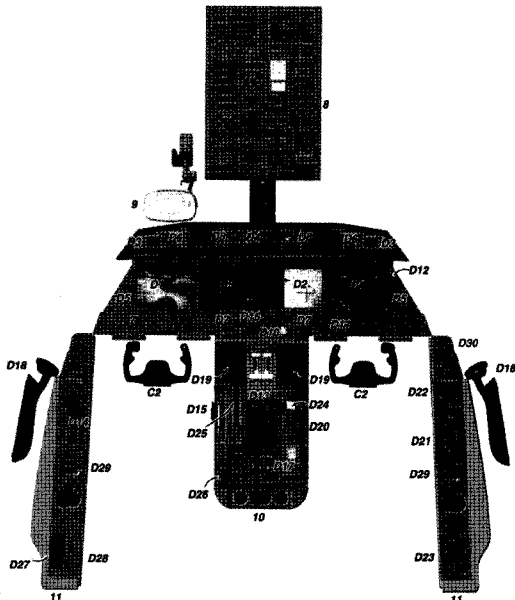


Gulfstream



Instrument panel and central console

Structure and general

- 1 Glassfibre honeycomb construction, upward hinging radome
- 2 Titanium birdstrike barrier panels
- 3 Forward pressure bulkhead
- 4 Curved two-piece windshield, electrically de-iced
- 5 Two fixed cockpit side windows (one each side of aircraft) electrically defogged
- 6 Two-crew cockpit with seat for third crew member
- 7 Instrument panel housing four 13 x 10in (330 x 254mm) liquid crystal displays
- 8 Overhead panel
- 9 Pilot's LCD head-up display
- 10 Pedestal
- 11 Side consoles

- 12 Fuselage is of an all-metal semi-monocoque construction with bonded, clad aluminium alloy skin, frames and stringers. The fuselage consists of a nose section, forward mid-section, centre section, aft mid-section and tail section
- 13 Air stair door, hydraulically actuated
- 14 Graphite/thermoplastic composite floorboards - Stork Fokker Aerostructures
- 15 Machined aluminium alloy floor beams and seat track rails
- 16 Sixteen elliptical windows - 523 x 714mm. The windows are constructed of stretched acrylic (inner) and new craze resistant polymer (outer) panes. These are acoustically isolated from the inner heated pane - PPG Aerospace.

