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第 1 部分/SECTION 1

总则（所有型别）/General (ALL MODELS)

1. CAAC 认可数据单和型号合格证数据单 CAAC Validation Data Sheet and Type Certificate Data Sheet

	中国民用航空局认可数据单号、版次和颁发日期 CAAC Validation Data Sheet Number, Revision and issuance date	型号合格证数据单号、版次和颁发日期 Type Certificate Data Sheet Number, Revision and issuance date
当前/ Current	VTC0142A 3 2015/12/17	FAA A12EA, Rev 43, Sep. 4, 2014
历史/ History	VTC0142A 2 2014/09/29 VTC0142A 1 2007/11/16 VTC0142A 0 2003/9/15	FAA A12EA, Rev 40, May 8, 2012 FAA A12EA, Rev 29, March 16, 2006 FAA A12EA, Rev 26, Aug 14, 2003

2. 适航类别/Airworthiness Category: 运输类航空器/ Transport Category Aircraft
3. 认可当局/Validation Authority: 中国民用航空局/CAAC
审定当局/Certifying Authority: 美国联邦航空局/FAA
4. 型号合格证持有人/Type Certificate Holder: Gulfstream Aerospace Corporation
P.O. Box 2206
Savannah, Georgia 31402-2206
5. 中国民用航空局附加技术条件/CAAC Additional Technical Conditions

交付到中国的每一架本数据单列出的型别的飞机须满足下述附加技术条件:

Each of Model listed on the TCDS shall meet the following Additional Technical Conditions when delivered to China:

(1) 必须符合 FAA 颁布的所有适用的适航指令;

All applicable airworthiness directives (ADs) issued by the FAA shall be complied with.

(2) 燃油符合“中国国标 3 号喷气燃料燃油—GB6537-2006”的规范;

Fuel conforming to Specification “PRC National Standard No.3 Jet Fuel -- GB6537-2006”.

6. 进口要求/Import Requirments

(1) 使用要求/Operational Requirments

交付中国的每架飞机，必须满足中国民用航空局的使用要求（包括 CAD2012-MULT-09 要求的厕所垃圾箱灭火器所使用的灭火剂、CAD-97-MULT-38 规定的 QAR、CCAR21.29(5)规定的中文标记标牌），并且中文字符的尺寸应满足 CCAR 25.811(e)(4)(iii) 款和 CCAR 25.812 条的要求。/For each aircraft to be delivered in China, the operational requirements of CAAC must be met (Including the lavatory disposal receptacle fire extinguishing agent required by CAD2012-MULT-09, the Quick Access Recorder (QAR) required by CAD97-MULT-38 and the Chinese placard and marking required by CCAR21.29(5), and the dimension of the Chinese characters shall comply with the provision of the CCAR 25.811(e)(4)(iii) and CCAR 25.812.) .

(2) 出口适航证/Export Certificate

美国联邦航空局将颁发声明飞机符合中国民用航空局批准的型号设计的单独出口适航证，并处于安全使用状态。/Federal Aviation Administration will issue an individual Exprot Certificate of Airworthiness stating that the aircraft complies with CAAC approved type design and is in condition for safe operation.

(3) G-IV、GV、GV-SP 和 GIV-X 型《飞机飞行手册》。/G-IV, GV, GV-SP and GIV-X Aircraft Flight Manual.

每架飞机配有美国联邦航空局以中国民用航空局批准的 G-IV、GV、GV-SP 和 GIV-X 型《飞机飞行手册》。/The G-IV, GV, GV-SP and GIV-X Aircraft Flight Manual for each aircraft will be approved by Federal Aviation Administration on behalf of CAAC.

第 2 部分/SECTION 2: Gulfstream IV

I. 总则/General

- | | |
|--------------------------------------|---|
| 1. 型号/Model: | Gulfstream IV |
| 2. 适航类别/Airworthiness Category: | 运输类航空器/Transport Category Aircraft |
| 3. 型号合格证持有人/Type Certificate Holder: | Gulfstream Aerospace Corporation
P.O. Box 2206
Savannah, Georgia 31402-2206 |
| 4. FAA 批准日期/FAA Approved Date: | 1987.04.22/April 22, 1987 |
| 5. CAAC 批准日期/CAAC Approved Date: | 2003.09.15/Sep 15, 2003 |

II. 认可审定基础/Validation Certification Basis

CAAC的认可审定基础由FAA的审定基础和CAAC的附加技术条件组成。/

The CAAC validation basis consists of the FAA certification basis and the CAAC additional technical conditions.

1. FAA 的审定基础/FAA Certification Basis

规章/Regulation:

14 CFR 25 部(生效日期: 1965 年2 月1日), 包括修正案25-1 到修正案25-56, 除了修正案指示表明符合性的下述章节 外/14 CFR FAR Part 25, effective February 1, 1965, including Amendments 25-1 through 25-56, except for the following sections which are limited to showing compliance with the amendments indicated:

章节/Section	修正案/Amendment
FAR25.109	FAR25, 1965年2月1日/ FAR25, dated February 1, 1965
FAR25.571	修正案25-22 (适用于机身和尾翼) / 25-22 (as applies to fuselage and empennage)
FAR25.671	FAR25, 1965年2月1日/ FAR25, dated February 1, 1965
FAR25.807(c)(2)	修正案25-15/ 25-15
FAR25.813	FAR25, 1965年2月1日/ FAR25, dated February 1, 1965
FAR36部, 包括修正案36-1到修正案36-12/FAR 36, including Amendments 36-1 through 36-12.	
SFAR 27, 包括修正案27-1到修正案27-5/SFAR 27, including Amendments 27-1 through 27-5.	

选择性水上迫降要求的符合性已确立: 涵盖水上迫降要求25.801(包含25.563, 25.807 (d) 和25.1585 (a), 但不包含25.1411)的数据已获批准。营运规则要求应急设备时, 必须演示25.1411和 25.1415的条款符合性。Gulfstream 公司的报告《水上迫降FAA合格审定的装机要求(No. 1159-GER-7)》提供了表明 25.1411 和25.1415 的条款符合性的可接受方法。/Compliance with the following Optional Ditching Requirements has been established: Data covering ditching requirements of 25.801, including 25.563, 25.807 (d) and 25.1585 (a) (but excluding 25.1411) are approved. When the operating rules require emergency ditching equipment, compliance with 25.1411 and 25.1415 must be demonstrated. Gulfstream Report 1159-GER-7 entitled "Outfitting Requirements for FAA Certification for Ditching" provides an acceptable means for showing compliance with 25.1411 and 25.1415.

等效安全/Equivalent Safety Findings:

- | | |
|----------------------|--|
| (1) FAR 25.201 | 失速演示/ Stall Demonstration |
| (2) FAR 25.729(e)(2) | 起落架音响警告/ Landing Gear Warning horn |
| (3) FAR 25.773(b)(2) | 直视窗/ Direct Vision Window |
| (4) FAR 25.807(a)(4) | FAR25, 1965年2月1日, 具有水平主轴的椭圆应急出口/FAR 25, effective February 1, 1965, Oval Emergency exit Windows with Horizontal Major Axis |

2. CAAC 的附加技术条件

见第一部分 总则。

III. 技术特征和运行限制 /Technical Characteristics and Operational Limitations

发动机/Engines:

2 台罗尔斯.罗伊斯公司的发动机, 型号: TayMark611-8, 型号合格证: E25NE, 型号认可证: VTC145E。

2 Rolls Royce Tay Mark 611-8 (Type Certificate E25NE, VTC145E).

发动机限制/Engine Limits:

稳态推力 (海平面标准大气) /Static Thrust (std. day) S.L.

额定起飞 (见注释 9) /Rated Takeoff (See Note 9) 13,850 lb.

额定最大连续/Rated Maximum continuous 12,420 lb.

最大允许连续转速/Maximum permissible continuous rotor operating speeds:

N1 (低压压气机/low compressor) (95.5%) 8,015 rpm

N2 (高压压气机/high compressor) (97.5%) 12,172 rpm

最大允许温度/Maximum permissible temperatures (°C):

第一级低压涡轮前的导向叶片处测量的涡轮燃气温度/Turbine gas temp measured at nozzle guide vanes ahead of first low stage pressure turbine:

起飞 (见注释 9) /Takeoff (See Note 9) 800°

最大连续/Maximum continuous 715°

地面启动瞬时最大/Momentary maximum during ground starts 700°

空中开车瞬时最大/Momentary maximum during airstarts (relights) 780°

最大超温(20 秒)/Maximum over-temperature (20 second limit) 820°

滑油温度(最小启动)/Oil temp (minimum for starting) -40°

滑油温度(最大启动)/Oil temp (maximum) 105°

滑油温度(15 分钟限制)/Oil temp (15 minute limit) 120°

高压泵燃油进口温度/Fuel inlet temp to engine high pressure pump 90°

燃油进口温度(15 分钟限制)/Fuel inlet temperature (15 min. limit) 120°

最大允许引气量/Maximum Permissible Air Bleed Extraction

第七级高压引气/7th Stage HPC Bleed 7.0 lb./sec

第 12 级高压引气(最大连续及以下)

/12th Stage HPC Bleed (max continuous and below) 10.0 lb./sec

风扇引气/Fan Bleed 10.5 lb./sec

辅助动力装置(APU)

/Auxiliary Power Unit (APU)

AirResearch GTCP-36-100G

最大允许排气温度/Maximum permissible exhaust gas temperature -

启动期间直到 60%转速/Up to 60% rpm during start 988°C

启动期间 60% - 100% 821°C 至 732°C

/60% - 100% during start /821°C to 732°C
(线性减少/linear decrease)

运转/Running 732°C

最大转速-所有状态/Maximum rotor speed - all conditions 110%

APU 交流发电载荷(额定)/APU alternator load rating 30Kva

APU 额定输出轴功率/APU rated output shaft power 50hp

(环境温度 103°F , 引气量每分钟 46.6 磅的情况下)
/(with 46.6 lb. per min. bleed air and ambient temp of 103°F)

Honeywell 36-150(G) (S/N 1000 -1535 by ASC 465)

最大允许排气温度/Maximum permissible exhaust gas temperature-
启动期间直到 50%转速/Up to 50% rpm during start 1785°F
启动期间 51% - 87% 1785°F 至 1350°F
/51% - 87% during start 1785°F to 1350°F
(线性减少/linear decrease)
启动期间 87% - 100%/87% - 100% during start 1350°F
运转/Running 1230°F
最大转速-所有状态/Maximum rotor speed - all conditions: 110.70%
APU 交流发电载荷(额定)/APU alternator load rating 30Kva
APU 额定输出轴功率/APU rated output shaft power 47.3hp
(引气量每分钟 66.8 磅的情况下/with 66.8 lb. per min. bleed air)

燃油/Fuel:

煤油/Kerosene
美国/American ASTM D 1655, Jet A
ASTM D 1655, Jet A-1
MIL-T-83133, Grade JP8
MIL-DTL-83133
英国/British Def. Stan. 91-87
Def. Stan. 91-91
加拿大/Canadian CAN/CGSB-3.23
中国/Chinese GB 6537-2006, 包括以下按照附录 A 中限定浓度的燃油添加剂: / GB 6537-2006 including the following fuel additives limited to the concentrations stated in Annex A of GB 6537-2006:
1. 抗静电剂: Stadis 450/ Static Dissipater additive:Stadis 450
2. 抗氧化剂 2,6-二叔丁基对甲基苯酚 / Antioxidant: 2,6-ditertiary-butyl-4-methyl-phenol
3. 防冰剂: 二乙醇甲醚或二乙二醇甲醚/ Icing Inhibitor: Ethylene Glycol Monomethyl Ether or Diethylene Glycol Monomethyl Ether
4. 金属钝化剂: N,N'-二水杨基-1,2-丙烷二胺/ Metal Deactivator: N,N'-disalicylidene 1,2-propanediamine
以下燃油添加剂未批准在本型别的湾流飞机上使用: 抗静电剂 T1502 以及抗磨剂 T1601 和 T1602。 / The following Chinese fuel additives are not approved for use on this Gulfstream aircraft model: Static Dissipater additive T1502 and antifriction additives T1601 and T1602.
独联体/CIS GOST 10227-86, T-1, TS-1 & RT
法国/French DCSEA 134

JP-4 宽馏分型 (见注释 3)

/JP-4 Wide Cut Type (See NOTE 3)

美国/American ASTM D 1655, Jet B
ASTM D6615

英国/British MIL-DTL-5624, Grade JP4
 加拿大/Canadian MIL-PRF-5624 Grade JP4
 DEF. STAN. 91-88
 CAN/CGSB-3.22

美国/American JP-5 高闪点型/JP-5 High Flash - Point Type
 MIL-DTL-5624, Grade JP5
 MIL-PRF-5624 Grade JP5
 英国/British Def. Stan. 91-86
 加拿大/Canadian 3-GP-3.24
 法国/French DCSEA 144

燃油应符合所列规范，及其后继版次，依照最新批准的《飞机飞行手册》。
 /Fuel shall conform to the specification as listed or to subsequent revisions found in the latest approved Airplane Flight Manual.

滑油/Oil:

发动机和辅助动力装置使用下列经批准的滑油：
 /The following oils are approved for use in the engine and APU:

3 Centistoke
 Aeroshell Turbo Oil 390
 Castrol 3C Turbine Oil
 Castrol 325 Engine Oil
 ESSO/Exxon Turbo 2389

5 Centistoke
 Esso/Exxon Turbo Oil 2380
 Mobil Jet Oil II
 Mobil Jet Oil 254
 Castrol 5000 Gas Turbine Oil
 Aeroshell Turbine Oil ATO 500

注释：辅助动力装置不推荐使用混合滑油。
 /Note: Mixing of oils is not recommended for APU.

注释：不推荐使用混合滑油，但各个牌号制作实质可能是混合物。当翻新罗尔斯·罗伊斯公司已获批准关于粘性和等级的标准时，上述牌号的滑油已经批准。
 /NOTE: Mixing of oils is not recommended but brands may be mixed if operationally essential. Oils of the above brands, when reclaimed to the approved Rolls-Royce standard for viscosity and grade, are approved for use.

滑油应符合所列的规范或最新批准的《飞机飞行手册》中规定的后续版本。
 /Oil shall conform to the specification as listed or to subsequent revisions in the latest approved Airplane Flight Manual.

空速限制（校准空速）:

/Airspeed Limits (CAS):

Vmo/Mmo (最大使用速度/Maximum operating)

见高度/马赫数使用包线/See Altitude/Mach Flight Operating Envelope

Va	(机动/Maneuvering)	195 mph	170 knots
		235 mph (1)	206 knots (1)
Vfe	(襟翼放下到39°/Flaps down to 39°)	196 mph	170 knots
		206 mph (1)	180 knots (1)
	(襟翼放下到20°/Flaps down to 20°)	253 mph	220 knots
	(襟翼放下到10°/Flaps down to 10°)	288 mph	250 knots
Vlo	(起落架收放速度)		

Vle	/Landing gear operation)	259 mph	225 knots
	(起落架伸态速度		
VmCG	/Landing gear extended)	288 mph	250 knots
	(地面最小可操纵速度)/	128 mph	111 knots
Vmca	(Minimum control ground)		
	(空中最小可操纵速度)	120 mph	104 knots
	/(Minimum control air)		

最大重量:

/Maximum Weight (lb.):

飞机序号/Aircraft S/N	最大零燃油重量/ Max. Zero Fuel	最大停机重量/ Max. Ramp	最大起飞重量/ Max. Take-Off	最大着陆重量/ Max. Landing
1000 至 1213/ 1000 thru 1213	46,500	73,600	73,200	58,500
1000 至 1213 (带 ASC 61 改装)/ 1000 thru 1213 with ASC 61	49,000	73,600	73,200	58,500
1000 至 1213 (带 ASC 261 改装)/ 1000 thru 1213 with ASC 261	49,000	73,600	73,200	58,500
1000 至 1213 (带 ASC190 改装)/ 1000 thru 1213 with ASC 190	49,000	75,000	74,600	66,000
1214 及后续 1214 & Sub	49,000	75,000	74,600	66,000
1500 及后续(带 ASC 440 改装)/ 1500 & Subs with ASC 440 (G400)	49,000	75,000	74,600	66,000
1500 及后续(带 ASC 436 改装)/ 1500 & Subs with ASC 436 (G300)	49,000	72,400	72,000	66,000

燃油容积

/Fuel Capacity

重力加油或压力加油/Gravity or Pressure Fueling:

	<u>GIV/GIV(G400)</u>	<u>GIV(G300)</u>
总量/Total	29,605 lb	27,005 lb
可用/Usable	29,500 lb.	26,900 lb
力臂/Arm*	+430.4	+426.5

燃油重量基于每加仑 6.75 磅/Fuel weights based upon fuel density of 6.75 lb. per gal.

*力臂地面静态(-1.5°FRL)/*Arm based on ground static altitude (-1.5°FRL)

滑油容积

/Oil Capacity

单台发动机全部滑油容积 13.5 磅/14.4 美制品脱。

/Total engine oil capacity 13.5 lb./14.4 U.S. pints (each engine).

单台发动机可用滑油容积 10.1 磅/10.8 美制品脱。

/Usable engine oil capacity 10.1 lb./10.8 U.S. pints (each engine)

(力臂/Arm = +582.00)

重量基于每加仑 7.5 磅/Oil weights based upon oil density of 7.5 lb. per gal.

系统滑油见注释 1/See NOTE 1 for system oil.

所表明的滑油容积仅为发动机的滑油箱容积。

/Capacities shown are for engine oil tankage only.

每台发动机的总滑油附加 16.8 磅/Total engine oil is an additional 16.8 lb. per engine.

