



OPERATIONAL SUITABILITY DATA (OSD)

Flight Crew

GULFSTREAM AEROSPACE CORPORATION
GVIII-G700

REVISION ORIGINAL

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REVISION CONTROL

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ACRONYMS

14 CFR.....	Title 14 of the Code of Federal Regulations
AB	Auto Brake
AC	Advisory Circular
AFCS.....	Automatic Flight Control System
AFM	Airplane Flight Manual
AIC	Aeronautical Information Circular
ANAC	<i>Agência Nacional de Aviação Civil</i> , Brazilian Civil Aviation Authority
ANSP	Air Navigation Service Provider
APU.....	Auxiliary Power Unit
AT	Autothrottle
CAS	Crew Alert System
DCN	Data Concentration Network
DECEA.....	<i>Departamento de Controle do Espaço Aéreo</i> , Brazilian ANSP
ECL.....	Electronic Checklist
EDM.....	Automatic Emergency Descent Mode
EFB.....	Electronic Flight Bag
EFVS.....	Enhanced Flight Vision System
EGPWS.....	Enhanced Ground Proximity Warning System
EVM	Engine Vibration Monitor
FAA	Federal Aviation Administration
FADEC.....	Full Authority Digital Electronic Control
FBW	Fly-By-Wire
FC.....	Flight Crew
FD	Flight Director
FFS	Full Flight Simulator
FMS.....	Flight Management System
FPV	Flight Path Vector

FSB.....	Flight Standardization Board
FSTD.....	Flight Simulation Training Device
HUD	Head-Up Display
ICS.....	Intercom System
IFIS.....	Integrated Flight Information System
LPV.....	Localizer Performance with Vertical Guidance
MDR.....	Master Differences Requirements
MMEL	Master Minimum Equipment List
OSD.....	Operational Suitability Data
RAT	Ram Air Turbine
RBAC.....	<i>Regulamento Brasileiro de Aviação Civil</i> , Brazilian civil aviation regulation
RNP AR	Required Navigation Performance Authorization Required
SU.....	Stand-Up Instruction
TCAS	Traffic Alert and Collision Avoidance System
TCDS	Type Certificate Data Sheet
V ₁	Takeoff Decision Speed
V _{MCA}	Flaps 20 Minimum Control Speed Air
V _{MCL}	Minimum Control Speed Landing
V _{MO} /M _{MO}	Maximum Operating Limit Speed
WAI.....	Wing Anti-Ice

1. INTRODUCTION

1.1. Background

ANAC's operational evaluation of the Gulfstream GVIII-G700 aircraft was conducted by documental analysis using information provided by the Original Equipment Manufacturer (OEM) and the determinations of the FAA Flight Standardization Board (FSB) Report, original revision dated May 3rd, 2024.

In case more detailed information is required, refer to the FAA FSB Report mentioned above.

1.2. Objective

The objective of this report is to present the ANAC Flight Crew Data (FCD) related to the Gulfstream GVIII-G700 aircraft.

The content of this report is applicable to operations under the framework of ANAC.

1.3. Purpose

The purpose of this report is to:

- Determine the Pilot Type Rating assigned for the Gulfstream GVIII-G700 aircraft;
- Recommend the requirements for training, checking, and currency applicable to flight crew for the Gulfstream GVIII-G700 aircraft; and
- Determine the operational suitability of the Gulfstream GVIII-G700 aircraft.

1.4. Applicability

This report is applicable to:

- ANAC employees who approve training programs;
- ANAC employees and designees who certify airmen; and
- Aircraft operators and training providers certified / approved under Brazilian requirements to assist them in developing their flightcrew member training, checking, and currency.

1.5. Cancellation

Not Applicable.

2. PILOT TYPE RATING

The pilot type rating assigned to the GVIII-G700 is designated “GVIII”.

Table 1 – Gulfstream GVIII pilot type rating

Fabricante (Manufacturer)	Aeronave (Aircraft)		Observações (Remarks)	Designativo (Designative)
	Modelo (Model)	Nome (Name)		
GULFSTREAM AEROSPACE CORPORATION	GVIII-G700	G700	Relatório de FCD Gulfstream GVIII (G700) ANAC OSD-FC Report Gulfstream GVIII (G700)	GVIII

3. RELATED AIRCRAFT

3.1. Related aircraft on same TCDS.

Not applicable.

3.2. Related Aircraft on Different TCDS.

The GVIII-G700 has been evaluated as related to the GVII-G500 and GVII-G600.

