**DEPARTMENT OF TRANSPORTATION**
**FEDERAL AVIATION ADMINISTRATION**

A61NM
Revision 12
Gulfstream Aerospace LP
Gulfstream G280
December 21, 2021

# FAA TYPE CERTIFICATE DATA SHEET NO. A61NM

This data sheet, which is part of Type Certificate No. A61NM, prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the US Federal Aviation Regulations.

Type Certificate Holder: Gulfstream Aerospace LP (GALP)
P.O. Box 1036
Airport City
7019900, Israel

## I. Model Gulfstream G280 (Transport Category Airplane) approved on August 30, 2012

**Engines**
2 Honeywell AS907-2-1G (Turbofan) Engines per FAA Type Certificate Data Sheet E00010LA

**Auxiliary Power Unit**
Honeywell 36-150[IAI]

**Fuel**
Fuels conforming to Honeywell International Inc. Specifications EMS53111 (Jet Atype), EMS53112 (Jet A1 and JP-8 types), EMS53116 (JP-5 type)

**Oil**
Oils conforming to Honeywell International Inc. Specification EMS53110, Type II.

**Engine Limits**
Refer to Airplane Flight Manual (AFM)

**APU Limits**
Refer to Airplane Flight Manual (AFM)

**Airspeed Limits**

| | | |
|---|---|---|
| $V_{MO}$ | | 300 KIAS from sea level to 10,000 ft., increasing linearly to 330 KIAS at 20,000 ft. |
| | | 340 KIAS from 20,000 ft. to 28,000 ft. |
| $M_{MO}$ | | 0.85 Mach from 28,000 ft. to 45,000 ft. |
| $V_A$ (Maneuvering) | | 215-225 KIAS below 20,000 ft. |
| | | 225-264 KIAS between 20,000 ft. and 35,000 ft. |
| | | 264 KIAS from 35,000 ft. to 39,000 ft. |
| $V_A$ (Maneuvering) | | 0.85 Mach from 35,000 ft. to 45,000 ft. |
| $V_{FE}$ (Flaps Extended) | Flaps 10°250 KIAS | |
| | Flaps 20°220 KIAS | |
| | Flaps LND | 180 KIAS |
| Maximum Landing Gear Operating Speed ($V_{LO}$) | | 195 KIAS |
| Maximum Landing Gear Extended Speed ($V_{LE}$) | | 195 KIAS |
| Vmc air (ISA; sea level) | | 97 KIAS |
| Vmc landing (ISA; sea level) | | 95 KIAS |
| Vmc ground (ISA; sea level) | | 95 KIAS |
| Main landing gear tire speed limit | | 195 kts. |
| Nose landing gear tire speed limit | | 182 kts. |

**Datum**
Fuselage station 0, located 221.77 inches (5.633 meters) forward of the main entrance aft frame.

**Mean Aerodynamic Chord**
The MAC length is 112.92 inches (2.868 meters), with leading edge at fuselage station 10305.

**Leveling Means**
Longitudinally: Place level on either seat rail at fuselage station 10534 (FR 34 – against the emergency exit) parallel to aircraft centerline.

Laterally: Place level on seat rail at cockpit floor fuselage station 4518 (FR 10) 90° to aircraft centerline.

Center of Gravity (CG) Limits: Refer to Airplane Flight Manual (AFM)

Empty Weight CG Limits: None.

Maximum Weights

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|---|---|
| Max Ramp Weight: | 39,750 lbs. |
| Max Takeoff Weight: | 39,600 lbs. |
| Max Landing Weight: | 32,700 lbs. |
| Max Zero Fuel Weight: | 28,200 lbs. |

Maximum Compartment Weights

| | Lbs. | Arm |
|---|---|---|
| Floor load 120 lb./ft.$^2$ (floor load behind vertical net 100 lb./ ft.$^2$) | 1980 | 544.21 in. (13.82 meters) |

