European Union Aviation Safety Agency

TYPE-CERTIFICATE DATA SHEET

No. EASA.IM.A.169

for

Gulfstream GVI

Type Certificate Holder:

Gulfstream Aerospace Corporation

500 Gulfstream Road,
Savannah, GA, 31408
USA

For Model(s): GVI (G650/G650ER)
GVIII-G700 (G700)
GVIII-G800 (G800)

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SECTION 1: GVI

SECTION 1: GVI

I. General

This Data Sheet, which is part of Type Certificate No. IM.A.169, prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the European Union Aviation Safety Agency.

1. Type / Model / Variant

GVI (G650/G650ER)

2. Performance Class

A

3. Certifying Authority

Federal Aviation Administration (FAA)
East Certification Branch
1701 Columbia Avenue
College Park
Atlanta, GA 30337
United States of America

4. Manufacturer

Gulfstream Aerospace Corporation
P.O. Box 2206
Savannah, GA 31402-2206
United States of America

5. FAA Certification Application Date

September 18, 2007

6. EASA Validation Application Date

September 18, 2007

7. FAA Type Certification Date

G650(1)	September 07, 2012
G650ER(2)	October 07, 2014

8. EASA Type Validation Date

G650(1)	December 21, 2012
G650ER(2)	April 01, 2016

(1) G650 is the commercial / marketed designation to identify Gulfstream GVI aircraft model.

(2) G650ER (ER standing for Extended Range) is the commercial / marketed designation to identify Gulfstream GVI aircraft model having received the Gulfstream modification 'Gross Weight Increase', supported by the embodiment of the Gulfstream ASC 014.
The G650ER is not considered as new aircraft model or variant.

SECTION 1: GVI – continued

II. Certification Basis

1. Reference Date for determining the applicable requirements

September 18, 2007

2. FAA Type Certification Data Sheet No.

T00015AT

3. FAA Certification Basis

September 18, 2007

4. EASA Airworthiness Requirements

EASA Certification Specification (CS) 25, Amendment 2, effective as of October 02, 2006, except where identified below.

Certification Specification All Weather Operations (CS AWO), Book 1 and 2 published October 17, 2003.

5. Special Conditions

CRI	Subject
B-101	High Incidence Protection Function
C-102	Limit engine torque loads sudden engine stoppage
C-103	Design Roll Manoeuvre requirement
C-104	Automatic speed protection for design dive speed (dive speed definition)
D-06	Pilot view “Hydrophobic coatings”
D-07	Towbarless Towing
D-09	Application of ARAC proposal 25.671
D-15	Side facing seats and Divans
D-23	Installation of Flight Crew Sleeping Facility
D-24	Airworthiness standards for Subsonic Transport aeroplanes to be operated above of 41,000 ft
D-26	Isolated compartments
D-29	Control surface position awareness/Electronic flight control systems
E-04	Fuel tank safety
E-05	Freezing fog
E-07	Uncontrollable high thrust
E-12	Water/Ice in Fuel System
E-13	Fuel Quantity Indicating System
E-101	In flight verification of fire detector circuitry
E-102	Inflight engine re-start
E-103	Fuel vent system Fire Protection

SECTION 1: GVI – continued

CRI	Subject
F-05	High Intensity Radiated Fields (HIRF) Protection
F-06	Lightning Protection - Direct Effects (EL)
F-07	Lightning Protection - Indirect Effects (IEL)
F-44	Controller Pilot Data Link Communication (CPDLC)
F-45	Flight Data recorders including Data Link Recording
F-55	In Seat Power Supply Systems (ISPSS)
F-101	Control Surface Position Awareness
F-102	Yaw Oscillations
F-104	Pilot Compartment View Requirements with an Enhanced Flight Vision System
F-105	Electronic Flight Control System Mode Annunciation
F-106	Operation without normal electrical power
F-108	Security of Network Server Systems
F-110	Installation of non-rechargeable lithium battery

6. Exemptions

Not applicable

7. Deviations

D-22	Doors between passenger compartments
E-18	Uncontrollable thrust increase

8. Equivalent Safety Findings

The following table lists the Equivalent Safety Finding requests made by Gulfstream which are specific to the GVI model.

CRI	Subject
B-12	Steep Approach and Landing Capability
C-105	Widespread Fatigue damage limits of validity
D-16	Emergency Exit Locator Signs
D-20	Emergency exit and encroachment
E-03	APU mounting system fireproofness
E-104	Fuel Filter Indication System
E-105	Turbine Engine tailpipe Fire Detection
E-106	Oil fire detection system
E-107	Digital-only Display of Engine HP Rotor speed
E-108	Flammable Fluid Carrying Components in Nacelle Areas Behind the Firewall
F-39	Standby (Magnetic) Compass Removal

SECTION 1: GVI – continued

FAA ELOS TC8700AT-T-C-7 Rev. 2 – Encroachment into Emergency Exits

9. Elect to Comply

B-07	CS 25.1419 Am 3 “Flight in Icing Conditions”
C-04	CS 25.561; 25.721; 25.963 Am 3 “Fuel Tank Integrity and Access Covers

NPA	Subject
NPA 15/2004	CS 25.1302 Am 3 “Human Factors”
NPA 02/2006	CS 25.783 Am 4 “Doors”
NPA 18/2004	CS 25.1329 Am 4 “Flight Guidance Systems”
NPA 2008-13	CS 25.856 Am 6 “Thermal/Acoustic Insulation Materials”

10. Environmental Protection Standards

For aircraft not fitted with ASC 014:
- Noise: ICAO Annex 16, Volume I, Amendment 8(*) (Fifth Edition), Chapter 4 for Noise; and
- Emissions: ICAO Annex 16, Volume II (Third Edition), Amendment 6, for Emissions.

For aircraft fitted with ASC 014:
- Noise: ICAO Annex 16, Volume I, Amendment 10(*) (Sixth Edition), Chapter 4 for Noise;
  and
- Emissions: ICAO Annex 16, Volume II (Third Edition), Amendment 6, for Emissions.

For aircraft fitted with ASC 014 and (ASC 026, ASC 027, ASC 028, ASC 029, or ASC 082):

- Noise: ICAO Annex 16, Volume I, Amendment 11B(*) (Seventh Edition), Chapter 4 for Noise;
  and
- Emissions: ICAO Annex 16, Volume II (Third Edition), Amendment 6, for Emissions.

For aircraft fitted with ASC 137:
- Noise: ICAO Annex 16, Volume I, Amendment 13(*) (Eighth Edition), Chapter 4 for Noise; and
- Emissions: ICAO Annex 16, Volume II (Third Edition), Amendment 6, for Emissions.

(*) Note: The difference between the ICAO Annex 16, Volume I amendment level is relevant with their applicability at the time of the certification exercises.

For details of the certified noise levels see TCDSN EASA.IM.A.169

SECTION 1: GVI – continued

III. Technical Characteristics and Operational Limitations

1. Type Design Definition

Gulfstream drawing 60P0000000-001, GVI Aircraft Level Configuration Control Document, revision M, or later approved revision, (EASA Project No. IM.A.169), as amended by Gulfstream ASC 10 for EASA aircraft, and post TC modifications as defined in Report GVI-GER-0331 “EASA POST-TYPE CERTIFICATION MODIFICATIONS (EASA TYPE DESIGN)”, latest approved revision.

2. Description

Twin turbo-fan, long range, large aeroplane.

3. Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification.

4. Dimensions

Wingspan	30.36 meters [99.62 feet]
Fuselage Length	30.41 meters [99.78 feet,]
Fuselage Width at Constant Section	2.74 meters [9.00 feet,]

5. Engines

Two (2) Rolls Royce Deutschland Ltd & Co. KG Turbofan Engine Models: BR700-725A1-12 (EASA Engine Type Certificate No. E.018)

Engine Limits:

Engine Limits **Data Sheet EASA E.018**	GVI BR700-725A1-12
Static thrust at sea level (Standard Day)	75.2 kN (16,900 lbs)

Other engine limitations: See the Engine Type Certificate Data Sheet EASA.E.018.

6. Auxiliary Power Unit

One (1) Honeywell RE220(GVI) FAA TSO-C77a.

For aircraft not fitted with ASC 014:
Limitations and Operating Procedures - See the FAA approved Airplane Flight Manual ref GAC-AC-G650-OPS-0001 and EASA approved Airplane Flight Manual Supplement ref EASA-G650-2012-01, latest approved revisions.

For aircraft fitted with ASC 014:
Limitations and Operating Procedures – See the FAA approved Airplane Flight Manual ref GAC-AC-G650ER-OPS-0001 and EASA approved Airplane Flight Manual Supplement ref EASA-G650ER-2015-01, latest approved revisions

7. Propellers

N/A

SECTION 1: GVI – continued

8. Fluids (Fuel, Oil, Additives, Hydraulics)

Fuels: Rolls Royce PLC Turbofan Engines*

Refer to the applicable approved Manuals.

Kerosene Type (AVTUR, JP8) NATO Code F24/F34/F35		
American	**British**	**Canadian**
ASTM D1655, Jet A ASTM D1655, Jet A-1 MIL-T-83133, JP-8 MIL-DTL-83133, JP8	DEF STAN 91-87 DEF STAN 91-91	CAN/CGSB-3.23
French	**CIS**	**Chinese**
DCSEA 134/A	TS-1 & RT (GOST 10227, AM 1) GSTU 320.001149943.007-97 (RT Type) GSTU 320.001149943.011-99 (TS-1 Type)	GB 6537-2006 including the fuel additives limited to the concentrations stated in Annex A of GB 6537-2006 (see Chinese Fuel Additives note below)

NOTE:
The following Chinese fuel additives are approved for use on this Gulfstream aircraft model:

1. Static Dissipater additive: Stadis 450
2. Antioxidant: 2,6-ditertiary-butyl-4-methyl-phenol
3. Icing Inhibitor: Ethylene Glycol Monomethyl Ether or Diethylene Glycol Monomethyl Ether
4. Metal Deactivator: N,N’-disalicylidene 1,2-propanediamine

The following Chinese fuel additives are not approved for use on this Gulfstream aircraft model:

1. Static Dissipater additive T1502
2. Antifriction additives T1601 or T1602

Oils
Refer to the applicable approved Manuals.

Hydraulics
Refer to the applicable approved Manuals.

