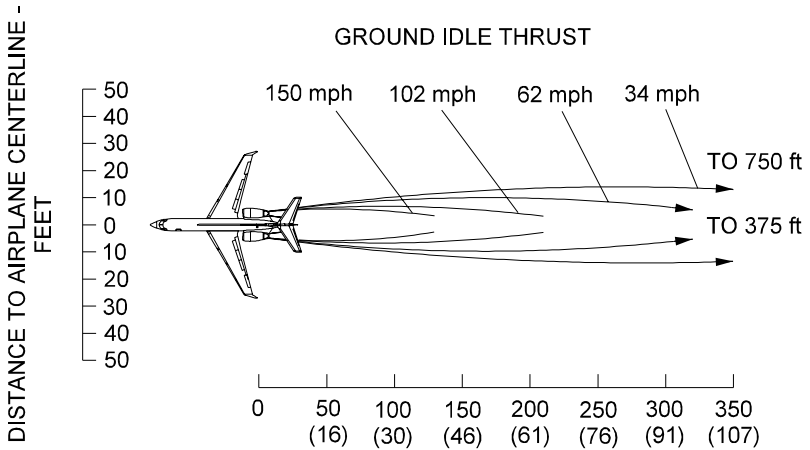
All values stated are minimum values based on maximum nose wheel deflection of 80°.

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Turning Dimensions and Distances
Figure 3

JET EXHAUST KEEP - OUT ZONES TWO ENGINE OPERATION

- AIRCRAFT STATIC
- SEA LEVEL ISA
 - NO WIND



AXIAL DISTANCE - FEET (METERS)

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Danger and Caution Areas
Figure 4

2. General Weight Data:

- A. **Maximum Takeoff Gross Weight (TOGW):** 90,500 lb (41050 kg)
- B. **Maximum Zero Fuel Weight:** 54,500 lb (24721 kg)
- C. **Maximum Usable Fuel Weight:**
 - (1) **Aircraft Production Numbers 501 Through 548 Without ASC 50:**
41,026 lb (18610 kg)
 - (2) **Aircraft Production Numbers 549 And Subsequent, Aircraft Production Numbers 501 Through 548 With ASC 50:**
41,300 lb (18734 kg)

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- D. Manufacturer's Bare Empty Weight:** 38,000 lb (17236 kg)
- E. Maximum Wing Loading (at TOGW):** 78.3 lb / ft² (10.83 m / kg)

3. General Powerplant Data:

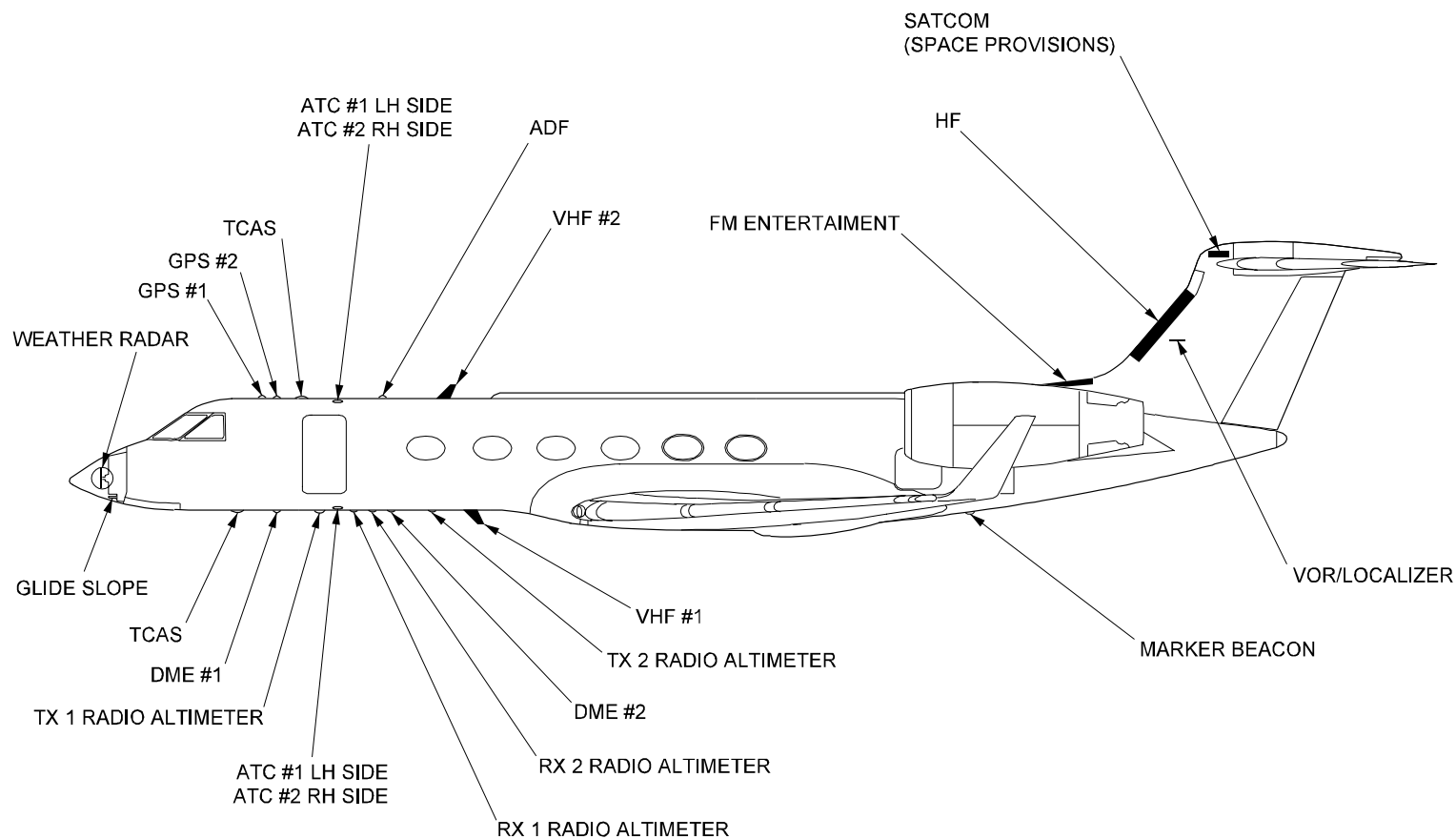
- A. Manufacturer:** BMW / Rolls Royce
- B. Model:** BR710A1-10
- C. Number Installed:** 2
- D. Takeoff Thrust (Sea Level):** 14,750 lb (6691 kg)
- E. Fan Area / Radius:** 1826.79 in² / 24.114 in
- F. Takeoff Thrust-To-Weight Ratio:** 0.325

4. External Component Locations:

- A. Antenna Locations:**

NOTE:

See Section 2A-23-00: Communications, for descriptions of the aircraft antennas.