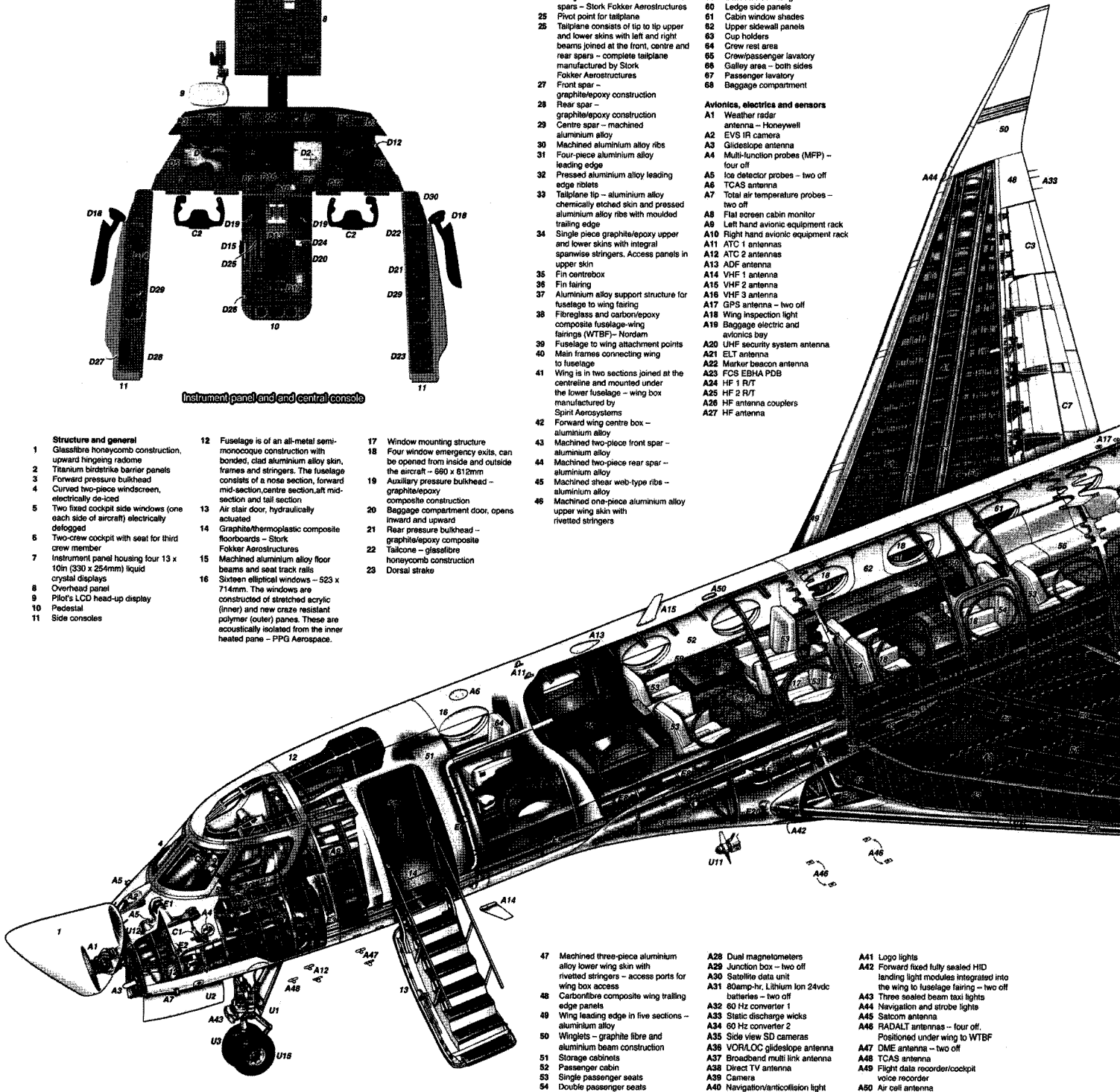
- 17 Window mounting structure
- 18 Four window emergency exits, can be opened from inside and outside the aircraft - 680 x 812mm
- 19 Auxiliary pressure bulkhead - graphite/epoxy composite construction
- 20 Baggage compartment door, opens inward and upward
- 21 Rear pressure bulkhead - graphite/epoxy composite
- 22 Tailcone - glassfibre honeycomb construction
- 23 Dorsal strake

- 24 Fin consists of three machined spars joined by machined chordwise ribs. The aluminium alloy chemically etched skin panels with bonded aluminium alloy doublers and stringers are riveted to the ribs and spars - Stork Fokker Aerostructures
- 25 Pivot point for tailplane
- 26 Tailplane consists of tip to tip upper and lower skins with left and right beams joined at the front, centre and rear spars - complete tailplane manufactured by Stork Fokker Aerostructures
- 27 Front spar - graphite/epoxy construction
- 28 Rear spar - graphite/epoxy construction
- 29 Centre spar - machined aluminium alloy
- 30 Machined aluminium alloy ribs
- 31 Four-piece aluminium alloy leading edge
- 32 Pressed aluminium alloy leading edge riblets
- 33 Tailplane tip - aluminium alloy chemically etched skin and pressed aluminium alloy ribs with moulded trailing edge
- 34 Single piece graphite/epoxy upper and lower skins with integral sparwise stringers. Access panels in upper skin
- 35 Fin centrebox
- 36 Fin fairing
- 37 Aluminium alloy support structure for fuselage to wing fairing
- 38 Fibreglass and carbon/epoxy composite fuselage-wing fairings (WTBF) - Nordam
- 39 Fuselage to wing attachment points
- 40 Main frame connecting wing to fuselage
- 41 Wing is in two sections joined at the centreline and mounted under the lower fuselage - wing box manufactured by Spirit AeroSystems
- 42 Forward wing centre box - aluminium alloy
- 43 Machined two-piece front spar - aluminium alloy
- 44 Machined two-piece rear spar - aluminium alloy
- 45 Machined shear web-type ribs - aluminium alloy
- 46 Machined one-piece aluminium alloy upper wing skin with riveted stringers

- 55 Divan
- 56 Fold-down passenger tables - two off. Only one table shown folded out
- 57 Conference table
- 58 Cradanza
- 59 Cabin window ledges
- 60 Ledge side panels
- 61 Cabin window shades
- 62 Upper sidewall panels
- 63 Cup holders
- 64 Crew rest area
- 65 Crew/passenger lavatory
- 66 Galley area - both sides
- 67 Passenger lavatory
- 68 Baggage compartment