SECTION 1: GVI – continued

9. Fuel Capacities

For aircraft not fitted with ASC 014, the following fuel capacities apply:

Tanks	Pounds	U.S. Gallons*	Kilograms*	Litres*
Right	22,100	3,298	10,024	12,486
Left	22,100	3,298	10,024	12,486
Total	44,200	6,597	20,048	24,972

For aircraft fitted with ASC 014, the following fluid capacities apply:

Tanks	Pounds*	U.S. Gallons*	Kilograms*	Litres*
Right	24,100	3,597	10,931	13,616
Left	24,100	3,597	10,931	13,616
Total	48,200	7,194	21,863	27,233

* Fuel Density is 6.700 Pounds / U.S. Gallon and 0.8028 Kilograms / Litre

See applicable Weights and Balance Manual

10. Airspeed Limits

V_{MO}/M_{MO} = 340KCAS / 0.925M.

For aircraft not fitted with ASC 014:
For other airspeed limits, see the FAA approved Flight Manual ref GAC-AC-G650-OPS-0001 and EASA approved Airplane Flight Manual Supplement ref EASA-G650-2012-01, latest approved revisions. (Section 1)

For aircraft fitted with ASC 014:
For other airspeed limits, see the FAA approved Flight Manual ref GAC-AC-G650ER-OPS-0001 and EASA approved Airplane Flight Manual Supplement ref EASA-G650ER-2015-01, latest approved revisions. (Section 1):

11. Flight Envelope

Maximum Operating Altitude: 15,545 Meters (51,000 feet)

For aircraft not fitted with ASC 014:
See the FAA approved Flight Manual ref GAC-AC-G650-OPS-0001 and EASA approved Airplane Flight Manual Supplement ref EASA-G650-2012-01, latest approved revisions.

For aircraft fitted with ASC 014:
See the FAA approved Flight Manual ref GAC-AC-G650ER-OPS-0001 and EASA approved Airplane Flight Manual Supplement ref EASA-G650ER-2015-01, latest approved revisions.

SECTION 1: GVI – continued

12. Operating Limitations

Gulfstream GVI (G650)

For aircraft not fitted with ASC 014:
See the FAA approved Flight Manual ref GAC-AC-G650-OPS-0001 and EASA approved Airplane Flight Manual Supplement ref EASA-G650-2012-01, latest approved revisions.

For aircraft outfitted with ASC 101 (Steep Approach and Landing):
See the FAA approved Flight Manual ref GAC-AC-G650-OPS-0001 and EASA approved Airplane Flight Manual Supplement EASA-G650-2012-01, and EASA-G650-2021-01, latest approved revisions.

For aircraft outfitted with ASC 109 (CAT II Operations):
See the FAA approved Flight Manual ref GAC-AC-G650-OPS-0001 and EASA approved Airplane Flight Manual Supplement EASA-G650-2012-01, and FAA approved Flight Manual Supplement G650-2017-04, latest approved revisions.

Gulfstream GVI (G650ER)

For aircraft fitted with ASC 014:
See the FAA approved Flight Manual ref GAC-AC-G650ER-OPS-0001 and EASA approved Airplane Flight Manual Supplement ref EASA-G650ER-2015-01, latest approved revisions.

For aircraft outfitted with ASC 101 (Steep Approach and Landing):
See the FAA approved Flight Manual GAC-AC-G650ER-OPS-0001 and EASA approved Airplane Flight Manual Supplement EASA-G650ER-2015-01 and EASA-G650ER-2021-01, latest approved revisions.

For aircraft outfitted with ASC 109 (CAT II Operations):
See the FAA approved Flight Manual GAC-AC-G650ER-OPS-0001 and EASA approved Airplane Flight Manual Supplement EASA-G650ER-2015-01 and FAA approved Flight Manual Supplement G650ER-2017-04, latest approved revisions

12.1 Approved Operations

The airplane is approved for the following kinds of flight and operation, both day and night, provided the required equipment is installed and approved in accordance with the applicable regulations/specifications:

- Visual (VFR)
- Instrument (IFR)
- Icing Conditions
- Low weather minima (CAT I operations)
- Low weather minima (CAT II operations)
- RVSM
- Wet and contaminated runway operations (Appendix D data to FAA approved AFM)
- Steep Approach and Landing

SECTION 1: GVI – continued

12.2 Other Limitations

Runway slope ±2%

Maximum Takeoff and Landing Tailwind Component – 10 knots

Maximum Operating Altitude – 15,545 m (51,000 feet) pressure altitude

Maximum demonstrated crosswind component for takeoff and landing is 28 knots.

When operating in a flight control law mode other than Normal (i.e. Alternate, Direct, or Backup), maximum crosswind component for Landing is 10 knots.

SECTION 1: GVI – continued

13. Maximum Certified Masses

Configuration	Maximum Taxi Weight	Maximum Take-off Weight	Maximum Landing Weight	Maximum Zero Fuel Weight
G650	45,359 kg	45,177 kg	37,874 kg	27,442 kg
	100,000 lbs	99,600 lbs	83,500 lbs	60,500 lbs
G650ER (ASC 014)	47,173 kg	46,992 kg	37,874 kg	27,442 kg
	104,000 lbs	103,600 lbs	83,500 lbs	60,500 lbs
G650ER (ASC 14 + ASC 26)	33,974 kg	33,974 kg	33,974 kg	27,442 kg
	74,900 lbs	74,900 lbs	74,900 lbs	60,500 lbs
G650ER (ASC 14 + ASC 27)	40,823 kg	40,823 kg	37,874 kg	27,442 kg
	90,000 lbs	90,000 lbs	83,500 lbs	60,500 lbs
G650ER (ASC 14 + ASC 28)	43,091 kg	43,091 kg	37,874 kg	27,442 kg
	95,000 lbs	95,000 lbs	83,500 lbs	60,500 lbs
G650ER (ASC 14 + ASC 29)	45,359 kg	45,177 kg	37,874 kg	27,442 kg
	100,000 lbs	99,600 lbs	83,500 lbs	60,500 lbs
G650ER (ASC 14 + ASC 82)	45,681 kg	45,500 kg	37,874 kg	27,442 kg
	100,710 lbs	100,310 lbs	83,500 lbs	60,500 lbs
G650 (ASC 137)	45,359 kg	45,177 kg	29,483 kg	27,442 kg
	100,000 lbs	99,600 lbs	65,000 lbs	60,500 lbs
G650ER (ASC 137)	47,173 kg	46,992 kg	29,483 kg	27,442 kg
	104,000 lbs	103,600 lbs	65,000 lbs	60,500 lbs

Note: The maximum weight limits may be less as limited by centre of gravity, fuel density and fuel loading limits, as given in the EASA approved Airplane Flight Manual Supplement (See Section 1).

For aircraft not fitted with ASC 014:
See the FAA approved Flight Manual ref GAC-AC-G650-OPS-0001 and EASA approved Airplane Flight Manual Supplement ref EASA-G650-2012-01, latest approved revisions. (Section 1).

SECTION 1: GVI – continued

For aircraft fitted with ASC 014:
See the FAA approved Flight Manual ref GAC-AC-G650ER-OPS-0001 and EASA approved Airplane Flight Manual Supplement ref EASA-G650ER-2015-01, latest approved revisions (Section 1).

For aircraft fitted with ASC 014 and (ASC 026, ASC 027, ASC 028, ASC 029, or ASC 082):

See the FAA approved Flight Manual Supplement ref AFMS EASA-G650-2016-01 or AFMS EASA-G650ER-2016-02, latest approved revisions.

14. Centre of Gravity Range

For aircraft not fitted with ASC 014:
See the FAA approved Flight Manual ref GAC-AC-G650-OPS-0001 and EASA approved Airplane Flight Manual Supplement ref EASA-G650-2012-01, latest approved revisions (Section 1).

For aircraft fitted with ASC 014:
See the FAA approved Flight Manual ref GAC-AC-G650ER-OPS-0001 and EASA approved Airplane Flight Manual Supplement ref EASA-G650ER-2015-01, latest approved revisions (Section 1).

15. Datum

For weight and balance purposes, the zero datum is 100 inches forward of the radome

16. Mean Aerodynamic Chord (MAC)

4.756 meters [187.24 inches]

17. Levelling Means

Longitudinal: Lugs at left nose wheel well door longeron STA 163.0 & 174.0
Lateral: Lugs on rear face of bulkhead STA 148.5 in nose wheel well

18. Minimum Flight Crew

Two (2): Pilot and co-pilot

19. Maximum Seating Capacity

Total number of occupants shall not exceed 22.

The number of passengers shall not exceed 19 as determined by emergency exit requirements, nor shall the number of passengers exceed the number of seating accommodations approved for takeoff and landing.

Note: Type Certificate EASA.IM.A.169 considers a “green” aircraft (aircraft without an approved cabin interior) configuration only. Cabin interior installations (including passenger seating configurations up to 19 passengers) are subject to completion STCs being EASA approved prior to any operation with passengers.

SECTION 1: GVI – continued

20. Baggage/ Cargo Compartment

For aircraft not fitted with ASC 014:
Gulfstream G650 Weight and Balance Manual Issue 3, dated April 2012 or later revisions.

For aircraft fitted with ASC 014:
Gulfstream G650ER Weight and Balance Manual revision 1 dated April 2015 or later revisions.

21. Wheels and Tyres

Nose wheels TSO C135a, Tyres Twin 21 x 7.25-10 bias ply (TSO C62e) nominal pressure 216 psi.
Main wheels TSO C135a, Tyres Twin H37.5 x 12.0 R 19 (TSO C62e) nominal pressure 216 psi.

See Aircraft Maintenance Manual for proper servicing of tires

22. Extended Diversion Time Operations (EDTO)

The following EDTO capabilities granted by EASA are valid for Commercial Air Transport Operations.
Operational approval must be sought from the State of Registry of each individual aircraft.

The GVI aircraft model has been demonstrated compliant with the design and reliability requirement for 180min diversion time from an adequate aerodrome without ETOPS.

23. EVS and HUD Operations

The GVI Type Design has been shown to be operable in accordance with Commission Regulation (EU) No 965/2012, paragraphs SPA.LVO.100 and CAT.OP.MPA.110. It has been demonstrated compliant with the appropriate design and reliability requirements defined in CRI F-51.
Operational approval must be sought from the State of Registry of each individual aircraft.

24. Interiors Installations

GVI cabin interior installations must be in accordance with Gulfstream report GVI-GER-6855 “GVI Interior Certification Requirements Document”.