辅助动力装置的滑油量为 4.75 磅/5.0 美制品脱。/APU oil 4.75 lb./5.0 U.S. Pints

(力臂/Arm = +620.0)

最大使用高度 / Maximum Operating Altitude	45,000 英尺/45,000 feet
基准/Datum	对于重量与平衡的目的, 基准零点位于前机轮舱飞机中心线的基点后15英寸处, 或机身206站位前的206英寸处。 /For weight and balance purposes, the zero datum is 15 inches aft of the jig point at the centerline of the airplane in the nose wheel well or 206 inches forward of Fuselage Station 206.
水平措施 /Levelling Means	纵向: 机头, 右侧纵梁站位61.5 & 72.5 舱门处耳状物/Longitudinal: Lugs at right nose well door longeron STA 61.5 & 72.5 横向:前起机轮舱站位44.5 处隔框背面的耳状物/Lateral: Lugs on rear face of bulkhead STA 44.5 in nose wheel well.
平均气动弦/M.A.C	166.22英寸(平均气动弦前缘位于机身387.7站位处)。 / 166.22 in. (L.E. of M.A.C. = Fuselage Station 387.7).
最小飞行机组/ Minimum Crew	2 人(正驾驶和副驾驶)。/2 Persons (Pilot and Copilot).
最大乘员/ Maximum Occupants	19 人, 受限于应急出口要求。(见注释13) /19 - limited by emergency exit requirements. (See Note 13)
行李或货物限制/ Baggage or Cargo Limitations	<u>客舱地板/Cabin Floor</u> <u>主客舱地板装载限制, 生产序号从1000 起/Main cabin floor loading</u> <u>limitations, GIV S/N 1000 and subsequent:</u> 主客舱地板, 站位从193 至321.5。在全部地板宽度上, 静负载货物装载最大均 布载荷应为每平方英尺49磅; 中间下部20 英寸干净走廊上最大均布载荷应为每 平方英尺98 磅。除了中间走廊外(此处最大静负载应为184 磅), 每一孤立平方英 尺地板上的货物装载, 与另一货物装载间隔至少30 英寸, 最大静负载应为260 磅。 /Main cabin floor fuselage station 193 to 321.5. Dead weight cargo loading maximum uniform load over entire width of floor shall be 49 lb. per square foot. Maximum uniform load with a 20-inch clear aisle down the middle shall be 98 lb. per square ft. Maximum dead weight , cargo load on one isolated square foot , at least 30 inches from another load , shall be 260 lb. , except in the middle aisle where it shall be 184 lb. 主客舱地板, 站位从321.5 至498。静负载货物装载最大均布载荷应为每平方英 尺100 磅。/Main cabin floor fuselage station 321.5 to 498. Dead weight cargo loading maximum uniform loading shall be 100 lb. per square foot. 主客舱地板, 站位从498 至539.75。静负载货物装载最大均布载荷应为每平方英 尺65 磅。/Main cabin floor fuselage station 498 to 539.75. Maximum uniform loading shall be 65 lb. per square foot. <u>最大行李, 生产序号自1000 起/Maximum Baggage,GIV S/N 1000 and subsequent:</u> 机身后舱, 站位从539.75 至隔框(或气密端框)。/Compartment aft of fuselage station 539.75 to bulkhead or pressure dome. 容量—2000 磅, 设备处尽量少放。/Capacity - 2,000 lb. less any weight added in equipment bay. 最大地板载荷, 每平方英尺65 磅。/ Maximum floor loading – 65 lb./sq. ft. 重心—站位 565 处2000磅。如进一步后移, 所需容量相应减少。/C.G. - STA 565 for 2000 lb. If further aft, corresponding reduction in capacity required.

操纵面运动量
/Control Surface
Movements

升降舵/Elevators	上偏/Up	24°(+1/2°, -1/2°)	下偏/Down	13°(+0°, -1°)
升降舵调整片 /Elevator trim tab	上偏/Up	8°(+1°, -1°)	下偏/Down	22°(+1°, -1°)
方向舵/Rudder	右偏/Right	22°-22.5°	左偏/Left	22°- 22.5°
方向舵配平 /Rudder trim	右偏/Right	7.5°(+1°, -1°)	左偏/Left	7.5°(+1°, -1°)
副翼/Ailerons	上偏/Up	10°(+1°, -1°)	下偏/Down	10°(+1°, -1°)
副翼配平 /Aileron trim	上偏/Up	15°(+4°, -4°)	下偏/Down	15°(+4°, -4°)
襟翼Flaps			下偏/Down	39°(+0°, -1 1/2°)
减速板 /Speed brakes	右偏/Right	26°(+2°, -2°)	左偏/Left	26°(+ 2°, -2°)
地面扰流板 /Ground spoiler	上偏/Up	55°(+4°, -3°)		
(所有扰流板 /all spoilers)				

水平安定面运动范围—前缘下偏-1°(+1/4°, -1/4°)至 -4.6°(+1/4°, -1/4°)/Horizontal stabilizer travel range - Leading edge down: -1°(+1/4°, -1/4°) to -4.6°(+1/4°, -1/4°)

生产基础
/Production Basis

生产许可证编号7SO（1978年9月1日颁发，1987年8月31日重新颁发），生产序号1000及后续。/Production Certificate No. 7SO (issued September 1, 1978 and reissued August 31, 1987), S/N 1000 and subsequent.

设备/Equipment

为了满足审定要求，适用的适航要求（见审定基础）规定的基本所需设备必须安装在飞机上。批准的设备清单见《图解零件目录（IPC）》中，另外，还需下述设备项目：/The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. See the Illustrated Parts Catalog (IPC) for an approved equipment listing. In addition, the following items of equipment are required:
(a) 当飞机的装备用于装载旅客时，必须安装FAA批准的旅客氧气系统。/When an airplane is outfitted to carry passengers, an FAA approved passenger oxygen system must be installed.
(b) FAA批准的《飞机飞行手册》。/FAA Approved Airplane Flight Manual.

标牌/Placards

所需的标牌列在对应的《飞机飞行手册》的第11章中。/The required placards are listed in Chapter 11 of the appropriate Airplane Maintenance Manual.

其它运行限制/Other
Operating Limitations

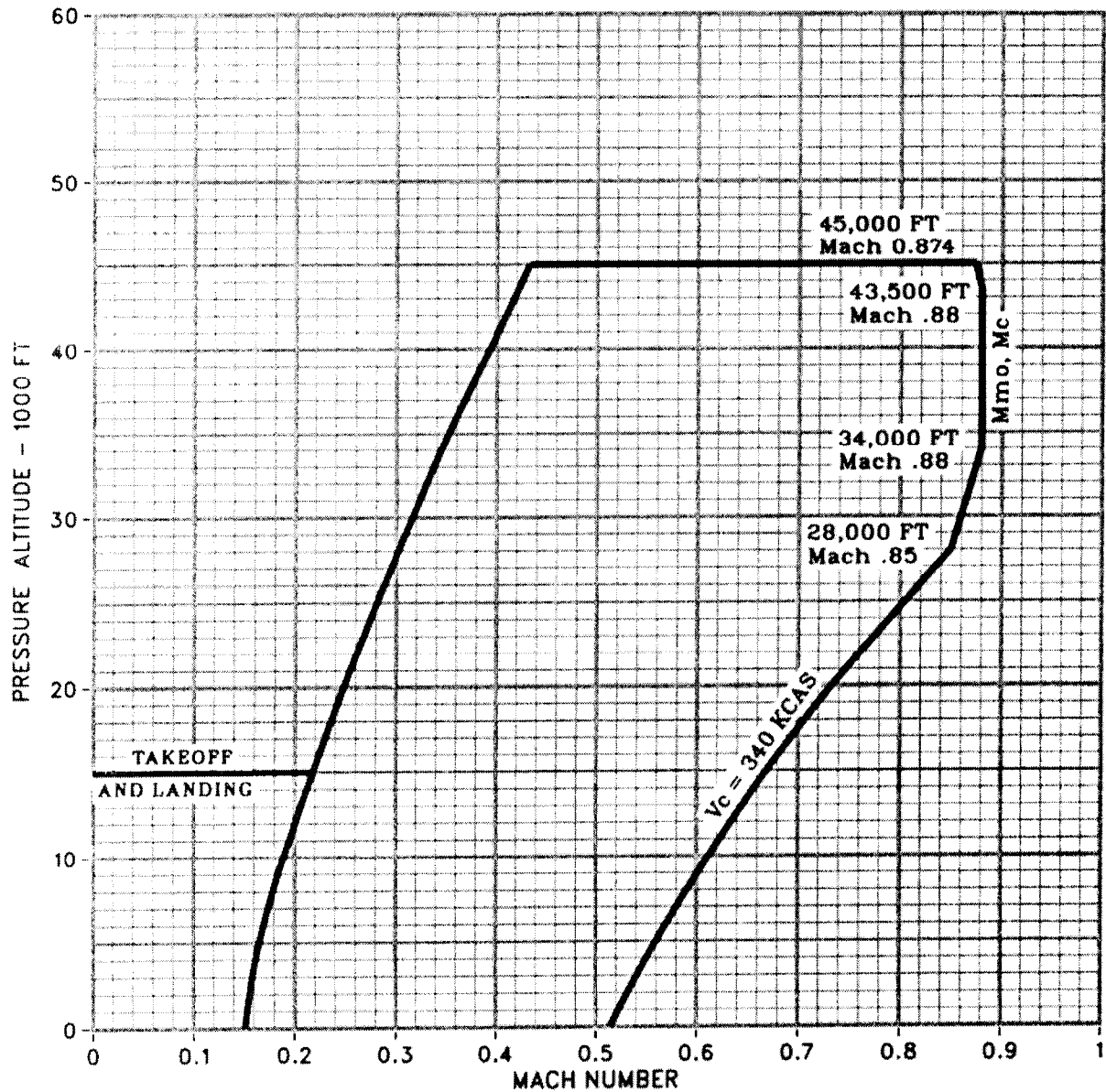
飞机必须依照最新批准版次的《飞机飞行手册》运行。/The aircraft must be operated in accordance with the latest FAA approved revision to the Airplane Flight Manual.

制造序号
/Serial No. Eligible

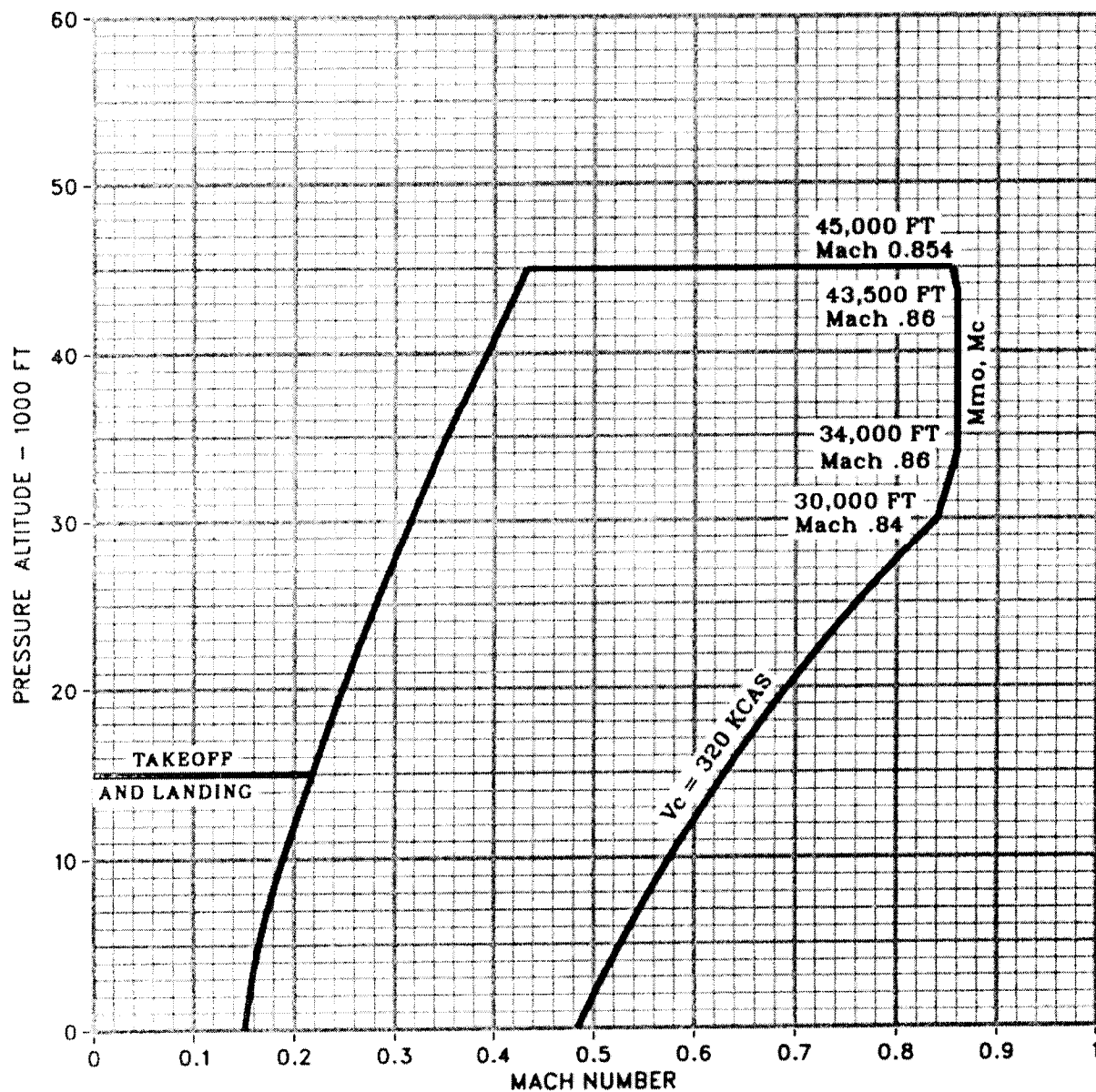
生产序号：1000至1535(1500-1535为G300/G400型)
/ S/N 1000 through 1535 (1500-1535 are G300/G400).

空速限制(最大使用)
/AIRSPEED LIMITS
(MAXIMUM OPERATING)

ALTITUDE / MACH FLIGHT ENVELOPE (S/N 1000 AND SUBSEQUENT)



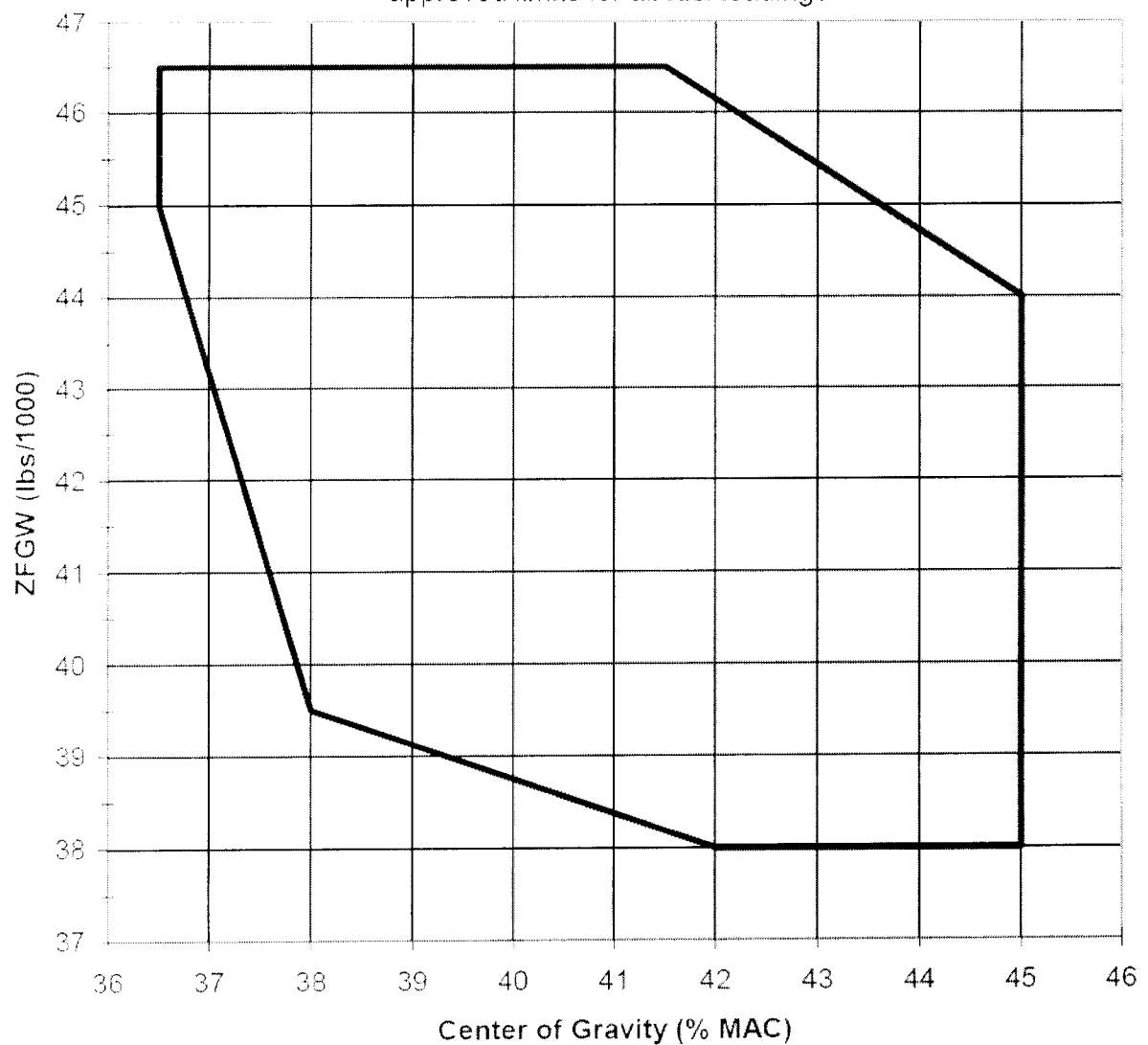
ALTITUDE / MACH FLIGHT ENVELOPE (S/N 1000 – 1213 WITH ASC 61)



Aircraft Zero Fuel Gross Weight Envelope

For SN 1000-1213			
Maximum Weight (lbs)			
Zero Fuel	Landing	Ramp	Takeoff
46,500	58,500	73,600	73,200

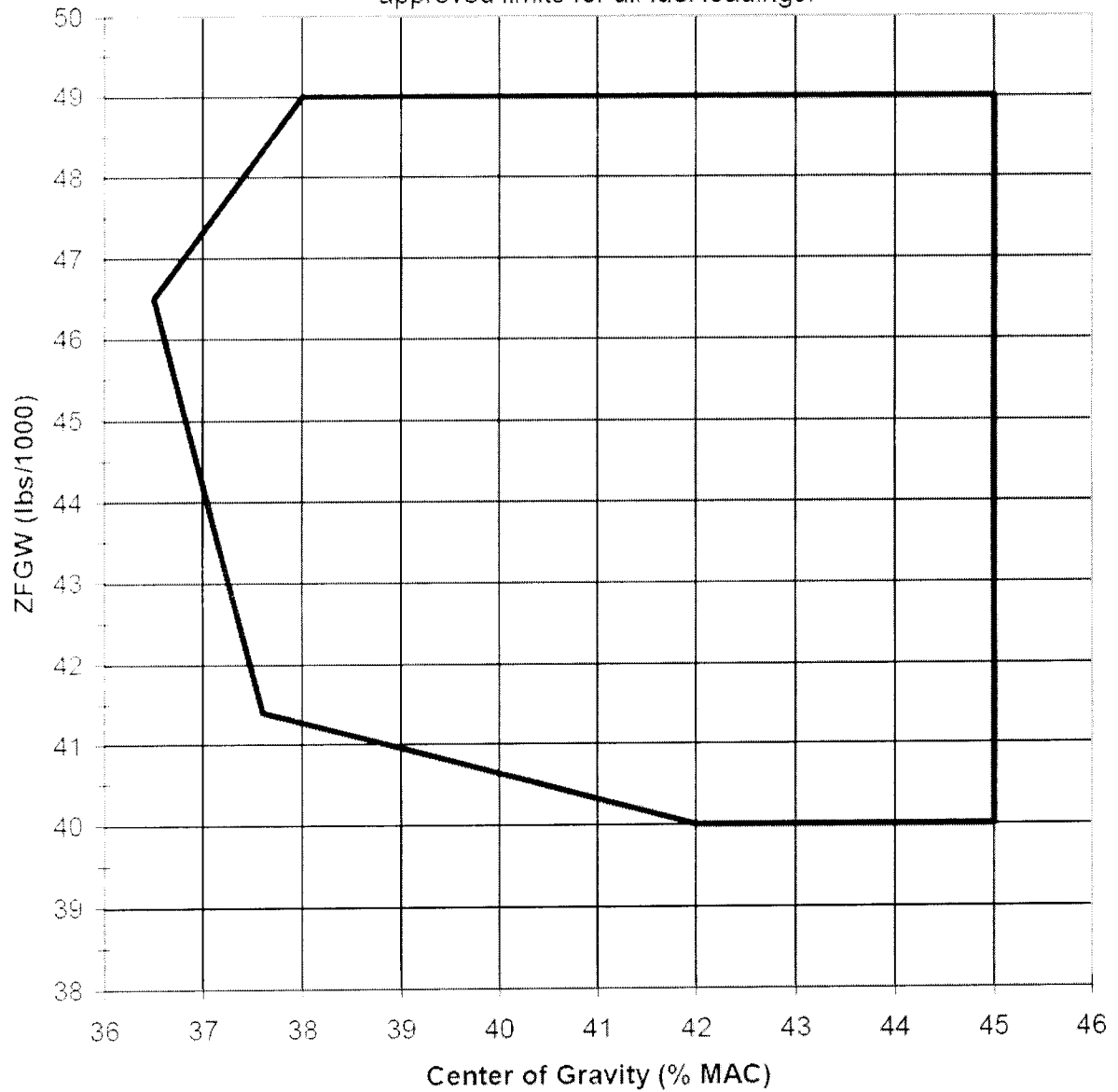
If the ZFGW is within the envelope, the fueled aircraft will be within FAA approved limits for all fuel loadings.



