



U.S. Department of Transportation
Federal Aviation Administration
Washington, DC

Flight Standardization Board Report

Revision: 1
Date: XX/XX/XXXX

Manufacturer Gulfstream Aerospace Corporation

Type Certificate Data Sheet (TCDS)	TCDS Identifier	Marketing Name	Pilot Type Rating
T00015AT	GVIII	G700	GVIII
T00015AT	GVIII	G800	GVIII

Approved by the Aircraft Evaluation Division (AED)
Federal Aviation Administration
Corporate Aviation Branch
AFS-100
800 Independence Avenue, S.W.
Washington, DC 20591

AED Email: 9-AVS-AFS-100@faa.gov

TABLE OF CONTENTS

Section	Page
1. RECORD OF REVISIONS.....	3
2. INTRODUCTION.....	3
3. HIGHLIGHTS OF CHANGE	3
4. BACKGROUND	3
5. ACRONYMS.....	4
6. DEFINITIONS	7
7. PILOT TYPE RATING	8
8. RELATED AIRCRAFT	8
9. PILOT TRAINING.....	8
10. PILOT CHECKING.....	13
11. PILOT CURRENCY	14
12. OPERATIONAL SUITABILITY.....	14
13. MISCELLANEOUS	15
APPENDIX 1. DIFFERENCES LEGEND.....	16
APPENDIX 2. MASTER DIFFERENCES REQUIREMENTS (MDR) TABLE.....	18
APPENDIX 3. DIFFERENCES TABLES.....	19
APPENDIX 4. GVII-G500/G600 TO GVIII-G700/G800 TRANSITION/REDUCED CURRICULUM COURSE.....	22
APPENDIX 5. AUTHORIZATION REQUIRED OPERATIONS (RNP AR).....	46
APPENDIX 6. ENHANCED FLIGHT VISION SYSTEM (EFVS) OPERATIONS	49

1. RECORD OF REVISIONS

Revision Number	Section(s)	Date
Original	All	05/03/2024
1	3, 4, 7, 8, 9, 10,12, Appendices 2, 3, 4 ,5, 6	XX/XX/XXXX

2. INTRODUCTION

The Aircraft Evaluation Division (AED) is responsible for working with aircraft manufacturers and modifiers, during the development and Federal Aviation Administration (FAA) certification of new and modified aircraft to determine:

- 1) The pilot type rating,
- 2) Flightcrew member training, checking, and currency requirements, and
- 3) Operational suitability.

This report lists those determinations for use by:

- 1) FAA employees who approve training programs,
- 2) FAA employees and designees who certify airmen, and
- 3) Aircraft operators and training providers, to assist them in developing their flightcrew member training, checking and currency.

3. HIGHLIGHTS OF CHANGE

The purpose of this revision is to add Gulfstream model GVIII-G800 to this Flight Standardization Board Report (FSBR).

4. BACKGROUND

The Corporate Aircraft Branch (CAB), AED formed a Flight Standardization Board (FSB) that evaluated the GVIII-G700 as defined in amended FAA Type Certificate Data Sheet (TCDS) No. T00015AT. The evaluation was conducted from October 2023 through February 2024, using the methods described in FAA Advisory Circular (AC) 120-53B with Change 1, Guidance for Conducting and Use of Flight Standardization Board Evaluations.

The GVIII-G700 features fly-by-wire (FBW) which interfaces with dual Active Control Sidesticks (ACS) and is powered by Rolls-Royce Pearl 700 Model BR700-730B2-14 turbofan engines producing 18,250 lbs. of thrust.

The GVIII-G700 has the Gulfstream Symmetry Flight Deck which is based on the Honeywell Primus Epic integrated avionics system with the SmartView Synthetic Vision System (SVS), two-dimensional (2D) and three-dimensional (3D) airport moving maps, and cockpit display of traffic information. Integrated touchscreens are used for system controls, flight management, communications, electronic checklists (ECL), and monitoring of weather and flight information. The aircraft is equipped with a Data Concentration and Network (DCN), and dual Head-Up Displays (HUD) III incorporating the Kollsman Enhanced Vision

System (EVS) -III. The GVIII-G700 is certificated to a maximum of 19 passengers and 22 occupants (including 3 flightcrew members). Maximum takeoff weight (MTOW) for the GVIII-G700 is 107,600 lbs.

From October 2023 through February 2024, an FSB was convened to determine operational suitability and evaluate training, checking, and currency requirements for operations in the GVIII-G700 aircraft. At the completion of the FSB, the GVIII-G700 was determined to be operationally suitable.

In December 2023, the CAB AED convened an FSB to evaluate the GVII-G500/G600 transition/reduced curriculum course to the GVIII -G700. The FSB determined that the GVII-G500/G600 to GVIII-G700 transition/reduced curriculum course was validated to be operationally suitable for the consolidation of knowledge which is included in Appendix 4.

In February 2024, the CAB AED convened an FSB to evaluate the Gulfstream GVIII-G700 RNP AR Operations. The FSB determined that the GVIII-G700 RNP AR operations are operationally suitable which is included in Appendix 5.

In March 2025, the FSB conducted a flight evaluation of the GVIII-G800 aircraft. The aircraft was evaluated for GVIII-G700 aircraft equivalence. The GVIII-G800, as well as the associated Airplane Flight Manual (AFM), were found to be operationally suitable.

5. ACRONYMS

- 14 CFR Title 14 of the Code of Federal Regulations
- 2D Two-Dimensional
- 3D Three-Dimensional
- AB Auto Brake
- AC Advisory Circular
- ACFT Aircraft
- ACS Airman Certification Standards
- ACS Active Control Sidestick
- AED Aircraft Evaluation Division
- AFCS Automatic Flight Control System
- AFM Airplane Flight Manual
- AGL Above Ground Level
- AOA Angle of Attack
- APR Approach
- APU Auxiliary Power Unit
- AP TCAS Autopilot Traffic Alert and Collision Avoidance System
- AR Authorization Required
- AT Auto Throttle
- ATP Airline Transport Pilot
- AV Audiovisual Presentation
- C Celsius
- CAB Corporate Aircraft Branch

- CAI Cowl Anti-Ice
- CAS Crew Alerting System
- CAT Category
- CPT Cockpit Procedures Trainer
- CVS Combined Vision System
- DCN Data Concentration and Network
- ECL Electronic Checklist
- ECS Environmental Control System
- EDM Emergency Descent Mode
- EFB Electronic Flight Bag
- EFVS Enhanced Flight Vision System
- EGPWS Enhanced Ground Proximity Warning System
- ELDAC Enhanced Lateral-Directional Assist Controller
- EPR Exhaust Pressure Ratio
- EVAS Emergency Vision Assurance System
- EVM Engine Vibration Monitor
- EVS Enhanced Vision System
- FAA Federal Aviation Administration
- FADEC Full Authority Digital Engine Control
- FBW Fly-By-Wire
- FCS Flight Control System
- FD Flight Director
- FFS Full Flight Simulator
- FMS Flight Management System
- FPA Flight Path Angle
- FPV Flight Path Vector
- FSB Flight Standardization Board
- FSBR Flight Standardization Board Report
- FSTD Flight Simulation Training Device
- ft Feet
- FTD Flight Training Device
- GPS Global Positioning System
- HF High Frequency
- HO Handout
- HUD Head-Up Display
- ICBI Interactive Computer-Based Instruction
- ICS Intercom System
- IPS Inches Per Second
- KCAS Knots Calibrated Airspeed
- kt Knot
- lbs Pounds
- LDA Localizer Directional Aid
- LNAV Lateral Navigation
- LOC Localizer

- LOC BC Localizer Back Course
- LP Localizer Performance
- LPV Localizer Performance with Vertical Guidance
- LRCS Long-Range Communications System
- M Mach
- MAC Mean Aerodynamic Chord
- MAP Missed Approach Point
- MDR Master Differences Requirements
- MFF Mixed Fleet Flying
- MMEL Master Minimum Equipment List
- M_{MO} Maximum Operating Limit in Mach
- MTOW Maximum Takeoff Weight
- NAS National Airspace System
- NDB Nondirectional Radio Beacon
- NWS Nose Wheel Steering
- OAT Outside Air Temperature
- PF Pilot Flying
- PFD Primary Flight Display
- PIC Pilot In Command
- PM Pilot Monitoring
- PTT Part Task Trainers
- RGA Reduced Go-Around
- RNAV Area Navigation
- RNP Required Navigation Performance
- RNP AR Required Navigation Performance Authorization Required
- SATCOM Satellite Communications
- SIC Second In Command
- STC Supplemental Type Certificate
- SU Stand-Up Instruction
- SVS Synthetic Vision System
- SXM Sirius XM
- TAT Total Air Temperature
- TC Type Certificate
- TCAS Traffic Alert and Collision Avoidance System
- TCBI Tutorial Computer-Based Instruction
- TCDS Type Certificate Data Sheet
- TOLD Take Off and Landing Data
- VNAV Vertical Navigation
- VOR Very High Frequency Omni-Directional Range
- V₁ Takeoff Decision Speed
- V_{MCA} Minimum Control Speed - Air
- V_{MCL} Minimum Control Speed - Approach and Landing
- V_{MCG} Minimum Control Speed - Ground
- WAI Wing Anti-Ice

6. DEFINITIONS

These definitions are for the purposes of this report only.