IV. Operating and Service Instructions

1. Airplane Flight Manual (AFM)

Gulfstream GVI (G650)

For aircraft not fitted with ASC 014:
Gulfstream GVI (G650) AFM, FAA approved Flight Manual ref GAC-AC-G650-OPS-0001 and EASA approved Airplane Flight Manual Supplement ref EASA-G650-2012-01, latest approved revisions.

For aircraft outfitted with ASC 101 (Steep Approach and Landing):

SECTION 1: GVI – continued

See the FAA approved Flight Manual ref GAC-AC-G650-OPS-0001 and EASA approved Airplane Flight Manual Supplement EASA-G650-2012-01, and EASA-G650-2021-01, latest approved revisions.

For aircraft outfitted with ASC 109 (CAT II Operations):
See the FAA approved Flight Manual ref GAC-AC-G650-OPS-0001 and EASA approved Airplane Flight Manual Supplement EASA-G650-2012-01, and FAA approved Flight Manual Supplement G650-2017-04, latest approved revisions.

Gulfstream GVI (G650ER)

For aircraft fitted with ASC 014:
Gulfstream GVI (G650ER) FAA approved Flight Manual ref GAC-AC-G650ER-OPS-0001 and EASA approved Airplane Flight Manual Supplement ref EASA-G650ER-2015-01, latest approved revisions.

For aircraft outfitted with ASC 101 (Steep Approach and Landing):
See the FAA approved Flight Manual GAC-AC-G650ER-OPS-0001 and EASA approved Airplane Flight Manual Supplement EASA-G650ER-2015-01 and EASA-G650ER-2021-01, latest approved revisions.

For aircraft outfitted with ASC 109 (CAT II Operations):
See the FAA approved Flight Manual GAC-AC-G650ER-OPS-0001 and EASA approved Airplane Flight Manual Supplement EASA-G650ER-2015-01 and FAA approved Flight Manual Supplement G650ER-2017-04, latest approved revisions.

2. Instructions for Continued Airworthiness and Airworthiness Limitations

For aircraft not fitted with ASC 014:
Component life limitations are provided in Section 05-10-10, Chapter 5 of the GVI (G650) Aircraft Maintenance Manual.

Maintenance criteria to comply with the certification maintenance requirements are provided in Chapter 5 of the GVI (G650) Aircraft Maintenance Manual.

For aircraft fitted with ASC 014:
Component life limitations are provided in Section 05-10-10, Chapter 5 of the GVI (G650ER) Aircraft Maintenance Manual.

Maintenance criteria to comply with the certification maintenance requirements are provided in Chapter 5 of the GVI (G650 ER) Aircraft Maintenance Manual.

Note 1 A current Weight and Balance Report, must be in each aircraft at the time of original airworthiness certification.

Note 2 Airplane operation must be in accordance with the EASA approved Airplane Flight Manual. All placards required by either the EASA approved Flight Manual, the applicable operating rules, or the Certification Basis must be installed in the airplane.

SECTION 1: GVI – continued

V. OPERATIONAL SUITABILITY DATA (OSD)

The Operational Suitability Data elements listed below are approved by the European Union Aviation Safety Agency under the EASA Type Certificate EASA.IM.A.169, as per Commission Regulation (EU) 748/2012 as amended by Commission Regulation (EU) No 69/2014.

1. Master Minimum Equipment List

a. Master Minimum Equipment List (MMEL), reference: EASA-MMEL-AC-G650-OPS-0004 dated 7 January 2013, as per the defined Operational Suitability Data Certification Basis, recorded in the Operational Review Item (ORI) n°4 Issue 2, or later approved revisions
b. Required for entry into service by EU operator.

2. Flight Crew Data

a. The Flight Crew Data (FCD), reference: EASA-OSD-FC-GVI-GAC-002, Revision 4, dated 11 Apr 2023, or later approved revisions, as per the defined Operational Suitability Data Certification Basis recorded in the same document [Section 2].
b. Required for entry into service by EU operator.
c. Pilot Type Rating: GVI.

Note: These data cover the Gulfstream GVI aircraft model, including:

- GVI fitted with ASC 901 - PlaneView II Avionics Software Version "Block Point I" -,
- GVI fitted with ASC 902 - PlaneView II Avionics Software Version "Block Point 2" -,
- GVI fitted with ASC 014 - Gross Weight Increase / G650ER.
- GVI fitted with ASC 037 - Flight Control Computer (FCC) version 6.2 software
- GVI fitted with ASC 055 - Autobrakes system
- GVI fitted with ASC 101 - Steep Approach to Landing Activation
- GVI fitted with ASC 903 - PlaneView II Avionics Software Version “Block 3” and ASC 125 HUD II Software Update, along with the following optional ASCs:
  - GVI fitted with ASC 005 - Runway Awareness Advisory System (RAAS)
  - GVI fitted with ASC 008 - XM Weather System
  - GVI fitted with ASC 120 - Predictive Weather Hazards
  - GVI fitted with ASC 121 - Situational Awareness Package Installation
  - GVI fitted with ASC 127 - Predictive Landing Performance System (PLPS) / Runway Overrun Alerting and Awareness System (ROAAS)
  - GVI fitted with ASC 128 - Auto-Pilot Coupled Traffic Collision Avoidance System (AP TCAS)

3. Cabin Crew Data

Not applicable

VI. Notes

None

SECTION 2: GVIII-G700

I. General

This Data Sheet, which is part of Type Certificate No. IM.A.169, prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the European Union Aviation Safety Agency.

1. Type / Model / Variant

GVIII-G700 (G700)

2. Performance Class

A

3. Certifying Authority

Federal Aviation Administration (FAA)
East Certification Branch
1701 Columbia Avenue
College Park
Atlanta, GA 30337
United States of America

4. Manufacturer

Gulfstream Aerospace Corporation
P.O. Box 2206
Savannah, GA 31402-2206
United States of America

5. FAA Certification Application Date

18 November 2015

6. EASA Validation Application Date

25 May 2017

7. FAA Type Certification Date

GVIII-G700	29 March 2024

8. EASA Type Validation Date

GVIII-G700	15 May 2024

SECTION 2: GVIII-G700 – continued

II. Certification Basis

1. Reference Date for determining the applicable requirements

31 December 2019

2. FAA Type Certification Data Sheet No.

T00015AT

3. FAA Certification Basis

31 December 2019

4. EASA Airworthiness Requirements

EASA Certification Specification (CS) 25, Amendment 23, effective as of July 16, 2019, with exceptions per 21.A.101 shown:

CS 25		Amendment	APPLICABLE AREA	NOTES
SECTION	**TITLE**			
25.105	Takeoff	25/3	GVIII-G700	
25.111	Takeoff path.	25/3	GVIII-G700	
25.119	Landing climb: All engines operating.	25/3	GVIII-G700	
25.121	Climb: One-engine inoperative.	25/3	GVIII-G700	
25.123	En route flight paths.	25/3	GVIII-G700	
25.125	Landing.	25/3	GVIII-G700	
25.237	Wind velocities.	25/3	GVIII-G700	
25.253	High speed characteristics.	25/11	GVIII-G700	
25.611(b)	Accessibility provisions.	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.
25.729 (a)(b)(d)	Retracting mechanism.	25/0	Landing Gear System except the Landing Gear Control and Indication System (LGCIS)	
25.734	Protection against wheel and tyre failures	N/A	GVIII-G700	
25.735	Brakes	25/2	GVIII-G700	
25.773(b)(1)(i)	Pilot Compartment View	25/0	GVIII-G700	25-452-SC (GIV-X / GV-SP / GV IP F-05)

SECTION 2: GVIII-G700 – continued

CS 25		Amendment	APPLICABLE AREA	NOTES
SECTION	**TITLE**			
25.795	Security considerations	25/0	GVIII-G700	EASA operating rules do not require the installation of a flight deck security door based on adoption of Amendment 43 to ICAO Annex VI, Part I. Refer to Air Operations Regulation (EU) 2019/1387 ORO.SEC.100 "Flight crew compartment security - aeroplanes"
25.831	Ventilation	25/18	GVIII-G700	
25.851	Fire extinguishers.	25/0	GVIII-G700 except 25.851(a)(8) for increased cabin volume due to fuselage stretch	
25.855(a)(b)(d)(e)(f)(g)(h)(1)(2)(i)(j)	Cargo or baggage compartments.	25/5	GVIII-G700 except as noted below	
25.855(j)	Cargo or baggage compartments.	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.
25.857(b)	Cargo compartment classification	25/0	GVIII-G700	
25.869(a)(3)	Fire protection: Systems.	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.

SECTION 2: GVIII-G700 – continued

CS 25		Amendment	APPLICABLE AREA	NOTES
SECTION	**TITLE**			
25.869(a)(4)	Fire protection: Systems	25/0	EWIS components in the wing and empennage: Unchanged LRUs in fuselage, pylon, engine, wing, and empennage; EWIS components integral to unrelated, not significant changes	
25.901(b)	Installation	25/1	Fuel Extinguishing Plumbing and Wiring Connections	GVI IP P-02
25.963	Fuel tanks: General	25/3	GVIII-G700 except 25.963(e) for wing fuel tank in areas exposed to small engine debris threat model defined in AMC 25.963(e)	
25.975	Fuel tank vents and carburetor vapor vents.	25/0	GVIII-G700	
25.981	Fuel tank explosion prevention.	25/1	GVIII-G700	
25.1193	Cowling and nacelle skin.	25/18	GVIII-G700	GVIII CRI E-201
25.1197	Fire extinguishing agents.	25/0	GVIII-G700	
25.1301(b)	Function and installation.	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.
25.1303	Flight and navigation instruments.	25/18	GVIII-G700	
25.1309(d)	Equipment, systems, and installations.	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.
25.1323	Airspeed indicating system.	25/0	TAT Probe	
25.1324	Flight instrument external probes.	N/A	TAT Probe	
25.1325	Static pressure systems.	25/0	TAT Probe	

SECTION 2: GVIII-G700 – continued

CS 25		Amendment	APPLICABLE AREA	NOTES
SECTION	**TITLE**			
25.1326	Flight instrument external probes heating systems alert.	25/0	TAT Probe	
25.1353	Electrical equipment and installations.	25/0	GVIII-G700 except -Data Concentration & Network -Engine -Flight Control System: • Active Control Sidestick -Flight Deck: Touch Screen Controllers	
25.1436(a)(1)(2)(3)(b)(1)(2)(3)(6)(7)(8)(c)(2)(3)	Pneumatic systems - high pressure.	25/1	GVIII-G700	
25.1441	Oxygen equipment and supply	25/18	GVIII-G700	
25.1701	Definition.	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.
25.1703	Function and installation: EWIS	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.
25.1705	Systems and functions: EWIS	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.
25.1707	System separation: EWIS	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.