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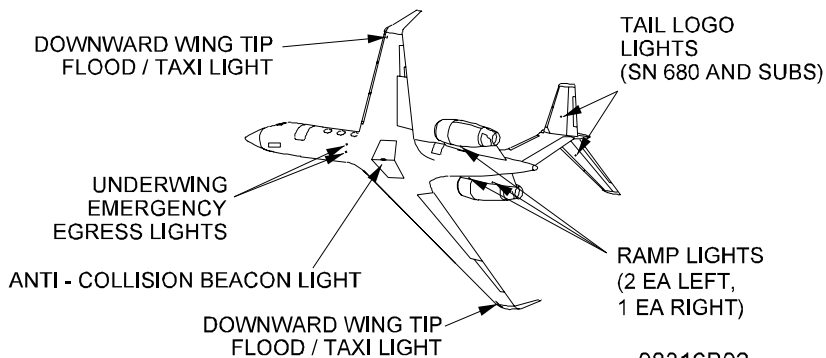
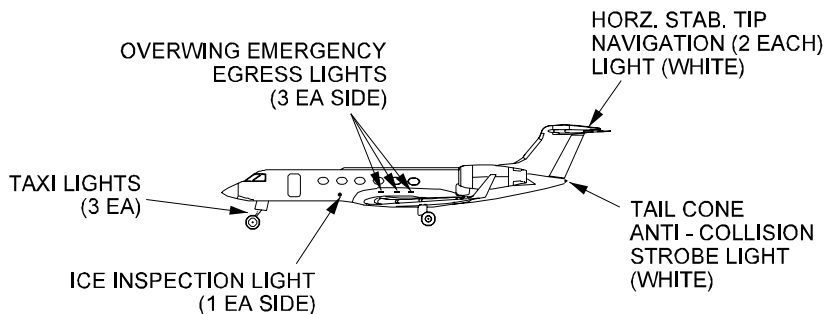
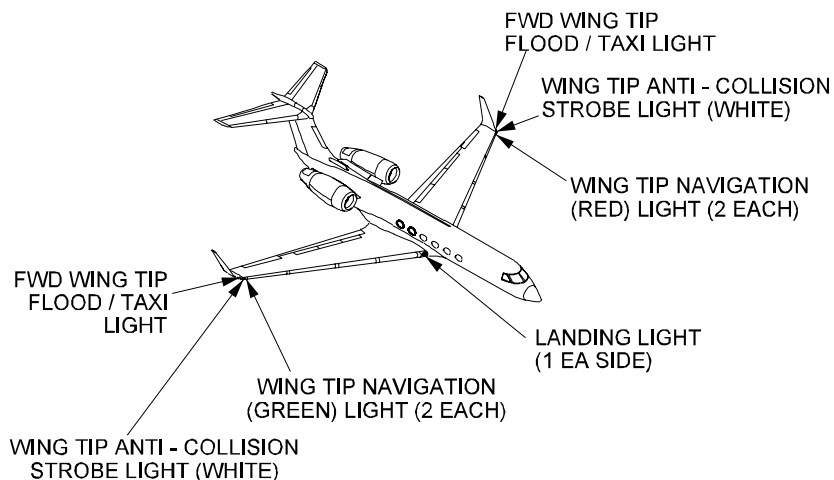
B. Light Locations:

NOTE:

See Section 2A-33-00: Lighting for descriptions of the external lights.

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External Lights
Figure 6

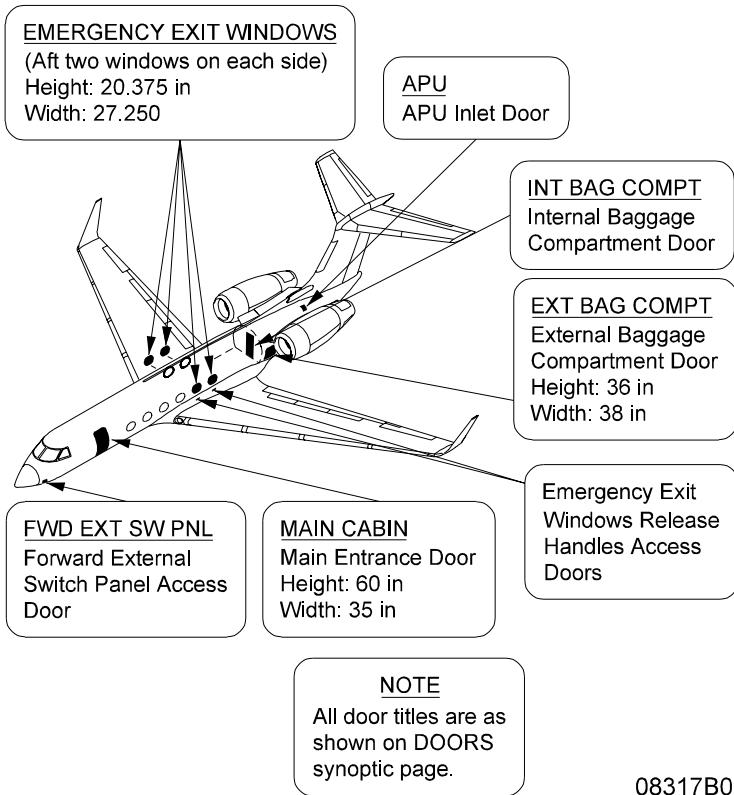
2A-06-30: Entrances, Exits and External Doors

(See Figure 7.)

For a description of operation of the following components, see Section 2A-52-00: Doors System Description.