- 6.1 Base Aircraft.** An aircraft identified for use as a reference to compare differences with another aircraft.
- 6.2 Current.** A crewmember meets all requirements to operate the aircraft under the applicable operating part.
- 6.3 Differences Tables.** Describes the differences between a pair of related aircraft, and the minimum levels operators must use to conduct differences training and checking of flightcrew members. Differences levels range from A to E.
- 6.4 Master Differences Requirements (MDR).** Specifies the minimum levels of training and checking required between a pair of related aircraft, derived from the highest level in the Differences Tables.
- 6.5 Mixed Fleet Flying (MFF).** The operation of a base aircraft and one or more related aircraft for which credit may be taken for training, checking, and currency events.
- 6.6 Operational Evaluation.** The AED process to determine pilot type rating, minimum flightcrew member training, checking and currency requirements, and unique or special airman certification requirements (e.g., specific flight characteristics, no-flap landing).
- 6.7 Operational Suitability.** The AED determination that an aircraft or system may be used in the National Airspace System (NAS) and meets the applicable operational regulations (e.g., Title 14 of the Code of the Federal Regulations (14 CFR) parts 91, 121, 125, 133, and 135).
- 6.8 Qualified.** A flightcrew member holds the appropriate airman certificate and ratings as required by the applicable operating part.
- 6.9 Related Aircraft.** Any two or more aircraft of the same make with either the same or different type certificates (TC) that have been demonstrated and determined by the Administrator to have commonality.
- 6.10 Seat-Dependent Tasks.** Maneuvers or procedures using controls that are accessible or operable from only one flightcrew member seat.
- 6.11 Special Emphasis Area.** A training requirement unique to the aircraft, based on a system, procedure, or maneuver, which requires additional highlighting during training. It may also require additional training time, specialized flight simulation training devices (FSTD), or training equipment.
- 6.12 Specific Flight Characteristics.** A maneuver or procedure with unique handling or performance characteristics that the FSB has determined must be checked.

7. PILOT TYPE RATING

7.1 Type Rating. In accordance with the provisions of AC 120-53B, 14 CFR parts 1, 61, and 135, the same pilot type rating is assigned to the GVIII-G700 and the GVIII-G800 and the type rating designation is **GVIII**.

7.2 Common Type Ratings. Not applicable.

7.3 Military Equivalent Designations. Military aircraft that qualify for the GVIII type rating designation can be found at www.faa.gov under “Licenses & Certificates,” “Airmen Certification,” “Online Services,” “Aircraft Type Rating Designators.” This webpage is kept up-to-date and can be found at: https://www.faa.gov/licenses_certificates/airmen_certification/.

8. RELATED AIRCRAFT

8.1 Related Aircraft on Same TCDS. The GVIII-G700 is related to the GVIII-G800.

8.2 Related Aircraft on Different TCDS. The GVIII is related to the GVII.

9. PILOT TRAINING

9.1 Airman Experience. Airman receiving initial GVIII training should have 50 hours of multiengine transport turbojet aircraft, Automatic Flight Control System (AFCS), Autothrottle (AT), Autobrakes (AB), Flight Management System (FMS), Crew Alerting System (CAS), ECL, Electronic Flight Bags (EFB), HUD, highly integrated avionics systems with electronic flight displays and high-altitude operations. Pilots without this experience may require additional training.

9.2 Special Emphasis Areas.

9.2.1 Pilots must receive special emphasis on the following areas during ground training:

- a) **Abnormal/Emergency Guidance.** Gulfstream’s philosophy is to not identify any steps in the GVIII abnormal or emergency procedures as so-called “memory items.” Pilots are expected to perform some initial and critical steps without reference to any documentation. In addition, pilots are expected to don oxygen masks promptly when appropriate (e.g., when smoke is detected). Operators and training providers should ensure pilots are trained accordingly during initial, transition, upgrade, and recurrent training.

The following are examples of procedures that the initial/critical steps should be performed promptly without reference to a checklist:

- Engine fire/auxiliary power unit (APU) fire.
- Engine failure after takeoff decision speed (V₁).

- Cabin pressure low/emergency descent.
 - Engine exceedance.
 - Enhanced ground proximity warning system (EGPWS)/windshear/Traffic Alert and Collision Avoidance System (TCAS) alerts.
 - Sidestick fail.
 - Ground spoilers armed.
 - Brake-by-wire fail (ground procedures).
- b) CAS Message Philosophy. Pilots should demonstrate proper interpretation of the CAS message window in abnormal and emergency operations. Pilots should understand that when a CAS message, or a Consequential Alert within it, is directive in nature, that directive shall be accomplished immediately. This item must be trained in initial, transition, upgrade, and recurrent training.
- c) ECL Philosophy. Pilots should understand operation of the ECL to include selecting the default display, when autosensing occurs, selectable CAS messages, and insertion of special operating conditions. This item must be trained in initial, transition, upgrade, and recurrent training.
- d) DCN. This should include instruction on the system architecture, crew actions, and checklist. This should include training on Airplane Flight Manual (AFM) DCN dispatch limitations that take precedence over Master Minimum Equipment List (MMEL) relief. This item must be included in initial, transition, upgrade, and recurrent training.
- e) Flight Control Modes. This aircraft utilizes FBW flight controls. It is important to thoroughly understand the operation of the aircraft in each of the flight control modes, to include limiting speeds. The flight control reset button should **only** be pressed when directed by the checklist. This item must be included in initial, transition, upgrade, and recurrent training.
- f) HUD. Relationship between boresight, Flight Path Vector (FPV), flight director (FD), and V-speed awareness band during all-engine and single-engine takeoff operations. Pilots should understand HUD symbology during normal and abnormal operations, including TCAS, windshear, low speed/stall recovery, EVS, Combined Vision System (CVS) and Synthetic Vision System (SVS) and unusual attitude recovery. This item must be included in initial, transition, upgrade, and recurrent training.
- g) Emergency Vision Assurance System (EVAS). Pilots should understand the proper operation and deployment of the EVAS. They should understand the importance of the glareshield being stowed prior to deploying EVAS. Pilots should demonstrate the deployment in the classroom, FSTD, or aircraft during initial, transition, upgrade, and recurrent training.

- h) Autopilot Traffic Alert and Collision Avoidance System (AP TCAS). Pilots should understand the limitations of AP TCAS and that the intended function is to assist when a pilot is incapable of responding with manual control inputs. This item must be included in initial, transition, upgrade, and recurrent training.
- i) Zero/Partial-flap landing, including the need to positively fly the nose gear to the runway after main gear touchdown. Pilots should understand the implications of the high approach speeds associated with this maneuver and have a good understanding of the forward slip to landing procedure utilized. This item must be included in initial, transition, upgrade, and recurrent training.
- j) Full Authority Digital Engine Control (FADEC). The Engine FADEC is designed to protect the engine during startup on the ground with an automatic shutoff when exceeding limits is imminent. Crews should be aware of actions that are required if the engine does exceed AFM limitations during startup procedures. This item must be included in initial, transition, upgrade, and recurrent training.
- k) Reduced Go-Around (RGA). Training should cover situations when it is appropriate to use a manually flown, maximum power go-around versus an RGA. This item must be included in initial, transition, upgrade, and recurrent training.
- l) AT. AT may not maintain selected airspeed in turbulence. Pilots should understand appropriate use of AT during turbulence, low altitude operations, and circling approaches. This item must be included in initial, transition, upgrade, and recurrent training.
- m) Take Off and Landing Data (TOLD). The automatic TOLD function for this aircraft is not yet available. Pilots should be trained on obtaining performance numbers for takeoff and landing and the process to input these numbers into the FMS. This item must be included in initial, transition, upgrade, and recurrent training.
- n) FMS Speed and Altitude Control. Under certain circumstances, the FMS may target different speeds or altitudes than expected. Pilots must closely monitor and ensure autospeed sequencing and altitude requirements. Pilots should be prepared to correct any anomalies. This item must be included in initial, transition, upgrade, and recurrent training.
- o) Fuel Sump Drains. Pilots must be aware of which drains are required to be sumped as required by the AFM or aircraft maintenance manual. This item must be included in initial, transition, upgrade, and recurrent training.

- p) Enhanced Flight Vision System (EFVS). See Appendix 6. This item must be included in initial, transition, upgrade, and recurrent training.
- q) Location and proper donning of the smoke goggles. Pilots should demonstrate the proper donning of the oxygen mask and smoke goggles in the classroom, FSTD, or aircraft during initial, transition, upgrade, and recurrent training.

9.2.2 Pilots must receive special emphasis on and perform in the following areas during flight training:

- a) ECL Philosophy. Pilots should understand operation of the ECL to include selecting the default display, when autosensing occurs, selectable CAS messages, and insertion of special operating conditions. This item must be trained in initial, transition, upgrade, and recurrent training.
- b) Flight Control Modes. This aircraft utilizes FBW flight controls. It is important to thoroughly understand the operation and handling of the aircraft in Flight Control System (FCS) Normal and FCS Alternate flight control modes to include limiting speeds. The flight control reset button should **only** be pressed when directed by the checklist. This item must be included in initial, transition, upgrade, and recurrent training.
- c) HUD. Relationship between boresight, FPV, FD, and V-speed awareness band during all engine and single-engine takeoff operations. Pilots should understand HUD symbology during normal and abnormal operations, including TCAS, windshear, low speed/stall recovery, EVS, CVS and SVS and unusual attitude recovery. This item must be included in initial, transition, upgrade, and recurrent training.
- d) Zero/Partial-Flap Landing. Pilots should understand the implications of higher approach speeds and the utilization of the forward slip maneuver during approach and landing. Pilots should understand the need to positively fly the nose gear to the runway after main gear touchdown. This item must be included in initial, transition, upgrade, and recurrent training.
- e) RGA. Training should cover situations when it is appropriate to use a manually flown, maximum power go-around versus a reduced go-around. This item must be included in initial, transition, upgrade, and recurrent training.
- f) AT. AT can have a difficult time in turbulent situations. Pilots should be taught appropriate use of auto throttles such as turbulence, low altitude situations, and circling approaches. This item must be included in initial, transition, upgrade, and recurrent training.

