

# Gulfstream G700



- 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)
  - 6 Two-crew cockpit with seat for third crew member
  - 7 Instrument panel housing four 330 x 254mm (13 x 10in) liquid crystal displays
  - 8 Overhead panel
  - 9 Pilot & co-pilot's LCD head-up displays
  - 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 – GKN
  - 15 Toilet door – shown open
  - 16 Twenty elliptical windows – 523 x 714mm (20.6 x 28in). The windows are constructed of stretched acrylic (liner) and new craze resistant polymer (outer) panes. These are acoustically isolated from the inner heated panel – PPG Aerospace.
  - 17 Window mounting structure
  - 18 Four window emergency exits, can be opened from inside and outside the aircraft – 660 x 812 mm (26 x 32in)
  - 19 Auxiliary pressure bulkhead – aluminium 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 rivetted to the ribs and spars – GKN
  - 25 Fokker Aerostructures
  - 26 Pivot point for tailplane
  - 27 Tailplane consists of tip to tip upper and lower skins with integral beams joined at the front, centre and rear spars – complete tailplane manufactured by GKN
  - 28 Fokker Aerostructures
  - 29 Front spar – graphite/epoxy construction
  - 30 Rear spar – graphite/epoxy construction
  - 31 Centre spar – machined aluminium alloy
  - 32 Machined aluminium alloy ribs
  - 33 Four-piece aluminium alloy leading edge
  - 34 Pressed aluminium alloy leading edge riblets
  - 35 Tailplane tip – aluminium alloy chemically etched skin and pressed aluminium alloy ribs with moulded trailing edge
  - 36 Single piece graphite/epoxy upper and lower skins with integral spanwise stringers. Access panels in upper skin
  - 37 Fin centrebox
  - 38 Fin fairing

- 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 rivetted stringers
- 47 Machined three-piece aluminium alloy lower wing skin with rivetted 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 by Daher
- 51 Three cabinets with centred area for microwaves and convection ovens
- 52 Passenger cabin
- 53 Single passenger seats
- 54 Double passenger seats
- 55 Divan
- 56 Fold-down passenger tables – three off. Only two tables shown folded out
- 57 Conference table
- 58 Credenza
- 59 Cabin window ledges
- 60 Ledge side panels
- 61 Glasses cabinet
- 62 Upper sidewall panels
- 63 Cup holders
- 64 Crew area – left side
- 65 Crew/passenger lavatory
- 66 Galley area – right side
- 67 Passenger lavatory
- 68 Baggage compartment
- 69 Crew emergency egress hatch
- 70 Bureau
- 71 Bed
- 72 Aft lavatory wardrobe/storage cabinet

- Avionics, electrics and sensors**
- A1 Weather radar antenna – Honeywell
  - A2 EVS II camera – Kollsman
  - A3 Glideslope antenna
  - A4 Multi-function probes (MFP) – four off
  - A5 Ice detector probes – two off
  - A6 TCAS antenna – upper
  - A7 Total air temperature probes – two off
  - A8 ADF antenna
  - A9 Left hand electronic equipment rack (LEER)
  - A10 Right hand electronic equipment rack (REER)
  - A11 ATC 1 antennas upper – 2 off
  - A12 ATC 2 antennas lower – 2 off
  - A13 Passengers electronic controls
  - A14 VHF 1 antenna
  - A15 VHF 2 antenna
  - A16 VHF 3 antenna
  - A17 GPS antenna – two off
  - A18 Wing inspection light
  - A19 Baggage electronic equipment rack (BEER)
  - A20 ELT antenna
  - A21 UHF security system 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
  - A28 Dual magnetometers
  - A29 Junction box – two off
  - A30 Satellite data unit
  - A31 80amp-hr, Lithium Ion 24vdc batteries – two off