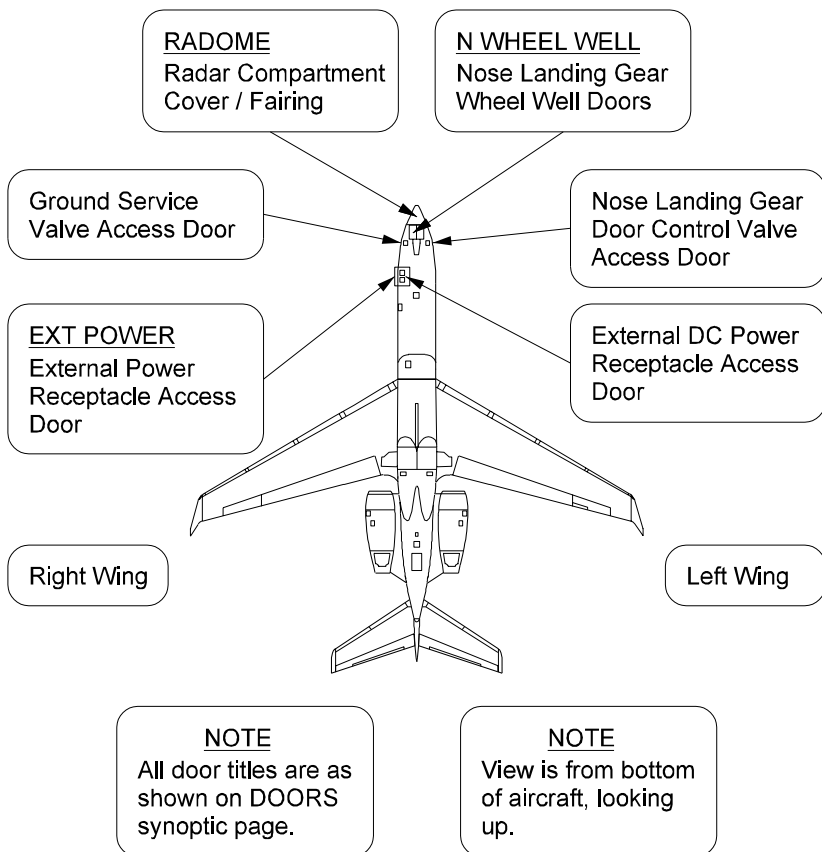
- Main Entrance Door
- External Baggage Door
- Internal Baggage Door
- Tail Compartment Door
- Emergency Exit Windows

For a description of the DOORS synoptic page, see Section 2B-03-00: Engine Instruments and Crew Alerting system.



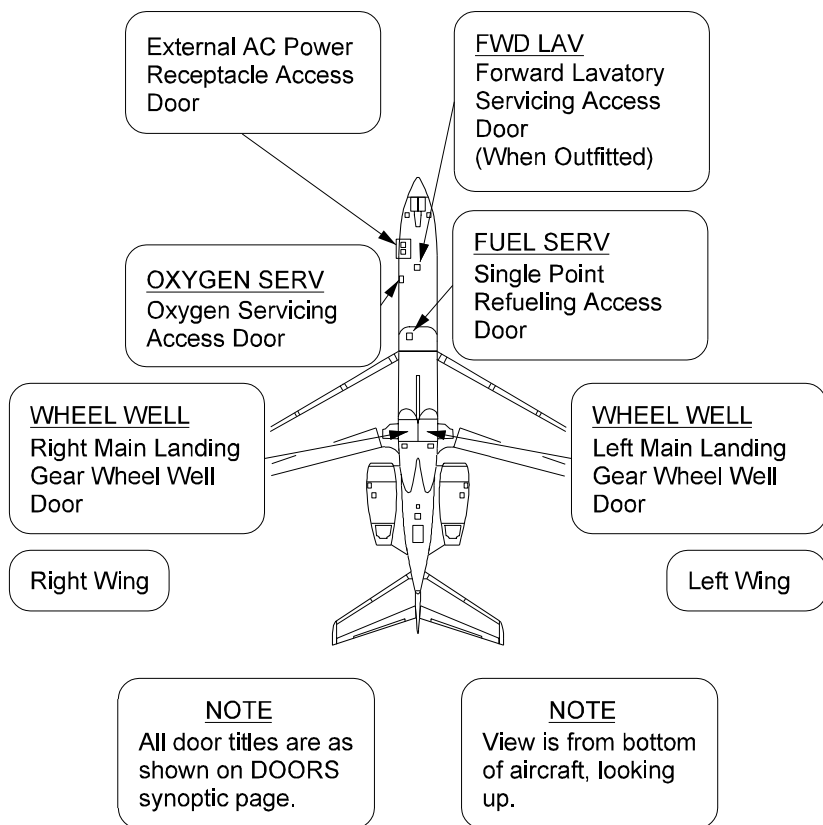
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Entrances, Exits and External Doors
Figure 7



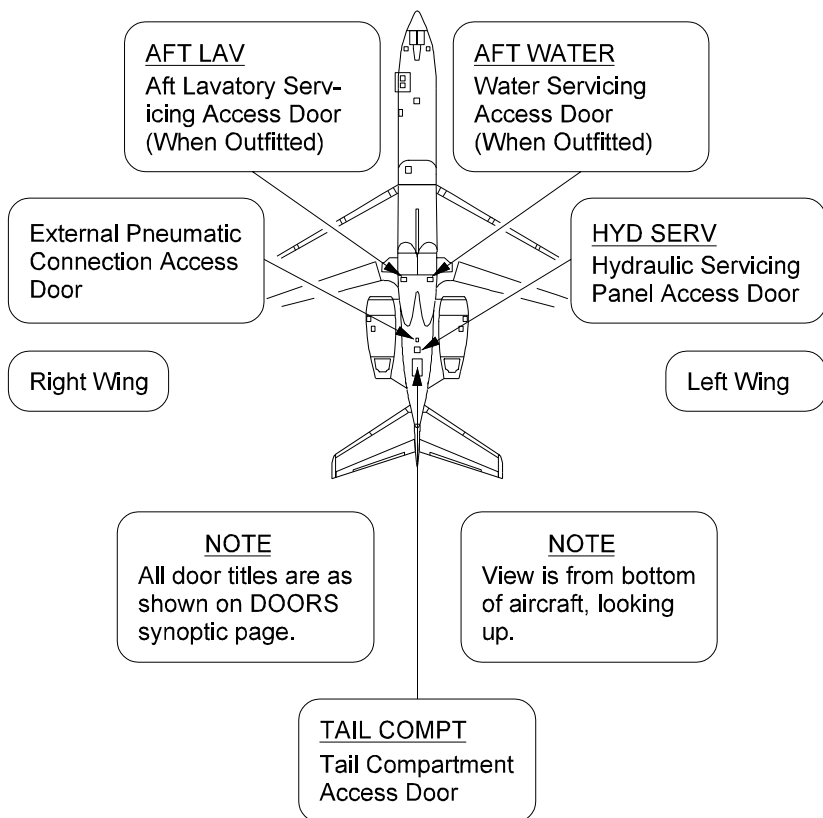
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Entrances, Exits and External Doors
Figure 8 (Sheet 1 of 5)