- g) TOLD. The automatic TOLD function for this aircraft is not yet available. Pilots should be trained to input these numbers into the FMS. This item must be included in initial, transition, upgrade, and recurrent training.
- h) EFVS. See Appendix 6. This item must be included in initial, transition, upgrade, and recurrent training.
- i) FMS Speed and Altitude Control. The FMS may target different speeds or altitudes than expected. Pilots must closely monitor and ensure autospeed sequencing and altitude requirements. Pilots should be prepared to correct any anomalies. This item must be included in initial, transition, upgrade, and recurrent training.
- j) Location and proper donning of the smoke goggles. Pilots will demonstrate to an instructor in the FSTD or aircraft, the ability to don their oxygen mask, smoke goggles, adjust mask oxygen flow selector and establish communication with the other pilot over the Intercom System (ICS). Pilots must don the smoke goggles and establish communication within a reasonable time, such that they can maintain aircraft control and accomplish any necessary smoke removal tasks. Pilots should be encouraged to practice with or use their personal headset as special techniques may be required to use some headsets with the oxygen mask. This must be accomplished during initial, transition, upgrade, and recurrent training.

9.3 Specific Flight Characteristics. Maneuvers or procedures required to be checked as referenced in the Airline Transport Pilot (ATP) and Type Rating for Airplane Airman Certification Standards (ACS). There are no specific flight characteristics.

9.4 Seat-Dependent Tasks. Pilots must receive training in these seat-dependent tasks:

- a) Passenger Oxygen System activation (right seat); initial training, upgrade, and recurrent training.
- b) Nose wheel steering (NWS) (left seat); initial, transition, upgrade, and recurrent training.

9.5 Regulatory Training Requirements Which Are Not Applicable to the GVIII.

Part 135 Ground Training: Propellers.

9.6 FSTD. There are no specific systems, procedures, or maneuvers that are unique to the GVIII that require a specific FSTD for training.

9.7 Training Equipment. There are no specific systems or procedures that are unique to the GVIII that require specific training equipment.

9.8 Differences Training Between Related Aircraft. Pilots must receive transition training between the GVIII-G700 and GVIII-G800. The level of training is specified in Appendix 3, Differences Tables. Additionally, Pilots must receive transition training

between the GVII-G500 or GVII-G600 and the GVIII-G700 or GVIII-G800. The level of training is specified in Appendix 4, GVII-G500/G600 to GVIII-G700/G800 Transition/Reduced Curriculum Course.

9.9 Other Training.

9.9.1 Instrument Approaches. Category (CAT) I approaches are permitted by certification. Operators should ensure that flightcrews are familiar with the appropriate use of the AFCS control panel, AFCS, Standby Flight Instrument System, and the Honeywell Primus EPIC® Symmetry Avionics System, including modes to be used for the types of instrument approaches to be flown and methods in lieu of or in conjunction with Nondirectional Radio Beacon (NDB), very high frequency omni-directional range (VOR) radio beacon, Localizer (LOC), Localizer Back Course (LOC BC) procedures, and circling approaches.

9.9.1.1 The selection of bearing pointers on Primary Flight Display (PFD) for VOR and NDB approaches.

9.9.1.2 The selection of manual speed mode for circling approaches.

9.9.1.3 The selection of Approach (APR) mode, subsequent selection of Lateral Navigation (LNAV) and adjustment of Flight Path Angle (FPA) at appropriate time for LOC, Localizer Directional Aid (LDA) and back course approaches.

9.9.2 Autobrakes. Flightcrews operating aircraft equipped with autobrakes should receive appropriate instruction with emphasis on the performance associated with the different autobrakes settings versus manual braking utilization.

9.9.3 The Pilot Monitoring (PM) should be familiar with their responsibilities outlined in AC 120-71B, Standard Operating Procedures and Pilot Monitoring Duties for Flight Deck Crewmembers.

10. PILOT CHECKING

10.1 Landing from a No-Flap or Nonstandard Flap Approach. The probability of flap extension failure on the GVIII is not extremely remote due to system design. Therefore, demonstration of a no-flap approach and landing during pilot certification is required. During a 14 CFR part 61, § 61.58 proficiency check, 14 CFR part 91, § 91.1065 competency check, or 14 CFR part 135, § 135.293 competency check, this task may be required. Refer to FAA Order 8900.1, Volume 5, Airman Certification, when the test or check is conducted in an aircraft versus a Full Flight Simulator (FFS).

10.2 Specific Flight Characteristics. Maneuvers or procedures required to be checked as referenced in the ATP and Type Rating for Airplane ACS.

There are no specific flight characteristics.

10.3 Seat-Dependent Tasks. Pilots must be checked in these seat-dependent tasks:

- a) Nose wheel steering (NWS) (left seat); initial, transition, upgrade, and recurrent training.

10.4 Other Checking Items.

- a) An EFVS operation to 100 feet (ft) above touch down zone elevation on a precision approach with and without HUD. This item must be included in initial, transition, upgrade, and recurrent checking.
- b) Localizer Performance with Vertical Guidance (LPV) approach, initial, transition, upgrade, and recurrent checking.

10.5 Flight Simulation Training Devices (FSTD).

There are no specific systems, procedures, or maneuvers that are unique to the GVIII that require a specific FSTD for checking.

10.6 Equipment.

There are no specific systems or procedures that are unique to the GVIII that require specific equipment.

10.7 Differences Checking Between Related Aircraft. There are no checking differences between the GVIII-G700 and the GVIII-G800. Additionally, there are no additional checking differences between the GVIII-G700/G800 and the GVII-G500/600 other than those listed in Appendix 4 for the addition of a type rating.

11. PILOT CURRENCY

There are no additional currency requirements for the GVIII other than those already specified in 14 CFR parts 61 and 135.

11.1 Differences Currency Between Related Aircraft.

Not applicable.

12. OPERATIONAL SUITABILITY

The GVIII is operationally suitable for operations conducted under 14 CFR parts 91 and 135. The FSB determined operational compliance by conducting an evaluation of aircraft serial number 87011 on 12/15/2023. Additional flights were conducted on March 3 and March 6, 2025, on aircraft serial numbers 87056 and 88002 to determine equivalence between the GVIII-G700 and the GVIII-G800. The list of operating rules evaluated is on file at the CAB AED.

13. MISCELLANEOUS

13.1 Forward Observer Seat. The GVIII forward observer seat as installed by Gulfstream Aerospace Corporation T00015AT has been evaluated and determined to meet requirements of 14 CFR § 135.75(b) and AC 120-83.

13.2 Aircraft Approach Category. The GVIII is considered a Category C aircraft for the purposes of determining the appropriate instrument approach procedure category in accordance with 14 CFR § 97.3.

13.3 Normal Landing Flaps. The GVIII normal “final flap setting” per 14 CFR § 91.126(c) is flaps 39 (DOWN).

APPENDIX 1. DIFFERENCES LEGEND

Training Differences Legend

Differences Level	Type	Training Method Examples	Conditions
A	Self-Instruction	<ul style="list-style-type: none"> • Operating manual revision (handout (HO)) • Flightcrew operating bulletin (HO) 	<ul style="list-style-type: none"> • Crew has already demonstrated understanding on base aircraft (e.g., updated version of engine). • Minor or no procedural changes required. • No safety impact if information is not reviewed or is forgotten (e.g., different engine vibration damping mount). • Once called to attention of crew, the difference is self-evident.
B	Aided Instruction	<ul style="list-style-type: none"> • Audiovisual presentation (AV) • Tutorial computer-based instruction (TCBI) • Stand-up instruction (SU) 	<ul style="list-style-type: none"> • Systems are functionally similar. • Crew understanding required. • Issues need emphasis. • Standard methods of presentation required.
C	Systems Devices	<ul style="list-style-type: none"> • Interactive (full-task) computer-based instruction (ICBI) • Cockpit Procedures Trainers (CPT) • Part task trainers (PTT) • Level 4 or 5 flight training device (FTD 4-5) 	<ul style="list-style-type: none"> • Training can only be accomplished through systems training devices. • Training objectives focus on mastering individual systems, procedures, or tasks versus highly integrated flight operations or “real-time” operations. • Training devices are required to assure attainment or retention of crew skills to accomplish more complex tasks usually related to aircraft systems.
D	Maneuvers Devices	<ul style="list-style-type: none"> • Level 6 or 7 flight training device (FTD 6-7) • Level A or B full flight simulator (FFS A-B) 	<ul style="list-style-type: none"> • Training can only be accomplished in flight maneuver devices in a real-time environment. • Training requires mastery of interrelated skills versus individual skills. • Motion, visual, control-loading, and specific environmental conditions may be required.
E	Level C/D FFS or Aircraft	<ul style="list-style-type: none"> • Level C or D full flight simulator (FFS C-D) • Aircraft (ACFT) 	<ul style="list-style-type: none"> • Motion, visual, control-loading, audio, and specific environmental conditions are required. • Significant full-task differences that require a high fidelity environment. • Usually correlates with significant differences in handling qualities.