Aircraft Zero Fuel Gross Weight Envelope

For SN 1000-1213 with ASC 61			
Maximum Weight (lbs)			
Zero Fuel	Landing	Ramp	Takeoff
49,000	58,500	73,600	73,200

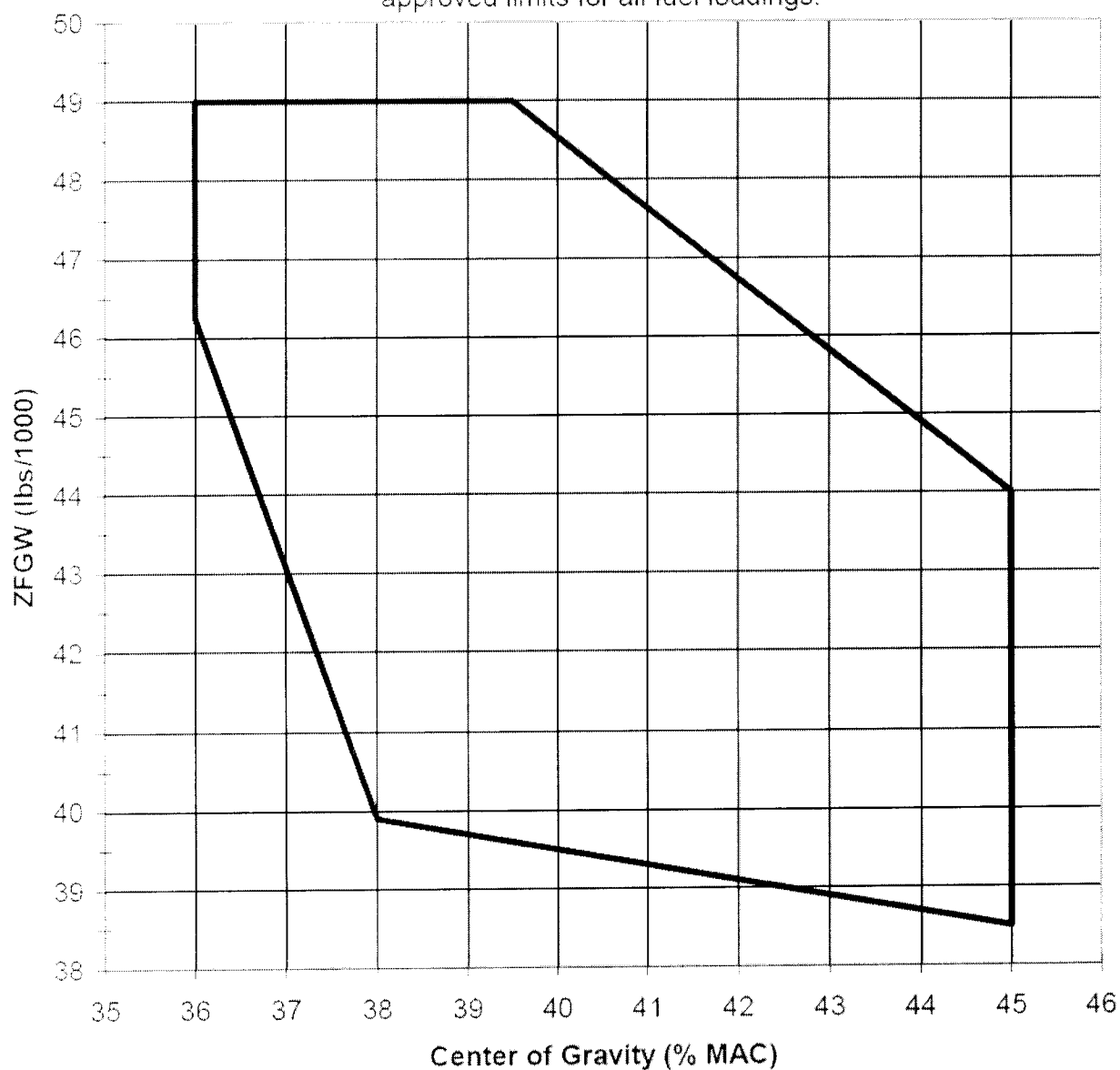
If the ZFGW is within the envelope, the fueled aircraft will be within FAA approved limits for all fuel loadings.



Aircraft Zero Fuel Gross Weight Envelope

For SN 1000-1213 with ASC 261			
Maximum Weight (lbs)			
Zero Fuel	Landing	Ramp	Takeoff
49,000	58,500	73,600	73,200

If the ZFGW is within the envelope, the fueled aircraft will be within FAA approved limits for all fuel loadings.

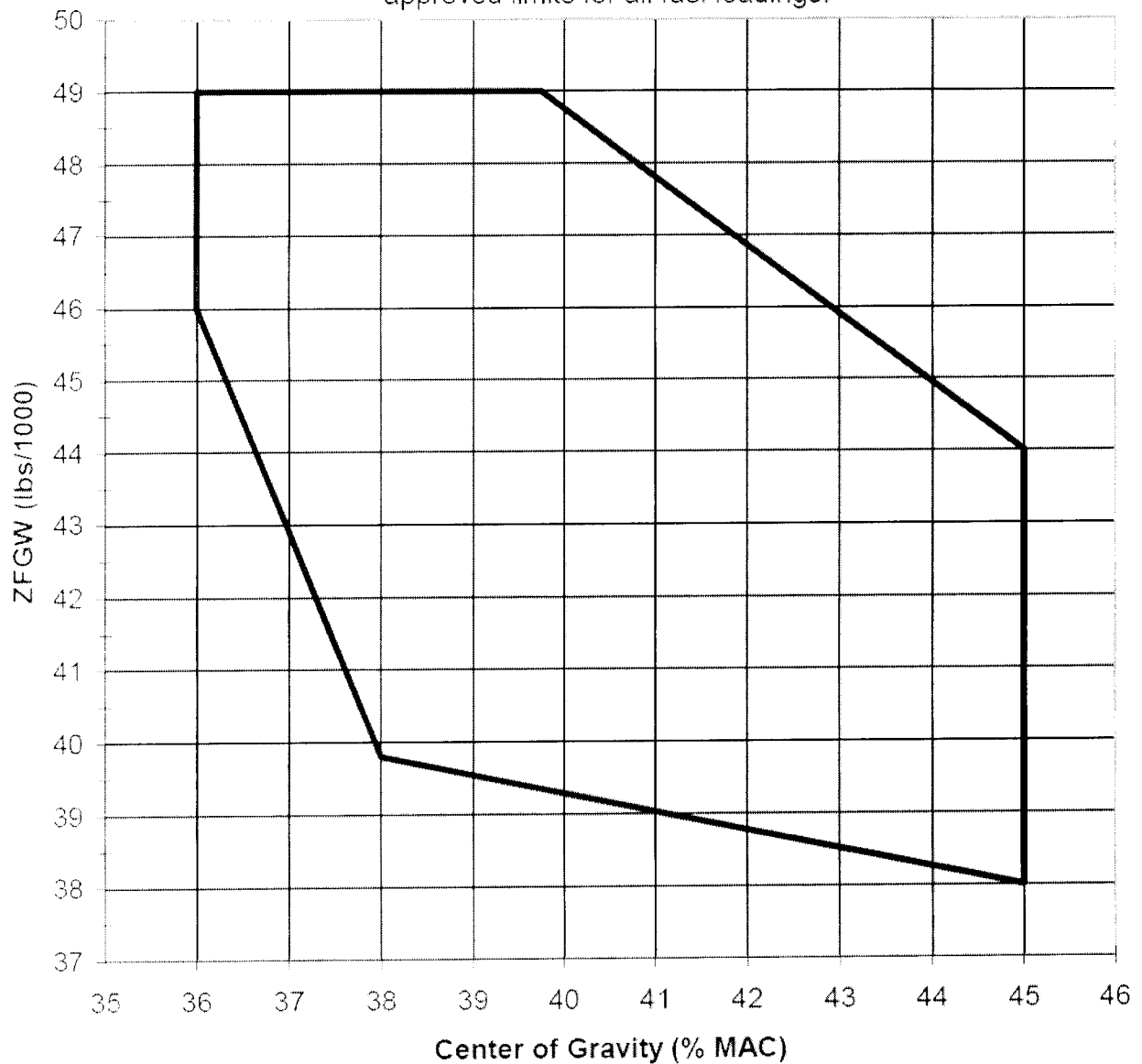


Aircraft Zero Fuel Gross Weight Envelope

For SN 1214 and Subs. and SN 1000-1213 with
ASC 190 and SN 1500 and Subs. with ASC 440

Maximum Weight (lbs)			
Zero Fuel	Landing	Ramp	Takeoff
49,000	66,000	75,000	74,600

If the ZFGW is within the envelope, the fueled aircraft will be within FAA approved limits for all fuel loadings.

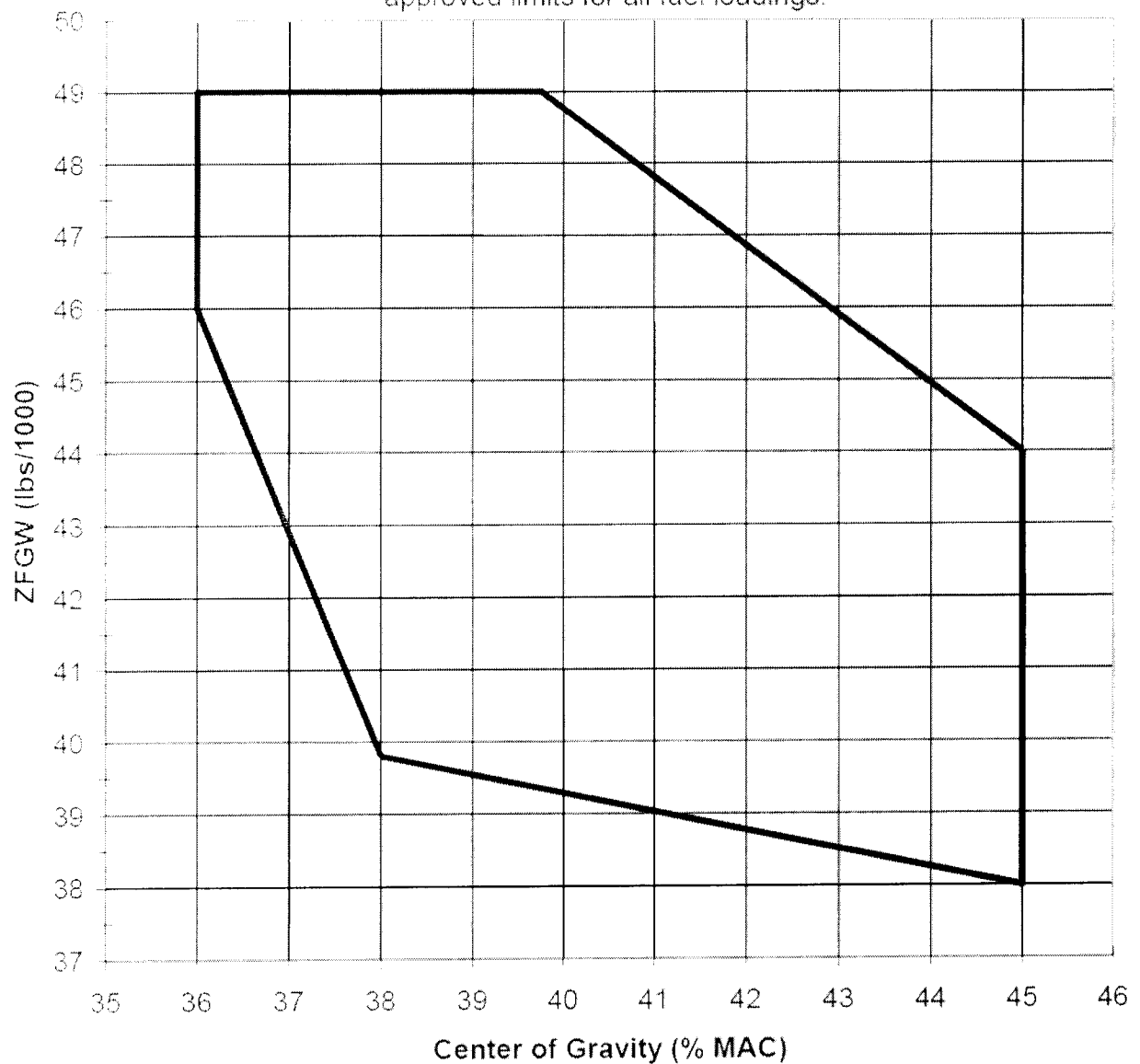


Aircraft Zero Fuel Gross Weight Envelope

For SN 1500 and Subs. with ASC 436

Maximum Weight (lbs)			
Zero Fuel	Landing	Ramp	Takeoff
49,000	66,000	72,400	72,000

If the ZFGW is within the envelope, the fueled aircraft will be within FAA approved limits for all fuel loadings.



IV. 注释/NOTES

注释1/NOTE 1

重量与平衡/Weight and Balance

(a) 必须为每架飞机提供最新的重量平衡报告, 包括原合格审定空机重量之中所包含的设备清单。重量与平衡报告应包括空机重量、系统燃油、全部滑油和液压油。/ Current weight and balance report, including list of equipment included in certificated empty weight, and loading instructions when necessary, must be provided for each airplane at the time of original certification. The weight and balance report shall include as part of the empty weight, system fuel, total oil and hydraulic fluid.

(b) 系统燃油: 填充所有管路和最临界飞行姿态下燃油箱计量仪器从零至可读点所需的全部燃油重量。/ System fuel: The weight of all fuel required to fill all lines and tanks up to zero/readable fuel point on the fuel gages in the most critical flight attitude.

生产序号4001及后续/S/N 4001 and subsequent

全部不可用燃油*-105磅 /Unusable fuel* - 105 lb. total

全部燃油管路内的燃油-45磅/Fuel lines - 45 lb. total

全部系统燃油-150磅/System fuel - 150 lb. total

*包括不可排放燃油 13磅/*Includes 13 lb. undrainable

(c) 系统滑油: 保留在发动机管路和滑油箱零读数时的滑油重量。/ System oil: The weight of oil remaining in the engine lines and tanks after subtracting the oil in the tanks which is above the "zero gage" levels.

(d) 上述的"不可用"燃油燃油箱中的燃油量, 其包括FAR 25. 959 定义的油箱截留燃油, 即最临界飞行状态下难以获得的燃油。每一机型的可用燃油在前面的"燃油容积"中给出。"不可用"燃油包含在前面 (a) 节的系统燃油之中, 并不需要分别计算。下述相关资料见FAA 批准的飞机飞行手册: /The above "unusable" fuel is that amount of fuel in the tanks, including tank trapped fuel as defined in CAR 4b.416 or FAR 25.959, which is unavailable to the engines under critical flight conditions. The usable fuel capacity is given under section entitled "Fuel Capacity" for each airplane model. The "unusable" fuel is included in the system fuel as indicated in (a) above and need not be accounted for separately. See FAA approved Airplane Flight Manual for information concerning the following:

(1) 起飞和飞行中的左右油箱间的最大不平衡/Maximum fuel unbalance between left and right tanks for take-off and in-flight operations.

(2) 为获得相等燃油量, 服役期间内推荐的地面飞机姿态/Recommended airplane ground attitude to obtain equal fuel quantities during servicing.

(3) 燃油添加剂/Fuel additives.

注释2/NOTE 2

退役期限/Retirement Times:

疲劳极限时限件的退役期限开列在《飞机维修手册》第5 章的第IV 节中/The retirement times of fatigue critical life limited components are listed in Section IV, Chapter 5.

多种构形飞机的剩余寿命限制起落时限, 请与Gulfstream 公司的工程部门联系。/For airplanes having time (landings) in more than one configuration, contact Gulfstream Aerospace Engineering for remaining life limitations.

注释3/NOTE 3

JP-4 燃油的使用/Use of JP-4 Fuel:

运营者、罗尔斯·罗伊斯公司和适航当局同意的JP -4 (宽馏分)燃油的使用可能导致降低高压燃油泵的寿命。/The use of JP-4 fuel (wide cut) as agreed to by the operator, Rolls-Royce, and the appropriate airworthiness authority may result in a reduction of HP fuel pump life.

注释4/NOTE 4

飞机服务变更(ASC)/Aircraft Service Changes(ASC' s):

下面列出的是较为重大的ASC, 其主要涉及重量限制、燃油系统和使用困难修正相关的更改, 并不是GIV型飞机完整的ASC清单。/The following are the more significant Aircraft Service Changes (ASC's), dealing primarily with weight limit changes, fuel system changes, and service difficulty corrections. This is not the complete list of ASC's for GIV.