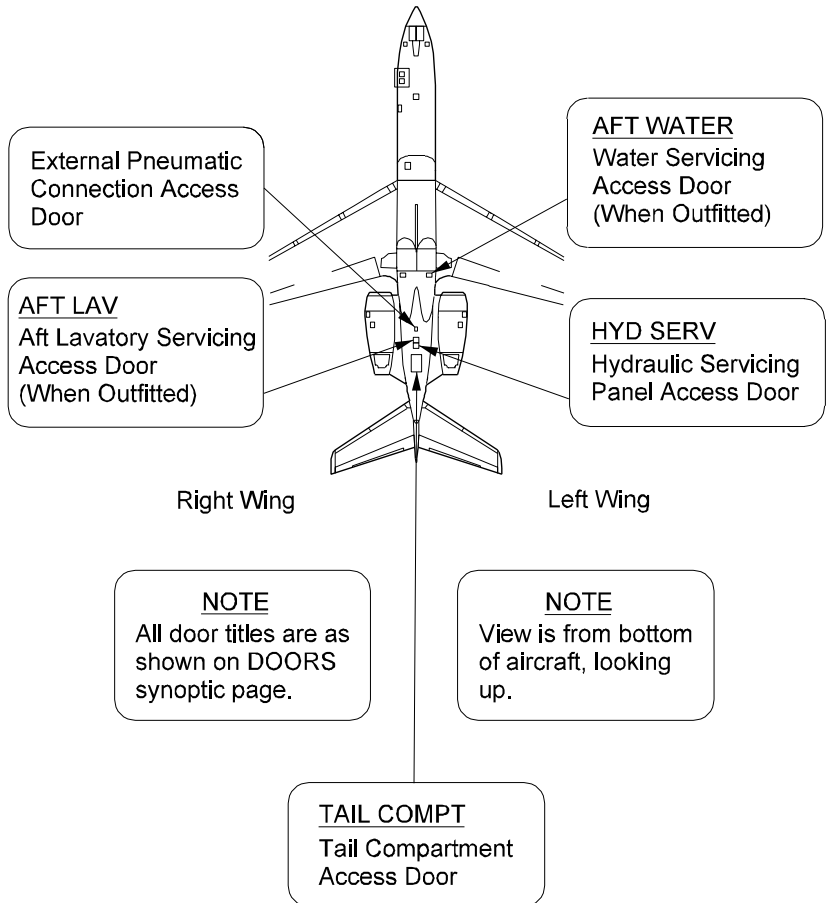
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Entrances, Exits and External Doors
Figure 8 (Sheet 2 of 5)



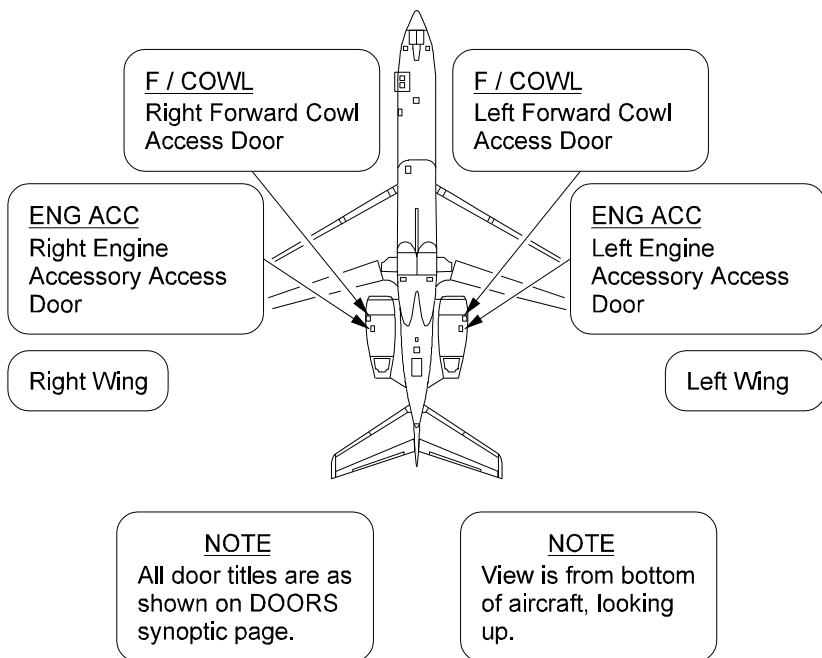
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Entrances, Exits and External Doors (Airplanes 501 - 674)
Figure 8 (Sheet 3 of 5)



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Entrances, Exits and External Doors (Airplanes 675 and Subsequent)
Figure 8 (Sheet 4 of 5)



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Entrances, Exits and External Doors
Figure 8 (Sheet 5 of 5)

2A-06-40: Flight Crew Station Components

1. Cockpit Layout and Components:

(See Figure 9 through Figure 16.)

NOTE:

The panels, units and components shown in Figure 9 through Figure 16 are representative of installed equipment. See the appropriate system descriptions for the most current configuration.

2. Electronic Equipment Rack Layout and Components:

(See Figure 17 and Figure 18.)

The Gulfstream V has two (2) Electronic Equipment Racks (EERs) located aft of the cockpit: the Left EER (LEER) and Right EER (REER). Each EER contains the following items necessary for the safe and efficient operation of the aircraft:

- Electrical and avionics units and components, primarily designed as Line-Replaceable Units (LRUs).
- A Circuit Breaker (CB) panel.
- A Power Distribution Box (PDB) with an associated CB panel.

In addition, the LEER contains a System Monitor/Test panel. This panel is used for refueling, and for system maintenance, testing and fault isolation.

NOTE:

The panels, units and components shown in Figure 17 and Figure 18 are representative of installed equipment. See the appropriate system descriptions for the most current configuration.

3. Flight Compartment Seating:

A. General:

Seating in the flight compartment is provided for three (3) occupants: Pilot, Copilot, and Observer. Seats for the pilot and copilot are identical and remain accessible at all times. Each uses a five (5) point harness for the safe restraint of the occupant.

B. Operation of the Pilot's and Copilot's Seats:

(See Figure 19.)

For optimum comfort and safety, the following description is provided to ensure the seat is properly adjusted and positioned:

- (1) Adjust the thigh pads, if adjustable thigh pads are fitted, to approximately mid-position.
- (2) Adjust the lumbar in/out support and up/down support to the out and down positions.
- (3) Adjust the recline angle to approximately mid-position.
- (4) Adjust the back cushion to approximately mid-position.
- (5) Ensure the occupant is correctly positioned in the seat pan.

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- (6) Adjust the recline angle until the shoulders are positioned at the desired sitting angle.
- (7) Adjust the lumbar in/out support and up/down support to the desired positions.
- (8) Using the vertical adjustment control and fore/aft track lock control, position the seat to properly align the occupant with the Design Eye Locator on the center windshield post.
- (9) Verify thigh pads “break away” to allow sufficient movement on the rudder pedals and toe brakes.