Checking Differences Legend

Differences Level	Checking Method Examples	Conditions
A	None	None
B	<ul style="list-style-type: none"> • Oral or written exam • Tutorial computer-based instruction (TCBI) self-test 	Individual systems or related groups of systems.
C	<ul style="list-style-type: none"> • Interactive (full-task) computer-based instruction (ICBI) • Cockpit Procedures Trainers (CPT) • Part task trainers (PTT) • Level 4 or 5 flight training device (FTD 4-5) 	<ul style="list-style-type: none"> • Checking can only be accomplished using systems devices. • Checking objectives focus on mastering individual systems, procedures, or tasks.
D	<ul style="list-style-type: none"> • Level 6 or 7 flight training device (FTD 6-7) • Level A or B full flight simulator (FFS A-B) 	<ul style="list-style-type: none"> • Checking can only be accomplished in flight maneuver devices in a real-time environment. • Checking requires mastery of interrelated skills versus individual skills. • Motion, visual, control-loading, and specific environmental conditions may be required.
E	<ul style="list-style-type: none"> • Level C or D full flight simulator (FFS C-D) • Aircraft (ACFT) 	Significant full-task differences that require a high fidelity environment.

APPENDIX 2. MASTER DIFFERENCES REQUIREMENTS (MDR) TABLE

These are the minimum levels of training and checking required, derived from the highest level in the Differences Tables in Appendix 3, differences levels are arranged as training/checking.

To Related Aircraft ↓	From Base Aircraft →	GVIII-G700	GVIII-G800
GVIII-G700		Not applicable	Not evaluated
GVIII-G800		A/A	Not applicable

APPENDIX 3. DIFFERENCES TABLES

This Design Differences Table, from the GVIII-G700 to the GVIII-G800, was proposed by Gulfstream and validated by the FSB on March 6, 2025. It lists the minimum differences levels operators must use to conduct differences training and checking of flightcrew members.

FROM BASE AIRCRAFT: GVIII-G700 TO RELATED AIRCRAFT: GVIII-G800	DESIGN	REMARKS	FLT CHAR	PROC CHNG	TRAINING	CHECKING
	Weights	Max Zero Fuel Weight decreased from 62,750 lb to 60,500 lb.	No	No	A	A
		Min and Max Zero Fuel Center of Gravity limits changed from 36.00% - 43.70% MAC to 35.00% -45.00% MAC.	No	No	A	A
		Max Ramp Weight decreased from 108,000 lb to 106,000 lb.	No	No	A	A
		Max T.O. Weight decreased from 107,600 lb to 105,600 lb.	No	No	A	A
		Min Flight Weight decreased from 57,500 lb to 56,000 lb.	No	No	A	A

FROM BASE AIRCRAFT: GVIII-G700 TO RELATED AIRCRAFT: GVIII-G800	DESIGN	REMARKS	FLT CHAR	PROC CHNG	TRAINING	CHECKING
	Airplane Configuration	Airplane length decreased from 109.87 ft to 99.78 ft.	No	No	A	A
		Airplane Height decreased from 25.68 ft to 25.54 ft.	No	No	A	A
		Crew emergency escape hatch in overhead vestibule not installed.	No	Yes	A	A
		APU fuel line leak inspection indicator not installed.	No	Yes	A	A
	Limitations	Flaps 20 VMCA changed from 102 KCAS to 111 KCAS.	No	No	A	A
		Flaps 10 VMCA changed from 106 KCAS to 109 KCAS.	No	No	A	A
		VMCL changed from 100 KCAS to 106 KCAS.	No	No	A	A
		VMCG changed from 102 KCAS to 104 KCAS at SL.	No	No	A	A
		Maximum airport elevation increased from 10,000 ft to 15,000 ft.*	No	Yes	A	A
		Maximum 9,000 ft airport elevation for landing with single bleed source and WAI not applicable.	No	No	A	A

FROM BASE AIRCRAFT: GVIII-G700 TO RELATED AIRCRAFT: GVIII-G800	DESIGN	REMARKS	FLT CHAR	PROC CHNG	TRAINING	CHECKING
	31 Display Units	Synoptic changes for airplane length and number of windows.	No	No	A	A
	32 Landing Gear	Minimum taxiway width for 180° turn decreased from 68 ft to 61 ft.	No	No	A	A

I

APPENDIX 4. GVII-G500/G600 to GVIII-G700/G800 TRANSITION/REDUCED CURRICULUM COURSE

1. BACKGROUND

In December 2023, the CAB AED convened an FSB to evaluate the GVII-G500/G600 transition/reduced curriculum course to the GVIII-G700. The course was proposed by Gulfstream Aerospace Corporation due to the similarity/common systems between the aircraft. The course was presented by FlightSafety International Savannah, GA and evaluated at Level B. All FAA required training modules and elements must be covered during transition training. If the airman meets the prerequisites listed in paragraph 4.1.2, the training already completed does not need to be repeated.

The course proposed 16 hours of SU ground school followed by three (1.5 hour) system integration modules. A full FAA ATP ACS check was conducted in the aircraft with all test candidates passing. Gulfstream Aerospace Corporation requests that the GVII-G500/G600 to GVIII-G700 transition/reduced curriculum course be held to a higher standard and include FFS training above the minimum Level B proposal. The FSB determined that the GVII-G500/G600 to GVIII-G700 transition/reduced curriculum course was validated to be operationally suitable for the consolidation of knowledge.

2. PILOT TYPE RATING

Upon satisfactory completion of the GVII-G500/G600 to GVIII-G700 transition/reduced curriculum course and a practical test in accordance with the full FAA ATP ACS, the addition of the GVIII type rating is appropriate.

3. RELATED TYPE RATING

The GVII-G500/G600 and GVIII-G700 are related but on separate TCDSs.

4. PILOT TRAINING

4.1 Minimum Training: Level B.

4.1.1 Experience/Prerequisite. Airman must hold a GVII type rating and meet the general and instrument experience recency requirements specified in 14 CFR § 61.57, and;

4.1.2 Meets one of the following:

- Completed initial GVII training including the GVII type rating practical test within the last 12 calendar months, or
- Completed a proficiency or competency check in the GVII in accordance with 14 CFR §§ 61.58, 91.1065, or 135.293 within the preceding 12 calendar months, or
- Have flown at least 50 hours in the GVII as PIC within the last 6 months.

4.2 Special Emphasis Areas.

- 4.2.1 No-Flap Approach. Flap Malfunction is a unique procedure on the GVIII which requires a side-slip maneuver as opposed to the GVII requiring the Wing Anti-Ice to be turned ON prior to descent.
- 4.2.2 Engine Icing Limitations. The GVIII Rolls-Royce Pearl 700 engines do not have an in-flight “no-dwell-zone” with WAI selected ON, unlike the Pratt & Whitney PurePower PW800 engines.
- 4.2.3 ECL. The GVIII utilizes an enhanced ECL that includes non-normal procedures and selectable CAS messages, while the GVII-G500/G600 has an ECL with only normal procedures.

4.3 Ground Training.

- 4.3.1 The FSB recommends a minimum of 20.5 hours of ground training to include 16 hours of SU ground instruction with an additional 4.5 hours of system integration training. Emphasis should be on the different systems and procedures such as automatic flight control system, electronic checklists, normal, abnormal, and emergency procedures, system controls and operations, and flight planning differences.
- 4.3.2 To assist in the transfer of learning between the two aircraft make/model, design and maneuver tables are included below for the GVII-G500 to the GVIII-G700. These tables may not be all-inclusive:

FROM BASE AIRCRAFT: GVII-G500	DESIGN	REMARKS	FLT CHAR	PROC CHNG
TO RELATED AIRCRAFT: GVIII-G700	Weights	Maximum Zero Fuel Weight increased from 52,100 lbs. to 62,750 lbs.	No	No
		Minimum and Maximum Zero Fuel Center of Gravity limits changed from 36.30% -48.43% Mean Aerodynamic Chord (MAC) to 36.00% - 43.70% MAC.	No	No
		Maximum Ramp Weight increased from 80,000 lbs. to 108,000 lbs.	No	No
		MTOW increased from 79,600 lbs. to 107,600 lbs.	No	No
		Maximum Landing Weight increased from 64,350 lbs. to 83,500 lbs.	No	No