SECTION 2: GVIII-G700 – continued

CS 25		Amendment	APPLICABLE AREA	NOTES
SECTION	**TITLE**			
25.1709	System safety: EWIS	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.
25.1711	Component identification: EWIS	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.
25.1713	Fire protection: EWIS	N/A (See Note)	EWIS components in the wing and empennage	25.1713 is not applicable for unchanged LRUs from the GVI in the fuselage, pylon, engine, wing, and empennage; 25.1713 does not apply to EWIS components in the wing and empennage and EWIS components integral to unrelated, not-significant changes.
25.1715	Electrical bonding and protection against static electricity: EWIS	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.
25.1717	Circuit protective devices: EWIS	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.

SECTION 2: GVIII-G700 – continued

CS 25		Amendment	APPLICABLE AREA	NOTES
SECTION	**TITLE**			
25.1719	Accessibility provisions: EWIS	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.
25.1721	Protection of EWIS	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.
25.1723	Flammable fluid fire protection; EWIS	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.
25.1725	Powerplants: EWIS	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.
25.1727	Flammable fluid shutoff means: EWIS	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.
25.1729	Instructions for Continued Airworthiness: EWIS	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.
25.1731	Powerplant and APU fire detector system: EWIS	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.

SECTION 2: GVIII-G700 – continued

CS 25		Amendment	APPLICABLE AREA	NOTES
SECTION	**TITLE**			
C25.1	Appendix C, Part I - Atmospheric Icing Conditions. Appendix C, Part II - Airframe Ice Accretions for Showing Compliance with Subpart B.	25/7	GVIII-G700	
H25.1	General.	25/0 (See Note)	EWIS components in the wing and empennage	All changed areas comply with the H25.1 requirements at Amendment 25/19, except the wing and empennage.
H25.5	Electrical Wiring Interconnection System (EWIS) Instructions for Continued Airworthiness.	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the H25.5 requirements at Amendment 25/18, except the wing and empennage.
Appendix M	Fuel Tank System Flammability Reduction Means.	N/A	GVIII-G700	
Appendix N	Fuel Tank Flammability Exposure and Reliability Analysis.	N/A	GVIII-G700	
Appendix P	Mixed phase and ice crystal icing envelope (Deep convective clouds)	N/A	TAT Probe	

Certification Specification CS ACNS, Airborne Communication, Navigation and Surveillance, Issue 2, dated 26 April 2019
Appendix S at Amendment 23, excepting S25.20(b). ESF to CS25.813(c)(2)(ii) via TC8700AT-T-C-7, Revision 2

Certification Specification All Weather Operations (CS AWO), Book 1 and 2 Initial Issue published October 17, 2003.

5. Special Conditions

CRI	Subject
GVII CRI B-01	Flight Envelope Protection

SECTION 2: GVIII-G700 – continued

CRI	Subject
25-858-SC (GVIII IP F-04)	Flight Envelope Protection: Takeoff Stall Protection
GVII CRI B-10	High Incidence Protection Function; stall speeds, stall warning
25-452-SC (GIV-X / GV-SP / GV IP F-05)	Pilot compartment view - Hydrophobic coatings in lieu of windshield wipers
GVII CRI D-16	Installation of Flight Crew Sleeping Facility
GVIII CRI D-206	High Altitude Operation / High Cabin Heat Load
GVIII CRI D-203	Installation of a Therapeutic Oxygen System
GVI CRI D-29	Control Surface Position Awareness / Electronic Flight Control Systems
GVII IP S-06	Electronic Flight Control System: Control Surface Position Awareness
GVIII IP C-02	Technical Criteria for Approving Side-Facing Seats
GVI CRI E-04	Fuel Tank Safety
GVI CRI E-12	Water / Ice in Fuel System
GVI CRI E-13	Fuel Quantity Indicating System
GVI CRI E-103	Fuel Vent System Fire Protection
GVI CRI F-105	Electronic FCS Mode Annunciation
GVIII CRI G-201	Performance Information for landing distance assessment at dispatch and at time of arrival
GVI IP P-02	Fire Extinguishing Plumbing and Wiring connections
GVIII CRI E-201	Engine Cowl Retention
GVII CRI F-33	Non-rechargeable Lithium Battery Installations

SECTION 2: GVIII-G700 – continued

CRI	Subject
GVI CRI F-112	Electro-Hydraulic seats installation
GVIII CRI F-203	Synthetic Vision / Combined Vision on the Head Up Display
25-846-SC (GVII IP S-02)	Electronic System Security Protection from Unauthorized Internal Access
25-847-SC (GVII IP S-03)	Electronic System Security Protection from Unauthorized External Access

6. Exemptions

Not applicable

7. Deviations

GVIII CRI E-207	Uncontrollable High Thrust Failure Conditions
GVIII CRI E-208	Water / Ice in Fuel System

8. Equivalent Safety Findings

The following table lists the Equivalent Safety Finding requests made by Gulfstream which are specific to the GVIII-G700 model.

CRI	Subject
GVII CRI D-03	Flight Control System Failure Criteria
GVI CRI D-20	Emergency Exits
TC8700AT-T-C-7, Revision 2 (GVI IP C-07)	Seat/Furnishing Encroachment into the Overwing Emergency Exit Openings
GVII CRI D-11	Emergency Exit Signs
GVII CRI D-48	Combined Aircraft Pressurization Outflow and Positive Pressure Differential Relief Valves (Cover CRI)
GVI CRI E-104	Fuel Filter Indication System
GVI CRI E-106	Oil Fire Detection System

SECTION 2: GVIII-G700 – continued

CRI	Subject
GVIII CRI E-204	Nacelle behind fire wall: TRAS compartment, absence of fire detection system
GVIII CRI E-206	APU Certification Requirements
GVII CRI E-40	Ignition Switches
AT-01-2015-0016-F-1-GVII (GVII IP F-01)	Electronic Flight Control System: Out-of-trim characteristics
AT-01-2015-0016-F-15-GVII	Vibration / Buffeting Compliance Criteria for External Modifications
GVII CRI F-24	Vertical Acceleration for Flight Data Recorder
GVII CRI F-37	Use of an Electric Only Direction Indicator for Standby Instrumentation
GVIII CRI F-208	Degraded flight instrument external probe heating system
GVIII CRI F-209	Terrain information Display and Synthetic Vision System
AT-01-2015-0016-A-1 (GVIII IP A-1)	Failure Criteria Considered Under the Aeroelastic Stability Requirements of §25.629
AT-01-2015-0016-A-03-GVIII (GVIII IP A-3)	Operation Test Compliance for Fly-by-Wire Flight Control Systems
AT-01-2015-0016-P-1-GVII (GVII IP P-01)	Reverse Thrust Control and Indication
AT-01-2015-0016-P-3, Revision 1 (GVIII IP P-03)	Digital-Only Display of Engine Parameters

SECTION 2: GVIII-G700 – continued

CRI	Subject
AT-01-2015-0016-P-12	Engine Fuel Shutoff Valve Indication
AT-01-2015-0016-P-13	Turbojet Engine Thrust Reverser System Tests
AT-01-2015-0016-S-1 (GVIII IP S-1)	Equipment, Systems, and Installation Requirements: Use of ARAC Recommendations
TC8700AT-T-S-17, Revision 1 (GVI IP S-17)	Flight Control System Failure Criteria

9. Elect to Comply

Gulfstream Aerospace Corporation has determined to elect to comply with:
- CS 25.671(d) at Amendment 25/24
- CS 25.1460(a) at Amendment 25/26
- CS 25.1591 at Amendment 25/27
- CS-ACNS, Airborne Communications, Navigation and Surveillance, Issue 3 Subpart E Section 3, dated 31 May 2021
- Appendix S of CS 25 Amdt. 25/21, excepting S25.20(b)
- CS 34 at Amendment 34/4
- CS 36 at Amendment 36/6

10. Environmental Protection Standards

- Noise: ICAO Annex 16, Volume I, Amendment 13(*) (Eighth Edition), Chapter 14 effective 20 July 2020 for Noise; and
- Emissions: ICAO Annex 16, Volume II, Amendment 10 (Fourth Edition), effective 20 July 2020, for Emissions.

(*) Note: The difference between the ICAO Annex 16, Volume I amendment level is relevant with their applicability at the time of the certification exercises.

For details of the certified noise levels see TCDSN EASA.IM.A.169

III. Technical Characteristics and Operational Limitations

1. Type Design Definition

Gulfstream drawing 62P0000000-001, GVIII-G700 Aircraft Level Configuration Control Document, revision A, or later approved revision, as amended by Gulfstream ASC 007 for EASA aircraft, and post TC modifications as defined in Report GVIII-GER-3607 “Gulfstream GVIII - GVIII-G700 EASA Post-Type Certification Modifications (EASA Type Design)”, latest approved revision.

SECTION 2: GVIII-G700 – continued

2. Description

Twin turbo-fan, long range, large aeroplane.

3. Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification.

4. Dimensions

Wingspan	31.40 meters [103.02 feet]
Fuselage Length	33.49 meters [109.87 feet]
Fuselage Width at Constant Section	2.74 meters [9.00 feet]

5. Engines

Two (2) Rolls Royce Deutschland Ltd & Co. KG Turbofan Engine Models: BR700-730B2-14 (EASA Engine Type Certificate No. E.135)

Engine Limits:

Engine Limits **Data Sheet EASA E.135**	GVIII-G700 BR700-730B2-14
Static thrust at sea level (Standard Day)	81.2 kN (18,250 lbs)

Other engine limitations: See the Engine Type Certificate Data Sheet EASA.E.135.

6. Auxiliary Power Unit

One (1) Honeywell RE220(GVI) FAA TSO-C77a.

Limitations and Operating Procedures - See the FAA approved Airplane Flight Manual ref GAC-AC-GVIII-G700-OPS-0001 and EASA approved Airplane Flight Manual Supplement ref EASA-GVIII-G700-2023-01, latest approved revisions.

