

Civil Aviation Authority United Kingdom



TYPE-CERTIFICATE DATA SHEET

UK.TC.A.00038

For

Gulfstream GVI and GVIII

Type Certificate Holder

Gulfstream Aerospace Corporation

500 Gulfstream Road

Savannah

Georgia 31408

United States of America

Model(s): GVI (G650)
GVIII-G700 (G700)

Issue: 5

Date of issue: 12 November 2024

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Section 1 GVI**I. General**

This Type-Certificate Data Sheet (TCDS) is the concise definition of the type-certificated product accepted and or approved by the CAA in the UK for the affected types and models.

This TCDS includes:

1. Details of the type design that affect the TCDS that have been approved or accepted by the CAA in the UK since 01 January 2021.
2. Details of the type design that affected the TCDS and were approved or accepted by EASA before 01 January 2021, and were incorporated into EASA TCDS EASA.IM.A.169 at Issue 7 dated 23 October 2020 and are therefore accepted by the UK under Article 15 of Annex 30 of the UK-EU Trade and Cooperation Agreement.

1. Type / Variant or Model

- a) Type: Gulfstream GVI
- b) Model: GVI (G650)
- c) Variant: N/A

2. Airworthiness Category

Large Aeroplanes

3. Performance Class

A

4. Certifying Authority

Federal Aviation Administration (FAA)
Atlanta Aircraft Certification Office
1701 Columbia Avenue
College Park
Atlanta
Georgia 30337
United States of America

5. Type Certificate Holder

Gulfstream Aerospace Corporation
500 Gulfstream Road
Savannah
Georgia 31408
United States of America

6. Manufacturer

Gulfstream Aerospace Corporation
500 Gulfstream Road
Savannah
Georgia 31408
United States of America

7. State of Design Authority Certification Application Date

18 September 2007

8. EASA Type Certification Application Date

18 September 2007

Section 1: GVI, continued

9. State of Design Authority Type Certificate DateG650⁽¹⁾ 07 September 2012G650ER⁽²⁾ 07 October 2014**10. EASA Type Certification Date**G650⁽¹⁾ 21 December 2012G650ER⁽²⁾ 01 April 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.**II. Certification Basis****1. Reference Date for Determining the Applicable Requirements**

18 September 2007

2. State of Design Airworthiness Authority Type Certification Data Sheet Number

T00015AT

3. State of Design Airworthiness Authority Certification Basis

14 CFR part 25, Airworthiness Standards: Transport Category Airplanes, effective February 1, 1965, including Amendments 25-1 through 25-120 and 25-122, 25-124, 25-132, 25-137* and 25-144**. Amendment 25-118 was not published and therefore has no applicability.

*Amendment 25-137 only applies to 14 CFR 25.1302(a)(b)(c)(d) for new and novel functions associated with avionics changes.

**Amendment 25-144 only applies to 14 CFR 25.773(e) for EFVS operations to touchdown and rollout and associated subsystems.

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

<u>CRI</u>	<u>Subject</u>
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

Section 1: GVI, continued

E-07	Uncontrollable high thrust
E-12	Water/Ice in Fuel System
E-13	Fuel Quantity Indicating System
<u>CRI</u>	<u>Subject</u>
E-101	In flight verification of fire detector circuitry
E-102	Inflight engine re-start
E-103	Fuel vent system Fire Protection
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

<u>CRI</u>	<u>Subject</u>
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.

<u>CRI</u>	<u>Subject</u>
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

FAA ELOS

TC8700AT-T-C-7 Rev. 2

Subject

"Encroachment into Emergency Exits"

Section 1: GVI, continued

9. Elect to Comply

<u>CRI</u>	<u>Subject</u>
B-07	CS 25.1419 Amdt 3 "Flight in Icing Conditions"
C-04	CS 25.561 ; 25.721 ; 25.963 Amdt 3 "Fuel Tank Integrity and Access Covers"

<u>NPA</u>	<u>Subject</u>
NPA 15/2004	CS 25.1302 Amdt 3 "Human Factors"
NPA 02/2006	CS 25.783 Amdt 4 "Doors"
NPA 18/2004	CS 25.1329 Amdt 4 "Flight Guidance Systems"
NPA 2008-13	CS 25.856 Amdt 6 "Thermal/Acoustic Insulation Materials"

10. Environmental Protection Standards

For aircraft not fitted with ASC 014:

- Noise: ICAO Annex 16, Volume I, Amendment 8 (Fourth Edition), Part II, Chapter 4;
- Emissions: ICAO Annex 16, Volume II, Amendment 6 (Third Edition), Part II, Chapter 2, Prevention of intentional fuel venting

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

- Noise: ICAO Annex 16, Volume I, Amendment 10 (Sixth Edition), Part II, Chapter 4;
- Emissions: ICAO Annex 16, Volume II, Amendment 6 (Third Edition), Part II, Chapter 2, Prevention of intentional fuel venting.