飞机服务变更第61号, "G-IV 零燃油总重增至49,000磅(具有速度限制)". / Aircraft Service Change (ASC) 61, "49,000 lb. Zero Fuel Gross Weight Increase (with Speed Restriction), G-IV."

适用于生产序号1000至1213/Applicable to S/N 1000 through 1213.

飞机服务变更第190号, "增加G-IV 停机、着陆和零燃油总重"。/ Aircraft Service Change (ASC) 190, "Increased Ramp, Landing and Zero Fuel Gross Weight, G-IV."

适用于生产序号1000至1213/Applicable to S/N 1000 through 1213.

飞机服务变更第261号, "G-IV 零燃油总重增至49,000磅"。/ Aircraft Service Change (ASC) 261, "49,000 lb. Zero Fuel Gross Weight Increase, G-IV."

适用于生产序号1000至1213/Applicable to S/N 1000 through 1213.

飞机服务变更第436号, "G300 修订"指明G-IV (G300) 型飞机。这些飞机将依据《飞机飞行手册(GAC-AC-G300-OPS-0001)》运行。/ Aircraft Service Change (ASC) 436, "G300 Modification" will designate those aircraft as Model G-IV (G300). Those aircraft shall be operated under Airplane Flight Manual GAC-AC-G300-OPS-0001.

适用生产序号: 自1500起。/Applicable to S/N 1500 and subsequent.

飞机服务变更第440号, "G400 修订"指明G-IV (G400) 型飞机。这些飞机将依据《飞机飞行手册(GAC-AC-G400-OPS-0001)》运行/ Aircraft Service Change (ASC) 440, "G400 Modification" will designate those aircraft as Model G-IV (G400). Those aircraft shall be operated under Airplane Flight Manual GAC-AC-G400-OPS-0001.

适用生产序号: 自1500起。/Applicable to S/N 1500 and subsequent.

飞机服务变更第465号, "辅助动力装置36-150(G)的安装" /Aircraft Service Change (ASC) 465 "Auxiliary Power Unit (APU) 36-150(G) Installation."

适用于生产序号1000至1535。/Applicable to S/N 1000 to S/N 1535.

飞机服务变更485B "GIV辅助动力装置外罩-生产序号1311-1535的隔热屏障安装"。/Aircraft Service Change (ASC) 485B "GIV Auxiliary Power Unit (APU) Enclosure -Thermal Barrier Installation to S/N 1311-1535.

飞机服务变更487"GIV第4阶段"/Aircraft Service Change (ASC) 487 "GIV Stage 4"

适用于生产序号1000至1535。/Applicable to S/N 1001-1535.

注释5/NOTE 5

改变飞机标识/ Alternate Aircraft Identifications:

假设关联的飞机服务变更(ASC)合并的情况下, 下面提供了批准的改变飞机标识资料:/The following provides approved alternate aircraft identification information assuming incorporation of the associated (listed) ASC:

序列号自1500起, 按照GAC飞机服务变更第436号改进时, G-IV型机具有G-IV (G300) 型机的资格。/Model G-IV, serial number 1500 & Subs, are eligible for identification as Model G-IV (G300) when modified in accordance with GAC Aircraft Service Change (ASC) 436.

序列号自1500起, 按照GAC飞机服务变更第440号改进时, G-IV型机具有G-IV

(G400) 型机的资格。/Model G-IV, serial number 1500 & Subs, are eligible for identification as Model G-IV (G400) when modified in accordance with GAC Aircraft Service Change (ASC) 440.

注释6/NOTE 6

驾驶舱视界/ Cockpit Field of View:

G-IV 型机的驾驶舱前风挡尺寸对于前向视界的审定要求是临界的, 因此, 在未与 FAA 飞机审定办公室协调前, 不得在遮光罩的顶部安装任何设备。/The cockpit front windshield dimensions for the Model G-IV airplanes are critical for forward field of view certification requirements; therefore, no equipment should be installed on top of the glare shield without prior coordination with an FAA Aircraft Certification Office.

注释7/NOTE 7

系统修改/Systems Modifications:

G-IV 机型的综合航电系统使用基于软件的航线可更换单元 (LRU) (该装置分享数字信号传输总线)。对于驾驶舱仪表系统的正确工作来说, 生产交付的 G-IV 机型的航电构型是临界的。通过替换不同的 LRU 的、增加新的 LRU 或改变 LRU 的接口而对 LRU 的软件进行更改会对已审定产品的适航性产生不利影响。因此, 改装者在未与辖区内的 FAA 航空器审定办公室协调的情况下, 不得对综合航电系统进行更改。/The G-IV models incorporate integrated avionics systems using software-based line replaceable units (LRU's) which share a digital signal transmission bus. The avionics configuration of the G-IV as delivered from production, is critical to the proper operation of the cockpit instrumentation system. Modification to the LRU software supplied with the G-IV replacement of an LRU with a different LRU, addition of new LRU, or alteration of an LRU interface could adversely affect the airworthiness of the certified product. Accordingly, no changes to the integrated avionics system should be made without coordination with the Aircraft Certification Office having jurisdiction over the modifier.

注释8/NOTE 8

驾驶舱更改/ Cockpit Modifications:

任何可能影响机组工作量、舱内噪声水平或昼间/夜间照明的驾驶舱构型的更改和变化必须经过FAA合格审定飞行试验驾驶员或飞行标准运行督察员评估。/ Any modification or changes in cockpit configuration which may affect aircrew workload, cockpit noise level or day/night lighting must be evaluated by an FAA Aircraft Certification Flight Test Pilot or Flight Standards Operation Inspector.

注释9/NOTE 9

起飞推力的使用/ Use of Takeoff Thrust:

大于 5 分钟 (不超过 10 分钟) 的起飞推力的使用, 仅在发生一台发动机停车或故障期间获得批准。/Use of takeoff thrust for more than five (5) minutes [not to exceed ten (10) minutes] is approved for use only in the event of an inoperative engine due to shutdown or failure.

注释10/NOTE 10

适航限制/ Airworthiness Limitations:

作为MSG3大纲的部分, 对于生产序号1400起, 适航限制章节(ALS)被纳入《GIV型飞机维修手册》, 而对于其他飞机已编入飞机服务变更第416号。基于咨询通告AC91-56A的损伤容限要求, 编发了该份飞机服务变更, 以满足FAR 25.571条的25-54修正案的要求, 并且受控于FAA而航空器运行人不得变更。通过损伤容限要求, 该份飞机服务变更除却了以前安全寿命审定零件所确定的寿命限制。/ As part of the MSG3 Program, an Airworthiness Limitations Section (ALS) has been added to the GIV Maintenance Manual for aircraft serial number 1400 and subsequent, and for all other GIV aircraft having incorporated ASC 416. This ALS has been developed to FAR 25.571 at Amendment 25-54, based on the damage tolerance requirements of AC91-56A. It is controlled by the FAA and can not be changed by the aircraft operator. Through the damage tolerance requirements, the ALS removes certain life limitations on previous safe life certified components.

- 注释11/NOTE11 航向指示仪表要求/Direction Indicator Requirements:
G-IV型飞机, 以下述方法, 通过安装备份数字阅读磁指示系统满足14 CFR25部 25.1303(a)(3)条款关于航向指示器(非稳定磁罗盘)的要求: /Gulfstream Models G-IV meet 14 CFR part 25.1303(a)(3) requirements for a direction indicator (non-stabilized magnetic compass) by installation of Standby Digital Reading Magnetic Indicator Systems through the following means:

由流量阀驱动备份数字和方向距离指示器(DBDI)系统。/ Standby Digital and Bearing Distance Indicator (DBDI) system driven by flux valve
- 注释12 /Note12 第4阶段噪音/Stage 4 Noise
安装了飞机服务变更ASC 487“第4阶段”的湾流GIV型飞机(有效序列号1000-1535)符合14 CFR 36部至36-28修正案的4阶段噪音要求。证明数据记录在湾流报告GIV-GER-423中。/Gulfstream model aircraft GIV having installed the ASC 487 “Stage 4” (Serial Number Effectivity 1000 - 1535) are compliant to 14 CFR Part 36, through amendment 36-28, Stage 4 Noise requirements. Substantiating data is documented in Gulfstream reports GIV-GER-423.
- 注释13/ Note13 飞机型号设计为绿构型, 不包括外观油漆、标记标牌和座椅等旅客相关设施。当批准的座位布置和必要的乘客设施按照审定基础加入航空器后, 客舱允许载客。/ The type design is “Green” configuration, does not include the external painting, markings and placards, and other passenger facilities such as seats etc. When approved seats arrangement and necessary passenger facilities added to the aircraft according to the certification basis, the cabin compartment is allowed to carry passengers.

第 3 部分/SECTION 3: Gulfstream V

I. 总则/General

- | | |
|--------------------------------------|---|
| 1. 型号/Model: | Gulfstream V |
| 2. 适航类别/Airworthiness Category: | 运输类航空器/Transport Category Aircraft |
| 3. 型号合格证持有人/Type Certificate Holder: | Gulfstream Aerospace Corporation
P.O. Box 2206
Savannah, Georgia 31402-2206 |
| 4. FAA 批准日期/FAA Approved Date: | 1997.04.11/April 11, 1997 |
| 5. CAAC 批准日期/CAAC Approved Date: | 2007.11.13/Nov 13, 2007 |

II. 认可审定基础/Validation Certification Basis

CAAC的认可审定基础由FAA的审定基础和CAAC的附加技术条件组成。/

The CAAC validation basis consists of the FAA certification basis and the CAAC additional technical conditions.

1. FAA 的审定基础/FAA Certification Basis

规章/Regulation:

14 CFR 25 部(生效日期: 1965 年2 月1日), 包括修正案25-1 到修正案25-56, 除了修正案指示表明符合性的下述章节 外/14 CFR FAR Part 25, effective February 1, 1965, including Amendments 25-1 through 25-56, except for the following sections which are limited to showing compliance with the amendments indicated:

章节/Section	修正案/Amendment
FAR25.109	FAR25, 1965年2月1日/ FAR25, dated February 1, 1965
FAR25.807(c)(2)	修正案25-15/ 25-15
FAR25.813	FAR25, 1965年2月1日/ FAR25, dated February 1, 1965
14CFR 34部, 包括修正案34-1/14CFR Part 34, Amendment 34-1	
14CFR36部, 包括修正案36-1到修正案36-21/14 CFR Part 36, including Amendments 36-1 through 36-21.	

所有座椅肩带将替换为经演示符合修正案25-64的 § 25.562(c)(5)和(c)(6)试验要求的肩带。由于特许, 关于 § 25.562(c)(5)和(c)(6)的 § 25.785试验要求的符合性不需要演示。/Shoulder harness on all seats will be in lieu of demonstrated compliance to the test requirements of FAR25.562(c)(5) and (c)(6) per Amendment 25-64. Compliance with the requirements of FAR25.785 in reference to FAR25.562(c)(5) and (c)(6) need not be demonstrated due to this concession.

选择性水上迫降要求的符合性已确立: 含盖水上迫降要求25.801(包含25.563,25.807(d)和25.1585(a), 但不包含25.1411)的数据已获批准。运营准则要求应急设备时, 必须演示25.1411和25.1415的条款符合性。Gulfstream公司的报告《水上迫降FAA合格审定的装机要求(No.1159-GER-7)》提供了表明25.1411和25.1415的条款符合性的可接受方法。/Compliance with the following Optional Ditching Requirements has been established: Data covering ditching requirements of 25.801, including 25.563, 25.807(d) and 25.1585(a) (but excluding 25.1411) are approved. When the operating rules require emergency ditching equipment, compliance with 25.1411 and 25.1415 must be demonstrated. Gulfstream Report 1159-GER-7 entitled "Outfitting Requirements for FAA Certification for Ditching" provides an acceptable means for showing compliance with 25.1411 and 25.1415.

专用条件/Special Conditions:

No. 25-NM-105, 高强度辐射场, 有效日期: 1995年9月28日/HIRF (High Intensity Radiated Fields), effective September 28, 1995.

No.25-ANM-108, 高高度运行, 有效日期: 1995年11月26日/High Altitude Operations, effective November 16, 1995.

注释: 高高度专用条件不但包含了增压系统要求, 而且还有压力容器的损伤容限要求。因此, 依据专用条件的要求, 增压系统的任何变化, 或对于压力容器的修改或修复必须批准。/ NOTE: The high altitude special condition includes pressurization system requirements, as well as damage tolerance requirements

on the pressure vessel. Therefore, any changes to the pressurization system or modifications or repairs to the pressure vessel must be approved in accordance with the requirements defined in the special condition.

按照座舱高度的时间历程(作为座舱泄漏率的函数), 该专用条件中规定了损伤容限要求。所规定的座舱压力高度时间历程的要求可能遭遇压力容器的开度为7.2平方英寸的有效面积(或每平方英寸为7.2)(考虑假设应急下降时适当的流量系数)。等效裂缝长度的确定将取决于裂缝特定位置, 该位置中的压力容器结构, 裂缝的方向等等。修改和/或修理的批准必须考虑专用条件的要求, 及它们如何适用于特定位置、修改和修理的结构, 引起的检查大纲也必须考虑其它适用的结构规范。/The damage tolerance requirements in the special condition are specified in terms of cabin altitude time history, which is a function of the cabin leak rate. The specified cabin altitude time history requirement can be met with a pressure vessel opening of 7.2 square inches effective area (which considers the appropriate discharge coefficient assuming an emergency descent). The determination of an equivalent crack length will depend upon the particular location of the crack, the pressure vessel configuration in that location, the direction of the crack, etc. The approval of modifications and /or repairs must take into account the requirements of the special condition and how they apply to the particular location and configuration being modified or required. The resulting inspection program must also consider other applicable structural criteria.

豁免/Exemptions:

No. 6436[FAR25.571(e)(1)] 鸟撞速度/Bird Impact Speed

等效安全/Equivalent Safety Findings:

(1) FAR25.103, 用定义的 V_{s1g} 替代 V_{min} 的失速速度/Stall Speeds defined by V_{s1g} in lieu of V_{min}

(2) FAR 25.341, 欧洲联合航空局替代静态突风的离散调谐突风/JAR Discrete Tuned Gust in lieu of Static Gust

(3) FAR 25.807(a)(4), 具有水平主轴的椭圆形应急门, 有效日期: 1965年2月1日/Effective February 1, 1965, Oval Emergency Windows with Horizontal Major Axis.

(4) FAR 25.933, 飞行中反推装置无意中展开的预防/Prevention of Inadvertent Inflight Thrust Reverser Deployment

2. CAAC 的附加技术条件

见第一部分 总则。

III. 技术特征和运行限制 /Technical Characteristics and Operational Limitations

除了以下差异外, Gulfstream GV 与 Gulfstream G IV 型飞机相同/The Gulfstream GV is the same as the Gulfstream G IV except for the following differences:

- 最大起飞和着陆重量约增大 15%/approximately 15% increase in maximum takeoff and landing weights
- 最大使用高度从 45,000 英尺增至 51,000 英尺/maximum operating altitude increase from 45,000 ft to 51,000ft
- 发动机由罗尔斯.罗伊斯公司的 Tay 型更改为罗尔斯.罗伊斯公司的 Deutschland BR700-710A1-10 型 (增大推力和提高涵道比)/engine change from Rolls Royce Tay to Rolls Royce Deutschland BR700-71A1 10(increased thrust and higher bypass ratio)
- 增加了全权数字式发动机控制(FADEC)/addition of FULL Authority Digital Engine Controls(FADEC)
- 翼展由 74.6 英尺增长至 93.5 英尺/wing span increased from 74.6 ft to 93.5 ft
- 主登机门后机身增加了 5 框, 和机翼后增加了 2 框/additions to the fuselage of a 5 foot section forward of the main entry door, and a 2 foot section aft of the wing
- 水平尾翼面积约增大 30%/approximately 30% increase in horizontal tail area
- 增加了复合材料飞行控制面和反推/addition of composite material flight control surfaces and thrust reversers

发动机/Engines:

2 台宝马罗尔斯.罗伊斯公司的发动机, 型号: Deutschland BR700-710A1-10, 型号合格证: E00057EN, 型号认可证: VTC0198E。/2 BMW-Rolls Royce Deutschland BR700-710A1-10 (Type Certificate E00057EN, VTC0198E)

发动机限制/Engine Limits:

静态推力（海平面标准大气）/Static Thrust (std. day) S.L.

起飞（5 分钟）/ Takeoff (5min.)	14,750 lb.
最大连续/ Maximum continuous	14,450 lb.

最大允许连续转速/Maximum permissible continuous rotor operating speeds:

N1 (低压压气机/low pressure compressor)

最大起飞(注释 8)/Maximum Takeoff (see Note 8)	(101.1%)	7,513 rpm
最大连续/Maximum Continuous	(101.0%)	7,505 rpm
最大超速(20 秒)/Maximum Overspeed (20 seconds)	(101.5%)	7,542 rpm
反推(30 秒)/Reverse Thrust (30 seconds)	(70%)	5,201 rpm

N2 (高压压气机/high pressure compressor)

最大起飞(注释 8)/Maximum Takeoff (see Note 8)	(99.6%)	15,834rpm
最大连续/Maximum Continuous	(98.9%)	15,723rpm
最大超速(20 秒)/Maximum Overspeed (20 seconds)	(99.8%)	15,866rpm
100% N1 等于每分钟 7,431 转/100% N1 equals 7,431 rpm		
100% N2 等于每分钟 15,898 转/100% N2 equals 15,898 rpm		

最大允许温度/Maximum permissible temperatures (°C):

第一级低压涡轮前的导向叶片处测量的涡轮燃气温度/Turbine gas temp measured at nozzle guide vanes ahead of first low stage pressure turbine:

起飞（注释 8）/Takeoff (See Note 8) 900°

最大连续/Maximum continuous 860°

开车前最大/Maximum prior to start 150°

最大超温(20 秒)/Maximum over-temperature (20 second limit) 905°

地面启动瞬时最大/Momentary maximum during ground starts 700°

空中开车瞬时最大/Momentary maximum during airstarts (relights) 850°

滑油温度(最小加速至起飞前)/Oil temp (minimum before accelerating for T/O) +20°

滑油温度(最小启动)/Oil temp (minimum for starting) -30°

滑油温度(最大)/Oil temp (maximum) 160°

海平面燃油低压泵燃油进口温度/Fuel inlet temperature to low pressure pump at S.L. 54°

高压泵燃油出口温度(不限制最大)/Fuel outlet temp to engine high pressure pump(unrestricted maximum) 158°

燃油出口温度(15 分钟限制)/Fuel inlet temperature (15 min. limit) 165°

燃油进口温度(最低)/Fuel inlet temperature(minimum) -40°

引气量/ Bleed Extraction:

EPR=P50/P2: 分别从第 5 级和第 8 级的引气量涉及核心机进气质量流量, W26:

风扇的引气量涉及风扇进气质量流量, W1A。/EPR=P50/P2: The amounts of bleed extraction from stages 5 and 8, respectively, are related to the core entry mass flow, W26. The amount of fan bleed extraction is related to the fan entry mass flow, W1A.