FROM BASE AIRCRAFT: GVII-G500 TO RELATED AIRCRAFT: GVIII-G700	DESIGN	REMARKS	FLT CHAR	PROC CHNG
	Weights	Minimum Flight Weight increased from 48,300 lbs. to 57,500 lbs.	No	No
	Airplane Configuration	Airplane length increased from 91.13 ft to 109.87 ft.	No	No
		Airplane wingspan increased from 87.11 ft to 103.02 ft.	No	No
		Airplane Height increased from 25.29 ft to 25.68 ft.	No	No
		Crew emergency escape hatch installed in overhead vestibule with internal locking handle.	No	Yes
		APU fuel witness drain sight glass located in water fill external service panel.	No	Yes
	Limitations	Maximum fuel capacity increased from 30,250 lbs. to 49,400 lbs.	No	No
		Maximum Operating Speed in Mach (M_{MO}) increased from 0.925M to 0.935M.	No	No
		Flaps 20 Maximum Control Speed in Air (V_{MCA}) changed from 112 Knots Calibrated Airspeed (KCAS) to 102 KCAS.	No	No
		Flaps 10 V_{MCA} changed from 120 KCAS to 106 KCAS.	No	No
		Maximum Control Speed on Approach and Landing (V_{MCL}) changed from 109 KCAS to 100 KCAS.	No	No
		Maximum Control Speed on Ground (V_{MCG}) changed from 111 KCAS to 102 KCAS.	No	No
		Maximum Flaps Down (39°) airspeed increased from 180 KCAS to 190 KCAS.	No	No

FROM BASE AIRCRAFT: GVII-G500 TO RELATED AIRCRAFT: GVIII-G700	DESIGN	REMARKS	FLT CHAR	PROC CHNG
	Limitations	Icing/anti-icing limitations differences: <ol style="list-style-type: none"> 1) Ground operations in freezing fog. 2) Ground operation periodic engine acceleration. 3) Engine Vibration Monitor (EVM) after engine start requiring shutdown (0.15 Inches Per Second (IPS) in GVII-G500; 0.3 IPS in GVIII-G700). 4) Time for Wing Anti-Ice (WAI) On prior to takeoff. 5) Auto Anti-ice On (GVII-G500: Auto from 400 Above Ground Level (AGL) to FL350). (GVIII-G700: Auto WAI inhibited on ground and >FL350, Auto Cowl Anti-Ice (CAI) inhibited >FL350). 6) WAI operations with single bleed source. 	No	Yes
		Engine limitations differences: <ol style="list-style-type: none"> 1) Operating parameters limits. 2) Ground wind limits for start and operation. 3) Air start envelope. 4) Starter duty. 5) GVII-G500 has procedure for rolling takeoff with crosswind >30 knots (kt); GVIII-G700 crosswind limit for takeoff is 30 kt. 	No	Yes
		APU operating limitations: <ol style="list-style-type: none"> 1) Inflight not limited to 47°C maximum Total Air Temperature (TAT). 2) Takeoff not limited to 45°C maximum Outside Air Temperature (OAT). 	No	Yes
		Maximum pressure altitude for takeoff and landing decreased from 15,000 ft to 10,000 ft.	No	Yes

FROM BASE AIRCRAFT: GVII-G500 TO RELATED AIRCRAFT: GVIII-G700	DESIGN	REMARKS	FLT CHAR	PROC CHNG
	22 Autoflight	AP TCAS capability installed.	No	Yes
		Emergency Descent Mode (EDM) activation lowered from FL 400 to FL 250.	No	No
		Takeoff target pitch attitude varies with aircraft, weight, pressure altitude, and temperature.	No	Yes
		"Smart" Go-around logic for RGA installed.	No	Yes
	23 Communications	Satellite Communications (SATCOM) certified as a Long-Range Communications System (LRCS).	No	Yes
		Standard installation of High Frequency (HF) radios decreased from 2 to 1.	No	Yes
	25 Overhead Panel Touchscreens	Increased number of Anti-ice switches: two switches for WAI (one for each wing) and CAI (one for each engine).	No	Yes
		Increased Environmental Control System (ECS) cabin zones from 3 to 4.	No	Yes
	27 Flight Controls	Takeoff Stall Protection installed.	Yes	No
		Enhanced Lateral-Directional Assist Controller (ELDAC) installed.	Yes	No
		ACS HUD/EVS rocker switch function (GVII-G500 – Up clears EVS video, Down declutters HUD symbology) (GVIII-G700 – Up cycles SVS/EVS/CVS video modes, Down clears video).	No	Yes
	28 Fuel	Heated Fuel Return (GVII-G500 – prerequisite altitude ≥ FL300) (GVIII-G700 – no altitude prerequisite).	No	No
	31 Touchscreens	Screen changes for Engines (GVII-G500 N1 controlled) (GVIII-G700 Exhaust Pressure Ratio (EPR) controlled).	No	Yes

FROM BASE AIRCRAFT: GVII-G500 TO RELATED AIRCRAFT: GVIII-G700	DESIGN	REMARKS	FLT CHAR	PROC CHNG
	31 Display Units	Synoptic and system changes for engines, doors, windows, and ECS.	No	No
	31 Electronic Checklist	Enhanced ECL installed.	No	Yes
	32 Landing Gear	Normal maximum pedal steering command to NWS decreased from +/- 40° (reducing as a function of increasing groundspeed to +/- 7°) to +/- 7°.	No	Yes
	34 Navigation	Number of HUDs increased from one to two.	No	Yes
		HUD airspeed and altitude round dials replaced with vertical tapes.	No	No
		SVS and CVS capability on HUD installed.	No	Yes
		Capability for Visual (Custom) Approaches installed.	No	Yes
		Capability for Area Navigation (RNAV) Global Positioning System (GPS) approach to Localizer Performance (LP) minima installed.	No	Yes
		Automatic Heading Synchronization installed.	No	No
		Predicted Trajectory Display installed.	No	No
		FMS TOLD not installed in GVIII-G700.	No	Yes
		XM Weather replaced with Sirius XM (SXM) Weather Products.	No	No

FROM BASE AIRCRAFT: GVII-G500 TO RELATED AIRCRAFT: GVIII-G700	DESIGN	REMARKS	FLT CHAR	PROC CHNG
	36 Pneumatic	Automatic activation of engine bleed air shutoff valve with certain abnormal and emergency conditions installed.	No	Yes
		Temperature controlled cabin zones increased from 3 to 4.	No	Yes
	71 Engine	Engine differences: 1) GVII-G500 – Pratt & Whitney PW814GA, N1-controlled; GVIII-G700 – Rolls-Royce Pearl 700, EPR-controlled. 2) GVII-G500 has no-dwell-zone at certain conditions with WAI On.	No	Yes

Maneuver tables for the GVII-G500 to GVIII-G700, may not be all-inclusive:

FROM BASE AIRCRAFT: GVII-G500 TO RELATED AIRCRAFT: GVIII-G700	MANUEVER	REMARKS	FLT CHAR	PROC CHNG
	Taxi	NWS has a decreased range from 40° to 7° while utilizing the rudder pedals.	Yes	Yes
	Engine Failure on Takeoff at V1	GVIII-G700 has ELDAC system to assist in yaw control.	Yes	No
	Abnormal Procedure	Flap Malfunction (Flaps ≤ 10°) – Side slip required.	Yes	Yes
	Single-Engine Approach	GVIII-G700 has ELDAC system to assist in yaw control and autothrottle usage allowed during approach.	Yes	No
	Single-Engine Go-Around	GVIII-G700 has ELDAC system to assist in yaw control and autothrottle usage allowed during approach and go-around.	Yes	No

4.3.3 To assist in the transfer of learning between the two aircraft types/models, design and maneuver tables are included below for the GVII-G600 to the GVIII-G700. These may not be all-inclusive:

FROM BASE AIRCRAFT: GVII-G600 TO RELATED AIRCRAFT: GVIII-G700	DESIGN	REMARKS	FLT CHAR	PROC CHNG
	Weights	Maximum Zero Fuel Weight increased from 57,440 lbs. to 62,750 lbs.	No	No
		Minimum and Maximum Zero Fuel Center of Gravity limits changed from 36.30% - 48.43% MAC to 36.00% - 43.70% MAC.	No	No
		Maximum Ramp Weight increased from 95,000 lbs. to 108,000 lbs.	No	No
		MTOW decreased from 94,600 lbs. to 107,600 lbs.	No	No
		Maximum Landing Weight increased from 76,800 lbs. to 83,500 lbs.	No	No
		Minimum Flight Weight increased from 54,300 lbs. to 57,500 lbs.	No	No
	Airplane Configuration	Airplane length increased from 96.11 ft to 109.87 ft.	No	No
		Airplane wingspan increased from 95.00 ft to 103.02 ft.	No	No
		Airplane Height increased from 25.29 ft to 25.68 ft.	No	No
		Crew emergency escape hatch installed in overhead vestibule.	No	Yes
		APU fuel witness drain sight glass located in water fill external service panel.	No	Yes

FROM BASE AIRCRAFT: GVII-G600 TO RELATED AIRCRAFT: GVIII-G700	DESIGN	REMARKS	FLT CHAR	PROC CHNG
	Limitations	Maximum fuel capacity increased from 41,730 lbs. to 49,400 lbs.	No	No
		Mmo increased from 0.925M to 0.935M.	No	No
		Flaps 20 V_{MCA} changed from 117 KCAS to 102 KCAS.	No	No
		Flaps 10 V_{MCA} changed from 118 KCAS to 106 KCAS.	No	No
		V_{MCL} changed from 112 KCAS to 100 KCAS.	No	No
		V_{MCG} changed from 111 KCAS to 102 KCAS.	No	No
		Maximum Flaps Down (39°) airspeed increased from 180 KCAS to 190 KCAS.	No	No
		Icing/anti-icing limitations differences: <ol style="list-style-type: none"> 1) Ground operations in freezing fog. 2) Ground operations periodic engine acceleration. 3) EVM after engine start requiring shutdown (0.15 IPS in GVII-G600; 0.3 IPS in GVIII-G700). 4) Time for WAI On prior to takeoff. 5) Auto Anti-ice On (GVII-G600: Auto from 400 AGL to FL 350) (GVIII-G700: Auto WAI inhibited on ground and >FL 350, Auto CAI inhibited >FL 350). 6) WAI operations with single bleed source 	No	Yes