For details of the certified noise levels see TCDSN no. UK.TC.A.00038

III. Technical Characteristic and Operating 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), and Aircraft Service Change (ASC) 10 Configuration Control Document 60A3101001-001 Rev A or later approved revision.

Post-TC major design changes approved by EASA prior to 01 January 2021 and by the UK CAA from 01 January 2021 are listed in Report GVI-GER-0049 "UK CAA GVI POST-TYPE CERTIFICATION MODIFICATIONS".

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 (CAA Engine Type Certificate No. EASA.E.018)

Section 1: GVI, continued

Engine Limits:

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

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

6. Auxiliary Power Unit

One (1) Honeywell RE220(GVI) CAA accepts (under Article 15 of Annex 30 of the UK-EU Trade and Cooperation Agreement) the existing EASA approval JT50 6615.

For aircraft not fitted with ASC 014:

Limitations and Operating Procedures - 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 CAA approved or accepted revisions.

For aircraft fitted with ASC 014:

Limitations and Operating Procedures – 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 CAA approved or accepted revisions.

7. Propellers

Not Applicable.

Section 1: GVI, continued

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

Fuels: Rolls-Royce Deutschland Ltd. & Co. KG 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 65372006 (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.

9. Fluid 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

Section 1: GVI, continued

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**

$V_{MO}/M_{MO} = 340\text{KCAS} / 0.925M$

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 CAA approved or accepted 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 CAA approved or accepted revisions. (Section 1).

11. **Flight Envelope**

Maximum Operating Altitude: 15,545 Metres (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 CAA approved or accepted revisions.

For aircraft not 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 CAA approved or accepted revisions.

Section 1: GVI, continued

12. Operating LimitationsGulfstream 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 CAA approved or accepted revisions.

For aircraft outfitted with ASC 109 (CAT II Operations):

See the FAA approved Flight Manual Supplement G650-2017-04, latest CAA approved or accepted revisions.

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

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

For aircraft outfitted with ASC 109 (CAT II Operations):

See the FAA approved Flight Manual Supplement G650ER-2017-04, latest CAA approved or accepted revisions.

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

See the FAA approved Flight Manual Supplement GAC-AC-G650ER-OPS-0001 and EASA approved Airplane Flight Manual Supplement EASA-G650ER-2015-01 and EASA-G650ER-2021-01, latest CAA approved or accepted revisions.

12.1 Approved Operations

The airplane is approved for the following kinds of 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, ASC 109)
- RVSM
- Wet and contaminated runway operations (Appendix D data to FAA approved AFM)
- Steep Approach and Landing Capability

12.2 Other Limitations

Runway slope $\pm 2\%$

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	46,991 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	45,550 kg	37,874 kg	27,442 kg
	100,710 lbs	100,310 lbs	83,500 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 CAA approved or accepted 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 CAA approved or accepted 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 ref AFMS EASA-G650-2016-01 or AFMS EASA-G650ER-2016-02, latest CAA approved or accepted revisions.

Section 1: GVI, continued

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 CAA approved or accepted 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 CAA approved or accepted 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 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 take-off and landing.

Note: Type Certificate UK.TC.A.00038 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 CAA approved prior to any operation with passengers.

20. Baggage/ Cargo Compartment

For aircraft not fitted with ASC 014:

Gulfstream G650 Weight and Balance Manual Issue 3, dated April 2012 or later approved revisions.

For aircraft fitted with ASC 014:

Gulfstream G650ER Weight and Balance Manual revision 1 dated April 2015 or later approved 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.

Section 1: GVI, continued

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 UK Civil Aviation Authority.

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 as retained (and amended in UK domestic law) under the European Union (Withdrawal) Act 2018 and amended by the Aviation Safety (Amendment etc.) (EU Exit) Regulations 2019, however this implies no operations approval.

It has been demonstrated compliant with the appropriate design and reliability requirements defined in CRI F-51.

Operational approval must be sought from the UK Civil Aviation Authority.