- Flying controls**
- C1 Rudder pedals – Rockwell Collins
  - C2 Pilot and co-pilot's active control side sticks – Rockwell Collins
  - C3 Aluminium alloy aileron control surfaces – manufactured by Triumph
  - C4 Spoilers – three per wing Inboard – speedbrake/ground spoiler Midboard – speedbrake/ground spoiler/roll spoiler Outboard – speedbrake/ground spoiler/roll spoiler – Triumph
  - C5 Fly-by-wire aileron actuators – two per aileron. One EHSA and one EBHA active/active operation – Parker Aerospace
  - C6 Fly-by-wire spoiler actuators – one per spoiler panel. One EHSA 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 Triumph
  - C8 Flap tracks – four per flap surface
  - C9 Flap actuators – two per flap 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 driveline 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/thermoplastic construction, the elevators are mounted on hinges attached to the tailplane rear spar – manufactured by GKN Fokker Aerostructures
  - C13 Rudder of graphite/thermoplastic construction, mounted on hinges attached to the fin rear spar – GKN Fokker Aerostructures
  - C14 Fly by wire rudder actuators – total of two. One EHSA and one EBHA – active/active operation – Parker Aerospace
  - C15 Fly by wire elevator actuators – total of two. One EHSA and one EBHA – active/active operation – Parker Aerospace

- Instrument panel and displays**
- D1 Pilot's overhead circuit breaker panel

- D18 Touch screen controller 1
- D19 Touch screen controller 4
- D20 Primary flight displays – two off
- D21 Multifunction displays – two off
- D22 Pilot's pull out tray
- D23 Co-pilot's pull out tray
- D24 Left fire handle
- D25 Emergency landing gear handle
- D26 Landing gear panel
- D27 Right fire handle
- D28 Touch screen controller 2
- D29 Touch screen controller 3
- D30 Throttle quadrant assembly
- D31 Pilot's cursor control device
- D32 Co-pilot's cursor control device
- D33 Engine fuel control panel
- D34 Flap handle
- D35 Speed brake handle
- D36 Parking brake
- D37 Storage container
- D38 Flight control trim panel
- D39 Cupholders – six off
- D40 Pilot's active control side stick
- D41 Pilot's ACS arm support
- D42 Nosewheel steering
- D43 Pilot's oxygen mask
- D44 Aircraft security system control panel
- D45 Data LAN management unit
- D46 ELT remote switch
- D47 Co-pilot's active control side stick
- D48 Co-pilot's ACS arm support
- D49 Oxygen control panel
- D50 Co-pilot's oxygen mask
- D51 Cockpit printer (option)

- Environmental control system**
- E1 Cockpit conditioned air foot ducting
  - E2 Cockpit conditioned air foot ducting
  - E3 Conditioned air ducting to cockpit
  - E4 Conditioned air to cabin
  - E5 Cabin foot level ducting for conditioned air
  - E6 Cabin return air
  - E7 Cockpit air supply ducting
  - 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 Gasper 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 Precooler exhaust

- 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

- Powerplant, APU, pylon and nacelle**
- P1 Pylons constructed of graphite/epoxy composite ribs and skins and aluminium alloy leading edge, top surface of pylon designed to withstand walking loads
  - P2 Rolls-Royce Pearl 700 turbofan engines
  - P3 Nacelle air intake – carbonfibre composite with aluminium alloy lip
  - P4 Cowl doors of carbonfibre composite – both cowl doors hinge for access to engine
  - P5 Forward engine mount
  - P6 Aft engine mount
  - P7 Thrust strut
  - P8 Target type thrust reverser – hydraulically actuated – Safran
  - P9 Thrust reverser doors
  - P10 Fire extinguisher bottles
  - P11 Honeywell RE220 auxiliary power unit (APU)
  - P12 APU inlet door

- 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 Meggitt
  - 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 EHSA/EBHA hydraulic control manifolds and remote electronics for aileron actuation – Parker Aerospace
  - U8 EHSA/EBHA hydraulic control manifolds and remote electronics for spoiler actuation – Parker Aerospace
  - U9 EHSA/EBHA hydraulic control manifolds and remote electronics for elevator actuation – Parker Aerospace
  - U10 EHSA/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 central console

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The help of the following Gulfstream staff members has been instrumental in the preparation of this cutaway  
Jimmy Hancock & Joel Ludlam



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MOOG

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