FROM BASE AIRCRAFT: GVII-G600 TO RELATED AIRCRAFT: GVIII-G700	DESIGN	REMARKS	FLT CHAR	PROC CHNG
	Limitations	Engine limitations differences: 1) Operating parameters limits. 2) Ground wind limits for start and operation. 3) Air start envelope. 4) Starter duty. 5) GVII-G600 has procedure for rolling takeoff with crosswind >30kt; GVIII-G700 crosswind limit for takeoff is 30 kt.	No	Yes
		APU operating limitations: 1) Inflight not limited to 47°C maximum TAT. 2) Takeoff not limited to 45°C maximum OAT.	No	Yes
		Maximum pressure altitude for takeoff and landing decreased from 15,000 ft to 10,000 ft.	No	Yes
	22 Autoflight	AP TCAS capability installed.	No	Yes
		EDM activation lowered from FL 400 to FL 250.	No	No
		Takeoff target pitch attitude varies with aircraft weight, pressure altitude, and temperature.	No	Yes
		“Smart” Go-around logic for RGA installed.	No	Yes
	23 Communications	SATCOM certified as a LRCS.	No	Yes
		Standard installation of HF radios decreased from 2 to 1.	No	Yes
	25 Overhead Panel Touchscreens	Increased number of Anti-ice switches: two switches for Wing Anti-ice (one for each wing) and Cowl Anti-ice (one for each engine).	No	Yes
		Increased ECS cabin zones from 3 to 4.	No	Yes

FROM BASE AIRCRAFT: GVII-G600 TO RELATED AIRCRAFT: GVIII-G700	DESIGN	REMARKS	FLT CHAR	PROC CHNG
	27 Flight Controls	Takeoff Stall Protection installed.	Yes	No
		ELDAC installed.	Yes	No
		ACS HUD/EVS rocker switch function (GVII-G600 – Up clears EVS video, Down declutters HUD symbology) (GVIII-G700 – Up cycles SVS/EVS/CVS video modes, Down clears video).	No	Yes
	28 Fuel	Heated Fuel Return (GVII-G600 – prerequisite altitude \geq FL 300) (GVIII-G700 – no altitude prerequisite).	No	No
	31 Touchscreens	Screen changes for Engines (GVII-G600 N1 controlled) (GVIII-G700 EPR controlled).	No	Yes
	31 Display Units	Synoptic and system changes for engines, doors, windows, and ECS.	No	No
	31 Electronic Checklist	Enhanced ECL installed.	No	Yes
	32 Landing Gear	Normal maximum pedal steering command to NWS decreased from +/- 40° (reducing as a function of increasing groundspeed to +/- 7°) to +/- 7°.	No	Yes
	34 Navigation	Number of HUDs increased from one to two.	No	Yes
		HUD airspeed and altitude round dials replaced with vertical tapes.	No	No
		SVS and CVS capability on HUD installed.	No	Yes
		Capability for Visual (Custom) Approaches installed.	No	Yes
		Capability for RNAV GPS approach to LP minima installed.	No	Yes

FROM BASE AIRCRAFT: GVII-G600 TO RELATED AIRCRAFT: GVIII-G700	DESIGN	REMARKS	FLT CHAR	PROC CHNG
	34 Navigation	Automatic Heading Synchronization installed.	No	No
		Predicted Trajectory Display installed.	No	No
		FMS TOLD not installed in GVIII-G700.	No	Yes
		XM Weather replaced with SXM Weather Products.	No	No
	36 Pneumatic	Automatic activation of engine bleed air shutoff valve with certain abnormal and emergency conditions installed.	No	Yes
		Temperature controlled cabin zones increased from 3 to 4.	No	Yes
	71 Engine	Engine differences: 1) GVII-G600 – Pratt & Whitney PW815GA, N1-controlled; GVIII-G700 – Rolls-Royce Pearl 700, EPR-controlled. 2) GVII-G600 has no-dwell-zone at certain conditions with WAI On.	No	Yes

Maneuver tables for the GVII-G600 to the GVIII-G700, may not be all-inclusive:

FROM BASE AIRCRAFT: GVII-G600 TO RELATED AIRCRAFT: GVIII-G700	MANUEVER	REMARKS	FLT CHAR	PROC CHNG
	Taxi	NWS has a decreased range from 40° to 7° while utilizing the rudder pedals.	Yes	Yes
	Engine Failure on Takeoff at V1	GVIII-G700 has ELDAC system to assist in yaw control.	Yes	No
	Abnormal Procedure	Flap Malfunction (Flaps ≤10°) – Side slip required.	Yes	Yes
	Single-Engine Approach	GVIII-G700 has ELDAC system to assist in yaw control and autothrottle usage allowed during approach.	Yes	No
	Single-Engine Go-Around	GVIII-G700 has ELDAC system to assist in yaw control and autothrottle usage allowed during approach and go-around.	Yes	No

4.3.4 To assist in the transfer of learning between the two aircraft make/model, design and maneuver tables are included below for the GVII-G500 to the GVIII-G800. These tables may not be all-inclusive:

FROM BASE AIRCRAFT: GVII-G500 TO RELATED AIRCRAFT: GVIII-G800	DESIGN	REMARKS	FLT CHAR	PROC CHNG
	Weights	Maximum Zero Fuel Weight increased from 52,100 lbs. to 60,500 lbs.	No	No
		Minimum and Maximum Zero Fuel Center of Gravity limits changed from 36.30% - 48.43% MAC to 35.00% - 45.00% MAC.	No	No
		Maximum Ramp Weight increased from 80,000 lbs. to 106,000 lbs.	No	No
		MTOW increased from 79,600 lbs. to 105,600 lbs.	No	No
		Maximum Landing Weight increased from 64,350 lbs. to 83,500 lbs.	No	No

FROM BASE AIRCRAFT: GVII-G500 TO RELATED AIRCRAFT: GVIII-G800	DESIGN	REMARKS	FLT CHAR	PROC CHNG
	Weights	Minimum Flight Weight increased from 48,300 lbs. to 56,000 lbs.	No	No
	Airplane Configuration	Airplane length increased from 91.13 ft to 99.78 ft.	No	No
		Airplane wingspan increased from 87.11 ft to 103.02 ft.	No	No
		Airplane Height increased from 25.29 ft to 25.54 ft.	No	No
	Limitations	Maximum fuel capacity increased from 30,250 lbs. to 49,400 lbs.	No	No
		M _{MO} increased from 0.925M to 0.935M.	No	No
		Flaps 20 V _{MCA} changed from 112 Knots Calibrated Airspeed (KCAS) to 111 KCAS.	No	No
		Flaps 10 V _{MCA} changed from 120 KCAS to 109 KCAS.	No	No
		V _{MCL} changed from 109 KCAS to 106 KCAS.	No	No
		Maximum Control Speed on Ground (V _{MCG}) changed from 111 KCAS to 104 KCAS.	No	No
		Maximum Flaps Down (39°) airspeed increased from 180 KCAS to 190 KCAS.	No	No

FROM BASE AIRCRAFT: GVII-G500 TO RELATED AIRCRAFT: GVIII-G800	DESIGN	REMARKS	FLT CHAR	PROC CHNG
	Limitations	Icing/anti-icing limitations differences: <ol style="list-style-type: none"> 1) Ground operations in freezing fog. 2) Ground operations periodic engine acceleration. 3) EVM after engine start requiring shutdown (0.15 IPS in GVII-G500; 0.3 IPS in GVIII-G800). 4) Time for WAI On prior to takeoff. 5) Auto Anti-ice On (GVII-G500: Auto from 400 AGL to FL 350). (GVIII-G800: Auto WAI inhibited on ground and >FL 350, Auto CAI inhibited >FL 350). 6) WAI operations with single bleed source 	No	Yes
		Engine limitations differences: <ol style="list-style-type: none"> 1) Operating parameters limits. 2) Ground wind limits for start and operation. 3) Air start envelope. 4) Starter duty. 5) GVII-G500 has procedure for rolling takeoff with crosswind >30kt; GVIII-G800 crosswind limit for takeoff is 30 kt. 	No	Yes
		APU operating limitations: <ol style="list-style-type: none"> 1) Inflight not limited to 47°C maximum TAT. 2) Takeoff not limited to 45°C maximum OAT. 	No	Yes

FROM BASE AIRCRAFT: GVII-G500 TO RELATED AIRCRAFT: GVIII-G800	DESIGN	REMARKS	FLT CHAR	PROC CHNG
	22 Autoflight	AP TCAS capability installed.	No	Yes
		EDM activation lowered from FL 400 to FL 250.	No	No
		Takeoff target pitch attitude varies with aircraft weight, pressure altitude, and temperature.	No	Yes
		"Smart" Go-around logic for RGA installed.	No	Yes
	23 Communications	SATCOM certified as a LRCS.	No	Yes
		Standard installation of HF radios decreased from 2 to 1.	No	Yes
	25 Overhead Panel Touchscreens	Increased number of Anti-ice switches: two switches for WAI (one for each wing) and CAI (one for each engine).	No	Yes
		Increased ECS cabin zones from 3 to 4.	No	Yes
	27 Flight Controls	Takeoff Stall Protection installed.	Yes	No
		ELDAC installed.	Yes	No
		ACS HUD/EVS rocker switch function (GVII-G500 – Up clears EVS video, Down declutters HUD symbology) (GVIII-G800 – Up cycles SVS/EVS/CVS video modes, Down clears video).	No	Yes
	28 Fuel	Heated Fuel Return (GVII-G500 – prerequisite altitude ≥ FL 300) (GVIII-G800 – no altitude prerequisite).	No	No
	31 Touchscreens	Screen changes for Engines (GVII-G500 N1 controlled) (GVIII-G800 EPR controlled).	No	Yes