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

In accordance with EU exit process, the UK CAA accepts the EASA baseline GVI (G650) EASA-G650-2012-01 Airplane Flight Manual Supplement, Revision 7 and GVI (G650ER) EASA-G650ER-2015-01 Airplane Flight Manual Supplement, Revision 5. These are approved as the UK CAA Airplane Flight Manual Supplement GVI (G650) UK-CAA-G650-2024-01, Initial Issue and GVI (G650ER) UK-CAA-G650ER-2024-01, Initial Issue.

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 CAA approved or accepted revisions.

For aircraft outfitted with ASC 109 (CAT II Operations):

See the FAA approved Flight Manual Supplement G650-2017-04, latest CAA approved or accepted revisions.

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

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

For aircraft outfitted with ASC 109 (CAT II Operations):

See the FAA approved Flight Manual Supplement G650ER-2017-04, latest CAA approved or accepted revisions.

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

See the FAA approved Flight Manual Supplement GAC-AC-G650ER-OPS-0001 and EASA approved Airplane Flight Manual Supplement EASA-G650ER-2015-01 and EASA-G650ER-2021-01, latest CAA approved or accepted revisions.

Section 1: GVI, continued

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 (G650ER) Aircraft Maintenance Manual.

3. Weight and Balance Manual (WBM)

For aircraft not fitted with ASC 014:

Gulfstream G650 Weight and Balance Manual Issue 3 dated April 2012 or later approved revisions (see Note 1).

For aircraft fitted with ASC 014:

Gulfstream G650ER Weight and Balance Manual revision 1 dated April 2015 or later approved revisions (see Note 1).

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 approved Airplane Flight Manual. All placards required by either the 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 UK Civil Aviation Authority under the UK CAA Type Certificate UK.TC.A.00038 and EASA under the EASA Type Certificate EASA.IM.A.169 as per Assimilated Regulation (EU) 748/2012 as amended by Assimilated Regulation (EU) No 69/2014, and are therefore accepted by the UK under Article 15 of Annex 30 of the UK-EU Trade and Cooperation Agreement.

1. Master Minimum Equipment List

a) Master Minimum Equipment List (MMEL), reference: UK-MMEL-AC-G650-OPS-0004, Revision Original, dated 11 September 2024, as per the defined Operational Suitability Data Certification Basis, recorded in the Operational Review Item (ORI) n°4 Issue 2, or later CAA approved or accepted revisions.

b) Required for entry into service by UK operator.

Section 1: GVI, continued

2. Flight Crew Data

- a) The Flight Crew Data (FCD), reference: UKCAA-OSD-FC-GVI-GAC-001, Initial Issue, dated 07 August 2024, 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 UK operator.
- c) Pilot Type Rating: GVI.

3. Cabin Crew Data

Not applicable.

VI. Notes

Note 1: GVI Aircraft for UK delivery must have ASC number 010 incorporated.

Section 2 GVIII-G700

I. General

This Type-Certificate Data Sheet (TCDS) is the concise definition of the type-certificated product accepted and or approved by the CAA in the UK for the affected types and models.

This TCDS includes:

1. Details of the type design that affect the TCDS that have been approved or accepted by the CAA in the UK since 01 January 2021.
2. Details of the type design that affected the TCDS and were approved or accepted by EASA before 01 January 2021, and were incorporated into EASA TCDS EASA.IM.A.169 at Issue 7 dated 23 October 2020 and are therefore accepted by the UK under Article 15 of Annex 30 of the UK-EU Trade and Cooperation Agreement.

1. Type / Variant or Model

- a) Type: Gulfstream GVIII
- b) Model: GVIII-G700 (G700)
- c) Variant: N/A

2. Airworthiness Category

Large Aeroplanes

3. Performance Class

A

4. Certifying Authority

Federal Aviation Administration (FAA)
Atlanta Aircraft Certification Office
1701 Columbia Avenue
College Park
Atlanta
Georgia 30337
United States of America

5. Type Certificate Holder

Gulfstream Aerospace Corporation
500 Gulfstream Road
Savannah
Georgia 31408
United States of America

6. Manufacturer

Gulfstream Aerospace Corporation
500 Gulfstream Road
Savannah
Georgia 31408
United States of America

7. State of Design Authority Certification Application Date

31 December 2019

8. EASA / UK CAA Type Certification Application Date

31 December 2019

Section 2: GVIII-G700, continued

9. State of Design Authority Type Certificate Date

GVIII-G700 29 March 2024

10. EASA Type Certification Date

GVIII-G700 15 May 2024

II. Certification Basis**1. Reference Date for Determining the Applicable Requirements**

31 December 2019

2. State of Design Airworthiness Authority Type Certification Data Sheet Number

T00015AT

3. State of Design Airworthiness Authority Certification Basis

14 CFR Part 25, Airworthiness Standards: Transport Category Airplanes, effective February 1, 1965, including Amendments 25-1 through 25-146 with the exceptions per 14 CFR 21.101 shown in FAA TCDS T00015AT.