4. SPECIFICATIONS FOR PILOT TRAINING

4.1. Airman Experience

Airmen receiving initial GVIII training will benefit from prior experience operating multiengine transport turbojet aircraft in accordance with RBAC 91 or 135.

Additionally, a working knowledge of systems, such as Automatic Flight Control System (AFCS), Autothrottle (AT), Auto Brakes (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 experience may be necessary to complete the training in a timely manner.

Pilots without this experience may require additional training.

4.2. Training Areas of Special Emphasis (TASE)

4.2.1. Pilots must receive special emphasis on the following areas during initial 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 (V_1).
 - 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 (U) (ground procedures).
- b) Crew Alert System (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. 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) Data Concentration Network (DCN). This should include instruction on the system architecture, crew actions, and checklist. This should include training on 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-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 prior to the first flight of the day or 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 4. 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.

4.2.2. Pilots must receive special emphasis on and perform 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-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 4. 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 auto speed 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.

4.3. 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.

4.4. 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 training.

4.5. Training Equipment

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

4.6. Differences Training between Related Aircraft

Pilots must receive transition training between the GVII-G500 or GVII-G600 and the GVIII-G700.

The level of training is specified in Appendix 5, GVII to GVIII Transition Training.

4.7. Other Training

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

5. SPECIFICATIONS FOR CHECKING

5.1. 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 is required.

5.2. Seat Dependent Tasks

Pilots must be checked in the following seat-dependent task:

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

5.3. 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.

5.4. 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.

5.5. Training Equipment

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

5.6. Differences Checking between Related Aircraft.

There are no additional checking differences between the GVIII-G700 and the GVII-G500/600 other than those listed in Appendix 5 for the addition of a type rating.

6. SPECIFICATIONS FOR CURRENCY

There are no additional currency requirements for the GVIII-G700 other than those already specified in RBAC 61, 91 and 135.

6.1. Differences Currency Between Related Aircraft.

Not applicable.

7. OPERATIONAL SUITABILITY

The GVIII was determined operationally suitable for operations under 14 CFR Parts 91, 125, and 135 by the FAA. No flight was conducted by the ANAC to determine operational suitability of the GVIII for operations under the RBAC 91 and 135.

8. MISCELLANEOUS

8.1. 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.

Forward Observer Seat was not evaluated by the ANAC.

8.2. Aircraft Approach Category

All operators should comply with DECEA publication AIC N03/21 dated 28 Jan 2021 and use an approach category appropriate to the speed of VREF. Air carriers may be further restricted by their operations specifications for circling approaches.

The GVIII is considered a Category C aircraft for the purposes of determining “straight-in landing weather minima”.

8.3. Normal Landing Flaps

The GVIII normal “final flap setting” is flaps 39 (DOWN).

Appendix 1 – MASTER DIFFERENCE REQUIREMENTS (MDR) TABLE

Not Applicable

Appendix 2 –DIFFERENCES REQUIREMENTS (DR) TABLES

Not Applicable.

Appendix 3 – REQUIRED NAVIGATION PERFORMANCE AUTHORIZATION REQUIRED (RNP AR)

RNP AR was not evaluated by ANAC.

RNP AR 0.1 approach capability is a feature of the Honeywell Primus Epic Symmetry avionics system.

The RNP AR training is defined in ANAC IS 91-001, appendix K. Training must be accomplished during initial, recurrent, transition, or upgrade training prior to conducting RNP AR approaches.

The FAA has determined that RNP AR approach capability installed in the GVIII-G700 aircraft is operationally suitable under Title 14 of the Code of Federal Regulations (14 CFR) parts 91, 125, and 135, indicating that it would be also operationally suitable under RBAC 91 and 135.

An operational suitability determination and completion of RNP AR training and checking **does not constitute an operational authorization**. Operators should reference the current edition of IS 91-001 for RNP AR application preparation and processing.

Appendix 4 – ENHANCED FLIGHT VISION SYSTEM (EFVS) OPERATIONS

EFVS was not evaluated by ANAC.

The FAA has determined that the EFVS installed in the GVIII-G700 aircraft is operationally suitable. Refer to RBAC 91, sections 91.1717 and 91.1719 for EFVS operations requirements. Refer to the current edition of IS 91-011 for: (1) training, recent flight experience, and proficiency requirements for EFVS operations, and (2) EFVS operational authorization application preparation and processing.

Appendix 5 – GVII-G500/G600 to GVIII-G700 TRANSITION/REDUCED CURRICULUM COURSE

1 BACKGROUND

Gulfstream Aerospace Corporation proposed a transition/reduced course from the GVII-G500/G600 to the GVIII-G700 due to the aircraft's similar systems.