Avionics, electrics and sensors

- A1 Weather radar antenna - Honeywell
- A2 EVS IR camera
- A3 Gildeslope antenna
- A4 Multi-function probes (MFP) - four off
- A5 Ice detector probes - two off
- A6 TCAS antenna
- A7 Total air temperature probes - two off
- A8 Flat screen cabin monitor
- A9 Left hand avionics equipment rack
- A10 Right hand avionics equipment rack
- A11 ATC 1 antennas
- A12 ATC 2 antennas
- A13 ADF antenna
- A14 VHF 1 antenna
- A15 VHF 2 antenna
- A16 VHF 3 antenna
- A17 GPS antenna - two off
- A18 Wing inspection light
- A19 Baggage electric and avionics bay
- A20 UHF security system antenna
- A21 GLT antenna
- A22 Marker beacon antenna
- A23 FCS EBHA PDB
- A24 HF 1 R/T
- A25 HF 2 R/T
- A26 HF antenna couplers
- A27 HF antenna

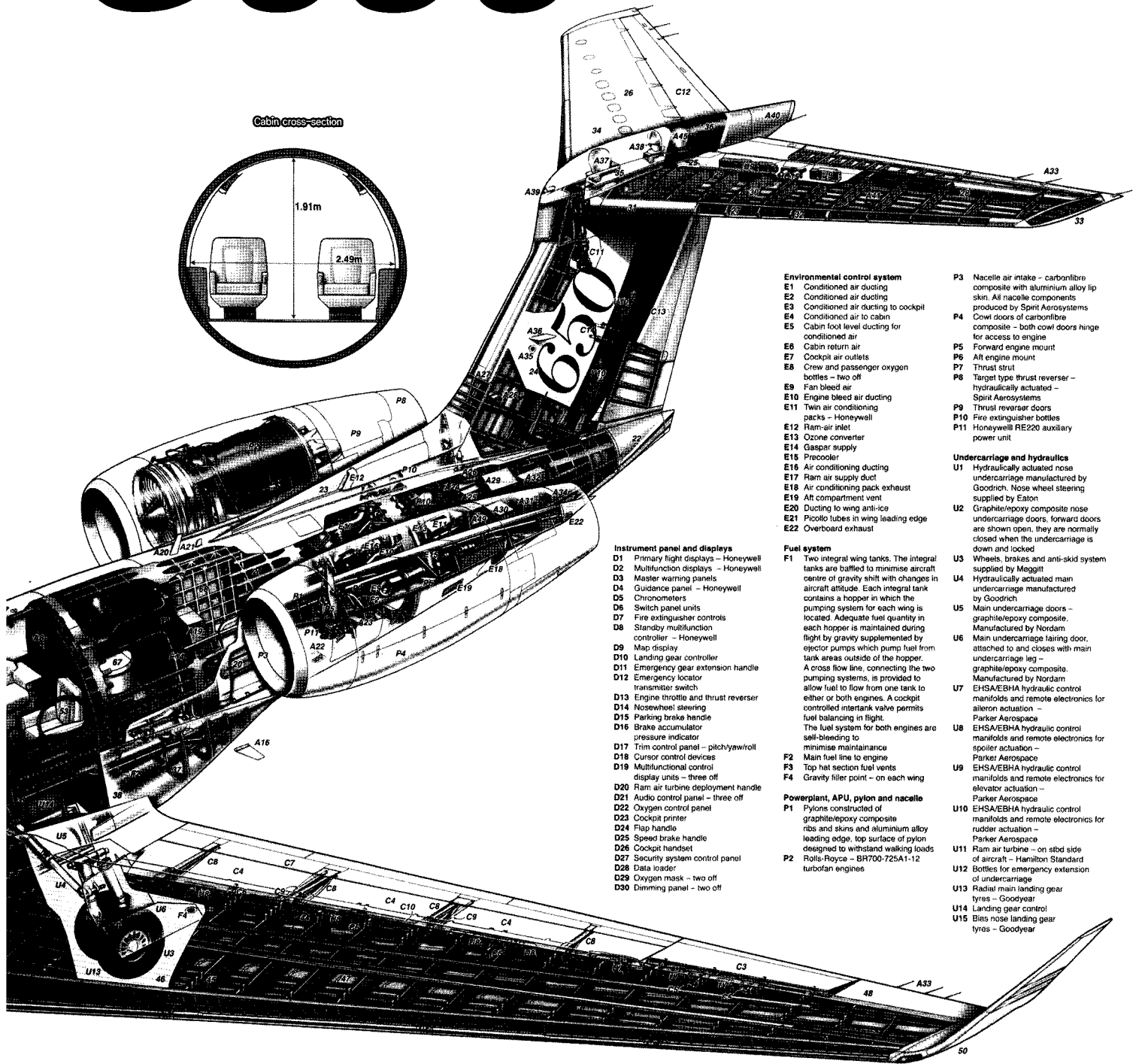


- 47 Machined three-piece aluminium alloy lower wing skin with riveted stringers - access ports for wing box access
- 48 Carbonfibre composite wing trailing edge panels
- 49 Wing leading edge in five sections - aluminium alloy
- 50 Winglets - graphite fibre and aluminium beam construction
- 51 Storage cabinets
- 52 Passenger cabin
- 53 Single passenger seats
- 54 Double passenger seats

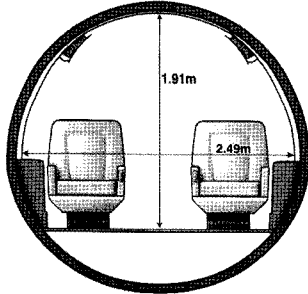
- A28 Dual magnetometers
- A29 Junction box - two off
- A30 Satellite data unit
- A31 80amp-hr. Lithium Ion 24vdc batteries - two off
- A32 60 Hz converter 1
- A33 Static discharge wicks
- A34 60 Hz converter 2
- A35 Side view SD cameras
- A36 VOR/DME gildeslope antenna
- A37 Broadband multi link antenna
- A38 Direct TV antenna
- A39 Camera
- A40 Navigator/anti-collision light

- A41 Logo lights
- A42 Forward fixed fully sealed HID landing light modules integrated into the wing to fuselage fairing - two off
- A43 Three sealed beam taxi lights
- A44 Navigation and strobe lights
- A45 Satcom antenna
- A46 RADALT antennas - four off. Positioned under wing to WTBF
- A47 DME antenna - two off
- A48 TCAS antenna
- A49 Flight data recorder/cockpit voice recorder
- A50 Air cell antenna

G650



Cabin cross-section



Environmental control system

- E1 Conditioned air ducting
- E2 Conditioned air ducting
- E3 Conditioned air ducting to cockpit
- E4 Conditioned air to cabin
- E5 Cabin floor level ducting for conditioned air
- E6 Cabin return air