Fuel Capacity

| | |
|---|---|
| Total useable fuel all tanks | 14620 lbs. (at density 6.7 lbs./U.S. gallon) |
| Total unusable fuel all tanks | 86.8 lbs. drainable from tanks and lines |
| | 29.6 lbs. trapped in tanks and lines |

| | LH wing tank | LH feed tank | Center tank | Aft tank | Fwd. tank | RH feed tank | RH wing tank |
|---|---|---|---|---|---|---|---|
| Tank Capacity (LBS) | 4377 | 540 | 2153 | 1132 | 1619 | 540 | 4377 |
| Tank Usable Fuel (LBS) | 4340 | 530 | 2140 | 1130 | 1610 | 530 | 4340 |
| Arm, inches (Meters) | 441 (11.20) | 439 (11.15) | 396 (10.05) | 541 (13.75) | 322 (8.20) | 439 (11.15) | 441 (11.20) |
| Unusable Fuel (LBS) | 36.8 | 10.0 | 12.6 | 1.6 | 8.6 | 10.0 | 36.8 |
| Arm, inches (Meters) | 441 (11.20) | 439 (11.15) | 396 (10.05) | 541 (13.75) | 322 (8.20) | 439 (11.15) | 441 (11.20) |

Minimum Crew: 2 Pilot and Copilot.

Maximum Passenger Seating Capacity

| | |
|---|---|
| 19 | As limited by exit door arrangement (see Note 4) |
| 0 | For aircraft conforming to "green" aircraft configuration defined by GALP drawing 30P000999900-501 Revision A and report 30P000/120060 Revision New |

Oil Capacity: Oil capacity (useable) for both engines 19.2 lbs. (at density 8.14 lbs./U.S. gallon)

Maximum Altitude: 45,000 ft.

Control Surface Movements

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|---|---|
| Ailerons | 15° TE up, 15° TE down (± 0.25°) |
| Aileron trim | 15° TE up, 15° TE down (± 1.0°) |
| Aileron gear tab | 15° TE up, 15° TE down (± 1.0°) |
| Elevator | 27.5° TE up, 20° TE down (± 0.5°) |
| Stabilizer | 12° TE up, 2.5° TE down (± 0.3°) |
| Rudder | 30° right, 30° left (± 1.5°) |
| Rudder trim | 9° right, 9° left (± 1.1°) |
| Ground Spoiler | 55° up (± 1.7°) |
| Roll Spoiler | 45° up (± 1.65°) |
| Flap | 39° maximum TE down (± 1.0°) |

Deflections are in the planes normal to the hinge lines, except for the flaps, which are in stream wise planes normal to the wing reference plane. Deflections of a surface supported by another moveable surface are relative to the parent surface. Stabilizer deflections are relative to the airplane horizontal reference. Rudder maximum deflections are scheduled by the flight control system as a function of airspeed; the data presented herein correspond to zero airspeed.

Serial Numbers: 2001 and subsequent (see Note 6).

**DATA PERTINENT TO ALL MODELS EXCEPT AS INDICATED**

Import Requirements

Refer to the applicable bilateral agreement to verify eligibility for import into the United States of both new and used aircraft based on the scope of the agreement, to identify any required statements by the exporting authority on the export certificate of airworthiness (or equivalent document), and for procedures for coordinating exceptions to conformity statements on these documents. Refer to FAA Order 8130.2, Airworthiness Certification of Aircraft, for requirements for issuance of an airworthiness certificate for imported aircraft.

Certification Basis

**14 CFR part 25**, effective February 1, 1965, including Amendments 25-1 through 25-120 in entirety, plus Amendment 25-122 in entirety.

**Special conditions**

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|---|---|
| No. 25-449-SC | Windshield Precipitation Removal by Hydrophobic Coatings |
| No. 25-425-SC | Dynamic Test Requirements for Side-facing, Single-occupant Seats |
| No. 25-432-SC | Go-around Performance Credit for Use of Automatic Power Reserve (ATTCS). |
| No. 25-447-SC | Engine Torque Loads for Sudden Engine Stoppage |
| No. 25-440-SC | Design Roll Maneuver |
| No. 25-453-SC | Operation without normal Electrical Power |
| No. 25-439-SC | Interaction of Systems and Structure |
| No. 25-464-SC | Isolation or Aircraft Electronic System Security Protection from Unauthorized Internal Access |
| No. 25-465-SC | Aircraft Electronic System Security Protection from Unauthorized External Access |
| No. 25-664-SC | Non-Rechargeable Lithium Battery Installations |

Note: The FAA Special Conditions referenced above may be accessed at internet location:

http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgSC.nsf/Frameset?OpenPage

See note 8 regarding change in model designation.