4. UK CAA Airworthiness Requirements

Certification Specifications for Large Airplanes (CS-25), Amendment 23, dated 15 July 2019, inclusive of CS-25 Subpart J, with the exceptions per 21.A.101 shown:

CS 25		AMENDMENT	APPLICABLE AREA	NOTES
SECTION	TITLE		GVIII-G700	
25.21(b)(g)(1)	Proof of compliance	25/18	GVIII-G700	GVII CRI B-10
25.105	Takeoff	25/3	GVIII-G700	
25.105(a)(2)(i)	Takeoff	25/3	GVIII-G700	GVII CRI B-10
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	
25.121(b)(2)(ii)(A)	Climb: One-engine inoperative.	25/3	GVIII-G700	GVII CRI B-10
25.121(c)(2)(ii)(A)	Climb: One-engine inoperative.	25/3	GVIII-G700	GVII CRI B-10
25.121(d)(2)(ii)	Climb: One-engine inoperative.	25/3	GVIII-G700	GVII CRI B-10
25.123	En route flight paths.	25/3	GVIII-G700	
25.123(b)(2)(i)	En route flight paths.	25/3	GVIII-G700	GVII CRI B-10
25.125	Landing.	25/3	GVIII-G700	
25.125(b)(2)(ii)(B)(C)	General.	25/3	GVIII-G700	GVII CRI B-10
25.143(a)(5)(6)(b)(4)(k)	General.	25/21	GVIII-G700	GVII IP S-06

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Section 2: GVIII-G700, continued

CS 25		AMENDMENT	APPLICABLE AREA	NOTES
SECTION	TITLE		GVIII-G700	
25.143(j)	General.	25/21	GVIII-G700	GVII CRI B-10
25.145(f)		25/21	GVIII-G700	
25.201	Stall demonstration.	25/3	GVIII-G700	GVII CRI B-10
25.207	Stall warning.	25/3	GVIII-G700	GVII CRI B-10
25.237	Wind velocities.	25/3	GVIII-G700	
25.253	High speed characteristics.	25/11	GVIII-G700	
25.611(b)	Accessibility provisions.	25/5	GVIII-G700 except as noted below	
25.611(b)	Accessibility provisions.	N/A (See Note)	EWIS components in the wing and empennage	All design areas comply with the EWIS requirements at Amendment 25/5, except the wing and empennage.
25.671(d)	Controls Systems - General	25/24	GVIII-G700	Elect to comply
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	25/18	GVIII-G700	25-452-SC (GIV-X / GV-SP / GV IP F-05)
25.773	Pilot Compartment View	25/18	GVIII-G700	GVIII CRI F-203
25.795	Security considerations	25/0	GVIII-G700	UK CAA 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	GVIII CRI D-206

Section 2: GVIII-G700, continued

CS 25		AMENDMENT	APPLICABLE AREA	NOTES
SECTION	TITLE		GVIII-G700	
25.851	Fire extinguishers.	25/0	GVIII-G700 except as noted below	
25.851(a)(8)	Fire extinguishers.	25/18	Increased cabin volume due to fuselage stretch	
25.855(a)(b)(d)(e)(f)(g)(h)(1)(2)(i)	Cargo or baggage compartments.	25/5	GVIII-G700	
25.855(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.	25/18	GVIII-G700 except as noted below	
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.
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	Gulfstream proposes 25.869(a)(4) [25-113] for unchanged LRUs from the GVI in the fuselage, pylon, engine, wing, and empennage in accordance with 21A.101(b)(1); and proposes that 25.869(a)(4) applies to EWIS components in the wing and empennage and EWIS components integral to unrelated, not-significant changes in accordance with 21A.101(b)(2).
25.963	Fuel tanks: General	25/3	GVIII-G700 except as noted below	
25.963(e)	Fuel tanks: General	25/18	Wing fuel tank in areas exposed to small engine debris	