动力范围 /Power Range	正常流量 /Normal Flow(%)			最大流量 /Maximum Flow(%)		
	第 5 级 /Stage 5	第 8 级 /Stage 8	风扇 /Fan	第 5 级 /Stage 5	第 8 级 /Stage 8	风扇 /Fan
慢车至 1.06EPR/ Idle to 1.06 EPR	*****	7.8	*****	3.0	12.1	0.6
1.06 至 1.3EPR /1.06 to 1.3 EPR	4.4	4.2	0.2	8.3	7.9	1.6
1.3EPR 以上 /Above 1.3 EPR	4.3	****	0.4	8.5	*****	1.8

辅助动力装置(APU)
/Auxiliary Power Unit
(APU)

1 台爱立信型号为: RE220{GV}/1 Allied Signal-Model RE220{GV}	
额定输出轴功率/Rated output shaft power	62 hp(连续/continuous) 70hp(5 分钟/minutes) 101hp(5 秒/seconds)
最大发电机输出轴转速/Maximum Generator Output Shaft Speed	12,000 rpm
最大排气温度(额定输出)/Maximum Exhaust Gas Temp(EGT) at Rated Output	1241°F (T ₂ =140°F)
最大允许转速/Maximum Allowable Rotor Speed	48,320 rpm(T ₂ <115°F)
最大允许排气温度/Maximum Allowable EGT	
启动: 1922°F (1050°C) [在 T ₂ <-20°F (-29°C), P ₂ >6.75 psia 的情况下]	
/Starting: 1922°F (1050°C) [for T ₂ <-20°F (-29°C), P ₂ >6.75 psia]	
运行: 1350°F (732°C) [在 T ₂ =140°F(60°C)的情况下]	
/Operating: 1350°F (732°C) [for T ₂ =140°F(60°C)]	

燃油/Fuel:

	<u>煤油/Kerosene</u>
美国/American	ASTM D 1655-92, Jet A ASTM D 1655-92, Jet A-1 MIL-DTL-83133, Grade JP-8 GSTU 320.00149943.007-97 GSTU 320.00149943.011-99
英国/British	Def.Stan.91-87 Def.Stan.91-91
加拿大/Canadian	CAN/CGSB-3.23
中国/Chinese	GB 6537-2006, 包括以下按照附录 A 中限定浓度的燃油添加剂: / GB 6537-2006 including the following fuel additives limited to the concentrations stated in Annex A of GB 6537-2006: 1. 抗静电剂: Stadis 450/ Static Dissipater additive:Stadis 450 2. 抗氧化剂 2,6-二叔丁基对甲基苯酚 / Antioxidant: 2,6-ditertiary-butyl-4-methyl-phenol 3. 防冰剂: 二乙醇甲醚或二乙二醇甲醚/ Icing Inhibitor: Ethylene Glycol Monomethyl Ether or Diethylene Glycol Monomethyl Ether 4. 金属钝化剂: N,N'-二水杨基-1,2-丙烷二胺/ Metal Deactivator: N,N'-disalicylidene 1,2-propanediamine 以下燃油添加剂未批准在本型别的湾流飞机上使用: 抗静电剂 T1502 以及抗磨剂 T1601 和 T1602。 / The following Chinese fuel additives are not approved for use on this Gulfstream aircraft model: Static Dissipater additive T1502 and antifriction additives T1601 and T1602.
独联体/CIS	GOST 10227-86, T-1, TS-1 & RT
法国/French	DCSEA134/A

JP-4 宽馏分类型(见注释 3)

	<u>/Wide Cut Type (See NOTE 3)</u>
美国/American	ASTM D6615
	MIL-DTL-5624(JP4 Grade)
英国/British	Def.Stan.91-88
加拿大/Canadian	CAN/CGSB-3.22-2001
独联体/CIS	GOST 10277-86
	<u>JP-5 高闪点类型/High Flash-Point Type</u>
美国/American	MIL-DTL-5624 JP5 Grade
英国/British	Def.Stan.91-86
加拿大/Canadian	3-GP-3.24
法国/French	DCSEA 144/A

燃油应符合所列规范，及其后继版次，依照最新批准的《飞机飞行手册》。/Fuel shall conform to the specification as listed or to subsequent revisions found in the latest approved Airplane Flight Manual (AFM).

高闪点燃油资料详见《飞机飞行手册》。/See AFM for information on high flash point fuels.

滑油牌号/Oil Type:	发动机和辅助动力装置使用下列经批准的滑油： / The following oils are approved for use in the engine and APU:
	3 Centistoke: Aeroshell Turbo Oil 390
	5 Centistoke: Aeroshell Turbine Oil ATO 500
	Castrol Aero 5000
	Exxon Turbo Oil 2380
	Mobil Jet Oil II
	Mobil Jet Oil 254

注释：辅助动力装置不推荐使用混合滑油。

/Note: Mixing of oils is not recommended for APU.

注释：不推荐使用混合滑油，但各个牌号制作实质可能是混合物。当翻新已获批准关于粘性和等级的标准时，上述牌号的滑油已经批准。

/NOTE: Mixing of oils is not recommended but brands may be mixed if operationally essential. Oils of the above brands, when reclaimed to the approved standard for viscosity and grade, are approved for use.

滑油应符合最新批准的《飞机飞行手册》中所列的或期后版次规定的规范。

/ Oil shall conform to the specification as listed or to subsequent revisions in the latest approved Airplane Flight Manual.

空速限制(校准空速)/Airspeed Limits (CAS):

Vmo/Mmo (最大使用速度/Maximum operating speed)	(mph)	(KCAS)
见飞行手册高度/马赫数使用包线/See AFM for Altitude/Mach Flight Operating Envelope		
Va (机动速度/Maneuvering speed)	237mph	206 knots
Vfe (襟翼放下速度/Flap extended speed)(Flaps down to 39°)	190mph	165knots
(具有ASC19A或73A组合一体的襟翼放下速度/Flap extended speed with ASC19A or 73A incorporated)(Flaps down to 39°)	196mph	170knots
Vfe (襟翼放下速度/Flap extended speed) (Flaps down to 20°)	253mph	220knots
Vlo (起落架收放速度/Landing gear operation)	259mph	225knots
Vle (起落架伸态速度/Landing gear extended)	288mph	250knots

Vmcg (地面最小可操纵速度/ Minimum control ground speed)	118mph	103knots
Vmca (空中最小可操纵速度/ Minimum control air speed,takeoff)	129mph	112knts

最大重量(磅):

/Maximum Weight (lb.):

飞机序号/Aircraft S/N	最大零燃油重量/ Max. Zero Fuel	最大停机重量/ Max. Ramp	最大起飞重量/ Max. Take-Off	最大着陆重量/ Max. Landing
501 & Subs	54,500	90,900	90,500	75,300

燃油容积

/Fuel Capacity

重力或压力加油/Gravity or Pressure Fueling:

	序列号 501 至 548(不带 ASC50 改装) /S/N 501 thru 548 Without ASC 50	序列号 549 及后续以及 501 至 548 (带 ASC50 改装) / S/N 549 and subs, and 501 thru 548 with ASC 50
总量/Total	41,506 lb.	41,489lb.
可用/Usable	41,026 lb.	41,300lb.
力臂/Arm*	+558.0	+558.5

燃油重量基于每加仑 6.75 磅/Fuel weights based upon fuel density of 6.75 lb. per gal.

* 力臂地面静态(-1.5°FRL)/Arm based on ground static attitude(-1.5°FRL)

滑油容积

/Oil Capacity

单台发动机全部滑油容积/Total engine oil capacity (each engine):

Lucas-Western 齿轮箱/Lucas-Western Gearbox: 16.9(磅/lb)/18(美制品脱/U.S.pints)

APT 齿轮箱/APT Gearbox: 22.0(磅/lb)/24.4(美制品脱/U.S.pints)

(力臂/Arm==+785.00)

重量基于每加仑 7.5 磅/Oil weights based upon oil density of 7.5 lb. per gal.

系统滑油见注释 1/See NOTE 1 for system oil.

所表明的滑油容积仅为发动机的滑油箱容积。

/Capacities shown are for engine oil tankage only.

每台发动机的总滑油外加 9.5 磅/Total engine oil is an additional 9.5 lb. per engine.

辅助动力装置的滑油量为 9.00 磅/9.6 美制品脱。/APU oil 9.00 lb./9.6 U.S. Pints

(力臂/Arm = +782.5)

最大使用高度

/Maximum Operating
Altitude

51,000 英尺/51,000feet

基准/Datum

对于重量与平衡的目的, 基准零点位于前机轮舱飞机中心线的基点后45英寸处。
/For weight and balance purposes, the zero datum is 45 inches aft of the jig point at the centerline of the airplane in the nose wheel well.

水平措施

/Levelling Means

纵向: 机头, 右侧纵梁站位61.5 & 72.5 舱门处耳状物/Longitudinal:

Lugs at right nose well door longeron STA 61.5 & 72.5

横向:前起机轮舱站位44.5 处隔框背面的耳状物/Lateral: Lugs on rear face of bulkhead STA 44.5 in nose wheel well.

平均气动弦/M.A.C

最小飞行机组/
Minimum Crew

最大乘员/
Maximum Occupants

行李或货物限制/
Baggage or Cargo
Limitations

171.19英寸(平均气动弦前缘位于机身524.74站位处)。
/ 171.19 in. (L.E. of M.A.C. = Fuselage Station 524.74).

2 人(正驾驶和副驾驶)。/2 Persons (Pilot and Copilot).

19 人, 受限于应急出口要求。(见注释12) /19 - limited by emergency exit requirements. (See Note 12)

客舱地板/Cabin Floor

主客舱地板装载限制, 生产序号自501起/ Maximum Baggage, GV S/N 501 and subsequent:

主客舱地板, 站位从229 至426。在全部地板宽度上, 静负载货物装载最大均布载荷应为每平方英尺49磅; 中间下部20 英寸干净走廊上最大均布载荷应为每平方英尺98磅。除了中间走廊外(此处最大静负载应为187 磅), 每一孤立平方英尺地板上的货物装载, 与另一货物装载间隔至少30 英寸, 最大静负载应为200 磅。
/ Main cabin floor fuselage station 229 to 426: Dead weight cargo loading maximum uniform load over entire width of floor shall be 49 lb/ft2. Maximum uniform load with a 20 inch clear aisle down the middle shall be 98 lb/ft2. Maximum dead weight cargo load on one isolated square foot, at least 30 inches from another load, shall be 200 lb., except in the middle aisle where it shall be 187 lb.

主客舱地板, 站位从426 至632。静负载货物装载最大均布载荷应为每平方英尺100 磅。
/Main cabin floor fuselage station 426 to 632: Dead weight cargo loading maximum uniform loading shall be 100 lb/ft2.

主客舱地板, 站位从632 至684。静负载货物装载最大均布载荷应为每平方英尺65 磅。
/ Main cabin floor fuselage station 632 to 684: Max uniform loading shall be 65 lb/ft2.

最大行李, 生产序号自501起/Maximum Baggage, GV S/N 501 and subsequent:

机身后舱, 站位从684.00 至气密端框。
/Compartment aft of fuselage station 684.00 to pressure bulkhead:

容量— 2500 磅, 设备处尽量少放。
/Capacity - 2500 lb. less any weight added in equipment bay

最大地板载荷, 每平方英尺65 磅。
/ Maximum floor loading - 65 lb/ft²

装有批准的烟雾探测系统。
/Approved smoke detection system required.

操纵面运动量
/Control Surface
Movements

升降舵/Elevators

升降舵调整片

/Elevator trim tab

方向舵/Rudder

方向舵配平

/Rudder trim

上偏/Up

上偏/Up

上偏/Up

右偏/Right

右偏/Right

右偏/Right

24° (+1/2°, -1/2°)

8° (+1°, -1°)

22° - 25°

7.5° (+1°, -1°)

11°(+1°, -2°)

下偏/Down

下偏/Down

左偏/Left

左偏/Left

下偏/Down

13° (+0°, -1°)

22° (+1°, -1°)

22° - 25°

7.5° (+1°, -1°)

11° (+1°, -2°)

注释: 对于航向配平如需使用驾驶配平旋钮和脚踏再设置0位, 方向舵配平可最大弥补(+3°, -3°)。详见飞行控制系统装备程序报告: GV-MS-51/Note: Rudder trim may be offset (+3°, -3°) maximum as required for directional trim with the cockpit trim knob and rudder pedals re-referenced to zero. See FCS Rigging Procedures Report GV-MS-51.

	/Aileron trim 上偏/Up 15° (+4°, -4°) 下偏/Down 15° (+4°, -4°) 襟翼/Flaps 下偏/Down 39° (+1°, -1°) 减速板(右&左)/Speed brakes (Right & Left) 4块外制动板(飞行扰流板) /4 Outb'd Panels (Flight Spoilers) 上偏/Up 30° (+2°, -8°) 2块内制动板(地面扰流板) /2 Inb'd Panels (Ground Spoilers) 上偏/Up 30° (+2°, -5°) 地面扰流板(全部)/Ground spoilers (all) 上偏/Up 55° (+4°, -5°) 水平安定面运动范围-前缘运动 /Horizontal stabilizer travel range - Leading Edge Travel: 正常运行 -1.5°(+1/4°, -1/4°)至 -4.6°(+1/4°, -1/4°)/ /Normal Operation -1.5°(+1/4°, -1/4°) to -4.6°(+1/4°, -1/4°) 应急稳定模式 -1.25° (+1/4°, -1/4°)至 -4.6° (+1/4°, -1/4°) /Emerg. Stab. Mode -1.25° (+1/4°, -1/4°) to -4.6° (+1/4°, -1/4°)
生产基础 /Production Basis	生产许可证编号7SO (1978年9月1日颁发, 1997年6月11日重新颁发), 生产序号501及后续。/ Production Certificate No. 7SO (issued September 1, 1978 and reissued June 11, 1997), S/N 501 and subsequent.
设备/Equipment	为了满足审定要求, 适用的适航要求(见审定基础)规定的基本所需设备必须安装在飞机上。批准的设备清单见《图解零件目录(IPC)》中, 另外, 还需下述设备项目: /The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. See the Illustrated Parts Catalog (IPC) for an approved equipment listing. In addition, the following items of equipment are required: (a) 当飞机的装备用于装载旅客时, 必须安装FAA批准的旅客氧气系统。/When an airplane is outfitted to carry passengers, an FAA approved passenger oxygen system must be installed. (b) FAA批准的《飞机飞行手册》。/FAA Approved Airplane Flight Manual.
标牌/Placards	所需的标牌列在对应的《飞机飞行手册》的第11章中。/The required placards are listed in Chapter 11 of the appropriate Airplane Maintenance Manual.
其它运行限制/Other Operating Limitations	飞机必须依照最新批准版次的《飞机飞行手册》运行。/ The aircraft must be operated in accordance with the latest FAA approved revision to the Airplane Flight Manual.
制造序号 /Serial Number Eligible	生产序号: 501至693,加上699(生产序号666变为699)。 / S/N 501 through 693,plus 699 (s/n 666 changed to 699).
重心包线/C.G Envelope	生产序号501至569无ASC73/73A装置, 零燃油总重与重心关系见图1-3。/ See Figure1-3 for GV Zero Fuel Gross Weight vs. Center of Gravity (S/N 501 through 569 without ASC73/73A) 生产序号570及后续机, 和501至569机装有ASC 73/73A装置, 零燃油总重与重心关系见图1-3A。/See Figure 1-3A for GV Zero Fuel Gross Weight vs. Center of Gravity (S/N 570 and subs, and S/N 501 through 569 with ASC 73/73A)

Figure 1-3: Zero Fuel Gross Weight Center of Gravity Envelope
(For Airplanes Without ASC 73/73A)