C. Operation of the Observer's Seat:

(See Figure 20.)

The observer's seat is normally stowed until needed. A four (4) point harness is used to restrain the occupant.

The seat is accessed by lifting the handle at the base of the seat and manually pulling the seat out of the stowage area. When the seat is out, the same handle is used to allow movement to either of two (2) use positions, or to allow stowage.

With the seat out, the seat pan is pushed down for occupancy and held down by the occupant's weight. Upon rising, the seat pan automatically retracts.

CAUTION

ENSURE THE LAPBELT RESTRAINT IS PROPERLY STORED IN THE RESTRAINT POCKET PRIOR TO ALLOWING THE SEAT PAN TO CLOSE. FAILURE TO DO SO COULD CUT OR FRAY THE LAPBELT RESTRAINT.

When seated, the following adjustments can be made:

- Forward or Aft Positioning: Lifting a paddle-type lever on the right hand side of the seat allows positioning and locking in a forward or aft position. There are no intermediate positions.
- Vertical Positioning: Rotation of a handle on the right hand side of the seat allows a six (6) inch vertical positioning range. To go up, the occupant must lift some weight off of the seat. To go down, the occupant must remain on the seat.
- Swivel Positioning: Rotation of a handle on the left hand side of the seat allows counter-clockwise rotation to a forward-facing or rearward-facing position. There are no intermediate positions.
- Recline Positioning: Rotation of a handle on the right hand side of the backrest allows reclining up to thirty (30) degrees from vertical in three (3) degree increments. The backrest will automatically return to the upright position by rotation of the handle and removing weight from the backrest.
- Armrest Positioning: The left and right armrests are stowed in a cavity on the backrest shroud. For use, they are pulled out and rotated forward to the normal position. Adjustment controls are located on the forward underside of the armrests.

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- Tray Table Provisions: There exists a provision for a detachable tray table, normally stored nearby, to be attached to the seat pan. When attached, the table is capable of 180 degrees of rotation to ensure comfort.

4. Standard Aircraft Equipment and Furnishings:

The equipment listed in the following tables is supplied as standard equipment on each aircraft:

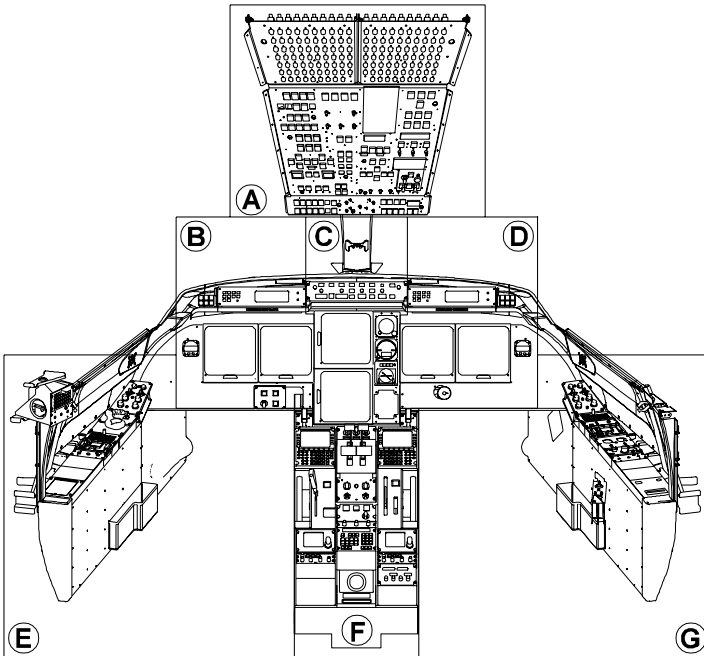
Cockpit Furnishings	
Quantity	Item
2	Logo Button
2	Battery Flashlight (SN 501 – 630)
2	Rechargeable Maglite (SN 631 & subs)
3	Smoke Goggles

Publications	
Quantity	Item
1	Weight and Balance Report
2	Engine Log Book
1	Aircraft Log Book
1	APU Log Book
1	Flight Manual

Ground Support	
Quantity	Item
1	Protective Covers and Plugs Kit
2	Main Landing Gear Safety Pin
2	Main Landing Gear Door Safety Pin
1	Nose Landing Gear Safety Pin
1	Nose Landing Gear Door Safety Pin
4	Brake Heat Pack Half Life Spacer
1	Aileron/Elevator Disconnect Handle Reset Tool

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NOTE

See the following corresponding sheets for details:

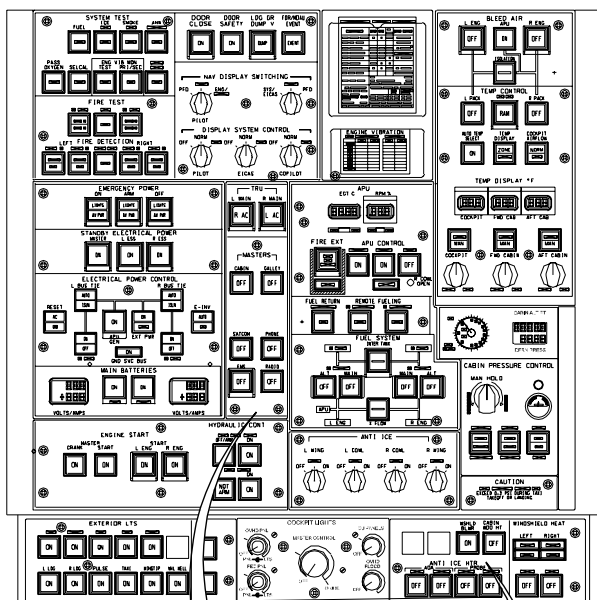
- Ⓐ Cockpit Overhead Panel
- Ⓑ Pilot's Flight Panel
- Ⓒ Center Flight Panel
- Ⓓ Copilot's Flight Panel
- Ⓔ Pilot's Left Console
- Ⓕ Center Console
- Ⓖ Copilot's Right Console

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Cockpit Areas
Figure 9

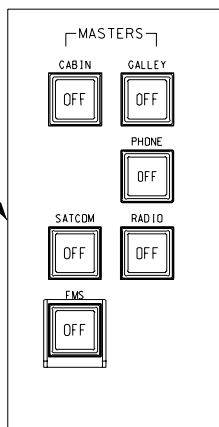
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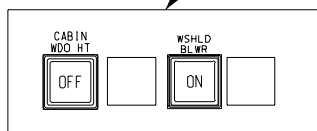