Section 2: GVIII-G700, continued

CS 25		AMENDMENT	APPLICABLE AREA	NOTES
SECTION	TITLE		GVIII-G700	
			threat model defined in AMC 25.963(e)	
25.975(a)(7)	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.	25/5	GVIII-G700 except as noted below	
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	
25.1303(a)(3)	Flight and navigation instruments.	25/18	GVIII-G700	GVII CRI F-37
25.1309	Equipment, systems, and installations.	25/20	GVIII-G700 except as noted below	
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	
25.1323(d)	Airspeed indicating system.	25/18	GVIII-G700	GVII CRI B-10
25.1324	Flight instrument external probes.	25/16	GVIII-G700 except as noted below	
25.1324	Flight instrument external probes.	N/A	TAT Probe	
25.1325	Static pressure systems.	25/16	GVIII-G700 except as noted below	
25.1325	Static pressure systems.	25/0	TAT Probe	
25.1326	Flight instrument	25/16	GVIII-G700 except	

Section 2: GVIII-G700, continued

CS 25		AMENDMENT	APPLICABLE AREA	NOTES
SECTION	TITLE		GVIII-G700	
	external probes heating systems alert.		as noted below	
25.1326	Flight instrument external probes heating systems alert.	25/0	TAT Probe	
25.1353	Electrical equipment and installations.	25/0	GVIII-G700 except as noted below	
25.1353	Electrical equipment and installations.	25/18	-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	Landing gear blow-down system lines re-routing	
25.1436(b)(4)(5) (c)(1)	Pneumatic systems - high pressure.	25/18	GVIII-G700	
25.1441	Oxygen equipment and supply	25/18	GVIII-G700	
25.1459(a)(5)	Flight Data Recorders	N/A	N/A	GVIII-G700 embodies a 25h recorder
25.1460(a)	Data Link Recorders	25/26	GVIII-G700	Elect to comply
25.1535	ETOPS Design Approval	N/A	N/A	No ETOPS approval sought
25.1583(k)	Operating Limitations	25/22	GVIII-G700	
25.1587(c)	Performance Information	25/21		
25.1591	Performance Information for Operations with Contaminated Runway Surface Conditions	25/27	GVIII-G700	Elect to comply
25.1701	Definition.	25/5	GVIII-G700 except as noted below	
25.1701	Definition.	N/A (See Note)	EWIS components in the wing and	All changed areas comply with the EWIS

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Section 2: GVIII-G700, continued

CS 25		AMENDMENT	APPLICABLE AREA	NOTES
SECTION	TITLE		GVIII-G700	
			empennage	requirements at Amendment 25/5, except the wing and empennage.
25.1703	Function and installation: EWIS	25/5	GVIII-G700 except as noted below	25.1703
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	25/5	GVIII-G700 except as noted below	
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	25/5	GVIII-G700 except as noted below	
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
25.1709	System safety: EWIS	25/5	GVIII-G700 except as noted below	
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	25/5	GVIII-G700 except as noted below	
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	25/5	GVIII-G700 except as noted below	
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,

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CS 25		AMENDMENT	APPLICABLE AREA	NOTES
SECTION	TITLE		GVIII-G700	
				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	25/5	GVIII-G700 except as noted below	
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	25/5	GVIII-G700 except as noted below	
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.
25.1719	Accessibility provisions: EWIS	25/5	GVIII-G700 except as noted below	
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	25/5	GVIII-G700 except as noted below	
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	25/5	GVIII-G700 except as noted below	
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

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Section 2: GVIII-G700, continued

CS 25		AMENDMENT	APPLICABLE AREA	NOTES
SECTION	TITLE		GVIII-G700	
				empennage.
25.1725	Powerplants: EWIS	25/5	GVIII-G700 except as noted below	
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	25/5	GVIII-G700 except as noted below	
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	25/5	GVIII-G700 except as noted below	
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	25/5	GVIII-G700 except as noted below	
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.
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.	25/19	GVIII-G700 except as noted below	
H25.1	General.	25/0 (See Note)	EWIS components in the wing and empennage	All changed areas comply with the H25.1 requirements at

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Section 2: GVIII-G700, continued

CS 25		AMENDMENT	APPLICABLE AREA	NOTES
SECTION	TITLE		GVIII-G700	
				Amendment 25/19, except the wing and empennage.
H25.5	Electrical Wiring Interconnection System (EWIS) Instructions for Continued Airworthiness.	25/18	GVIII-G700 except as noted below	
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 Specifications Airborne Communications, Navigation and Surveillance (CS-ACNS), Subpart E, Section 3, Issue 3.

CS-25 Appendix S at Amendment 23, excepting S25.20(b).

Certification Specification All Weather Operations (CS-AWO), Initial Issue, dated October 17th, 2003.