FROM BASE AIRCRAFT: GVII-G500 TO RELATED AIRCRAFT: GVIII-G800	DESIGN	REMARKS	FLT CHAR	PROC CHNG
	31 Display Units	Synoptic and system changes for engines, doors, windows, and ECS.	No	No
	31 Electronic Checklist	Enhanced ECL installed.	No	Yes
	32 Landing Gear	Normal maximum pedal steering command to NWS decreased from +/- 40° (reducing as a function of increasing groundspeed to +/- 7°) to +/- 7°.	No	Yes
	34 Navigation	Number of HUDs increased from one to two.	No	Yes
		HUD airspeed and altitude round dials replaced with vertical tapes.	No	No
		SVS and CVS capability on HUD installed.	No	Yes
		Capability for Visual (Custom) Approaches installed.	No	Yes
		Capability for RNAV GPS approach to LP minima installed.	No	Yes
		Automatic Heading Synchronization installed.	No	No
		Predicted Trajectory Display installed.	No	No
		FMS TOLD not installed in GVIII-G800.	No	Yes
		XM Weather replaced with SXM Weather Products.	No	No

FROM BASE AIRCRAFT: GVII-G500 TO RELATED AIRCRAFT: GVIII-G800	DESIGN	REMARKS	FLT CHAR	PROC CHNG
	36 Pneumatic	Automatic activation of engine bleed air shutoff valve with certain abnormal and emergency conditions installed.	No	Yes
		Temperature controlled cabin zones increased from 3 to 4.	No	Yes
	71 Engine	Engine differences: 3) GVII-G500 – Pratt & Whitney PW814GA, N1-controlled; GVIII-G800 – Rolls-Royce Pearl 700, EPR-controlled. 4) GVII-G500 has no-dwell-zone at certain conditions with WAI On.	No	Yes

Maneuver tables for the GVII-G500 to the GVIII-G800, may not be all-inclusive:

FROM BASE AIRCRAFT: GVII-G500 TO RELATED AIRCRAFT: GVIII-G800	MANUEVER	REMARKS	FLT CHAR	PROC CHNG
	Taxi	NWS has a decreased range from 40° to 7° while utilizing the rudder pedals.	Yes	Yes
	Engine Failure on Takeoff at V1	GVIII-G800 has ELDAC system to assist in yaw control.	Yes	No
	Abnormal Procedure	Flap Malfunction (Flaps $\leq 10^\circ$) – Side slip required.	Yes	Yes
	Single-Engine Approach	GVIII-G800 has ELDAC system to assist in yaw control and autothrottle usage allowed during approach.	Yes	No
	Single-Engine Go-Around	GVIII-G800 has ELDAC system to assist in yaw control and autothrottle usage allowed during approach and go-around.	Yes	No

4.3.5 To assist in the transfer of learning between the two aircraft types/models, design and maneuver tables are included below for the GVII-G600 to the GVIII-G800. These may not be all-inclusive:

FROM BASE AIRCRAFT: GVII-G600 TO RELATED AIRCRAFT: GVIII-G800	DESIGN	REMARKS	FLT CHAR	PROC CHNG
	Weights	Maximum Zero Fuel Weight increased from 57,4400 lbs. to 60,500 lbs.	No	No
		Minimum and Maximum Zero Fuel Center of Gravity limits changed from 36.30% - 48.43% MAC to 35.00% - 45.00% MAC.	No	No
		Maximum Ramp Weight increased from 95,000 lbs. to 106,000 lbs.	No	No
		MTOW increased from 94,600 lbs. to 105,600 lbs.	No	No
		Maximum Landing Weight increased from 76,800 lbs. to 83,500 lbs.	No	No
		Minimum Flight Weight increased from 54,300 lbs. to 56,000 lbs.	No	No
	Airplane Configuration	Airplane length increased from 96.11 ft to 99.78 ft.	No	No
		Airplane wingspan increased from 95.00 ft to 103.02 ft.	No	No
		Airplane Height increased from 25.29 ft to 25.54 ft.	No	No

FROM BASE AIRCRAFT: GVII-G600 TO RELATED AIRCRAFT: GVIII-G800	DESIGN	REMARKS	FLT CHAR	PROC CHNG
	Limitations	Maximum fuel capacity increased from 41,730 lbs. to 49,400 lbs.	No	No
		M _{MO} increased from 0.925M to 0.935M.	No	No
		Flaps 20 V _{MCA} changed from 117 KCAS to 111 KCAS.	No	No
		Flaps 10 V _{MCA} changed from 118 KCAS to 109 KCAS.	No	No
		V _{MCL} changed from 112 KCAS to 106 KCAS.	No	No
		V _{MCG} changed from 111 KCAS to 104 KCAS.	No	No
		Maximum Flaps Down (39°) airspeed increased from 180 KCAS to 190 KCAS.	No	No
		Icing/anti-icing limitations differences: <ol style="list-style-type: none"> 1) Ground operations in freezing fog. 2) Ground operations periodic engine acceleration. 3) EVM after engine start requiring shutdown (0.15 IPS in GVII-G600; 0.3 IPS in GVIII-G800). 4) Time for WAI On prior to takeoff. 5) Auto Anti-ice On (GVII-G600: Auto from 400 AGL to FL 350). (GVIII-G800: Auto WAI inhibited on ground and >FL 350, Auto CAI inhibited >FL 350). 6) WAI operations with single bleed source 	No	Yes

FROM BASE AIRCRAFT: GVII-G600 TO RELATED AIRCRAFT: GVIII-G800	DESIGN	REMARKS	FLT CHAR	PROC CHNG
	Limitations	Engine limitations differences: 1) Operating parameters limits. 2) Ground wind limits for start and operation. 3) Air start envelope. 4) Starter duty. 5) GVII-G600 has procedure for rolling takeoff with crosswind >30kt; GVIII-G800 crosswind limit for takeoff is 30 kt.	No	Yes
		APU operating limitations: 1) Inflight not limited to 47°C maximum TAT. 2) Takeoff not limited to 45°C maximum OAT.	No	Yes
	22 Autoflight	AP TCAS capability installed.	No	Yes
		EDM activation lowered from FL 400 to FL 250.	No	No
		Takeoff target pitch attitude varies with aircraft weight, pressure altitude, and temperature.	No	Yes
		“Smart” Go-around logic for RGA installed.	No	Yes
	23 Communications	SATCOM certified as a LRCS.	No	Yes
		Standard installation of HF radios decreased from 2 to 1.	No	Yes
	25 Overhead Panel Touchscreens	Increased number of Anti-ice switches: two switches for WAI (one for each wing) and CAI (one for each engine).	No	Yes
		Increased ECS cabin zones from 3 to 4.	No	Yes

FROM BASE AIRCRAFT: GVII-G600 TO RELATED AIRCRAFT: GVIII-G800	DESIGN	REMARKS	FLT CHAR	PROC CHNG
	27 Flight Controls	Takeoff Stall Protection installed.	Yes	No
		ELDAC installed.	Yes	No
		ACS HUD/EVS rocker switch function (GVII-G600 – Up clears EVS video, Down declutters HUD symbology) (GVIII-G800 – Up cycles SVS/EVS/CVS video modes, Down clears video).	No	Yes
	28 Fuel	Heated Fuel Return (GVII-G600 – prerequisite altitude \geq FL 300) (GVIII-G800 – no altitude prerequisite).	No	No
	31 Touchscreens	Screen changes for Engines (GVII-G600 N1 controlled) (GVIII-G800 EPR controlled).	No	Yes
	31 Display Units	Synoptic and system changes for engines, doors, windows, and ECS.	No	No
	31 Electronic Checklist	Enhanced ECL installed.	No	Yes
	32 Landing Gear	Normal maximum pedal steering command to NWS decreased from +/- 40° (reducing as a function of increasing groundspeed to +/- 7°) to +/- 7°.	No	Yes
	34 Navigation	Number of HUDs increased from one to two.	No	Yes
		HUD airspeed and altitude round dials replaced with vertical tapes.	No	No
		SVS and CVS capability on HUD installed.	No	Yes
		Capability for Visual (Custom) Approaches installed.	No	Yes
		Capability for RNAV GPS approach to LP minima installed.	No	Yes

FROM BASE AIRCRAFT: GVII-G600 TO RELATED AIRCRAFT: GVIII-G800	DESIGN	REMARKS	FLT CHAR	PROC CHNG
	34 Navigation	Automatic Heading Synchronization installed.	No	No
		Predicted Trajectory Display installed.	No	No
		FMS TOLD not installed in GVIII-G800.	No	Yes
		XM Weather replaced with SXM Weather Products.	No	No
	36 Pneumatic	Automatic activation of engine bleed air shutoff valve with certain abnormal and emergency conditions installed.	No	Yes
		Temperature controlled cabin zones increased from 3 to 4.	No	Yes
	71 Engine	Engine differences: 1) GVII-G600 – Pratt & Whitney PW815GA, N1-controlled; GVIII-G800 – Rolls-Royce Pearl 700, EPR-controlled. 2) GVII-G600 has no-dwell-zone at certain conditions with WAI On.	No	Yes