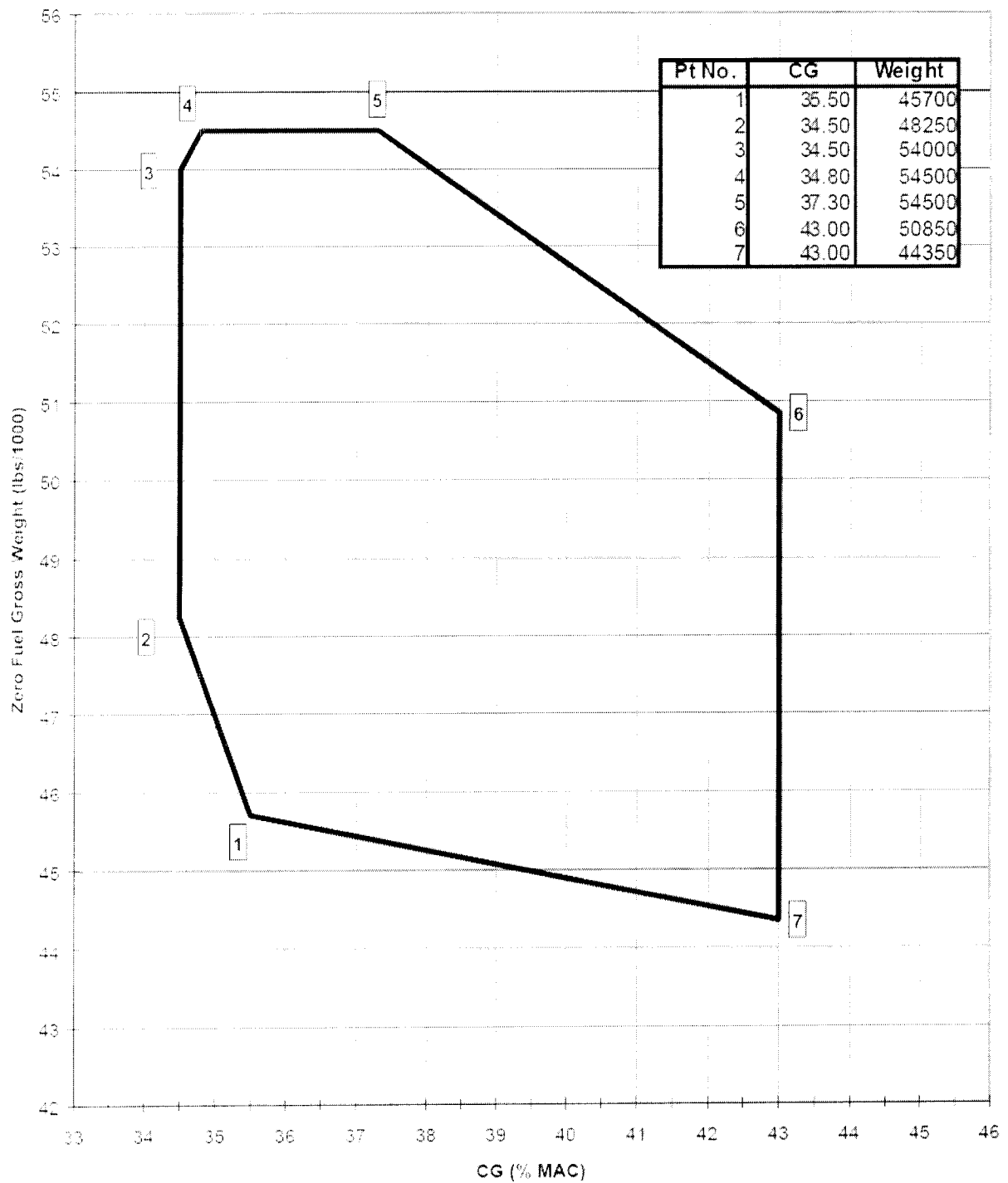
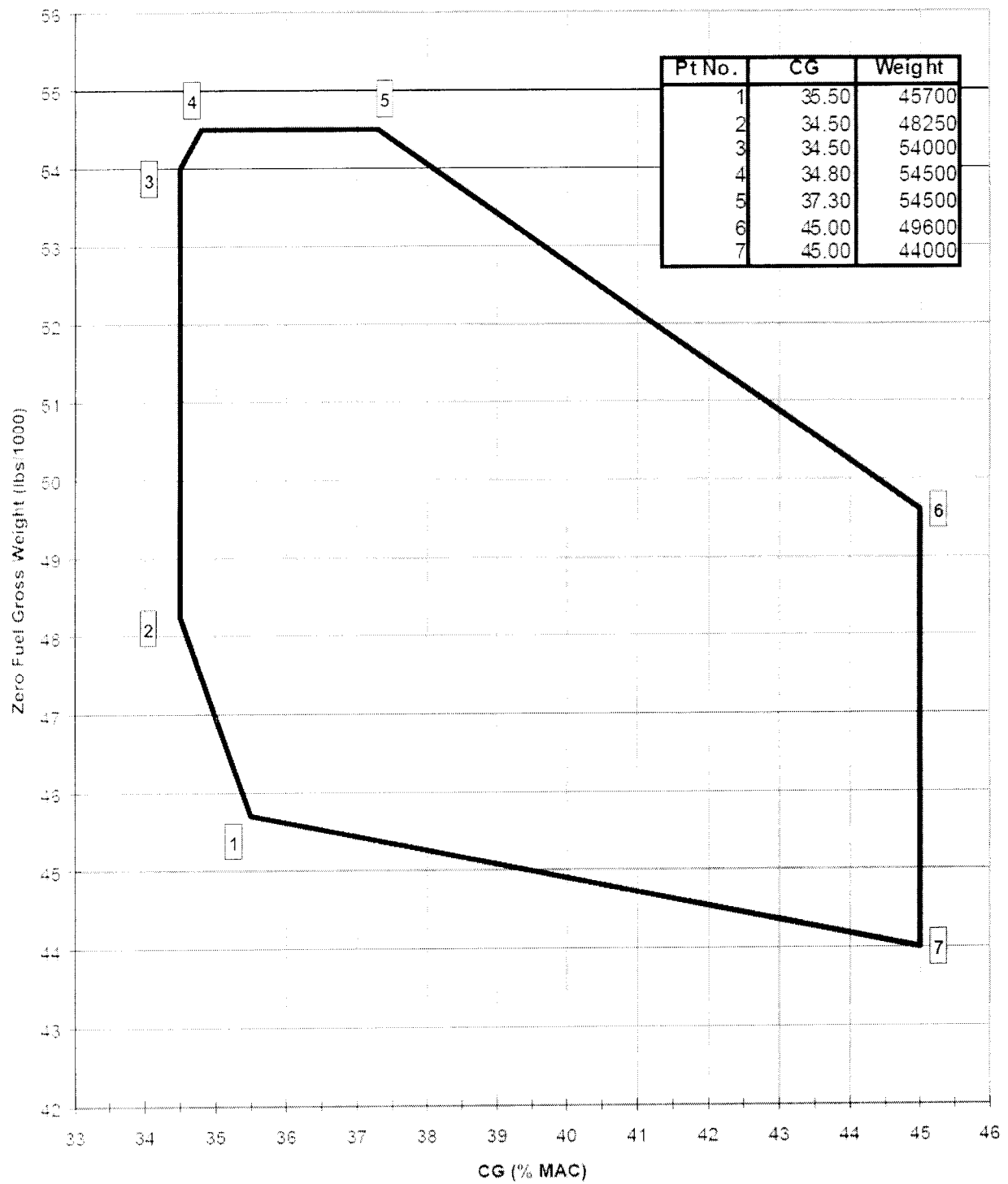


Figure 1-3A: Zero Fuel Gross Weight Center of Gravity Envelope
(For Airplanes With ASC 73/73A)



IV.注释/NOTES

注释1/NOTE 1

重量与平衡/Weight and Balance

(a) 必须为每架飞机提供最新的重量平衡报告, 包括原合格审定空机重量之中所包含的设备清单。重量与平衡报告应包括空机重量、系统燃油、全部滑油和液压油。/ Current weight and balance report, including list of equipment included in certificated empty weight, and loading instructions when necessary, must be provided for each airplane at the time of original certification. The weight and balance report shall include as part of the empty weight, system fuel, total oil and hydraulic fluid.

(b) 系统燃油: 填充所有管路和最临界飞行姿态下燃油箱计量仪器从零至可读点所需的全部燃油重量。/ System fuel: The weight of all fuel required to fill all lines and tanks up to zero/readable fuel point on the fuel gages in the most critical flight attitude.

(i) 生产序号 501 至 549(无 ASC 50)/ S/N 501 through 549 without ASC 50:

不可用燃油*-180磅/Unusable fuel* - 180 lb.

燃油管路-30磅/Fuel lines - 30 lb.

系统燃油-510磅/System fuel - 510 lb.

(ii) 生产序号 550 及后续飞机, 和装有 ASC 50 生产序号 501 至 549/ S/N 550 & subs, and S/N 501 through 549 with ASC 50:

不可用燃油*-189磅/Unusable fuel* - 189 lb.

燃油管路-30磅/Fuel lines - 30 lb.

系统燃油-219磅/System fuel - 219 lb.

*包括不可排放燃油 32磅/*Includes 32 lb. undrainable

(c) 系统滑油: 保留在发动机管路和滑油箱零读数时的滑油重量。/ System oil: The weight of oil remaining in the engine lines and tanks after subtracting the oil in the tanks which is above the "zero gage" levels.

(d) 上述的"不可用"燃油燃油箱中的燃油量, 其包括 FAR 25. 959 定义的油箱截留燃油, 即最临界飞行状态下难以获得的燃油。每一机型的可用燃油在前面的"燃油容积"中给出。"不可用"燃油包含在前面 (a) 节的系统燃油之中, 并不需要分别计算。下述相关资料见 FAA 批准的飞机飞行手册: /The above "unusable" fuel is that amount of fuel in the tanks, including tank trapped fuel as defined in CAR 4b.416 or FAR 25.959, which is unavailable to the engines under critical flight conditions. The usable fuel capacity is given under section entitled "Fuel Capacity" for each airplane model. The "unusable" fuel is included in the system fuel as indicated in (a) above and need not be accounted for separately. See FAA approved Airplane Flight Manual for information concerning the following:

(1) 起飞和飞行中的左右油箱间的最大不平衡/Maximum fuel unbalance between left and right tanks for take-off and in-flight operations.

(2) 为获得相等燃油量, 服役期间内推荐的地面飞机姿态/Recommended airplane ground attitude to obtain equal fuel quantities during servicing.

(3) 燃油添加剂/Fuel additives.

注释2/NOTE 2

退役期限/Retirement Times:

退役期限开列在适用《飞机维修手册》的 05-10-00 章节, 没有 FAA 的工程批准, 所列时限件的期限不得变更。/ Retirement times are listed in Section 05-10-00 of the applicable Airplane Maintenance Manual. The retirement times of these life limited components cannot be altered without FAA Engineering approval.

多种构形飞机的剩余寿命限制起落时限, 请与 Gulfstream 公司的工程部门联系。/ For airplanes having time (landings) in more than one configuration, contact Gulfstream Aerospace Engineering for remaining life limitations.

注释 3/NOTE 3

JP-4 燃油的使用/Use of JP-4 Fuel:

运营者、罗尔斯.罗伊斯公司和适航当局同意的JP-4 (宽馏分)燃油的使用可能导致降低高压燃油泵的寿命。/The use of JP-4 fuel (wide cut) as agreed to by the operator, Rolls-Royce, and the appropriate airworthiness authority may result in a reduction of HP fuel pump life.

注释4/NOTE 4

飞机服务变更(ASC)/Aircraft Service Changes(ASC's):

下面列出的是较为重大的ASC, 其主要涉及重量限制、燃油系统和使用困难修正相关的更改, 并不是GV型飞机完整的ASC清单。/The following are the more significant Aircraft Service Changes (ASC's), dealing primarily with weight limit changes, fuel system changes, and service difficulty corrections. This is not the complete list of ASC's for GV.

飞机服务变更第50号, “GV 后油箱吸油点位置” /Aircraft Service Change (ASC) 50, "Aft Fuel Pickups-Location, GV".

适用生产序号: 501 至548。 /Applicable to S/N 501 through 548

飞机服务变更第73A号, "GV 霍尼韦尔增强冬季合格审定(包括56021 仪表进近(IAC), 45% 重心扩大, 以及更改失速阻挡激活制度)". /Aircraft Service Change (ASC) 73A, "Honeywell Enhancement-Winter Certification, (includes 56021 IAC, 45% CG Expansion, and Revised Stall Barrier Activation Schedule), GV".

适用生产序号:501 至569。 /Applicable to S/N 501 through 569.

飞机服务变更198A “GV辅助动力装置外罩-生产序号514-693&699的隔热屏障安装”。 /Aircraft Service Change (ASC) 198A “GV Auxiliary Power Unit (APU) Enclosure –Thermal Barrier Installation to S/N 514-693 & 699

飞机服务变更197 “GV第4阶段” Aircraft Service Change (ASC) 197 “GV Stage 4”
适用生产序号501-693以及699。 /Applicable to S/N 501-693 including 699

注释5/NOTE 5

驾驶舱视界/ Cockpit Field of View:

G-V型机的驾驶舱前风挡尺寸对于前向视界的审定要求是临界的, 因此, 在未与FAA飞机审定办公室协调前, 不得在遮光罩的顶部安装任何设备。/The cockpit front windshield dimensions for the Model G-V airplanes are critical for forward field of view certification requirements; therefore, no equipment should be installed on top of the glare shield without prior coordination with an FAA Aircraft Certification Office.

注释6/NOTE 6

系统修改/Systems Modifications:

GV机型的综合航电系统使用基于软件的航线可更换单元 (LRU) (该装置分享数字信号传输总线)。对于驾驶舱仪表系统的正确工作来说, 生产交付的GV机型的航电构型是临界的。通过替换不同的LRU的、增加新的LRU或改变LRU的接口而对LRU的软件进行更改会对已审定产品的适航性产生不利影响。因此, 改装者在未与辖区内的FAA航空器审定办公室协调的情况下, 不得对综合航电系统进行更改。/The GV models incorporate integrated avionics systems using software-based line replaceable units (LRU's) which share a digital signal transmission bus. The avionics configuration of the GV as delivered from production, is critical to the proper operation of the cockpit instrumentation system. Modification to the LRU software supplied with the GV replacement of an LRU with a different LRU, addition of new LRU, or alteration of an LRU interface could adversely affect the airworthiness of the certified product. Accordingly, no changes to the integrated avionics system should be made without coordination with the Aircraft Certification Office having jurisdiction over the modifier.

注释7/NOTE7

驾驶舱更改/ Cockpit Modifications:

任何可能影响机组工作量、舱内噪声水平或昼间/夜间照明的驾驶舱构型的更改和变化必须经过FAA合格审定飞行试验驾驶员或飞行标准运行检察员评估。/ Any modification or changes in cockpit configuration which may affect aircrew workload, cockpit noise level or day/night lighting must be evaluated by an FAA Aircraft Certification Flight Test Pilot or Flight Standards Operation Inspector.

注释8/NOTE8

起飞推力的使用/ Use of Takeoff Thrust:

大于 5 分钟（不超过 10 分钟）的起飞推力的使用，仅在发生一台发动机停车或故障期间获得批准。/Use of takeoff thrust for more than five (5) minutes [not to exceed ten (10) minutes] is approved for use only in the event of an inoperative engine due to shutdown or failure.

注释9/NOTE9

更改资料/Information to Modifiers:

影响 GV 型飞机初始合格审定要求的限制方面的更改资料包含在《Gulfstream V 内饰合格审定要求（GV-GER-1242）》文件中。/Information to modifiers on limitations which impact original certification requirements of the Gulfstream GV are contained in Gulfstream Report GV-GER-1242, Gulfstream V Interior Certification Requirements Document.

注释10/NOTE10

航向指示仪表要求/Direction Indicator Requirements:

GV型飞机，以下述方法，通过安装备份数字阅读磁指示系统满足14 CFR25部 25.1303(a)(3)条款关于航向指示器（非稳定磁罗盘）的要求：/Gulfstream Models GV meet 14 CFR part 25.1303(a)(3) requirements for a direction indicator (non-stabilized magnetic compass) by installation of Standby Digital Reading Magnetic Indicator Systems through the following means:

由流量阀驱动备份无线电磁指示器（RMI）系统。

/Standby Radio Magnetic Indicator (RMI) system driven by flux valve

注释11 /Note11

第4阶段噪音/Stage 4 Noise

安装了飞机服务变更ASC197“第4阶段”的湾流GV型飞机(有效序列号501-693& 699)符合14CFR36部至36-28修正案第4阶段噪音要求。证明数据记录在湾流的报告GAC-CR-4058中。/NOTE: Gulfstream model aircraft GV having installed ASC 197 “Stage 4” (Serial Number Effectivity 501-693 including 699) are compliant to 14 CFR Part 36, through amendment 36-28, Stage 4 Noise requirements. Substantiating data is documented in Gulfstream reports GAC-CR-4058.

注释 12/ Note12

飞机型号设计为绿构型，不包括外观油漆、标记标牌和座椅等旅客相关设施。当批准的座位布置和必要的乘客设施按照审定基础加入航空器后，客舱允许载客。/ The type design is “Green” configuration, does not include the external painting, markings and placards, and other passenger facilities such as seats etc. When approved seats arrangement and necessary passenger facilities added to the aircraft according to the certification basis, the cabin compartment is allowed to carry passengers.

第 4 部分/SECTION 4: Gulfstream V-SP

I. 总则/General

- | | |
|--------------------------------------|---|
| 1. 型别/Model: | Gulfstream V-SP |
| 2. 适航类别/Airworthiness Category: | 运输类航空器/Transport Category Aircraft |
| 3. 型号合格证持有人/Type Certificate Holder: | Gulfstream Aerospace Corporation
P.O. Box 2206
Savannah, Georgia 31402-2206 |
| 4. FAA 批准日期/FAA Approved Date: | 2003.08.14/Aug 14, 2003 |
| 5. CAAC 批准日期/CAAC Approved Date: | 2007.11.16/Nov 16, 2007 |

II. 认可审定基础/Validation Certification Basis

CAAC的认可审定基础由FAA的审定基础和CAAC的附加技术条件组成。/

The CAAC validation basis consists of the FAA certification basis and the CAAC additional technical conditions.

1. FAA 的审定基础/FAA Certification Basis

规章/Regulation:

14 CFR 25 部(生效日期: 1965 年2 月1日), 除下列修正案外, 包括修正案25-1 到修正案25-98 /14 CFR FAR Part 25, effective February 1, 1965, including Amendments 25-1 through 25-98, with following exceptions:

所有座椅肩带将替换为经演示符合修正案25-64的 § 25.562(c)(5)和(c)(6)试验要求的肩带。由于特许, 关于 § 25.562(c)(5)和(c)(6)的 § 25.785试验要求的符合性不需要演示。/Shoulder harness on all seats will be in lieu of demonstrated compliance to the test requirements of FAR25.562(c)(5) and (c)(6) per Amendment 25-64. Compliance with the requirements of FAR25.785 in reference to FAR25.562(c)(5) and (c)(6) need not be demonstrated due to this concession.

修正案25-98中FAR25.571的要求仅限于机身和机身变化。飞机结构的其余部分按修正案25-81中的 25.571要求审定。/The requirements of FAR25.571 at Amdt 25-98 are limited to the fuselage and fuselage changes only. The remainder of the aircraft structure is certified to the requirements of 25.571 at Amdt 25-81.

14 CFR 34部, 包括修正案34-1至34-3/14CFR Part 34, including Amendments 34-1 through 34-3.

14 CFR 36部, 包括修正案36-1至36-23 生产序号 5001至5288/14CFR Part 36, including Amendments 36-1 through 36-22. S/N 5001-S/N 5288

14 CFR 36部, 包括修正案36-1 到 36-28 四阶段噪声水平, 生产序号 5289及以后/Part 36, Amendments 36-1 through 36-28. Stage 4, S/N 5289 and subsequent.

选择性水上迫降要求的符合性已确立: 含盖水上迫降要求25.801(包含25.563, 25.807(d)和25.1585(a), 但不包含25.1411)的数据已获批准。运营准则要求应急设备时, 必须演示25.1411和25.1415的条款符合性。Gulfstream公司的报告《水上迫降FAA合格审定的装机要求(No.1159-GER-7)》提供了表明25.1411和 25.1415的条款符合性的可接受方法。/Compliance with the following Optional Ditching Requirements has been established: Data covering ditching requirements of 25.801, including 25.563, 25.807(d) and 25.1585(a) (but excluding 25.1411) are approved. When the operating rules require emergency ditching equipment, compliance with 25.1411 and 25.1415 must be demonstrated. Gulfstream Report 1159-GER-7 entitled "Outfitting Requirements for FAA Certification for Ditching" provides an acceptable means for showing compliance with 25.1411 and 25.1415.

专用条件/Special Conditions:

No.25-180-SC, 增强性目视系统/Enhanced Vision Systems.

No.25-262-SC, HIRF (高强度辐射场)/HIRF (High Intensity Radiated Fields).

No. 25-342-SC, 使用防水涂层替代风挡雨刮/Windshield Coating in Lieu of Wipers

豁免/Exemptions:

No.7946[FAR25.813(e)]. 乘员客舱中间舱门/Mid-Cabin Doors Between Passenger Compartments.

No.8004[FAR25.901(c)]. 不可控高推力失效状态/Uncontrollable High Thrust Failure Conditions.