5. Special Conditions

GVII CRI B-01	Flight Envelope Protection
GVIII IP F-04	Flight Envelope Protection: General Limiting Requirements
GVII CRI B-10	High Incidence Protection Function; stall speeds, stall warning
GIV-X, GV, & GV-SP IP F-5	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-6	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

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GVIII CRI E-01UK	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-2	Fire Extinguishing Plumbing and Wiring Connections
GVIII CRI E-201	Engine Cowl Retention
GVII CRI F-33	Non-rechargeable Lithium Battery Installations
GVI & GVII CRI F-112	Supercapacitor Systems and Installation
GVIII CRI F-203	Synthetic Vision/Combined Vision on Head Up Display
GVII IP S-2	Isolation or Aircraft Electronic System Security Protection from unauthorized Internal Access
GVII IP S-3	Aircraft Electronic System Security Protection from Unauthorized External Access

6. Exemptions

Not applicable

7. Deviations

GVIII CRI E-02UK	Uncontrollable High Thrust failure conditions
GVIII CRI E-04UK	Fuel Feed Icing Threat

8. Equivalent Safety Findings

GVII CRI D-03	Flight Control System Failure Criteria
GVI CRI D-20	Emergency Exits
GVI IP C-7	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
GVII IP F-1	Electronic Flight Control System: Out-of-trim characteristics
GVII CRI F-24	Vertical Acceleration for Flight Data Recorder
GVIII CRI E-204	Nacelle behind fire Wall: TRAS compartment, absence of fire detection system
GVII CRI E-40	Ignition Switches
GVII CRI F-37	Use of an Electric Only Direction Indicator for Standby Instrumentation
GVIII IP A-1	Failure Criteria Considered Under the Aeroelastic Stability Requirements of §25.629
GVIII IP A-3	Operation Test Compliance for Fly-by-Wire Flight Control Systems
GVII IP P-01	Reverse Thrust Control and Indication

Section 2: GVIII-G700, continued

GVIII IP P-03	Digital Only Display of Engine Parameters
GVIII CRI E-03UK	Display of APU Normal Operating Range
GVIII IP P-12	Engine Fuel Shutoff Valve Indication
GVIII IP P-13	Thrust Reverser Testing
GVIII IP S-1	Equipment, Systems, and Installation Requirements: Use of ARAC Recommendations
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 24
- CS 25.1460(a) at Amendment 26
- CS 25.1591 at Amendment 27
- CS-ACNS, Airborne Communications, Navigation and Surveillance, Subpart E, Section 3, Issue 3, dated 31 May 2021
- Appendix S of CS Amdt. 25/23, 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.

Refer to UK CAA CRI N-01UK for Certification Basis for Noise Standards

For details of the certified noise levels see TCDSN no. UK.TC.A.00038

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 024 for UK aircraft, and post TC modifications as defined in Report GVIII-GER-1763 "Gulfstream GVIII - GVIII-G700 UK CAA Post-Type Certification Modifications", 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	33.49 meters [109.87 feet]
Fuselage Width at Constant Section	2.74 meters [9.00 feet]

Section 2: GVIII-G700, continued

5. Engines

Two (2) Rolls Royce Deutschland Ltd & Co. KG Turbofan Engine Models: BR700-730B2-14 (UK CAA Engine Type Certificate No. UK.TC.E.00082)

Engine Limits:

Data Sheet UK.TC.E.00082	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 UK.TC.E.00082.

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 UK CAA approved Airplane Flight Manual Supplement ref UK-CAA-GVIII-G700-2024-01, latest approved revisions.

7. Propellers

Not Applicable

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

Engines: Two-Rolls Royce Deutschland Ltd & Co KG Turbofan Engine Models: BR700-730B2-14 (Engine Type Certificate No. UK.TC.E.00082).

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)
	Ukraine	
	GSTU 320.00149943.007-97 (RT) GSTU 320.00149943.011-99 (TS-1)	

Section 2: GVIII-G700, continued

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.

Oils: Refer to the applicable approved Manuals.

Hydraulics: Refer to the applicable approved Manuals.

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

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

For other airspeed limits, see the FAA approved Flight Manual ref GAC-AC-GVIII-G700-OPS-0001 and UK CAA approved Airplane Flight Manual Supplement ref UK-CAA-GVIII-G700-2024-01, 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 UK CAA approved Airplane Flight Manual Supplement ref UK-CAA-GVIII-G700-2024-01, latest approved revisions.