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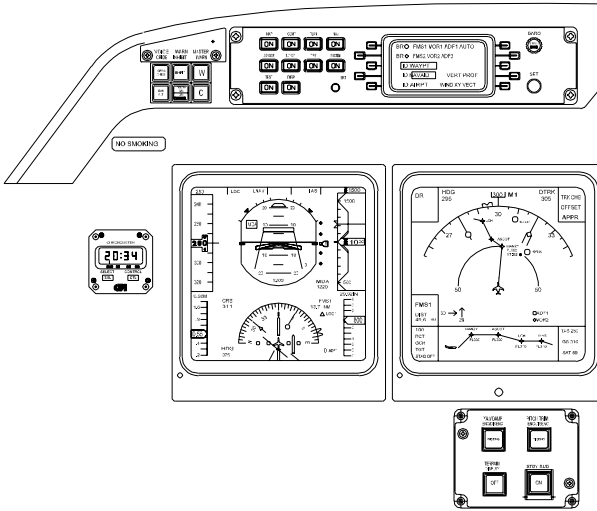


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Cockpit Overhead Panel
Figure 10

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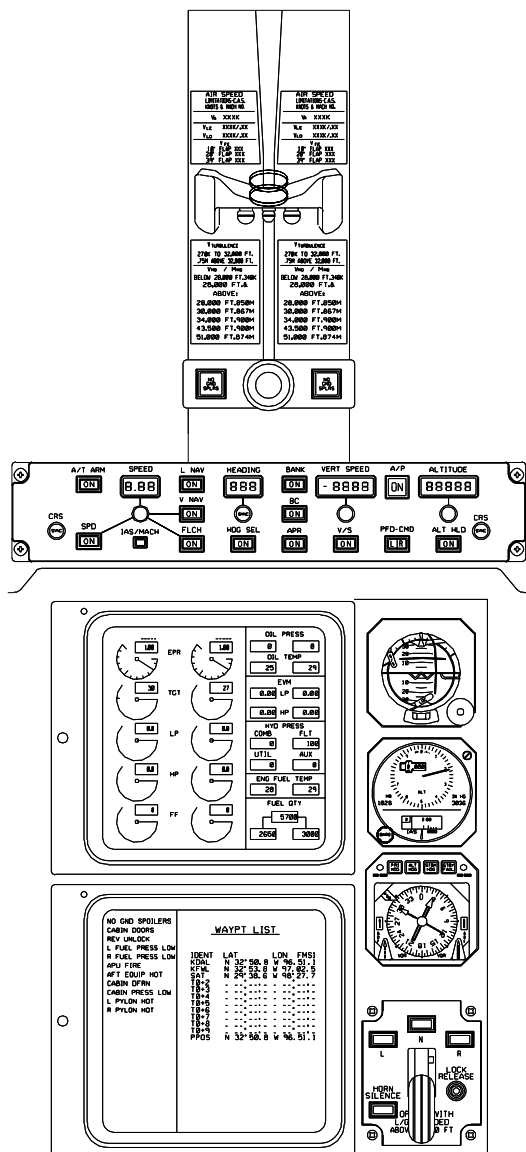
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Pilot's Flight Panel
Figure 11

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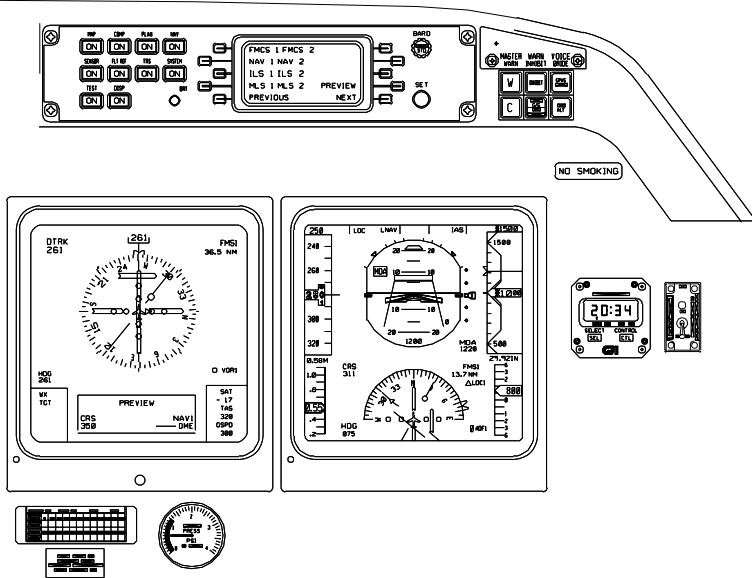
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Center Flight Panel
Figure 12

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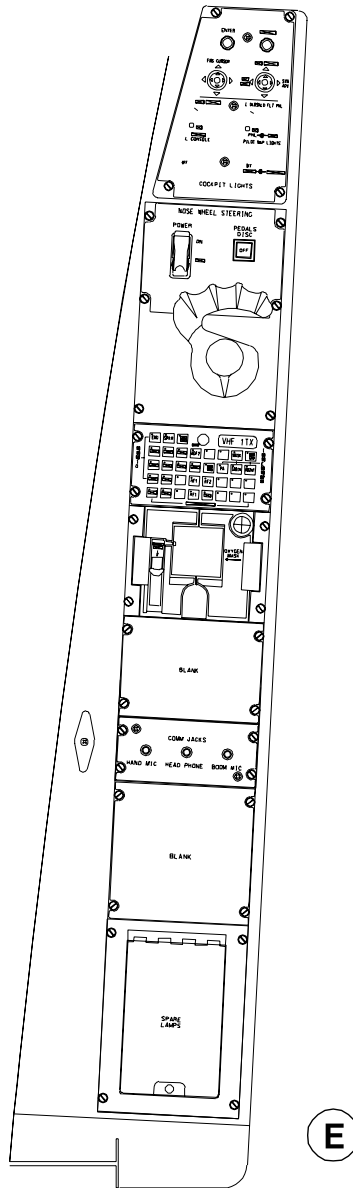
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Copilot's Flight Panel
Figure 13