注释: 美国联邦航空局已决定任何不可控高推力失效状态的发生, 或适用飞机的《维修手册》的

05-50-00 章节中所列出的任何相关原因的故障发生“可能危及飞机的安全运行”，并因此在 FAR 121.703, 125.409 和 135.415 下是值得报告的/NOTE: The FAA has conclude that the occurrence of any uncontrollable high thrust failure condition, or any of the associated causal failures listed in Section 05-50-00 of the applicable airplane Maintenance Manual “may endanger the safe operation of an airplane” and hence are reportable under FAR 121.703, 125.409 and 135.415.

No.10044[FAR25.1447(c)(1)], 15,000英尺乘客氧气设备展开/Passenger Oxygen Equipment Deployed at 15,000 feet

注释：当运行进入或离开着陆场海拔在14,000 和15,000英尺间的机场时，豁免允许乘客氧气面罩在座舱压力高度15,750±250英尺展开。/Note: Exemption permits passenger oxygen mask deployment at cabin pressure altitudes of 15,750±250 feet when operating into and out of airports with landing-field elevations between 14,000 and 15,000 feet.

等效安全/Equivalent Safety Findings:

(1)FAR25.807(g)(2), Gulfstream翼上应急出口窗户，TAD ELOS备忘录
(No.AT5177AT-T-A-2)/Gulfstream Overwing Emergency Exit Windows, TAD ELOS Memo No. AT5177AT-T-A-2.

在乘员为10至19人飞行中，有一位经撤离培训的机组成员是一项附加要求。所需的正、副驾驶员不能服务这一功能，而该位附加的机组成员必须通过关于Gulfstream椭圆应急出口，和指导乘员撤离程序，以防止某位乘员不能通过该椭圆出口致使该出口不能使用的情况发生的最佳撤离方法的培训。依据Gulfstream公司文件(对于G500的运行，为No.G500-OMS-1; 对于G550的运行，为No.G550-OMS-1)，每位承运人必须制定并保持关于该位机组成员的培训大纲，该大纲包含最初的和复训性的课程，和必须保持培训记录以供FAA检查/A crewmember trained in evacuation is an additional required crewmember on all flights of 10 to 19 passengers. The required pilot and co-pilot cannot serve this function. The additional crewmember must be trained in the optimum method for evacuating through the Gulfstream elliptical exits and in procedures for directing passenger flow to prevent someone who does not fit through an elliptical exit from blocking it so that others cannot use it. Each operator must establish and maintain a training program for this additional crewmember (to include an initial and recurrent curriculum) in accordance with Gulfstream Document G500-OMS-1, Revision 1(for G500 operations) or G550-OMS-1, Revision 1(for G550 operations), must keep a record of that training available for inspection by the FAA.

关于飞机特定出口的程序和撤离门构形的简要说明书每次飞行前必须提供给每位乘客。该份简要说明书必须详细说明通过椭圆出口应急撤离的最佳方法。这点取决于应急出口内部结构。/A pre-flight briefing on the configuration specific egress procedures and exits of the airplane must be provided to all passengers before each flight. This briefing must include a detailed explanation of the optimum method for evacuating through the overwing Gulfstream elliptical exits, which is dependant upon the interior configuration inboard of the exit.

(2)FAR25.811(d), 25.812(b),应急出口标记、定位器、和隔框/分隔器符号，TAD ELOS备忘录
(No.AT5177AT-T-C-1)/Emergency Exit Marker, Locator and Bulkhead/Divider Signs, TAD ELOS Memo No.AT5177AT-T-C-1

(3)FAR25.841(b)(6),座舱增压-高高度起飞和着陆运行，TAD ELOS备忘录
(No.AT5177AT-T-S-29)/Cabin Pressurization -High Altitude Takeoff and Landing Operations, TAD ELOS Memo No.AT5177AT-T-S-29

(4)FAR 25.853, 25.869,电气设备可燃性证明，TAD ELOS备忘录(No.AT5177AT-T-A-9)/Flammability Substantiation of Electronic Equipment , TAD ELOS Memo No. AT5177AT-T-A-9

2. CAAC 的附加技术条件

见第一部分 总则。

III. 技术特征和运行限制 /Technical Characteristics and Operational Limitations

除了以下差异外，Gulfstream GV-SP 与 Gulfstream GV 型飞机相同。/The Gulfstream GV-SP is the same as the Gulfstream GV except for the following differences:

- 一套霍尼维尔公司先进的飞行显示系统，以提高飞行机组形势警觉性和操作能力/A Honeywell advanced flight deck display suite to improve flight crew situational awareness and operational capabilities.
- 为了增强航程和经济性能，改进了机身气动力和发动机性能/Airframe aerodynamic improvements,

engine improvements, and operational changes for increased performance, range and economics.

- 向前重新设置客舱主登机门和增设第 7 对弦窗/Cabin main entry door relocated forward and seventh cabin window pair added.
- 为了增大行李舱空间, 外部能见度和舒适性, 改进了客舱/Cabin improvements for increased baggage space, external visibility and comfort.
- 为了可靠性和空间利用, 小的系统编号/Minor system changes for reliability and space utilization.

注释: Gulfstream GV-SP 有两个型别(见注释 5): (1)G550, 等同于 GV-SP;和(2)G500, 减少了燃油容量。
/Note: There are two variants of the GV-SP(see Note 5);(1)The G550, which is identical to the GV-SP, and (2)the G500, which has a reduced fuel capacity.

发动机/Engines:

2 台宝马罗尔斯.罗依斯公司的发动机, 型号: Deutschland BR700-710C4-11, 型号合格证: Nr.6305, 型号认证: VTC0198E。/2 BMW-Rolls Royce Deutschland BR700-710C4-11 (Type Certificate Nr.6305, VTC0198E).

发动机限制/Engine Limits:

稳态推力 (海平面标准大气) /Static Thrust (std. day) S.L.

起飞 (5 分钟) / Takeoff (5min.)	15,385(磅/ lb)
最大连续/ Maximum continuous	14,450 (磅/ lb)

最大允许连续转速/Maximum permissible continuous rotor operating speeds:

N1 (低压压气机/low pressure compressor)

最大起飞(注释 9)/Maximum Takeoff (see Note 9)	(101.1%)	7,513 rpm
最大连续/Maximum Continuous	(101.0%)	7,505 rpm
最大超速(20 秒)/Maximum Overspeed (20 seconds)	(101.5%)	7,542 rpm
反推(30 秒)/Reverse Thrust (30 seconds)	(70%)	5,201 rpm

N2 (高压压气机/high pressure compressor)

最大起飞(注释 9)/Maximum Takeoff (see Note 9)	(99.6%)	15,834rpm
最大连续/Maximum Continuous	(98.9%)	15,723rpm
最大超速(20 秒)/Maximum Overspeed (20 seconds)	(99.8%)	15,866rpm
100% N1 等于每分钟 7,431 转/100% N1 equals 7,431 rpm		
100% N2 等于每分钟 15,898 转/100% N2 equals 15,898 rpm		

最大允许温度/Maximum permissible temperatures (°C):

第一级低压涡轮前的导向叶片处测量的涡轮燃气温度/Turbine gas temp measured at nozzle guide vanes ahead of first low stage pressure turbine:

起飞 (注释 9) /Takeoff (See Note 9)	900°
最大连续/Maximum continuous	860°
开车前最大/Maximum prior to start	150°
最大超温(20 秒)/Maximum over-temperature (20 second limit)	905°
地面启动瞬时最大/Momentary maximum during ground starts	700°
空中开车瞬时最大/Momentary maximum during airstarts (relights)	850°
滑油温度(最小加速至起飞前)/Oil temp (minimum before accelerating for T/O)	+20°

滑油温度(最小启动)/Oil temp (minimum for starting)	-30°
滑油温度(最大)/Oil temp (maximum)	160°

海平面燃油低压泵燃油进口温度/Fuel inlet temperature to low pressure pump at S.L.	54°
--	-----

高压泵燃油出口温度(不限制最大)/Fuel outlet temp to engine high pressure pump(unrestricted maximum)	158°
燃油出口温度(15 分钟限制)/Fuel inlet temperature (15 min. limit)	165°

燃油进口温度(最低)/Fuel inlet temperature(minimum)

-40°

引气量/Bleed Extraction:

EPR=P50/P2: 分别从第 5 级和第 8 级的引气量涉及核心机进气质量流量, W26:
 风扇的引气量涉及风扇进气质量流量, W1A。/EPR=P50/P2: The amounts of bleed
 extraction from stages 5 and 8, respectively, are related to the core entry mass flow,
 W26. The amount of fan bleed extraction is related to the fan entry mass flow, W1A.

动力范围 /Power Range	正常流量/Normal Flow(%)			最大流量/Maximum Flow(%)		
	第 5 级 /Stage 5	第 8 级 /Stage 8	风扇 /Fan	第 5 级 /Stage 5	第 8 级 /Stage 8	风扇 /Fan
慢车至 1.06EPR/ Idle to 1.06 EPR	*****	7.7	*****	3.0	12.0	0.6
1.06 至 1.3EPR/ 1.06 to 1.3 EPR	4.3	4.1	0.2	8.2	7.8	1.6
1.3EPR 以上/ Above 1.3 EPR	4.2	****	0.4	8.3	*****	1.8

辅助动力装置(APU)

/Auxiliary Power Unit (APU)

1 台爱立信型号为: RE220{GV}/1 Allied Signal-Model RE220{GV}

额定输出轴功率/Rated output shaft power 62 hp(连续/continuous)
 70hp(5 分钟/minutes)
 101hp(5 秒/seconds)

最大发电机输出轴转速/Maximum Generator Output Shaft Speed 12,000 rpm

最大排气温度(额定输出)/Maximum Exhaust Gas Temp(EGT) at Rated Output

1241°F (T₂=140°F)

最大允许转速/Maximum Allowable Rotor Speed

48,320 rpm(T₂<115°F)

最大允许排气温度/Maximum Allowable EGT

启动: 1922°F (1050°C) [在 T₂<-20°F (-29°C), P₂>6.75 psia 的情况下]/Starting: 1922°F (1050°C) [for T₂<-20°F (-29°C), P₂>6.75 psia]运行: 1350°F (732°C) [在 T₂=140°F (60°C)的情况下]/Operating: 1350°F (732°C) [for T₂=140°F (60°C)]

燃油/Fuel:

煤油/Kerosene
 美国/American ASTM D 1655-92, Jet A
 ASTM D 1655-92, Jet A-1
 MIL-DTL-83133, Grade JP-8
 GSTU 320.00149943.007-97(RT Type)
 GSTU 320.00149943.011-99(TS-1, Type)
 英国/British DEF.STAN.91-87
 DEF.STAN.91-91
 加拿大/Canadian CAN/CGSB-3.23
 中国/Chinese GB 6537-2006, 包括以下按照附录 A 中限定浓
 度的燃油添加剂: / GB 6537-2006 including the
 following fuel additives limited to the
 concentrations stated in Annex A of GB
 6537-2006:
 1. 抗静电剂: Stadis 450/ Static Dissipater
 additive:Stadis 450
 2. 抗氧化剂 2,6- 二叔丁基对甲基苯酚/
 Antioxidant: 2,6-ditertiary-butyl-4-methyl-

phenol

3. 防冰剂: 乙二醇甲醚或二乙二醇甲醚/ Icing Inhibitor: Ethylene Glycol Monomethyl Ether or Diethylene Glycol Monomethyl Ether

4. 金属钝化剂: N,N'-二水杨基-1,2-丙烷二胺/ Metal Deactivator: N,N'-disalicylidene 1,2-propanediamine

以下燃油添加剂未批准在本型别的湾流飞机上使用: 抗静电剂 T1502 以及抗磨剂 T1601 和 T1602。/ The following Chinese fuel additives are not approved for use on this Gulfstream aircraft model: Static Dissipater additive T1502 and antifriction additives T1601 and T1602. 独联体/CIS GOST 10227-86, TS-1 & RT 法国/French DCSEA 134/A

JP-4 宽馏分类型 (见注释 3)
/Wide Cut Type (See NOTE 3)

美国/American

ASTM D6615

MIL-DTL-5624(JP4 Grade)

英国/British

Def.Stan.91-88

加拿大/Canadian

CAN/CGSB-3.22-2001

独联体/CIS

GOST 10277-86(Grade T-2)

JP-5 高闪点类型/High Flash-Point Type

美国/American

MIL-DTL-5624 (JP5 Grade)

英国/British

Def.Stan.91-88

加拿大/Canadian

3-GP-3

法国/French

DCSEA 144/A

燃油应符合所列规范, 及其后继版次, 依照最新批准的《飞机飞行手册》。/Fuel shall conform to the specification as listed or to subsequent revisions found in the latest approved Airplane Flight Manual (AFM).

高闪点燃油资料详见《飞机飞行手册》。/See AFM for information on high flash point fuels.

滑油牌号/Oil Type:

发动机和辅助动力装置使用下列经批准的滑油:

/ The following oils are approved for use in the engine and APU:

5 Centistoke Type Oils:

Aeroshell Turbine Oil ATO 500

Aeroshell Turbine Oil ATO 560

BP Turbo Oil 2197

Castrol Aero 5000

Exxon Turbo Oil 2197

Exxon Turbo Oil 2380

Mobil Jet Oil II

Mobil Jet Oil 254

Mobil Jet Oil 291

TurboNycoil 600

Royco 500

Royco 560

注释: 辅助动力装置不推荐使用混合滑油。

/Note: Mixing of oils is not recommended for APU.

注释: 不推荐使用混合滑油, 但各个牌号制作实质可能是混合物。当翻新已获批准关于粘性和等级的标准时, 上述牌号的滑油已经批准。

/NOTE: Mixing of oils is not recommended but brands may be mixed if operationally essential. Oils of the above brands, when reclaimed to the approved standard for viscosity and grade, are approved for use.

滑油应符合最新批准的《飞机飞行手册》中所列的或期后版次规定的规范。

/ Oil shall conform to the specification as listed or to subsequent revisions in the latest approved Airplane Flight Manual.

空速限制 (校准空速):

/Airspeed Limits (CAS):

Vmo/Mmo (最大使用速度/Maximum operating speed)	(mph)	(KCAS)
见飞行手册高度/马赫数使用包线/See AFM for Altitude/Mach Flight Operating Envelope		
Va (机动速度/Maneuvering speed)	237mph	206knots
Vfe (襟翼放下速度/Flap extended speed)(Flaps down to 39°)	196mph	170 knots
Vfe (襟翼放下速度/Flap extended speed) (Flaps down to 20°)	253mph	220 knots
Vfe (襟翼放下速度/Flap extended speed) (Flaps down to 10°)	288mph	250 knots
Vlo (起落架收放速度/Landing gear operation)	259mph	225 knots
Vle (起落架伸态速度/Landing gear extended)	288mph	250 knots
Vmcg (地面最小可操纵速度/ Minimum control ground speed)	123mph	107 knots
Vmca (空中最小可操纵速度/ Minimum control air speed,takeoff)	129mph	112 knots

最大重量:

/Maximum Weight (lb.):

飞机序号/Aircraft S/N	最大零燃油重量/ Max. Zero Fuel	最大停机重量/ Max. Ramp	最大起飞重量/ Max. Take-Off	最大着陆重量/ Max. Landing
5001 及后续 (包括 G550) /5001&Subs(also G550)	54,500	91,400	91,000	75,300
5001 及后续(带 ASC 10)(G500) /5001&Subs with ASC 10 (G500)	54,500	85,500	85,100	75,300

燃油容积

/Fuel Capacity

重力或压力加油/Gravity or Pressure Fueling:

	GV-SP(G550)	GV-SP(G500)
总量/Total	41,489 lb.	35,389 lb.
可用/Usable	41,300 lb.	35,200 lb.
力臂/Arm*	+558.5	-551.9

燃油重量基于每加仑 6.75 磅/Fuel weights based upon fuel density of 6.75 lb. per gal.

*力臂地面静态(-1.5°FRL)/Arm based on ground static attitude(-1.5°FRL)

滑油容积

/Oil Capacity

单台发动机全部滑油容积/Total engine oil capacity (each engine):

Hispano-Suiza 齿轮箱/ Hispano-Suiza Gearbox:

25.7(磅/lb)/27.4(美制品脱/U.S.pints)

可用滑油/Usable Oil:

10.4(磅/lb)/11.0(美制品脱/U.S.pints)

(力臂/Arm=+785.00)

重量基于每加仑 7.5 磅/Oil weights based upon oil density of 7.5 lb. per gal.

系统滑油见注释 1/See NOTE 1 for system oil.

	所表明滑油容积仅为发动机的滑油箱容积。 /Capacities shown are for engine oil tankage only. 每台发动机的总滑油外加 9.5 磅/Total engine oil is an additional 9.5 lb. per engine. 辅助动力装置的滑油量为 9.00 磅/9.6 美制品脱。/APU oil 9.00 lb./9.6 U.S. Pints (力臂/Arm = +782.5)
最大使用高度 / Maximum Operating Altitude	51,000 英尺/51,000 feet
基准/Datum	对于重量与平衡的目的, 基准零点位于前机轮舱飞机中心线的基点后45英寸处。 /For weight and balance purposes, the zero datum is 45 inches aft of the jig point at the centerline of the airplane in the nose wheel well 4.
水平措施 /Levelling Means	纵向: 机头, 右侧纵梁站位61.5 & 72.5 舱门处耳状物/Longitudinal: Lugs at right nose well door longeron STA 61.5 & 72.5 横向:前起机轮舱站位44.5 处隔框背面的耳状物/Lateral: Lugs on rear face of bulkhead STA 44.5 in nose wheel well.
平均气动弦/M.A.C.	171.19英寸(平均气动弦前缘位于机身524.74站位处)。 / 171.19 in. (L.E. of M.A.C. = Fuselage Station 524.74).
最小飞行机组/ Minimum Crew	2 人(正驾驶和副驾驶)。/2 Persons (Pilot and Copilot).
最大乘员/ Maximum Occupants	19 人, 受限于应急出口要求。(见注释16) /19 - limited by emergency exit requirements. (See Note 16)
行李或货物限制/ Baggage or Cargo Limitations	<u>客舱地板/Cabin Floor</u> <u>主客舱地板装载限制, 生产序号自5001 起/Main cabin floor loading limitations, GV-SP S/N 5001 and subsequent:</u> 主客舱地板, 站位从205 至426。在全部地板宽度上, 静负载货物装载最大均布载荷应为每平方英尺49磅; 中间下部20 英寸干净走廊上最大均布载荷应为每平方英尺98 磅。除了中间走廊外(此处最大静负载应为187 磅), 每一孤立平方英尺地板上的货物装载, 与另一货物装载间隔至少30英寸, 最大静负载应为200磅。 /Main cabin floor fuselage station 205 to 426: Dead weight cargo loading maximum uniform load over entire width of floor shall be 49 lb/ft². Maximum uniform load with a 20 inch clear aisle down the middle shall be 98 lb/ft². Maximum dead weight cargo load on one isolated square foot, at least 30 inches from another load, shall be 200 lb., except in the middle aisle where it shall be 187 lb. 主客舱地板, 站位从426 至632。静负载货物装载最大均布载荷应为每平方英尺100 磅。/Main cabin floor fuselage station 426 to 632: Dead weight cargo loading maximum uniform loading shall be 100 lb/ft². 主客舱地板, 站位从632 至684。静负载货物装载最大均布载荷应为每平方英尺65磅。/ Main cabin floor fuselage station 632 to 684: Maximum uniform loading shall be 65 lb/ft². <u>最大行李, 生产序号自5001 起/ Maximum baggage, GV-SP S/N 5001 and subsequent:</u> 机身后舱, 站位从684.00 至气密端框。/ Compartment aft of fuselage station 684.00

to pressure bulkhead:

容量—2500 磅, 设备处尽量少放。/ Capacity - 2500 lb., less any weight added in equipment bay

最大地板载荷, 每平方英尺65 磅。/ Maximum floor loading - 65 lb/ft²

装有批准的烟雾探测系统。/Approved smoke detection system required

操纵面运动量

/Control Surface Movements

升降舵/Elevators 上偏/Up 24° (+1/2°, -1/2°) 下偏/Down 13° (+0°, -1°)

升降舵调整片

/Elevator trim tab 上偏/Up 8° (+1°, -1°) 下偏/Down 22° (+1°, -1°)

方向舵/Rudder 右偏/Right 22° - 25° 左偏/Left 22° - 25°

方向舵配平

/Rudder trim 右偏/Right 7.5° (+1°, -1°) 左偏/Left 7.5° (+1°, -1°)

注释: 对于航向配平如需使用驾驶配平旋钮和脚蹬再设置0位, 方向舵配平可最大弥补(+3°, -3°)。详见飞行控制系统装备程序报告: GV-MS-51/Note:

Rudder trim may be offset (+3°, -3°) maximum as required for directional trim with the cockpit trim knob and rudder pedals re-referenced to zero. See FCS Rigging Procedures Report GV-MS-51.