12. Operating Limitations

See the FAA approved Flight Manual ref GAC-AC-GVIII-G700-OPS-0001, UK CAA approved Airplane Flight Manual Supplement ref UK-CAA-GVIII-G700-2024-01, and UK CAA approved Airplane Flight Manual Supplement ref UK-CAA-GVIII-G700-2024-02 (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 $\pm 2\%$

Maximum Takeoff and Landing Tailwind Component – 10 knots

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

Section 2: GVIII-G700, continued

Maximum takeoff crosswind component – 30 knots

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.

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

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 UK.TC.A.00038 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 UK CAA approved prior to any operation with passengers.

Section 2: GVIII-G700, continued

20. Baggage/ Cargo Compartment

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

The following EDTO capabilities granted by EASA are valid for Commercial Air Transport Operations.

Operational approval must be sought from the UK Civil Aviation Authority.

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 Assimilated 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 UK Civil Aviation Authority.

24. Interiors Installations

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

IV. Operating and Service Instructions

1. Airplane Flight Manual

Gulfstream GVIII-G700 AFM, FAA approved Flight Manual ref GAC-AC-GVIII-G700-OPS-0001, UK CAA approved Airplane Flight Manual Supplement ref UK-CAA-GVIII-G700-2024-01, and UK CAA approved Airplane Flight Manual Supplement ref UK-CAA-GVIII-G700-2024-02 (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-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 Assimilated Regulation (EU) No 748/2012, 21.A.61.

3. Weight and Balance Manual (WBM)

Gulfstream GVIII-G700 Weight and Balance Manual Revision 8 dated January 2024 or later approved revisions (Note 1).

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 UK CAA approved Airplane Flight Manual. All placards required by either the UK CAA 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 UK Civil Aviation Authority under the UK CAA Type Certificate UK.TC.A.00038, as per Assimilated Regulation (EU) 748/2012 as amended by Assimilated Regulation (EU) No. 69/2014.

TCDS No.: UK.TC.A.00038

Date: 12 November 2024

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Section 2: GVIII-G700, continued

1. Master Minimum Equipment List

- a) Master Minimum Equipment List (MMEL), reference: GVIII-G700 UK CAA MMEL, Revision Original, dated 11 September 2024, or later approved revisions, as per the defined Operational Suitability Data Certification Basis in CRI A-01UK. Required for entry into service by UK operator.

2. Flight Crew Data

- a) The Flight Crew Data (FCD), reference: UKCAA-OSD-FC-GVIII-GAC-001, Initial Issue, dated 06 August 2024, or later approved revisions, as per the defined Operational Suitability Data Certification Basis recorded in CRI A-01UK.
- b) Required for entry into service by UK operator.
- c) Pilot Type Rating: GVIII

3. Cabin Crew Data

Not Applicable

VI. Notes

Note 1: GVIII-G700 Aircraft for UK delivery must have ASC number 024 incorporated.

Section 3 Administration

I. Acronyms and Abbreviations

Acronym / Abbreviation	Definition	Acronym / Abbreviation	Definition
A/C	Aircraft	PW	Pratt & Whitney
AFM	Airplane Flight Manual	Ref	Reference
APU	Auxiliary Power Unit	RR	Rolls-Royce
ASC	Aircraft Service Change	RVSM	Reduced Vertical Separation Minima
ASTM	American Society for Testing and Materials	STA	Station
ATA	Air Transport Association	STC	Supplemental Type Certificate
AWO	All Weather Operations	TC	Type Certificate
CAA	(United Kingdom) Civil Airworthiness Authority	TCDS	Type Certificate Data Sheet
CFR	Code of Federal Regulations	TCDSN	Type Certificate Data Sheet for Noise
CG	Centre of Gravity	TCH	Type Certificate Holder
CRI	Certification Review Item	USA	United States of America
CS	Certification Specification	VFR	Visual Flight Rules
EASA	European Union Aviation Safety Agency	V _{MO}	Maximum Operating Limit Speed (KCAS)
EDTO	Extended Diversion Time Operations	WBM	Weight and Balance Manual
ELOS	Equivalent Level of Safety		
ETOPS	Extended-Range Twin-Engine Operational Performance Standards		
FAA	Federal Aviation Administration		
GA	Georgia		
HIRF	High Intensity Radiated Field		
HUD	Head Up Display		
ICAO	International Civil Aviation Organization		
IFR	Instrument Flight Rules		
JAA	Joint Aviation Authorities		
KCAS	Knots Calibrated Airspeed		
Kg	Kilograms		
Lbs	U.S. Pounds		
M	Mach		
MAC	Mean Aerodynamic Chord		
M _{MO}	Maximum Operating Limit Speed (Mach)		
MTOM	Maximum Take-off Mass		
No	Number		
OSD	Operational Suitability Data		
PSI	Pounds per Square Inch (pressure)		

Section 3: Administration, continued

II. Type Certificate Holder Record**TCH Record**

Gulfstream Aerospace Corporation
500 Gulfstream Road
Savannah
Georgia 31408
United States of America

Period

Present. No changes.