**Equivalent Safety Findings**

14 CFR 25.811(d)(1), 25.812(a)(1),(b),(c),(d),(e): Emergency Exit Marking and Emergency Lighting (documented in TAD ELOS memo AT0329IB-T-CI-1)

14 CFR 25.1301, 25.1309: Function and Installation and Equipment, Systems, and Installations (documented in TAD ELOS memo AT0329IB-T-S-21R1)

14 CFR 25.831(g): Cabin Temperature and Humidity (documented in TAD ELOS memo AT0329IB-T-S-15)

14 CFR 25.331(c): Checked Pitch Maneuver (documented in TAD ELOS memo AT0329IB-T-A-8)

14 CFR 25.341, 25.343, 25.345, 25.371, 25.373, 25.391: Design Gust Criteria and Continuous Turbulence (documented in TAD ELOS memo AT0329IB-T-A-9)

14 CFR 25.721, 25.963(d), 25.994: Emergency Landing Gear Breakaway (documented in TAD ELOS memo AT0329IB-T-A-10)

14 CFR 25.391, 25.395, 25.415: Ground Gust (documented in TAD ELOS memo AT0329IB-T-A-11)

14 CFR 25.671: Flight Control Systems (documented in TAD ELOS memo AT0329IB-T-S-22-1)

14 CFR 25.629: Aeroelastic Stability Requirements (documented in TAD ELOS memo AT0329IB-T-S-22-2R2)

14 CFR 25.1203(a): Engine Fire Detection in Tailpipe (documented in TAD ELOS memo AT0329IB-T-P-6)

14 CFR § 25.933: Flight Critical Thrust Reverser (documented in TAD ELOS memo AT0329IB-T-P-8)

14 CFR part 25 multiple sections: Adoption of Draft Harmonized Rules for APU Certification (documented in TAD ELOS memo AT0329IB-T-P-15)

14 CFR 25.841(b): Cabin Pressurization – High Altitude Airport Takeoff and Landing Operations (documented in TAD ELOS memo AT0329IB-T-S-16)

14 CFR 25.901, 25.1305, 25.1321, 25.1549: Digital Display of Engine Rotor Speed N2 (documented in TAD ELOS memo AT0329IB-T-F-8)

Note: The FAA Equivalent Safety Findings referenced above may be accessed at internet location:

http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgELOS.nsf/Frameset?OpenPage

See note 8 regarding change in model designation.

**Exemptions**

Exemption No. 9900 for 14 CFR Part 25 Sections 25.562(a) and 25.785(b): Multiple-occupancy Side-facing Seats

Partial Exemption No. 10274 for 14 CFR Part 25 Section 25.813(e): Doors between Passenger Seats Occupiable for Takeoff and Landing and any Passenger Emergency Exit

Exemption No. 10402 for 14 CFR Section 25.981(a)(3): Structural Lightning Protection Aspects of Fuel Tank Ignition Prevention

Time-limited Exemption No. 10408 for 14 CFR Section 25.901(c): Uncontrollable High Thrust Failure Conditions (see Note 3 and Note 11)

Time-limited Exemption No. 10612 for 14 CFR Section 25.981(a)(3): Fuel Tank Ignition Prevention (see Note 9)

Partial Time-limited Exemption No. 10613A from certain engine installation, operational limitation and engine indication provisions of Title 14, Code of Federal Regulations (14 CFR) (See Note 10)

Partial Exemption No. 17440 for 14 CFR Section 25.841(a)(2) from certain requirements for pressurized cabin. (see Note 12)

Note: The FAA Exemptions referenced above may be accessed at internet location:

http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgEX.nsf/Frameset?OpenPage

See note 8 regarding change in model designation.

**Optional Design Regulations:**

The model G280 has been shown to comply with the following optional requirements:

Section 25.801 Ditching

Section 25.1411(d),(e),(f),(g) Safety Equipment – General

Section 25.1415(a)(b)(c)(d) Ditching Equipment

Section 25.1419 Ice protection

**Environmental Standards:**

14 CFR part 34, as amended by Amendments 34-1 through 34-4, effective June 29, 2009

14 CFR part 36, effective December 1, 1969 including amendments 36-1 through 36-31 effective November 3, 2017

A finding of regulatory adequacy pursuant to the “Noise Control Act of 1972” (49 USC Section 44715)

**Additional Design Requirements and Conditions:**

The following design details or information must be maintained to ensure that an unsafe design condition is not present:

Fuel Vent System Fire Protection: Compliance shown by design; flame arrestors added to the vent line near the NACA scoops on the outboard wing.