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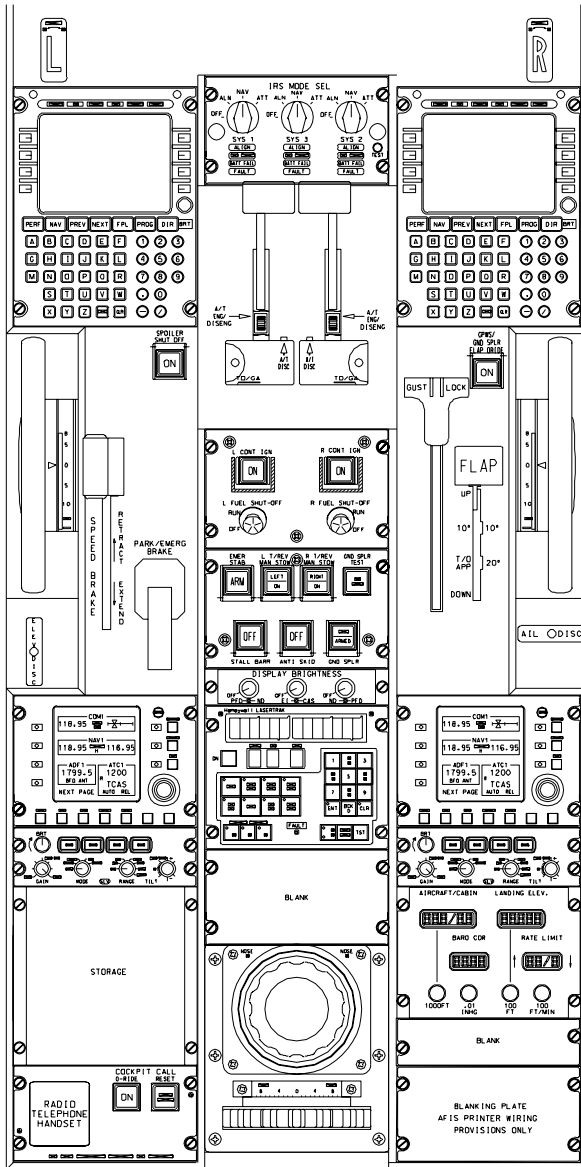


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Pilot's Left Console
Figure 14

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Center Console
Figure 15

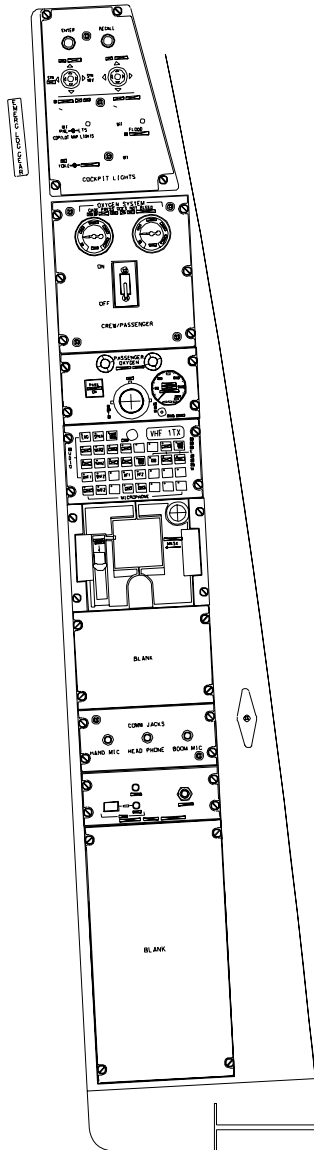
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PRODUCTION AIRCRAFT SYSTEMS

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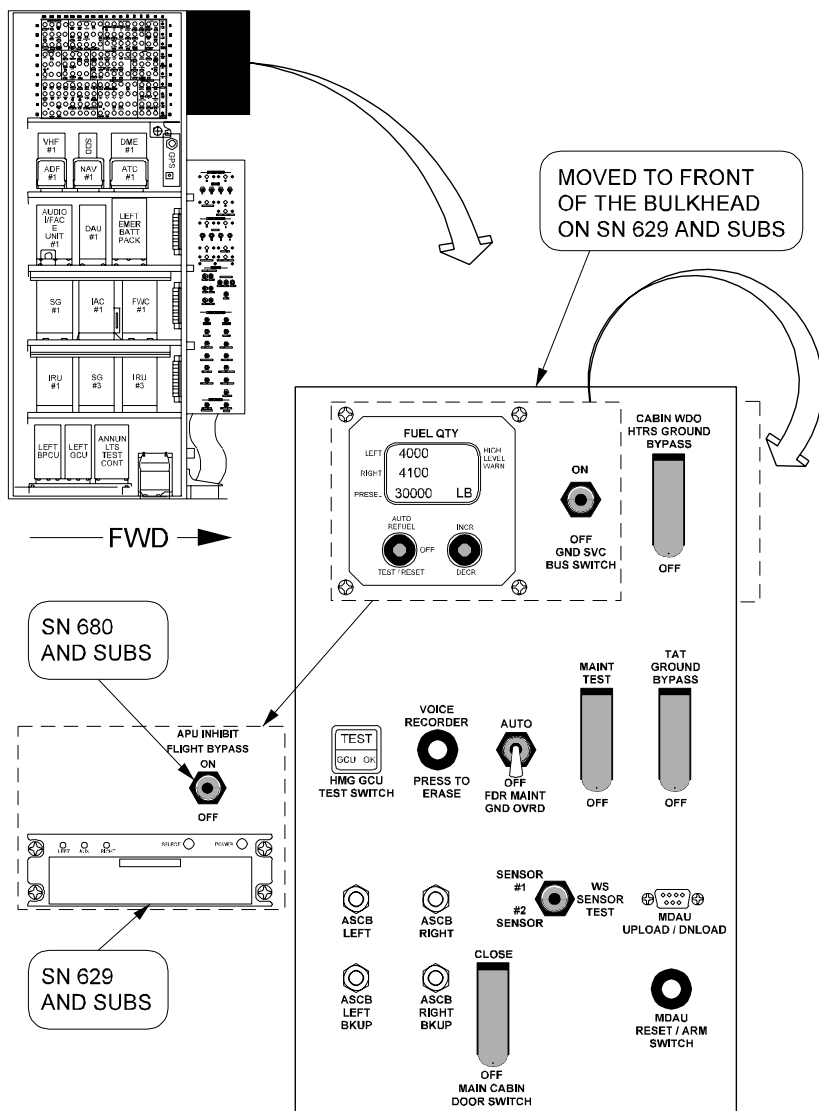
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Copilot's Right Console
Figure 16

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Left Electronic Equipment Rack
Figure 17