7. Propellers

N/A

8. Fluids (Fuel, Oil, Additives, Hydraulics)

Engines: Two-Rolls Royce Deutschland Ltd & Co KG Turbofan Engine Models: BR700-730B2-14 (Engine Type Certificate No. E00099EN Revision 1).

Fuels: Fuel shall conform to the specification as listed. See the approved Airplane Flight Manual for additional information.

Kerosene Type (AVTUR, JP8, JP5) NATO Code F34, F-44		
American	**British**	**Canadian**
ASTM D1655, Jet A		CAN/CGSB-3.23 (Jet A)

SECTION 2: GVIII-G700 – continued

ASTM D1655, Jet A-1 MIL-DTL-83133[1], JP-8[2,3] & F-34[2,3] MIL-DTL-5624, JP-5[2] and F-44[2]	DEF STAN 91-91 AVTUR (Jet A-1) DEF STAN 91-87 AVTUR/FSII (F-34) DEF STAN 91-86 AVCAT/FSII (F-44)	CAN/CGSB 3.23 (Jet A-1) CAN/CGSB 3.24 (Grade F-34) CAN/CGSB 3.24 (Grade F-44)
French	**Commonwealth of Independent States (C.I.S.)**	**People's Republic of China (P.R.C.)**
DCSEA 134D (Jet A-1 & F-34) DCSEA 144D (F-44)	GOST 10227-86 (TS-1 & RT)	GB 6537-2018 (No. 3 Jet Fuel) including the fuel additives limited to the concentrations stated in Annex A of GB 6537-2018 (see Chinese Fuel Additives note below)
	Ukraine	
	GSTU 320.001149943.007-97 (RT) GSTU 320.001149943.011-99 (TS-1)	

NOTE:
1. MIL-DTL-83133 covers three grades of aviation fuels, which are all almost the same as commercial fuel, Jet A-1, but specified additives are necessary
2. Contains Fuel System Icing Inhibitor (FSII) Diethylene Glycol Monomethyl Ether (DIEGME) for NATO fuel. Refer to MIL-DTL-85470 or NATO Code S-1745.
3. Contains static dissipator (electrical conductivity) additive

NOTE: Approved Chinese Fuel Additives
4. Static Dissipater additive: Stadis 450
5. Antioxidant: 2,6-ditertiary-butyl-4-methyl-phenol
6. Icing Inhibitor: Ethylene Glycol Monomethyl Ether or Diethylene Glycol Monomethyl Ether
7. Metal Deactivator: N,N'-disalicylidene 1,2-propanediamine

The following Chinese fuel additives are not approved for use on this Gulfstream aircraft model: Static Dissipater additive T1502 and antifriction additives T1602.

Oils
Refer to the applicable approved Manuals.

Hydraulics
Refer to the applicable approved Manuals.

SECTION 2: GVIII-G700 – continued

9. Fuel Capacities

Tanks	Pounds	U.S. Gallons*	Kilograms*	Litres*
Right	24,700	3,686	11,203	13,954
Left	24,700	3,686	11,203	13,954
Total	49,400	7,373	22,407	27,911

* Fuel Density is 6.700 Pounds / U.S. Gallon and 0.8028 Kilograms / Litre

See applicable Weights and Balance Manual

10. Airspeed Limits

V_{MO}/M_{MO} = 340KCAS / 0.935M.

For other airspeed limits, see the FAA approved Flight Manual ref GAC-AC-GVIII-G700-OPS-0001 and EASA approved Airplane Flight Manual Supplement ref EASA-GVIII-G700-2023-01, latest approved revisions. (Section 1)

11. Flight Envelope

Maximum Operating Altitude: 15,545 Meters (51,000 feet)

See the FAA approved Flight Manual ref GAC-AC-GVIII-G700-OPS-0001 and EASA approved Airplane Flight Manual Supplement ref EASA-GVIII-G700-2023-01, latest approved revisions.

SECTION 2: GVIII-G700 – continued

12. Operating Limitations

See the FAA approved Flight Manual ref GAC-AC-GVIII-G700-OPS-0001, EASA approved Airplane Flight Manual Supplement ref EASA-GVIII-G700-2023-01, and EASA approved Airplane Flight Manual Supplement ref EASA-GVIII-G700-2024-01 (when equipped with ASC 005, 009, 011, or 017) latest approved revisions.

12.1 Approved Operations

The airplane is approved for the following kinds of flight and operation, both day and night, provided the required equipment is installed and approved in accordance with the applicable regulations/specifications:

- Visual (VFR)
- Instrument (IFR)
- Icing Conditions
- Low weather minima (CAT I operations)
- RVSM
- Wet and contaminated runway operations

12.2 Other Limitations

Runway slope ±2%

Maximum Takeoff and Landing Tailwind Component – 10 knots

Maximum Operating Altitude – 15,545 m (51,000 feet) pressure altitude

Maximum takeoff crosswind component – 30 knots gusts included
Maximum demonstrated crosswind component for landing is 33 knots gusts included.

When operating in a flight control law mode other than Normal (i.e., Alternate, Direct, or Backup), maximum crosswind component for Landing is 10 knots.

SECTION 2: GVIII-G700 – continued

13. Maximum Certified Masses

Configuration	Maximum Taxi Weight	Maximum Take-off Weight	Maximum Landing Weight	Maximum Zero Fuel Weight
GVIII-G700	48,987 kg	48,806 kg	37,874 kg	28,462 kg
	108,000 lbs	107,600 lbs	83,500 lbs	62,750 lbs
GVIII-G700 (ASC 005)	33,974 kg	33,974 kg	33,974 kg	28,462 kg
	74,900 lbs	74,900 lbs	74,900 lbs	62,750 lbs
GVIII-G700 (ASC 009)	40,823 kg	40,823 kg	37,874 kg	28,462 kg
	90,000 lbs	90,000 lbs	83,500 lbs	62,750 lbs
GVIII-G700 (ASC 011)	43,091 kg	43,091 kg	37,874 kg	28,462 kg
	95,000 lbs	95,000 lbs	83,500 lbs	62,750 lbs
GVIII-G700 (ASC 017)	45,359 kg	45,177 kg	37,874 kg	28,462 kg
	100,000 lbs	99,600 lbs	83,500 lbs	62,750 lbs

Note: Certifying weights are originally in imperial units, when converted to international units they are rounded down to the nearest unit.

Note: The maximum weight limits may be less as limited by centre of gravity, fuel density and fuel loading limits, as given in the Airplane Flight Manual and applicable Airplane Flight Manual Supplement(s).

14. Centre of Gravity Range

See the FAA approved Flight Manual ref GAC-AC-GVIII-G700-OPS-0001 latest approved revision.

15. Datum

For weight and balance purposes, the zero datum is 31.5 inches forward of the radome

16. Mean Aerodynamic Chord (MAC)

4.756 meters [187.24 inches]

17. Levelling Means

Longitudinal: Levelling Brackets along left nose wheel well door longeron X STA 94.5 & 105.5
Lateral: Jig Point on Levelling brackets on rear face of bulkhead X STA 80.5 in nose wheel well

18. Minimum Flight Crew

Two (2): Pilot and co-pilot

SECTION 2: GVIII-G700 – continued

19. Maximum Seating Capacity

The number of passengers shall not exceed 19 as determined by emergency exit requirements, nor shall the number of passengers exceed the number of seating accommodations approved for takeoff and landing.

Note: Type Certificate EASA.IM.A.169 considers a “green” aircraft (aircraft without an approved cabin interior) configuration only. Cabin interior installations (including passenger seating configurations up to 19 passengers) are subject to completion STCs being EASA approved prior to any operation with passengers.

20. Baggage/ Cargo Compartment

Gulfstream GVIII-G700 Weight and Balance Manual Revision 8, dated January 2024 or later revisions.

21. Wheels and Tyres

Nose wheels TSO C135a, Tyres Twin 21 x 7.25-10 bias ply (TSO C62e) nominal pressure 216 psi.
Main wheels TSO C135a, Tyres Twin H37.5 x 12.0 R 19 (TSO C62e) nominal pressure 216 psi.

See Aircraft Maintenance Manual for proper servicing of tyres

22. Extended Diversion Time Operations (EDTO)

The following EDTO capabilities granted by EASA are valid for Commercial Air Transport Operations.
Operational approval must be sought from the State of Registry of each individual aircraft.

The GVIII-G700 aircraft model has been demonstrated compliant with the design and reliability requirement for 180min diversion time from an adequate aerodrome without ETOPS.

23. EVS and HUD Operations

The GVIII-G700 Type Design has been shown to be operable in accordance with Commission Regulation (EU) No 965/2012, paragraphs SPA.LVO.100 and CAT.OP.MPA.110. It has been demonstrated compliant with the appropriate design and reliability requirements for EFVS-A.
Operational approval must be sought from the State of Registry of each individual aircraft.

24. Interiors Installations

GVIII cabin interior installations must be in accordance with Gulfstream report GVIII-GER-0025 “GVIII Interior Certification Requirements Document”.

SECTION 2: GVIII-G700 – continued

IV. Operating and Service Instructions

1. Airplane Flight Manual (AFM)

Gulfstream GVIII-G700 AFM, FAA approved Flight Manual ref GAC-AC-GVIII-G700-OPS-0001, EASA approved Airplane Flight Manual Supplement ref EASA-GVIII-G700-2023-01, and EASA approved Airplane Flight Manual Supplement ref EASA-GVIII-G700-2024-01 (when equipped with ASC 005, 009, 011, or 017) latest approved revisions.

2. Instructions for Continued Airworthiness and Airworthiness Limitations

Component life limitations are provided in Section 05-10-10, Chapter 5 of the GVIII-G700 Aircraft Maintenance Manual.

Maintenance criteria to comply with the certification maintenance requirements are provided in Chapter 5 of the GVIII-G700 Aircraft Maintenance Manual.

Note: Complete Instructions for Continued Airworthiness must be furnished per Commission Regulation (EC) No 748/2012, 21.A.61. Contact EASA for information on the status.

Note 1 A current Weight and Balance Report, must be in each aircraft at the time of original airworthiness certification.

Note 2 Airplane operation must be in accordance with the EASA approved Airplane Flight Manual. All placards required by either the EASA approved Flight Manual, the applicable operating rules, or the Certification Basis must be installed in the airplane.