Fuselage Fuel Tank Penetration: Compliance shown by design and test of the G280 forward and aft fuselage fuel tanks to demonstrate resistance to tire fragment or other debris impact. Changes to fuel tank skin thickness, tire mass, and tire size, may impact debris penetration resistance. Therefore, any such changes will require evaluation to ensure an unsafe condition is not introduced.

**Type Certificate Information**

Type certificate A61NM issued August 30, 2012

- Original application for type certification dated March 31, 2006
- Extension granted per 14 CFR Section 21.17(d)(2) for a new reference date of application of March 31, 2007
- Provisional type certificate application October 27, 2011
- Extension granted per 14 CFR Section 21.17(d)(2) for a new reference date of application of September 30, 2007
- Provisional type certificate A61NM issued March 1, 2012

| | |
|---|---|
| Production Basis | Until 31 December 2021 Gulfstream G280 airplanes, all series and models, were produced in Israel under production certificate PA-30 issued by the Civil Aviation Authority of Israel (CAAI). From 1 January 2022, Gulfstream G280 airplanes, all series and models, are produced in Israel under production certificate PC-1 issued by the Civil Aviation Authority of Israel (CAAI). Effective 1 January 2022, production certificate PC-1 supersedes and replaces PA-30See also Note 7 regarding licensing arrangements. |
| Equipment | The basic required equipment as prescribed in the applicable airworthiness regulations (see the Certification Basis) must be installed in the aircraft. The list of all such equipment supplied by the manufacturer with each aircraft is contained in the GALP document:<br>G280 Master Equipment List Rep. 30P000/110634/Rev. A or higher |
| Airplane Flight Manual | CAAI-approved AFM No. G280-1001-1 for aircraft with avionics software version 3.2.1<br>CAAI-approved AFM No. G280-1002-1 for aircraft with avionics software version 3.6<br>CAAI-approved AFM No. G280-1003-1 for aircraft compliant with FADEC software version V2G (production modification G25-10044 or associated SB 280-76-128) |
| Service Information | Service bulletins, repair instructions (letters, drawings, specifications, forms used for transmitting repair descriptions, etc.), structural repair manuals, airplane flight manuals, vendor manuals, and overhaul and maintenance manuals that are published in the English language and indicate applicability to the U.S. approved type design included in this Type Certificate and that include a statement that the document is Civil Aviation Authority of Israel (CAAI) approved, are accepted by the FAA and are considered FAA approved. These approvals pertain to type design only. |

**NOTES:**

NOTE 1: Weight and balance:
A current weight and balance report, including a list of equipment included in certificated empty weight and loading instructions when necessary must be provided for each aircraft at the time of original certification.
The certificated basic empty weight and corresponding center of gravity location must include the total engine oil, hydraulic fluid and unusable fuel.

NOTE 2: Airplane operation must be in accordance with a CAAI approved Airplane Flight Manual. All placards required by the AFM, operating rules, and the certification basis must be installed in the appropriate locations.

NOTE 3: Maintenance Program, including Service Life Limits and Required Maintenance/Inspections/Reporting:

Chapter 5-10-10 of the Gulfstream G280 Maintenance Manual, part number G280-1001-3, basic issue, dated August 24, 2012 contains the Airworthiness Limitations Section required by 14 CFR part 25 appendix H25.4. Later revisions to the Chapter 5-10-10 must be approved prior to incorporation into the maintenance program of airplanes operated under the type certificate. The Chapter 5-10-10 includes the following components:

- Life limited components are listed in the Tables 4 and 5.
- The mandatory systems certification maintenance requirements, raised from the safety analysis, are listed in the Table 6.
- The fuel tank system airworthiness limitations are listed in the Table 6.
- The fuel tank system critical design configuration control limitations (CDCCLs) are listed in the Table 7.

Additionally, the FAA has concluded that the occurrence of any uncontrollable high-thrust failure condition, or any of the associated causal failures listed in Chapter 05-10-10 of the G280 Maintenance Manual, may endanger the safe operation of an airplane, and hence are reportable under Title 14, Code of Federal Regulations 121.703(c), 125.409(c), and 135.415(c).