Maneuver tables for the GVII-G600 to the GVIII-G800, may not be all-inclusive:

FROM BASE AIRCRAFT: GVII-G600 TO RELATED AIRCRAFT: GVIII-G800	MANUEVER	REMARKS	FLT CHAR	PROC CHNG
	Taxi	NWS has a decreased range from 40° to 7° while utilizing the rudder pedals.	Yes	Yes
	Engine Failure on Takeoff at V1	GVIII-G800 has ELDAC system to assist in yaw control.	Yes	No
	Abnormal Procedure	Flap Malfunction (Flaps ≤10°) – Side slip required.	Yes	Yes
	Single-Engine Approach	GVIII-G800 has ELDAC system to assist in yaw control and autothrottle usage allowed during approach.	Yes	No
	Single-Engine Go-Around	GVIII-G800 has ELDAC system to assist in yaw control and autothrottle usage allowed during approach and go-around.	Yes	No

4.4 Flight Training.

4.4.1 The FSB agrees with Gulfstream Aerospace Corporation request that the GVII-G500/G600 to GVIII-G700/G800 Transition/Reduced Curriculum Course be held to a higher standard and include FFS training above the minimum Level B proposal. The FSB recommends a minimum of two 2-hour training flights and a 2-hour Line-Oriented Simulator Training in a Level C FFS or higher when transitioning from the GVII-G500/G600 to GVIII-G700/G800.

5. PILOT CHECKING

5.1 **Minimum Checking:** Level E with a full practical test in accordance with the FAA ATP ACS for the addition of the GVIII type rating.

6. PILOT CURRENCY

Not applicable.

7. OPERATIONAL SUITABILITY

The FSB has determined that the GVII-G500/G600 to GVIII-G700/G800 Transition/Reduced Curriculum Course is operationally suitable.

An operational suitability determination does not constitute an operational authorization.

APPENDIX 5. AUTHORIZATION REQUIRED OPERATIONS (RNP AR)

1. BACKGROUND

In February 2024, an FSB convened in Savannah, GA at FlightSafety International to evaluate the Gulfstream GVIII-G700 ground and FFS training on RNP AR Operations. The FSB conducted flights to make an operational suitability determination in a Gulfstream GVIII-G700 flight test aircraft (N700GA). Numerous RNP AR approaches to RNP 0.1 minima were flown at Norfolk International Airport, Norfolk, VA (KORF) which included low approaches and go-around/missed approaches.

RNP AR 0.1 approach capability is a feature of the Honeywell Primus Epic Symmetry avionics system. The RNP AR training described in this appendix does not replace the requirements or considerations in the current edition of FAA AC 90-101, Approval Guidance for RNP Procedures with Authorization Required (AR). This report's requirements and recommendations are in addition to AC 90-101.

2. PILOT TYPE RATING

Not applicable.

3. RELATED AIRCRAFT

Not applicable.

4. PILOT TRAINING

The FSB has determined that the minimum training is Level E.

In conducting RNP AR approaches, specific duties and procedures are assigned to both the PF and PM. Therefore, the requirements for initial, transition, upgrade and recurrent training as defined below are applicable to both PIC and Second-in-Command (SIC).

4.1 Experience/Prerequisite. The pilots must be:

- a) Qualified and current on the Gulfstream GVIII-G700/G800 aircraft; or
- b) In training in an initial, transition, upgrade, or recurrent course.

4.2 Special Emphasis Areas. The following items are recommendations noted by the FSB to enhance pilot training and understanding of RNP AR approach operations in the Gulfstream GVIII-G700/G800.

- 4.2.1 Ground and flight training to include go-around procedure when above the missed approach altitude, including FMS sequencing.
- 4.2.2 Ground and flight training to include go-around procedure when radius to fix legs are after the Final Approach Point, including speed constraints, speed management and FMS sequencing.

4.3 Ground Training.

- 4.3.1 Initial ground training programs must fully comply with the requirements of the current edition of AC 90-101, Approval Guidance for RNP Procedures with AR.
- 4.3.2 Recurrent ground training must fully comply with the requirements of the current edition of AC 90-101, Approval Guidance for RNP Procedures with AR. Additionally, the FSB recommends a review of “Pilot Procedures” and “Abnormal/Failures” as defined in AC 90-101.

4.4 Flight Training.

- 4.4.1 Initial flight training programs must fully comply with the requirements of the current edition of AC 90-101, Approval Guidance for RNP Procedures with AR.
- 4.4.2 Recurrent flight training programs must fully comply with the requirements of the current edition of AC 90-101.

5. PILOT CHECKING

The FSB has determined that the minimum checking is Level B.

Credit for completion will be given once the applicant satisfactorily demonstrates to the instructor adequate knowledge and practical application of RNP AR operations. Title 14 CFR part 91K and 135 operators may be subject to additional checking per their FAA-approved training program. Due to the unique nature of these approaches, the FSB encourages operators to include RNP AR approaches in all applicable checking evaluations.

6. PILOT CURRENCY

To maintain currency in RNP AR operations, a PIC must have accomplished at least one RNP AR approach to either a missed approach or landing within the preceding 6 months. Additionally, the PM (SIC) used in meeting this currency requirement must be RNP AR current and qualified as described in this appendix.

The RNP AR approach must have been accomplished in either an appropriately qualified FSTD or GVIII-G700/G800 aircraft.

Any checking under 14 CFR parts 61, 91 or 135 that require a demonstration of RNP AR approach competency that was accomplished within the preceding 6 months satisfies this currency requirement.

If RNP AR approach currency is lost, currency may be reestablished by completing the RNP AR recurrent training elements defined in this appendix.

7. OPERATIONAL SUITABILITY

The FSB determined that RNP AR approaches are operationally suitable.

An operational suitability determination does not constitute an operational authorization.

APPENDIX 6. ENHANCED FLIGHT VISION SYSTEM (EFVS) OPERATIONS

1. BACKGROUND

October 2023 through February 2024, an operational evaluation was conducted in Savannah, Georgia at FSI to evaluate the Gulfstream GVIII-G700 ground and FFS training as part of the initial FSB. The FSB conducted flights during the initial aircraft certification to make an operational suitability determination in various GVIII-G700 aircraft. EFVS approaches were flown during FFS and aircraft training which included landings and go-around/missed approaches.

2. PILOT TYPE RATING

Not applicable.

3. RELATED AIRCRAFT

Not applicable.

4. PILOT TRAINING

The FSB has determined that the minimum training is Level E.

4.1 Experience/Prerequisite. The pilots must be:

- a) Qualified and current on the Gulfstream GVIII-G700/G800 aircraft; or
- b) In training in an initial, transition, upgrade, or recurrent course.

4.2 Special Emphasis Areas. The following items are recommendations noted by the FSB to enhance pilot training and understanding of EFVS operations.

- 4.2.1 Dual HUD is standard and therefore while conducting EFVS operations in accordance with 14 CFR part 91, § 91.176(b), the Pilot Flying (PF) must ensure the prescribed natural vision requirements are met before descending below 100 ft.
- 4.2.2 Although the PM is not responsible for making decisions regarding the conduct of an EFVS operation, they should be familiar with all aspects of EFVS operations outlined in 14 CFR part 91, § 91.176(b) to sufficiently fulfill their PM duties.
- 4.2.3 Training conducted with degraded automation (without autopilot and AT):
A complete EFVS approach profile flown with degraded automation.
- 4.2.4 Training to include that when the missed approach point (MAP) is prior to the runway, the reference FPA line changes to the current FPA and the FD vertical guidance is removed when passing the MAP.

4.2.5 Environmental Conditions. The training to include effects of different environmental conditions during day and night operations, such as, fog, varying cloud bases, rain, snow, contaminated runway, winds, variable RVRs.

4.3 Ground Training. Refer to 14 CFR part 61, § 61.66 and the current edition of AC 90-106, Enhanced Flight Vision Systems, for EFVS operations training requirements.

4.4 Flight Training. Refer to 14 CFR part 61, § 61.66 and the current edition of AC 90-106, Enhanced Flight Vision Systems, for EFVS operations training requirements.

5. PILOT CHECKING

The FSB has determined that the minimum checking is Level E.

5.1 Title 14 CFR Part 61. Refer to 14 CFR 61, § 61.66 and the current edition of AC 90-106, Enhanced Flight Vision Systems, for EFVS operations proficiency requirements.

5.2 Title 14 CFR Parts 91K and 135. Refer to the current edition of AC 90-106 and 14 CFR part 91, § 91.1065(g) or part 135, § 135.293(i) as applicable for EFVS task requirements during part 91 subpart K (part 91K) or part 135 competency checks.

6. PILOT CURRENCY

Refer to 14 CFR part 61, § 61.66 and the current edition of AC 90-106, Enhanced Flight Vision Systems for recent flight experience.

7. OPERATIONAL SUITABILITY

The FSB determined that the EFVS is operationally suitable for use during EFVS operations under § 91.176(b).

An operational suitability determination does not constitute an operational authorization.