V. OPERATIONAL SUITABILITY DATA (OSD)

The Operational Suitability Data elements listed below are approved by the European Union Aviation Safety Agency under the EASA Type Certificate EASA.IM.A.169, as per Commission Regulation (EU) 748/2012 as amended by Commission Regulation (EU) No 69/2014.

1. Master Minimum Equipment List

a. Master Minimum Equipment List (MMEL), reference: EASA-MMEL-AC-GVIII-OPS-0004 dated 15 May 2024, as per the defined Operational Suitability Data Certification Basis in CRI A-01.

b. Required for entry into service by EU operator.

2. Flight Crew Data

a. The Flight Crew Data (FCD), reference: EASA-OSD-FC-GVIII-GAC, Initial Issue, dated 15 May 2024, or later approved revisions, as per the defined Operational Suitability Data Certification Basis recorded in CRI A-01.

b. Required for entry into service by EU operator.

c. Pilot Type Rating: GVIII.

3. Cabin Crew Data

Not applicable

SECTION 2: GVIII-G700 – continued

VI. Notes

None

SECTION 3: GVIII-G800

I. General

This Data Sheet, which is part of Type Certificate No. IM.A.169, prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the European Union Aviation Safety Agency.

1. Type / Model / Variant

GVIII-G800 (G800)

2. Performance Class

A

3. Certifying Authority

Federal Aviation Administration (FAA)
East Certification Branch
1701 Columbia Avenue
College Park
Atlanta, GA 30337
United States of America

4. Manufacturer

Gulfstream Aerospace Corporation
P.O. Box 2206
Savannah, GA 31402-2206
United States of America

5. FAA Certification Application Date

18 November 2015

6. EASA Validation Application Date

25 May 2017

7. FAA Type Certification Date

GVIII-G800	16 April 2025

8. EASA Type Validation Date

GVIII-G800	16 April 2025

SECTION 3: GVIII-G800 – continued

II. Certification Basis

1. Reference Date for determining the applicable requirements

30 June 2020

2. FAA Type Certification Data Sheet No.

T00015AT

3. FAA Certification Basis

30 June 2020

4. EASA Airworthiness Requirements

EASA Certification Specification (CS) 25, Amendment 24, effective as of 10 January 2020, with exceptions per 21.A.101 shown:

CS 25		Amendment	APPLICABLE AREA	NOTES
SECTION	**TITLE**			
25.105	Takeoff	25/3	GVIII-G800	
25.111	Takeoff path.	25/3	GVIII-G800	
25.119	Landing climb: All engines operating.	25/3	GVIII-G800	
25.121	Climb: One-engine inoperative.	25/3	GVIII-G800	
25.123	En route flight paths.	25/3	GVIII-G800	
25.125	Landing.	25/3	GVIII-G800	
25.237	Wind velocities.	25/3	GVIII-G800	
25.253	High speed characteristics.	25/11	GVIII-G800	
25.611(b)	Accessibility provisions.	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.
25.705	Runway overrun awareness and alerting systems	N/A	GVIII-G800	
25.729 (a)(b)(d)	Retracting mechanism.	25/0	Landing Gear System except the Landing Gear Control and Indication System (LGCIS)	
25.734	Protection against wheel and tyre failures	N/A	GVIII-G800	
25.735	Brakes	25/2	GVIII-G800	
25.773(b)(1)(i)	Pilot Compartment View	25/0	GVIII-G800	25-452-SC (GIV-X / GV-SP / GV IP F-05)

SECTION 3: GVIII-G800 – continued

CS 25		Amendment	APPLICABLE AREA	NOTES
SECTION	**TITLE**			
25.795	Security considerations	25/0	GVIII-G800	EASA operating rules do not require the installation of a flight deck security door based on adoption of Amendment 43 to ICAO Annex VI, Part I. Refer to Air Operations Regulation (EU) 2019/1387 ORO.SEC.100 "Flight crew compartment security - aeroplanes"
25.831	Ventilation	25/18	GVIII-G800	GVIII CRI D-206
25.851	Fire extinguishers.	25/0	GVIII-G800 except 25.851(a)(8) for ECS Flow Schedule Change	
25.855(a)(b)(d)(e)(f)(g)(h)(1)(2)(i)(j)	Cargo or baggage compartments.	25/5	GVIII-G800 except as noted below	
25.855(j)	Cargo or baggage compartments.	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.
25.857(b)	Cargo compartment classification	25/0	GVIII-G800	
25.869(a)(3)	Fire protection: Systems.	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.

SECTION 3: GVIII-G800 – continued

CS 25		Amendment	APPLICABLE AREA	NOTES
SECTION	**TITLE**			
25.869(a)(4)	Fire protection: Systems	25/0	EWIS components in the wing and empennage: Unchanged LRUs in fuselage, pylon, engine, wing, and empennage; EWIS components integral to unrelated, not significant changes	
25.901(b)	Installation	25/1	Fuel Extinguishing Plumbing and Wiring Connections	GVI IP P-02
25.963	Fuel tanks: General	25/3	GVIII-G800 except 25.963(e) for wing fuel tank in areas exposed to small engine debris threat model defined in AMC 25.963(d)	
25.975	Fuel tank vents and carburetor vapor vents.	25/0	GVIII-G800	
25.981	Fuel tank explosion prevention.	25/1	GVIII-G800	
25.1193	Cowling and nacelle skin.	25/18	GVIII-G800	GVIII CRI E-201
25.1197	Fire extinguishing agents.	25/0	GVIII-G800	
25.1301(b)	Function and installation.	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.
25.1303	Flight and navigation instruments.	25/18	GVIII-G800	
25.1309(d)	Equipment, systems, and installations.	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.
25.1323	Airspeed indicating system.	25/0	TAT Probe	
25.1324	Flight instrument external probes.	N/A	TAT Probe	
25.1325	Static pressure systems.	25/0	TAT Probe	

SECTION 3: GVIII-G800 – continued

CS 25		Amendment	APPLICABLE AREA	NOTES
SECTION	**TITLE**			
25.1326	Flight instrument external probes heating systems alert.	25/0	TAT Probe	
25.1353	Electrical equipment and installations.	25/0	GVIII-G800 except - Data Concentration & Network -Engine -Flight Control System: • Active Control Sidestick -Flight Deck: Touch Screen Controllers	
25.1436(a)(1)(2)(3)(b)(1)(2)(3)(6)(7)(8)(c)(2)(3)	Pneumatic systems - high pressure.	25/1	GVIII-G800	
25.1441	Oxygen equipment and supply	25/18	GVIII-G800	
25.1701	Definition.	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.
25.1703	Function and installation: EWIS	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.
25.1705	Systems and functions: EWIS	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.
25.1707	System separation: EWIS	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.

SECTION 3: GVIII-G800 – continued

CS 25		Amendment	APPLICABLE AREA	NOTES
SECTION	**TITLE**			
25.1709	System safety: EWIS	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.
25.1711	Component identification: EWIS	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.
25.1713	Fire protection: EWIS	N/A (See Note)	EWIS components in the wing and empennage	25.1713 is not applicable for unchanged LRUs from the GVI in the fuselage, pylon, engine, wing, and empennage; 25.1713 does not apply to EWIS components in the wing and empennage and EWIS components integral to unrelated, not-significant changes.
25.1715	Electrical bonding and protection against static electricity: EWIS	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.
25.1717	Circuit protective devices: EWIS	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.

SECTION 3: GVIII-G800 – continued

CS 25		Amendment	APPLICABLE AREA	NOTES
SECTION	**TITLE**			
25.1719	Accessibility provisions: EWIS	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.
25.1721	Protection of EWIS	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.
25.1723	Flammable fluid fire protection; EWIS	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.
25.1725	Powerplants: EWIS	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.
25.1727	Flammable fluid shutoff means: EWIS	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.
25.1729	Instructions for Continued Airworthiness: EWIS	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.
25.1731	Powerplant and APU fire detector system: EWIS	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.
CS 25J994	Fuel System Components	25/1	GVIII-G800	

SECTION 3: GVIII-G800 – continued

CS 25		Amendment	APPLICABLE AREA	NOTES
SECTION	**TITLE**			
C25.1	Appendix C, Part I - Atmospheric Icing Conditions. Appendix C, Part II - Airframe Ice Accretions for Showing Compliance with Subpart B.	25/7	GVIII-G800	
H25.1	General.	25/0 (See Note)	EWIS components in the wing and empennage	All changed areas comply with the H25.1 requirements at Amendment 25/19, except the wing and empennage.
H25.5	Electrical Wiring Interconnection System (EWIS) Instructions for Continued Airworthiness.	N/A (See Note)	EWIS components in the wing and empennage	All changed areas comply with the H25.5 requirements at Amendment 25/18, except the wing and empennage.
Appendix M	Fuel Tank System Flammability Reduction Means.	N/A	GVIII-G800	
Appendix N	Fuel Tank Flammability Exposure and Reliability Analysis.	N/A	GVIII-G800	
Appendix P	Mixed phase and ice crystal icing envelope (Deep convective clouds)	N/A	TAT Probe	

Certification Specification CS ACNS, Issue 3, dated 31 May 2023 (new CS ACNS.E.LAD introduced via NPA 2020-03)

Appendix S at Amendment 23, excepting S25.20(b). ESF to CS25.813(c)(2)(ii) via TC8700AT-T-C-7, Revision 2

Certification Specification All Weather Operations (CS AWO), Book 1 and 2 Initial Issue published October 17, 2003.

5. Special Conditions

CRI	Subject
25-452-SC	Pilot compartment view - Hydrophobic coatings in lieu of windshield wipers
25-846-SC	Electronic System Security Protection from Unauthorized Internal Access

SECTION 3: GVIII-G800 – continued

CRI	Subject
25-847-SC	Electronic System Security Protection from Unauthorized External Access
25-855-SC	Electronic Flight Control System: Control Surface Position Awareness
25-858-SC	Flight Envelope Protection: Takeoff Stall Protection
25-862-SC	Technical Criteria for Approving Side-Facing Seats
GVI CRI E-04	Fuel Tank Safety
GVI CRI E-103	Fuel Vent System Fire Protection
GVI CRI E-12	Water / Ice in Fuel System
GVI CRI E-13	Fuel Quantity Indicating System
GVI CRI F-112	Electro-Hydraulic seats installation
GVI IP P-02	Fire Extinguishing Plumbing and Wiring connections
GVII CRI B-01	Flight Envelope Protection
GVII CRI B-10	High Incidence Protection Function; stall speeds, stall warning
GVII CRI D-16	Installation of Flight Crew Sleeping Facility
GVII CRI F-33	Non-rechargeable Lithium Battery Installations
GVIII CRI D-203	Installation of a Therapeutic Oxygen System
GVIII CRI D-206	High Altitude Operation / High Cabin Heat Load
GVIII CRI E-201	Engine Cowl Retention
GVIII CRI F-203	Synthetic Vision / Combined Vision on the Head Up Display
GVIII CRI G-201	Performance Information for landing distance assessment at dispatch and at time of arrival

6. Exemptions

Not applicable

7. Deviations

GVIII CRI E-208	Water / Ice in Fuel System

8. Equivalent Safety Findings

The following table lists the Equivalent Safety Finding requests made by Gulfstream which are specific to the GVIII-G800 model.