This course includes 16 hours of SU ground school, three 1.5-hour system integration modules, two 2-hour training flights, and a 2-hour Line-Oriented Simulator Training in a Level C FFS or higher.

The ANAC determined that this curriculum is operationally suitable for consolidating knowledge during the transition.

2 TYPE RATING

Upon satisfactory completion of the GVII-G500/G600 to GVIII-G700 transition/reduced curriculum course and a practical test, 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 TCDs.

4 PILOT TRAINING

4.1 General

4.1.1 Experience/Prerequisite. Airman must hold a GVII type rating and meet the general and instrument experience recency requirements specified in RBAC 61.21, 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 Brazilian requirements 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.

The FAA recommended 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.

4.4 Flight Training

It is recommended 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.

4.5 GVII-G500 to GVII-G700 Transition/ Reduced Training

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.

4.5.1 Design tables for the GVII-G500 to GVIII-G700 may not be all-inclusive.

FROM BASE AIRCRAFT: GVII-G500 TO RELATED AIRCRAFT: GVIII-G700	DESIGN	REMARKS	FLT CHAR	PROC CHNG
	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
		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

FROM BASE AIRCRAFT: GVII-G500	DESIGN	REMARKS	FLT CHAR	PROC CHNG
TO RELATED AIRCRAFT: GVIII-G700				
	Limitations	Maximum fuel capacity increased from 30,250 lbs. to 49,400 lbs.	No	No
		Maximum Operating Speed in Mach (MMO) increased from 0.925M to 0.935M.	No	No
		Flaps 20 Maximum Control Speed in Air (VMCA) changed from 112 Knots Calibrated Airspeed (KCAS) to 102 KCAS.	No	No
		Flaps 10 VMCA changed from 120 KCAS to 106 KCAS.	No	No
		Maximum Control Speed on Approach and Landing (VMCL) changed from 109 KCAS to 100 KCAS.	No	No
		Maximum Control Speed on Ground (VMCG) changed from 111 KCAS to 102 KCAS.	No	No
		Maximum Flaps Down (39°) airspeed increased from 180 KCAS to 190 KCAS.	No	No
		Minimum cold soak temperature increased from -40 Celsius (°C) to -26°C.	No	No
		Icing/anti-icing limitations differences: 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: 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

FROM BASE AIRCRAFT: GVII-G500 TO RELATED AIRCRAFT: GVIII-G700	DESIGN	REMARKS	FLT CHAR	PROC CHNG
		APU operating limitations: 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
	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/CSV 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
	31 Display Units	Synoptic and system changes for engines, doors, windows, and ECS.	No	No
	31 Electronic Checklist	Enhanced ECL installed.	No	Yes

FROM BASE AIRCRAFT: GVII-G500	DESIGN	REMARKS	FLT CHAR	PROC CHNG
TO RELATED AIRCRAFT: GVIII-G700				
	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
	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

4.5.2 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

4.6 GVII-G600 to GVII-G700 Transition/ Reduced Training

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.

4.6.1 Design tables for the GVII-G600 to GVIII-G700 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

FROM BASE AIRCRAFT: GVII-G600 TO RELATED AIRCRAFT: GVIII-G700	DESIGN	REMARKS	FLT CHAR	PROC CHNG
		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
	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 VMCA changed from 117 KCAS to 102 KCAS.	No	No
		Flaps 10 VMCA changed from 118 KCAS to 106 KCAS.	No	No
		VMCL changed from 112 KCAS to 100 KCAS.	No	No
		VMCG changed from 111 KCAS to 102 KCAS.	No	No
		Maximum Flaps Down (39°) airspeed increased from 180 KCAS to 190 KCAS.	No	No
		Minimum cold soak temperature increased from -40°C to -26°C.	No	No
		Icing/anti-icing limitations differences: 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	DESIGN	REMARKS	FLT CHAR	PROC CHNG
TO RELATED AIRCRAFT: GVIII-G700				
		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 limited to 47°C maximum TAT. 2) Takeoff 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
		Takeoff Stall Protection installed.	Yes	No
	27 Flight Controls	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/CSV video modes, Down clears video).	No	Yes
	28 Fuel	Heated Fuel Return (GVII-G600 – prerequisite altitude ≥ 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

FROM BASE AIRCRAFT: GVII-G600 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 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.	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

4.6.2 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

5. PILOT CHECKING

5.1 Minimum Checking: Level E with a full practical test for the addition of the GVIII type rating.

6. PILOT CURRENCY

Not applicable.

7. OPERATIONAL SUITABILITY

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

An operational suitability determination does not constitute an operational authorization.