NOTE 4: The type design defined by GALP drawings 30P000999900-501 Revision A and report 30P000/120060 Revision New includes approved seating for pilot and copilot only, and has peculiar provisions and limitations linked to this limited occupancy. A forward observer seat is not included in the approved type design.

Modifications intended to expand occupancy provisions to other than pilot and copilot seating approved under the TC must be approved. Certification guidance for interior installations is provided in GALP report 30P090/060643 Rev. A or higher "G280 Certification Specification for the Green Aircraft Completion Center Interface."

In addition to occupancy considerations noted above, compliance to 14 CFR 25.809(a) was found:

(a) for the over wing exit by using both the window in the exit and the window immediately forward of the exit. It isn't possible to view the likely area of evacuee ground contact from the over wing exit window therefore the window immediately forward of the exit was used for this purpose. No items may be installed between the over wing exit and the window immediately forward of the over wing exit that could cause an obstruction. Questions regarding a proposed installation in this area must be coordinated with the TC issuing office.

(b) for the Main Entry Door (MED) exit by using the left hand (LH) forward-most cabin window which is immediately aft of and adjacent to the MED. No items may be installed that could cause an obstruction of this window, unless alternative viewing means are approved. Questions regarding a proposed installation in this area must be coordinated with the TC issuing office.

NOTE 5: The G280 model incorporates integrated avionics systems using software-based line replaceable units (LRUs) which share a digital transmission bus. Modification to the LRU software or alteration of the LRU interface could adversely affect the airworthiness of the certified product. LRU software configurations approved under the TC are defined in GALP Document 30P8000005 Rev.W, "TOP ELECT.& AVIONIC PART LIST BASIC FINAL ASSY." Changes to the integrated avionics system must be approved.

NOTE 6: G280 airplane serial numbers 2003 through 2009 were imported into the U.S. under the provisional TC issued March 1, 2012. These serial number airplanes did not conform to the FAA-approved type design definition at the time of import. Eligibility for a standard certificate of airworthiness on these airplanes requires a determination of conformity to the type design definition approved under the FAA TC. The modifications necessary to bring these airplanes from the exported configuration to the FAA TC type design configuration are described in a Task Transfer Reports (TTR) prepared for each serial number airplane, according to the G280 GALP PTC to TC Configuration Management Plan, IAI Document Number 30P002/120376, Revision A, dated July 26, 2012.

NOTE 7: Israel Aerospace Industries (IAI) LTD., Ben Gurion International Airport 70100, ISRAEL, is licensed by GULFSTREAM AEROSPACE LP to manufacture and obtain Airworthiness Certificates for the aircraft models listed in this Type Certificate Data Sheet.

NOTE 8: GALP letter CAAI/11140/BM, dated July 18, 2011 provides notification of a model designation change from G250 to G280. Some FAA special conditions, exemptions, and equivalent safety finding memorandums issued prior to this date include the G250 model designation but are fully applicable to the Model Gulfstream G280.

NOTE 9: In accordance with the FAA Decision contained in Time-limited Exemption No. 10612 for 14 CFR Section 25.981(a)(3): Fuel Tank Ignition Prevention, no aircraft may operate after June 30, 2014 unless production modification G25-10706 or its associated service bulletin 280-57-036, and production modification G25-20047 or its associated service bulletin 280-57-071 areincorporated.

NOTE 10: In accordance with the FAA Decision contained in Time-limited Exemption No. 10613A from certain engine installation operational limitation and engine indication provisions: no aircraft may operate after December 31, 2015 unless production modification G25-10022 or its associated service bulletin 280-30-017, and production modification G25-20061 or its associated service bulletin 280- 76-111 are incorporated.

NOTE 11: In accordance with the FAA Decision contained in Time-limited Exemption No. 10408A for 14 CFR Section 25.901(c): Uncontrollable High Thrust Failure Conditions, production aircraft starting from aircraft Serial Number 2110 are equipped with the approved amended type design (production modification G25-10054) which satisfies the conditions required to remove this exemption from those aircraft having incorporated production modification G25-10054.

NOTE 12: In accordance with the FAA Decision contained in the Partial Grant of Exemption No. 17440, relief from certain requirements of 14 CFR Section 25.841(a)(2) allowing access to the baggage compartment up to 44,000 feet is granted for aircraft incorporating modification G25-10066 or it's associated service bulletin 280-11-252.

...END...