III. Amendment Record

TCDS Issue No.	TCDS Issue Date	Changes	TC Issue and Date
1	10 Jun 2022	<p>The content of the initial issue of this UK CAA TCDS was taken from EASA TCDS No. EASA.IM.A.169 Issue 7 dated 23 October 2020 which was the current EASA version at 31 December 2020 and therefore the version of the TCDS for the Gulfstream VII accepted by the UK under Article 15 of Annex 30 of the UK-EU Trade and Cooperation Agreement, except as listed below:</p> <ul style="list-style-type: none"> • Section 1.II.8: Removed reference to Equivalent Safety Finding CRI D-27. Added FAA ELOS TC8700AT-T-C-7 Rev. 2 –Encroachment into Emergency Exits. • Section 1.III.12.1 Category II operations ASC 109 added • Section 1.III.24: Added section 24 making reference to Gulfstream Report Number GVI-GER-6855. • Section 1.IV.1 AFMS for CAT II Operations (ASC 109) Added <p>Editorial changes/Changes to reflect EU Exit:</p> <ul style="list-style-type: none"> • Section 1.I: Explanatory note added. • Section 1.I.1: Type / Variant or Model added. • Section 1.I.5: Type Certificate Holder address added. • Section 1.I.6: Manufacturer address updated. • Section 1.II.3: State of Design Airworthiness Authority Certification Basis added. • Section 1.II.10: TCDSN number updated to UK reference, and minor corrections and enhancements to text embodied. • Section 1.III.1: Type Design definition for post-type certification modifications revised. • Section 1.III.5: Reference made to CAA engine type certificate. • Section 1.III.6: wording added to specify CAA acceptance of EASA JTSO 6615 approval. • Section 1.III.8: Engine manufacturer name updated • Section 1.III.19: TCDS reference updated, and added reference to UK CAA. • Section 1.III.22: Wording updated to reflect EU Exit. • Section 1.III.23: Wording updated to reflect EU Exit. • Section 1.V: Approval statement updated to reflect acceptance of EASA Approved OSD under UK-EU Trade and Cooperation Agreement. • Section 1.V.1, 2: wording updated to 'UK Operator'. • Section 1.VI: Note 1 referring to requirement for ASC 010 to be incorporated on aircraft for UK delivery. • Section 2.1: Additional Acronyms and Abbreviations added. 	Issue 1 10 Jun 2022

TCDS No.: UK.TC.A.00038

Date: 12 November 2024

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Section 3: Administration, continued

TCDS Issue No.	TCDS Issue Date	Changes	TC Issue and Date
2	25 Jan 2023	The following section revisions were made at Issue 2, adding data application to the Gulfstream GVI as validated by the CAA under project UK.MAJ.000185. Section 1.II.8: Equivalent Safety Finding, CRI B-12, Steep Approach and Landing Capability added. Section 1.V.2: Change to the Operational Suitability Data – Flight Crew Data (OSD-FCD) revised from issue 2 to 3.	Issue 1 10 Jun 2022
3	06 Aug 2024	Section 1: GVI Section II. 3: Added “operations to touchdown and rollout” to Amendment 25-144 EFVS description Added Section 2 – GVIII-G700	Issue 2 06 Aug 2024
4	02 Oct 2024	Section 3.III: TC Issue and Date Corrected Section 2.V.1: GVIII-G700 UK CAA MMEL, Revision Original, dated 11 September 2024 reference added.	Issue 2 06 Aug 2024
5	12 Nov 2024	Section 1: GVI Section II. 3: Added 25-137 to certification basis Added one Asterisks related to amendment 25-137. Changed from one to two Asterisks related to amendment 25-144. Section IV: Added an explanatory note with regards to UK Airplane Flight Manual Supplement reference. Section V: Added UK CAA TCDS reference. Section V1: Added UK MMEL document reference. Section V2: Added UK CAA OSD-FCD document reference.	Issue 2 06 Aug 2024

– END –