- E7 Cockpit air outlets
- E8 Crew and passenger oxygen bottles – two off
- E9 Fan bleed air
- E10 Engine bleed air ducting
- E11 Twin air conditioning packs – Honeywell
- E12 Ram air inlet
- E13 Ozone converter
- E14 Gaspar supply
- E15 Precooler
- E16 Air conditioning ducting
- E17 Ram air supply duct
- E18 Air conditioning pack exhaust
- E19 Aft compartment vent
- E20 Ducting to wing anti-ice
- E21 Piccolo tubes in wing leading edge
- E22 Overboard exhaust

Powerplant, APU, pylon and nacelle

- P3 Nacelle air intake – carbonfibre composite with aluminium alloy lip skin. All nacelle components produced by Spirit Aerosystems
- P4 Cowling doors of carbonfibre composite – both cowling doors hinge for access to engine
- P5 Forward engine mount
- P6 Aft engine mount
- P7 Thrust strut
- P8 Target type thrust reverser – hydraulically actuated – Spirit Aerosystems
- P9 Thrust reverser doors
- P10 Fire extinguisher bottles
- P11 Honeywell RE220 auxiliary power unit

Undercarriage and hydraulics

- U1 Hydraulically actuated nose undercarriage manufactured by Goodrich. Nose wheel steering supplied by Eaton
- U2 Graphite/epoxy composite nose undercarriage doors. Forward doors are shown open, they are normally closed when the undercarriage is down and locked
- U3 Wheels, brakes and anti-skid system supplied by Moogit
- U4 Hydraulically actuated main undercarriage manufactured by Goodrich
- U5 Main undercarriage doors – graphite/epoxy composite. Manufactured by Nordam
- U6 Main undercarriage fairing door, attached to and closes with main undercarriage leg – graphite/epoxy composite. Manufactured by Nordam
- U7 EHS/EBHA hydraulic control manifolds and remote electronics for aileron actuation – Parker Aerospace
- U8 EHS/EBHA hydraulic control manifolds and remote electronics for spoiler actuation – Parker Aerospace
- U9 EHS/EBHA hydraulic control manifolds and remote electronics for elevator actuation – Parker Aerospace
- U10 EHS/EBHA hydraulic control manifolds and remote electronics for rudder actuation – Parker Aerospace
- U11 Ram air turbine – on stbd side of aircraft – Hamilton Standard
- U12 Bottles for emergency extension of undercarriage
- U13 Radial main landing gear tyres – Goodyear
- U14 Landing gear control
- U15 Bias nose landing gear tyres – Goodyear