SECTION 3: GVIII-G800 – continued

CRI	Subject
GVI CRI D-20	Emergency Exits
TC8700AT-T-C-7, Rev 2	Seat/Furnishing Encroachment into the Overwing Emergency Exit Openings
GVII CRI D-11	Emergency Exit Signs
GVII CRI D-48	Combined Aircraft Pressurization Outflow and Positive Pressure Differential Relief Valves (Cover CRI)
GVI CRI E-104	Fuel Filter Indication System
GVI CRI E-106	Oil Fire Detection System
GVIII CRI E-204	Nacelle behind fire wall: TRAS compartment, absence of fire detection system
GVIII CRI E-206	APU Certification Requirements
GVII CRI E-40	Ignition Switches
AT-01-2015-0016-F-1-GVII	Electronic Flight Control System: Out-of-trim characteristics
AT-01-2015-0016-F-15-GVII	Vibration / Buffeting Compliance Criteria for External Modifications
GVII CRI F-24	Vertical Acceleration for Flight Data Recorder
GVII CRI F-37	Use of an Electric Only Direction Indicator for Standby Instrumentation
GVIII CRI F-208	Degraded flight instrument external probe heating system
GVIII CRI F-209	Terrain information Display and Synthetic Vision System
AT-01-2015-0016-A-03-GVIII	Operation Test Compliance for Fly-by-Wire Flight Control Systems
AT-01-2015-0016-P-1-GVII	Reverse Thrust Control and Indication
AT-01-2015-0016-P-3, Rev 1	Digital-Only Display of Engine Parameters
AT-01-2015-0016-P-12	Engine Fuel Shutoff Valve Indication
AT-01-2015-0016-P-13	Turbojet Engine Thrust Reverser System Tests
AT-01-2015-0016-S-1	Equipment, Systems, and Installation Requirements: Use of ARAC Recommendations
TC8700AT-T-S-17, Rev 1	Flight Control System Failure Criteria

9. Elect to Comply

Gulfstream Aerospace Corporation has determined to elect to comply with:

- CS 25.1460(a) at Amendment 25/26
- CS 25.1591 at Amendment 25/27
- CS-ACNS, Airborne Communications, Navigation and Surveillance, Issue 3, dated 31 May 2021
- Appendix S of CS 25 Amdt. 25/24 excepting S25.20(b) and
- Emissions: ICAO Annex 16, Volume II, Amendment 10 (Fourth Edition), effective 20 July 2020

(*) Note: The difference between the ICAO Annex 16, Volume I amendment level is relevant with their applicability at the time of the certification exercises.

For details of the certified noise levels see TCDSN EASA.IM.A.169

III. Technical Characteristics and Operational Limitations

SECTION 3: GVIII-G800 – continued

1. Type Design Definition

Gulfstream drawing 61P0000000-001, GVIII-G800 Aircraft Level Configuration Control Document, revision B, or later approved revision, as amended by Gulfstream ASC 007 for EASA aircraft, and post TC modifications as defined in Report GVIII-GER-3687 “Gulfstream GVIII - GVIII-G800 EASA Post-Type Certification Modifications (EASA Type Design)”, latest approved revision.

2. Description

Twin turbo-fan, long range, large aeroplane.

3. Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification.

4. Dimensions

Wingspan	31.40 meters [103.02 feet]
Fuselage Length	30.41 meters [99.78 feet]
Fuselage Width at Constant Section	2.74 meters [9.00 feet]

5. Engines

Two (2) Rolls Royce Deutschland Ltd & Co. KG Turbofan Engine Models: BR700-730B2-14 (EASA Engine Type Certificate No. E.135)

Engine Limits:

Engine Limits **Data Sheet EASA E.135**	GVIII-G800 BR700-730B2-14
Static thrust at sea level (Standard Day)	81.2 kN (18,250 lbs)

Other engine limitations: See the Engine Type Certificate Data Sheet EASA.E.135.

6. Auxiliary Power Unit

One (1) Honeywell RE220(GVI) FAA TSO-C77a.

Limitations and Operating Procedures - See the FAA approved Airplane Flight Manual ref GAC-AC-GVIII-G800-OPS-0001 and EASA approved Airplane Flight Manual Supplement ref EASA-GVIII-G800-2023-01, latest approved revisions.

7. Propellers

N/A

SECTION 3: GVIII-G800 – continued

8. Fluids (Fuel, Oil, Additives, Hydraulics)

Engines: Two-Rolls Royce Deutschland Ltd & Co KG Turbofan Engine Models: BR700-730B2-14 (Engine Type Certificate No. E00099EN Revision 1).

Fuels: Fuel shall conform to the specification as listed. See the approved Airplane Flight Manual for additional information.

Kerosene Type (AVTUR, JP8, JP5) NATO Code F34, F-44		
American	**British**	**Canadian**
ASTM D1655, Jet A ASTM D1655, Jet A-1 MIL-DTL-83133[1], JP-8[2,3] & F-34[2,3] MIL-DTL-5624, JP-5[2] and F-44[2]	 DEF STAN 91-91 AVTUR (Jet A-1) DEF STAN 91-87 AVTUR/FSII (F-34) DEF STAN 91-86 AVCAT/FSII (F-44)	CAN/CGSB-3.23 (Jet A) CAN/CGSB 3.23 (Jet A-1) CAN/CGSB 3.24 (Grade F-34) CAN/CGSB 3.24 (Grade F-44)
French	**Commonwealth of Independent States (C.I.S.)**	**People's Republic of China (P.R.C.)**
DCSEA 134D (Jet A-1 & F-34) DCSEA 144D (F-44)	GOST 10227-86 (TS-1 & RT)	GB 6537-2018 (No. 3 Jet Fuel) including the fuel additives limited to the concentrations stated in Annex A of GB 6537-2018 (see Chinese Fuel Additives note below)
	Ukraine	
	GSTU 32000.1149943.007-97 (RT) GSTU 32000.1149943.011-99 (TS-1)	

NOTE:

1. MIL-DTL-83133 covers three grades of aviation fuels, which are all almost the same as commercial fuel, Jet A-1, but specified additives are necessary
2. Contains Fuel System Icing Inhibitor (FSII) Diethylene Glycol Monomethyl Ether (DIEGME) for NATO fuel. Refer to MIL-DTL-85470 or NATO Code S-1745.
3. Contains static dissipator (electrical conductivity) additive

NOTE: Approved Chinese Fuel Additives

4. Static Dissipater additive: Stadis 450
5. Antioxidant: 2,6-ditertiary-butyl-4-methyl-phenol

SECTION 3: GVIII-G800 – continued

6. Icing Inhibitor: Ethylene Glycol Monomethyl Ether or Diethylene Glycol Monomethyl Ether
7. Metal Deactivator: N,N'-disalicylidene 1,2-propanediamine

The following Chinese fuel additives are not approved for use on this Gulfstream aircraft model: Static Dissipater additive T1502 and antifriction additives T1602.

Oils
Refer to the applicable approved Manuals.

Hydraulics
Refer to the applicable approved Manuals.

SECTION 3: GVIII-G800 – continued

9. Fuel Capacities

Tanks	Pounds	U.S. Gallons*	Kilograms*	Litres*
Right	24,700	3,686	11,203	13,954
Left	24,700	3,686	11,203	13,954
Total	49,400	7,373	22,407	27,911

* Fuel Density is 6.700 Pounds / U.S. Gallon and 0.8028 Kilograms / Litre

See applicable Weights and Balance Manual

10. Airspeed Limits

V_{MO}/M_{MO} = 340KCAS / 0.935M.

For other airspeed limits, see the FAA approved Flight Manual ref GAC-AC-GVIII-G800-OPS-0001 and EASA approved Airplane Flight Manual Supplement ref EASA-GVIII-G800-2023-01, latest approved revisions. (Section 1)

11. Flight Envelope

Maximum Operating Altitude: 15,545 Meters (51,000 feet)

See the FAA approved Flight Manual ref GAC-AC-GVIII-G800-OPS-0001 and EASA approved Airplane Flight Manual Supplement ref EASA-GVIII-G800-2023-01, latest approved revisions.

SECTION 3: GVIII-G800 – continued

12. Operating Limitations

See the FAA approved Flight Manual ref GAC-AC-GVIII-G800-OPS-0001, EASA approved Airplane Flight Manual Supplement ref EASA-GVIII-G800-2023-01, and EASA approved Airplane Flight Manual Supplement ref EASA-GVIII-G800-2024-02 (when equipped with ASC 005, 009, 011, or 017) latest approved revisions.

12.1 Approved Operations

The airplane is approved for the following kinds of flight and operation, both day and night, provided the required equipment is installed and approved in accordance with the applicable regulations/specifications:

- Visual (VFR)
- Instrument (IFR)
- Icing Conditions
- Low weather minima (CAT I operations)
- RVSM
- Wet and contaminated runway operations

12.2 Other Limitations

Runway slope ±2%

Maximum Takeoff and Landing Tailwind Component – 10 knots

Maximum Operating Altitude – 15,545 m (51,000 feet) pressure altitude

Maximum takeoff crosswind component – 30 knots including gusts
Maximum demonstrated crosswind component for landing is 33 knots gusts included.

When operating in a flight control law mode other than Normal (i.e., Alternate, Direct, or Backup), maximum crosswind component for Landing is 10 knots.

