

GULFSTREAM G650 Model Guide

GULFSTREAM G650 is a large twin-engine turbofan business jet. Its flight manual limits it to 22 occupants, of which 19 may be passengers, and to a 51,000 ft maximum operating altitude. The wider Gulfstream GVI family is listed at up to 7,000 nm range and 488 kt cruise. Those are family maxima, not G650 figures. The G650ER variant has higher weights and more fuel.

KEY TAKEAWAYS

- Max takeoff weight is 99,600 lbs for the G650 and 103,600 lbs for the G650ER. Max landing weight is 83,500 lbs for both.
- Fuel capacity is 44,200 lb (6,558 gal) on the G650 and 48,200 lb (7,152 gal) on the G650ER.
- Takeoff is prohibited in any flight control law other than Normal, and with frost, ice, snow or slush on critical surfaces.

OPERATING LIMITS TO KNOW

Max tailwind is 10 kts. Demonstrated crosswind is 28 kts, or 25 kts above 10,000 ft. Max airfield pressure altitude is 14,500 ft for s/n 6003 through 6019 and 15,000 ft for s/n 6001 and above 6020, so check the serial number. Max operating altitude is 51,000 ft, or 48,000 ft with a single air-conditioning pack.

FLIGHT CONTROL SOFTWARE (ASC 037)

ASC 037 Rev A updates the flight control computer software from v5.44 to v6.24. It adds range and cruise improvements, auto-brake provision and production yaw trim. It applies to s/n 6001 to 6164, takes about 51 labor-hours, and is done only at authorized Gulfstream facilities. FAA operators need AFM Revision 10 or later. Confirm it is incorporated.

RECORDS AND AD STATUS

The sample Master AD/SI report for s/n 6101 shows two BR725A1-12 engines and an APU. It shows 1245.8 hours and 507 AFL as of 23-Apr-2020. Most ADs show as complied with. AD 2020-11-01 (primary flight control actuation software update) was listed with 27-JUL-2022 as its next-due date. Ask for the current AD/SI report for the specific aircraft.

SPECIFICATIONS

Max Operating Altitude Ft	51000
Max Operating Altitude Single Pack Ft	48000
Fuel Capacity Lbs	44200
Fuel Capacity Gal	6558
Max Fuel Imbalance Takeoff Lbs	1000

PERFORMANCE

Max Tailwind Kts	10
Demonstrated Crosswind Kts	28
Max Airfield Pressure Altitude Ft	15000

V-SPEEDS

Vmo Above 8000ft Kts	340
Vmo Below 8000ft Kts	300
Va Kts	206
Vfe Flaps 10 Kts	250
Vfe Flaps 20 Kts	220
Vfe Flaps 39 Kts	190
Vle Kts	250
Vmcg Sea Level Kts	105

WEIGHT & BALANCE

Max Ramp Weight Lbs	100000
Max Takeoff Weight Lbs	99600
Max Landing Weight Lbs	83500
Max Zero Fuel Weight Lbs	60500

SAFETY NOTES

- The RAT may not be deployed when normal AC power is available, except in emergencies or as an abnormal or emergency checklist directs.
- Flight into known icing is prohibited when the flight control law is Alternate, Direct or Backup. Exit icing if the law degrades.
- Landing-gear and flap speeds are limited. VFE is 250 KCAS at flaps 10, 220 at flaps 20 and 190 at flaps 39.