Instrument panel and displays

- D1 Primary flight displays – Honeywell
- D2 Multifunction displays – Honeywell
- D3 Master warning panels
- D4 Guidance panel – Honeywell
- D5 Chronometers
- D6 Switch panel units
- D7 Fire extinguisher controls
- D8 Standby multifunction controller – Honeywell
- D9 Map display
- D10 Landing gear controller
- D11 Emergency gear extension handle
- D12 Emergency locator transmitter switch
- D13 Engine throttle and thrust reverser
- D14 Nosewheel steering
- D15 Parking brake handle
- D16 Brake accumulator pressure indicator
- D17 Trim control panel – pitch/yaw/roll
- D18 Cursor control devices
- D19 Multifunctional control display units – three off
- D20 Ram air turbine deployment handle
- D21 Audio control panel – three off
- D22 Oxygen control panel
- D23 Cockpit printer
- D24 Flap handle
- D25 Speed brake handle
- D26 Cockpit handset
- D27 Security system control panel
- D28 Data loader
- D29 Oxygen mask – two off
- D30 Dimming panel – two off

Fuel system

- F1 Two integral wing tanks. The integral tanks are baffled to minimise aircraft centre of gravity shift with changes in aircraft attitude. Each integral tank contains a hopper in which the pumping system for each wing is located. Adequate fuel quantity in each hopper is maintained during flight by gravity supplemented by ejector pumps which pump fuel from tank areas outside of the hopper. A cross flow line, connecting the two pumping systems, is provided to allow fuel to flow from one tank to either or both engines. A cockpit controlled intertank valve permits fuel balancing in flight. The fuel system for both engines are self-bleeding to minimise maintenance
- F2 Main fuel line to engine
- F3 Top hat section fuel vents
- F4 Gravity filler point – on each wing

Flying controls

- C1 Rudder pedals – Rockwell Collins
- C2 Control column – Rockwell Collins
- C3 Aluminium alloy aileron control surfaces – manufactured by Spirit Aerosystems
- C4 Spoilers – three per wing
 - Inboard – speedbrake/ground spoiler
 - Midboard – speedbrake/ground spoiler/roll spoiler
 - Outboard – speedbrake/ground spoiler/roll spoiler – manufactured by Spirit Aerosystems

- C5 Fly-by-wire aileron actuators – two per aileron. One EHS/EBHA and one EBHA active/active operation – Parker Aerospace
- C6 Fly-by-wire spoiler actuators – one per spoiler panel. One EHS/EBHA per inboard and midboard panel. One EBHA per outboard panel – Parker Aerospace
- C7 Aluminium alloy single-slotted Fowler-type flaps (one flap per wing) manufactured by Spirit Aerosystems
- C8 Flap tracks – four per flap surface

- C9 Flap actuators – two flaps per surface. Actuators interconnected via a rigid transmission drive system and powered by a hydraulically powered drive unit mounted within the wheel well area – manufactured by Moog
- C10 Torque tube drive line connecting the hydraulic drive unit to the flap actuators – manufactured by Moog
- C11 Tailplane trim actuator – electrically powered – manufactured by Rockwell Collins

- C12 Elevator of graphite/epoxy composite construction, the elevators are mounted on hinges attached to the tailplane rear spar – manufactured by Stork Fokker Aerostructures
- C13 Rudder of graphite/epoxy composite construction, mounted in hinges attached to the fin rear spar – Stork Fokker Aerostructures
- C14 Fly by wire rudder actuators – total of two. One EHS/EBHA and one EBHA active/active operation – Parker Aerospace

- C15 Fly by wire elevator actuators – two per elevator. One electro hydraulic servo actuator (EHS/EBHA) and one electro backup hydrostatic actuator (EBHA) – active/active operation – Parker Aerospace