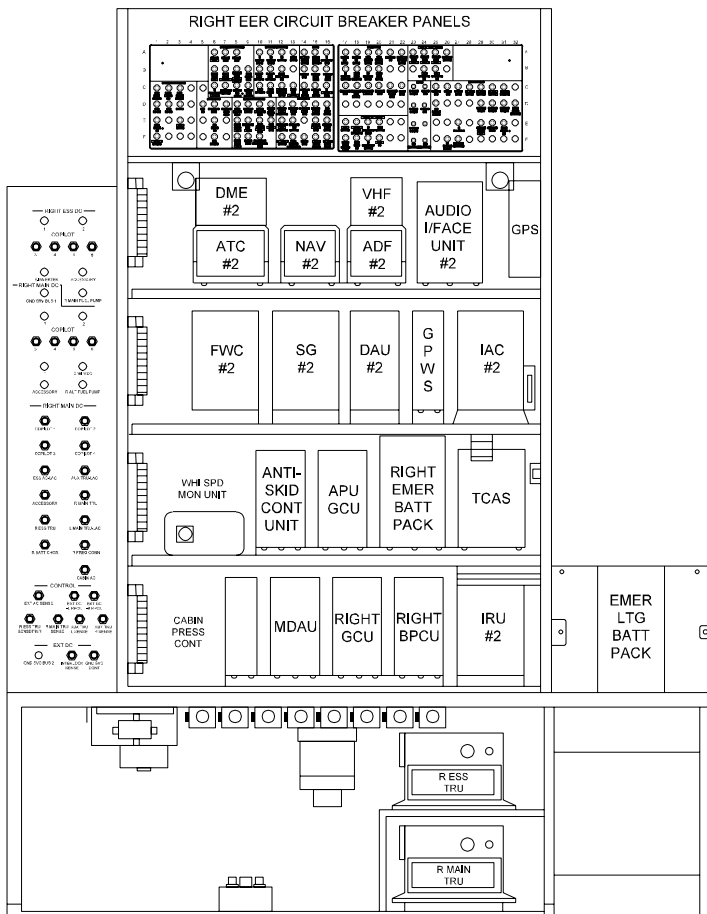
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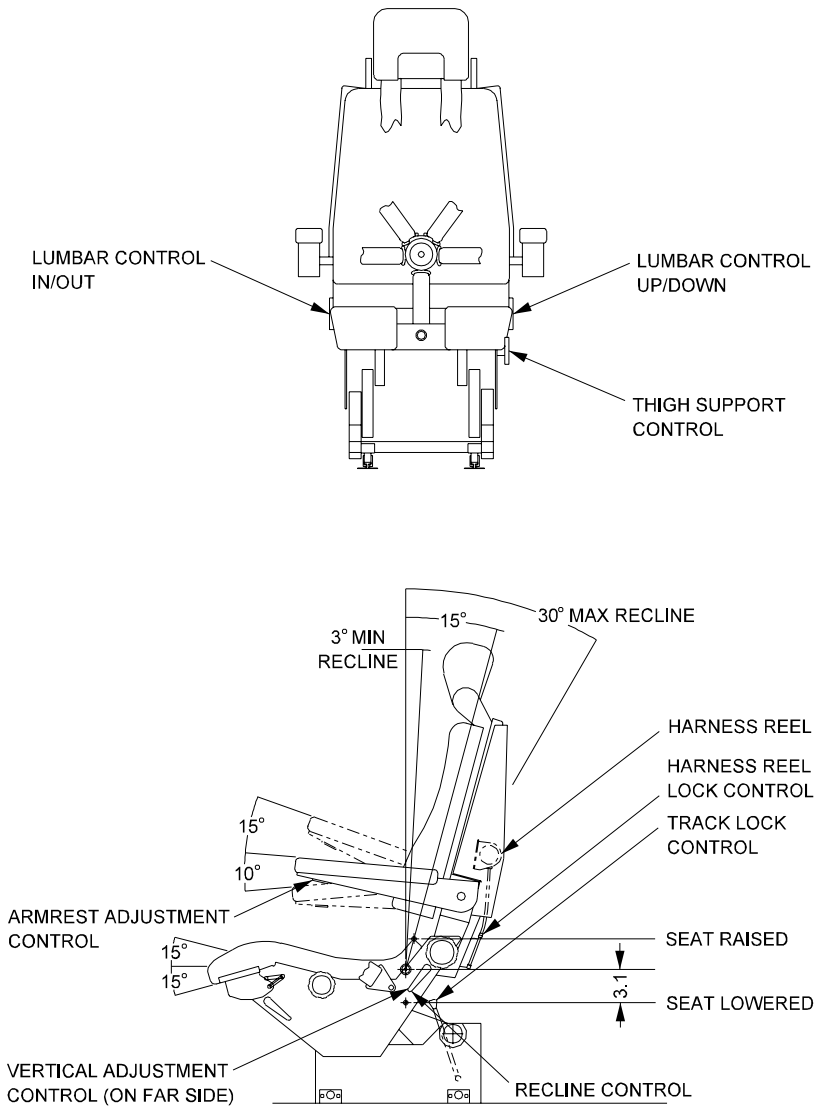
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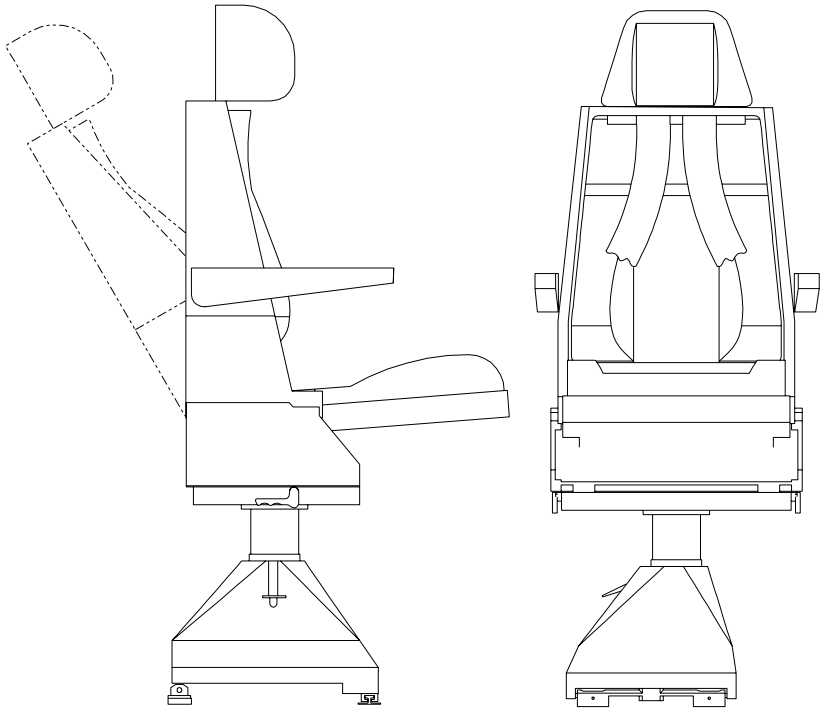
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Right Electronic Equipment Rack
Figure 18



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Pilot's / Copilot's Seats
Figure 19



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Observer's Seat
Figure 20