SECTION 3: GVIII-G800 – continued

13. Maximum Certified Masses

Configuration	Maximum Taxi Weight	Maximum Take-off Weight	Maximum Landing Weight	Maximum Zero Fuel Weight
GVIII-G800	48,081 kg	47,899 kg	37,874 kg	27,442 kg
	106,000 lbs	105,600 lbs	83,500 lbs	60,500 lbs
GVIII-G800 (ASC 005)	33,974 kg	33,974 kg	33,974 kg	27,442 kg
	74,900 lbs	74,900 lbs	74,900 lbs	60,500 lbs
GVIII-G800 (ASC 009)	40,823 kg	40,823 kg	37,874 kg	27,442 kg
	90,000 lbs	90,000 lbs	83,500 lbs	60,500 lbs
GVIII-G800 (ASC 011)	43,091 kg	43,091 kg	37,874 kg	27,442 kg
	95,000 lbs	95,000 lbs	83,500 lbs	60,500 lbs
GVIII-G800 (ASC 017)	45,359 kg	45,177 kg	37,874 kg	27,442 kg
	100,000 lbs	99,600 lbs	83,500 lbs	60,500 lbs

Note: Certifying weights are originally in imperial units, when converted to international units they are rounded down to the nearest unit.

Note: The maximum weight limits may be less as limited by centre of gravity, fuel density and fuel loading limits, as given in the Airplane Flight Manual and applicable Airplane Flight Manual Supplement(s).

14. Centre of Gravity Range

See the FAA approved Flight Manual ref GAC-AC-GVIII-G800-OPS-0001 latest approved revision.

15. Datum

For weight and balance purposes, the zero datum is 100.0 inches forward of the radome

16. Mean Aerodynamic Chord (MAC)

4.756 meters [187.24 inches]

17. Levelling Means

Longitudinal: Levelling Brackets along left nose wheel well door longeron STA 163.0 & 174.0
Lateral: Jig Point on Levelling brackets on rear face of bulkhead STA 149 in nose wheel well

18. Minimum Flight Crew

Two (2): Pilot and co-pilot

SECTION 3: GVIII-G800 – continued

19. Maximum Seating Capacity

The number of passengers shall not exceed 19 as determined by emergency exit requirements, nor shall the number of passengers exceed the number of seating accommodations approved for takeoff and landing.

Note: Type Certificate EASA.IM.A.169 considers a “green” aircraft (aircraft without an approved cabin interior) configuration only. Cabin interior installations (including passenger seating configurations up to 19 passengers) are subject to completion STCs being EASA approved prior to any operation with passengers.

20. Baggage/ Cargo Compartment

Gulfstream GVIII-G800 Weight and Balance Manual Revision 8, dated January 2024 or later revisions.

21. Wheels and Tyres

Nose wheels TSO C135a, Tyres Twin 21 x 7.25-10 bias ply (TSO C62e) nominal pressure 216 psi.
Main wheels TSO C135a, Tyres Twin H37.5 x 12.0 R 19 (TSO C62e) nominal pressure 216 psi.

See Aircraft Maintenance Manual for proper servicing of tyres

22. Extended Diversion Time Operations (EDTO)

The following EDTO capabilities granted by EASA are valid for Commercial Air Transport Operations.
Operational approval must be sought from the State of Registry of each individual aircraft.

The GVIII-G800 aircraft model has been demonstrated compliant with the design and reliability requirement for 180min diversion time from an adequate aerodrome without ETOPS.

23. EVS and HUD Operations

The GVIII-G800 Type Design has been shown to be operable in accordance with Commission Regulation (EU) No 965/2012, paragraphs SPA.LVO.100 and CAT.OP.MPA.110. It has been demonstrated compliant with the appropriate design and reliability requirements for EFVS-A.
Operational approval must be sought from the State of Registry of each individual aircraft.

24. Interiors Installations

GVIII cabin interior installations must be in accordance with Gulfstream report GVIII-GER-0025 “GVIII Interior Certification Requirements Document”.

SECTION 3: GVIII-G800 – continued

IV. Operating and Service Instructions

1. Airplane Flight Manual (AFM)

Gulfstream GVIII-G800 AFM, FAA approved Flight Manual ref GAC-AC-GVIII-G800-OPS-0001, EASA approved Airplane Flight Manual Supplement ref EASA-GVIII-G800-2023-01, and EASA approved Airplane Flight Manual Supplement ref EASA-GVIII-G800-2024-02 (when equipped with ASC 005, 009, 011, or 017) latest approved revisions.

2. Instructions for Continued Airworthiness and Airworthiness Limitations

Component life limitations are provided in Section 05-10-10, Chapter 5 of the GVIII-G800 Aircraft Maintenance Manual.

Maintenance criteria to comply with the certification maintenance requirements are provided in Chapter 5 of the GVIII-G800 Aircraft Maintenance Manual.

Note: Complete Instructions for Continued Airworthiness must be furnished per Commission Regulation (EC) No 748/2012, 21.A.61. Contact EASA for information on the status.

Note 1 A current Weight and Balance Report, must be in each aircraft at the time of original airworthiness certification.

Note 2 Airplane operation must be in accordance with the EASA approved Airplane Flight Manual. All placards required by either the EASA approved Flight Manual, the applicable operating rules, or the Certification Basis must be installed in the airplane.

V. OPERATIONAL SUITABILITY DATA (OSD)

The Operational Suitability Data elements listed below are approved by the European Union Aviation Safety Agency under the EASA Type Certificate EASA.IM.A.169, as per Commission Regulation (EU) 748/2012 as amended by Commission Regulation (EU) No 69/2014.

1. Master Minimum Equipment List

a. Master Minimum Equipment List (MMEL), reference: EASA-MMEL-AC-GVIII-OPS-0004, as per the defined Operational Suitability Data Certification Basis in CRI A-01.

b. Required for entry into service by EU operator.

2. Flight Crew Data

a. The Flight Crew Data (FCD), reference: At time of issuance of the TC, the approval of the Flight Crew Data parts of Operational Suitability Data were still pending.

b. Required for entry into service by EU operator.

c. Pilot Type Rating: GVIII.

3. Cabin Crew Data

Not applicable

SECTION 3: GVIII-G800 – continued

VI. Notes

None

SECTION 4

SECTION 4: ADMINISTRATIVE

I. Acronyms and Abbreviations

A/C	Aircraft
AFM	Airplane Flight Manual
AMC	Acceptable Means of Compliance
APU	Auxiliary Power Unit
ASC	Gulfstream Aircraft Service Change
CG	Centre of Gravity
CRI	Certification Review Item
EASA	European Union Aviation Safety Agency
EDTO	Extended Diversion Time Operations
ETOPS	Extended Twin-Engine Operations
EU	European Union
EFVS-A	Enhanced Flight Vision System used for approach
EVS	Enhanced Vision System
FAA	Federal Aviation Administration
HUD	Head Up Display
ICA	Instructions for Continued Airworthiness
ICAO	International Civil Aviation Organization
IFR	Instrument Flight Rules
JAA	Joint Aviation Authorities
MTOM	Maximum Take-off Mass
NPA	Notice of Proposed Amendment
OSD	Operational Suitability Data
RR	Rolls-Royce
RVSM	Reduced Vertical Separation Minima
TCDS	Type Certificate Data Sheet
TCDSN	Type Certificate Data Sheet for Noise
VFR	Visual Flight Rules
WBM	Weight and Balance Manual

II. Type Certificate Holder Record

Gulfstream Aerospace Corporation
500 Gulfstream Road,
Savannah, GA, 31408
United States of America

III. Change Record

Issue	Date	Changes	TC issue
Issue 01	21 December 2012	Initial Issue for Model GVI	Initial Issue, 21 December 2012
Issue 02	09 October 2014	-minor editorial changes -list of approved fuels extended to Russian Kerosene (Major change project 0010032587) -list of approved fuels extended to Chinese	

SECTION 4 - Continued

Issue	Date	Changes	TC issue
		Kerosene (Major change project 0010032587)	
Issue 03	09 December 2015	-Editorial changes to page one -OSD implementation in section V -CRI C-105 and E-101 withdrawn from the lists (withdrawn during TC process)	
Issue 04	18 May 2016	-Editorial change - Introduction of G650ER (Increased Gross Weight) modification	No Change
Issue 05	15 December 2017	- Minor editorial changes - List of approved fuels updated to reflect the approved fuels identified in the AFM (MIL-DTL-83133, JP8 and NATO Code F24). - Introduction of (optional) G650ER operational weight variants. - Revised Maximum Seating Capacity (Note). - Updated the Acronyms and Abbreviations section.	No Change
Issue 06	10 April 2019	- Section 22 – Update of the EDTO Section for consistency, removing limitations that are covered by operational requirements and remove references to operational requirement that can be subject to changes.	No Change
Issue 07	23 October 2020	- Section 1 (II) (5) Special Condition F-110 added	No Change
Issue 08	26 May 2021	- Section 13 Added ASC 137 for G650 & G650ER	No Change
Issue 09	12 August 2021	- Section 8, Deleted ref CRI D-27. Added FAA ELOS TC8700AT-T-C-7 Rev. 2 – Encroachment into Emergency Exits - Added Section 24. Interiors Installations	No Change
Issue 10	23 June 2022	- Minor editorial changes - Cover Page; added G650ER - Section I (1) added G650ER -Section II (8) added CRI B-12 - Section III (12) added EASA SAL AFMSs and FAA CAT II AFMSs. - Section III (12.1) added Steep Approach and Landing Capability - Section IV (1) added the EASA SAL AFMSs and CAT II FAA AFMS - Section V (2.a) added or later FAA approved revisions	No Change
Issue 11	24 Oct 2023	Section III (13) masses for ASC 082, 14 and 137 corrected	No Change
Issue 12	11 Mar 2024	Section V (2) FCD updated	No Change
Issue 13	15 May 2024	Section 1: GVI I. General - Updated FAA Office to East Certification Branch Section1: GVI IV. Technical Characteristics and Operational Limitations - updated APU TSO approval -Minor editorial changes to page 10 and 16 Derivative model GVIII-G700 added	GVIII-G700
Issue 14	21 Jan 2025	Section 2: GVIII-G700 II. Certification Basis	No Change

SECTION 4 - Continued

Issue	Date	Changes	TC issue
		clarified 21.A.101 exceptions and added FAA ELOS AT-01-2015-0016-F-15-GVII to equivalent safety findings	
Issue 15	16 April 2025	Derivative model GVIII-G800 added Corrected EASA acronym throughout Added EFVS-A acronym Clarified Chinese fuel additives for GVIII-G700 Editorial changes throughout	GVIII-G800

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