副翼/Ailerons 上偏/Up 11° (+1°, -2°) 下偏/Down 11° (+1°, -2°)

副翼配平

/Aileron trim 上偏/Up 15° (+4°, -4°) 下偏/Down 15° (+4°, -4°)

襟翼/Flaps

下偏/Down 39° (+1°, -1°)

减速板(右&左)/Speed brakes (Right & Left)

4块外制动板(飞行扰流板)

/4 Outb'd Panels (Flight Spoilers) 上偏/Up 30° (+2°, -8°)

2块内制动板(地面扰流板)

/2 Inb'd Panels (Ground Spoilers) 上偏/Up 30° (+2°, -5°)

地面扰流板(全部)/Ground spoilers (all) 上偏/Up 55° (+4°, -5°)

水平安定面运动范围-前缘运动

/Horizontal stabilizer travel range - Leading Edge Travel:

正常运行 -1.5° (+1/4°, -1/4°) 至 -4.6° (+1/4°, -1/4°)/

/Normal Operation -1.5° (+1/4°, -1/4°) to -4.6° (+1/4°, -1/4°)

应急稳定模式 -1.25° (+1/4°, -1/4°) 至 -4.6° (+1/4°, -1/4°)

/Emerg. Stab. Mode -1.25° (+1/4°, -1/4°) to -4.6° (+1/4°, -1/4°)

生产基础

/Production Basis

生产许可证编号7SO (1978年9月1日颁发, 2003年8月14日重新颁发), 生产序号5001及后续。/Production Certificate No. 7SO (issued September 1, 1978 and reissued August 14, 2003), S/N 5001 and subsequent.

设备/Equipment

为了满足审定要求, 适用的适航要求(见审定基础)规定的基本所需设备必须安装在飞机上。批准的设备清单见《图解零件目录(IPC)》中, 另外, 还需下述设备项目: /The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. See the Illustrated Parts Catalog (IPC) for an approved equipment listing. In addition, the following items of equipment are required:

(a) 当飞机的装备用于装载旅客时, 必须安装FAA批准的旅客氧气系统。/When an airplane is outfitted to carry passengers, an FAA approved passenger oxygen system must be installed.

(b) FAA批准的《飞机飞行手册》。/FAA Approved Airplane Flight Manual.

标牌/Placards

所需的标牌列在对应的《飞机飞行手册》的第11章中。/The required placards are listed in Chapter 11 of the appropriate Airplane Maintenance Manual.

其它运行限制/Other
Operating Limitations

飞机必须依照最新批准版次的《飞机飞行手册》运行。/ The aircraft must be operated in accordance with the latest FAA approved revision to the Airplane Flight Manual.

•GV-SP 型飞机飞行手册编号 为: GAC-AC-G550-OPS-0001。/ The Model GV-SP Airplane Flight Manual is GAC-AC-G550-OPS-0001.

•GV-SP (G550) 型飞机飞行手册编号为: GAC-AC-G550-OPS-0001。/ The Model GV-SP (G550) Airplane Flight Manual is GAC-AC-G550-OPS-0001.

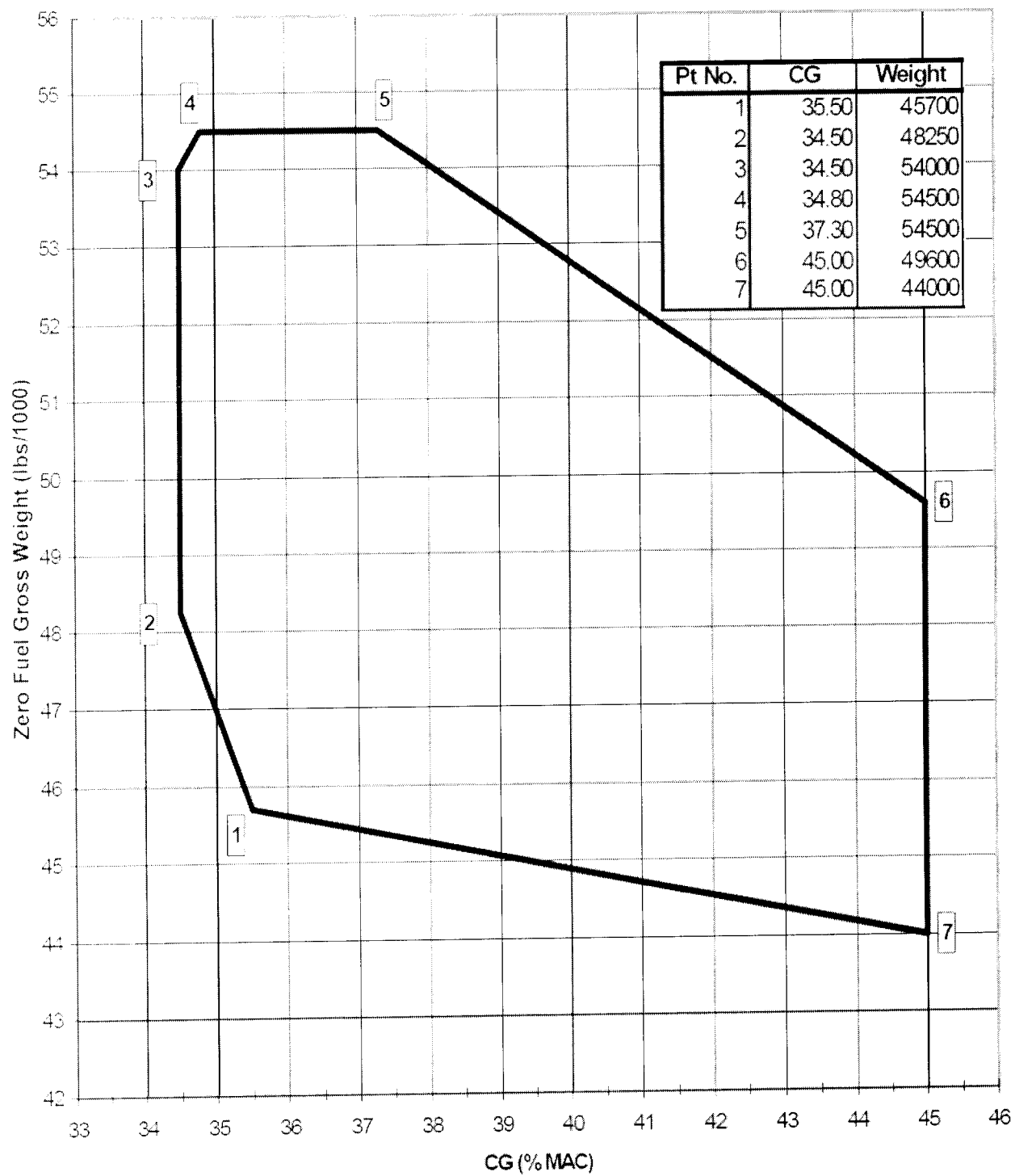
•GV-SP (G500) 型飞机飞行手册编号为: GAC-AC-G500-OPS-0001。/ The Model GV-SP (G500) Airplane Flight Manual is GAC-AC-G500-OPS-0001.

制造序号

/Serial Number Eligible 生产序号: 5001起及后续
/ S/N 5001 and subsequent.

重心包线/C.G Envelope GV-SP型飞机零燃油总重与重心图见下页(生产序号: 5001起及后续)
/See figure on next page for GV-SP Zero Fuel Gross Weight vs. Center of Gravity
(S/N 5001 and subsequent)

GV-SP Zero Fuel Gross Weight Center of Gravity Envelope
(For S/N 5001 and Subsequent)



IV. 注释/NOTES

注释1/NOTE 1

重量与平衡/Weight and Balance

(a) 必须为每架飞机提供最新的重量平衡报告, 包括原合格审定空机重量之中所包含的设备清单。重量与平衡报告应包括空机重量、系统燃油、全部滑油和液压油。/ Current weight and balance report, including list of equipment included in certificated empty weight, and loading instructions when necessary, must be provided for each airplane at the time of original certification. The weight and balance report shall include as part of the empty weight, system fuel, total oil and hydraulic fluid.

(b) 系统燃油: 填充所有管路和最临界飞行姿态下燃油箱计量仪器从零至可读点所需的全部燃油重量。/ System fuel: The weight of all fuel required to fill all lines and tanks up to zero/readable fuel point on the fuel gages in the most critical flight attitude.

生产序号从5001 起/ S/N 5001 and subsequent

不可用燃油*-189磅/Unusable fuel* - 189 lb.

燃油管路-30磅/Fuel lines - 30 lb.

系统燃油-219磅/System fuel - 219 lb.

*包括不可排放燃油 32磅/*Includes 32 lb. undrainable

(c) 系统滑油: 保留在发动机管路和滑油箱零读数时的滑油重量。/ System oil: The weight of oil remaining in the engine lines and tanks after subtracting the oil in the tanks which is above the "zero gage" levels.

(d) 上述的"不可用"燃油燃油箱中的燃油量, 其包括FAR 25. 959 定义的油箱截留燃油, 即最临界飞行状态下难以获得的燃油。每一机型的可用燃油在前面的"燃油容积"中给出。"不可用"燃油包含在前面 (a) 节的系统燃油之中, 并不需要分别计算。下述相关资料见FAA 批准的飞机飞行手册: /The above "unusable" fuel is that amount of fuel in the tanks, including tank trapped fuel as defined in CAR 4b.416 or FAR 25.959, which is unavailable to the engines under critical flight conditions. The usable fuel capacity is given under section entitled "Fuel Capacity" for each airplane model. The "unusable" fuel is included in the system fuel as indicated in (a) above and need not be accounted for separately. See FAA approved Airplane Flight Manual for information concerning the following:

(1) 起飞和飞行中的左右油箱间的最大不平衡/Maximum fuel unbalance between left and right tanks for take-off and in-flight operations.

(2) 为获得相等燃油量, 服役期间内推荐的地面飞机姿态/Recommended airplane ground attitude to obtain equal fuel quantities during servicing.

(3) 燃油添加剂/Fuel additives.

注释2/NOTE 2

退役期限/Retirement Times :

退役期限开列在适用《飞机维修手册》的05-10-00 章节, 没有FAA 的工程批准, 所列时限件的期限不得变更。/Retirement times are listed in Section 05-10-00 of the applicable Airplane Maintenance Manual. The retirement times of these life limited components cannot be altered without FAA Engineering approval.

多种构形飞机的剩余寿命限制起落时限, 请与Gulfstream 公司的工程部门联系。/For airplanes having time (landings) in more than one configuration, contact Gulfstream Aerospace Engineering for remaining life limitations.

注释 3/NOTE 3

JP-4 燃油的使用/Use of JP-4 Fuel:

运营者、罗尔斯·罗伊斯公司和适航当局同意的JP -4 (宽馏分)燃油的使用可能导致降低高压燃油泵的寿命。/The use of JP-4 fuel (wide cut) as agreed to by the operator, Rolls-Royce, and the appropriate airworthiness authority may result in a reduction of HP fuel pump life.

注释4/NOTE 4

飞机服务变更(ASC)/Aircraft Service Changes(ASC's):

下面列出的是较为重大的ASC, 其主要涉及重量限制、燃油系统和使用困难修正相关的更改, 并不是GV-SP型飞机完整的ASC清单。/The following are the more significant Aircraft Service Changes (ASC's), dealing primarily with weight limit changes, fuel system changes, and service difficulty corrections. This is not the complete list of ASC's for GV-SP.

飞机服务变更第10号, "G500 修订"指明GV-SP(G500)型飞机。这些飞机将依据《飞机飞行手册(GAC-AC-G500-OPS-0001)》运行/Aircraft Service Change (ASC) 10, "G500 Modification" will designate those aircraft as Model GV-SP (G500). Those aircraft shall be operated under Airplane Flight Manual GAC-AC-G500-OPS-0001.

适用生产序号:自5001起。/Applicable to S/N 5001 and subsequent.

飞机服务变更第11号, "G550 修订"指明G-IV (G550)型飞机。这些飞机将依据《飞机飞行手册(GAC-AC-G550-OPS-0001)》运行。/Aircraft Service Change (ASC) 11, "G550 Modification" will designate those aircraft as Model GV-SP (G550). Those aircraft shall be operated under Airplane Flight Manual GAC-AC-G550-OPS-0001.

适用生产序号:自5001起。/Applicable to S/N 5001 and subsequent.

飞机服务变更090A“GVSP辅助动力装置外罩-生产序号5001-5249(不包括5011、5225和5245)的隔热屏障安装”。/Aircraft Service Change (ASC) 090A “GVSP Auxiliary Power Unit (APU) Enclosure –Thermal Barrier Installation to S/N 5001-5249 excluding 5011, 5225, and 5245

飞机服务变更089“GVSP第4阶段”, 适用生产序号5001-5288。/Aircraft Service Change (ASC) 089 “GVSP Stage 4” Applicable to S/N 5001-5288.

注释5/NOTE 5

改变飞机标识/ Alternate Aircraft Identifications:

假设关联的飞机服务变更(ASC)合并的情况下, 下面提供了批准的改变飞机标识资料:/The following provides approved alternate aircraft identification information assuming incorporation of the associated (listed) ASC:

序列号自5001起, 按照GAC飞机服务变更第11号改进时, GV-SP型机具有GV-SP (G550)型机的资格。/Model GV-SP, serial number 5001 and subsequent are eligible for identification as Model GV-SP (G550) when modified in accordance with GAC Aircraft Service Change (ASC) 11.

序列号自5001起, 按照GAC飞机服务变更第10号改进时, GV-SP型机具有GV-SP (G500)型机的资格。/Model GV-SP, serial number 5001 and subsequent are eligible for identification as Model GV-SP (G500) when modified in accordance with GAC Aircraft Service Change (ASC) 10.

注释6/NOTE 6

驾驶舱视界/ Cockpit Field of View:

GV-SP型机的驾驶舱前风挡尺寸对于前向视界的审定要求是临界的, 因此, 在未与FAA飞机审定办公室协调前, 不得在遮光罩的顶部安装任何设备。/The cockpit front windshield dimensions for the Model GV-SP airplanes are critical for forward field of view certification requirements; therefore, no equipment should be installed on top of the glare shield without prior coordination with an FAA Aircraft Certification Office.

注释7/NOTE 7

系统修改/Systems Modifications:

GV-SP机型的综合航电系统使用基于软件的航线可更换单元(LRU)(该装置分享数字信号传输总线)。对于驾驶舱仪表系统的正确工作来说, 生产交付的GV-SP机型的航电构型是临界的。通过替换不同的LRU的、增加新的LRU或改变LRU

的接口而对 LRU 的软件进行更改会对已审定产品的适航性产生不利影响。因此, 改装者在未与辖区内的 FAA 航空器审定办公室协调的情况下, 不得对综合航电系统进行更改。/The GV-SP models incorporate integrated avionics systems using software-based line replaceable units (LRU's) which share a digital signal transmission bus. The avionics configuration of the GV-SP as delivered from production, is critical to the proper operation of the cockpit instrumentation system. Modification to the LRU software supplied with the GV-SP replacement of an LRU with a different LRU, addition of new LRU, or alteration of an LRU interface could adversely affect the airworthiness of the certified product. Accordingly, no changes to the integrated avionics system should be made without coordination with the Aircraft Certification Office having jurisdiction over the modifier.

注释8/NOTE8

驾驶舱更改/ Cockpit Modifications:

任何可能影响机组工作量、舱内噪声水平或昼间/夜间照明的驾驶舱构型的更改和变化必须经过FAA合格审定飞行试验驾驶员或飞行标准运行督察员评估。/ Any modification or changes in cockpit configuration which may affect aircrew workload, cockpit noise level or day/night lighting must be evaluated by an FAA Aircraft Certification Flight Test Pilot or Flight Standards Operation Inspector.

注释9/NOTE9

起飞推力的使用/ Use of Takeoff Thrust:

大于 5 分钟 (不超过 10 分钟) 的起飞推力的使用, 仅在发生一台发动机停车或故障期间获得批准。/Use of takeoff thrust for more than five (5) minutes [not to exceed ten (10) minutes] is approved for use only in the event of an inoperative engine due to shutdown or failure.

注释10/NOTE10

更改资料/Information to Modifiers:

影响 GV-SP 型飞机初始合格审定要求的限制方面的更改资料包含在《Gulfstream GV-SP 内饰合格审定要求 (GVSP-GER-6044)》文件中。/ Information to modifiers on limitations which impact original certification requirements of the Gulfstream GV-SP are contained in Gulfstream Report GVSP-GER-6044, Gulfstream GV-SP Interior Certification Requirements Document.

注释11/NOTE11

减小垂直飞行间隔/RVSM:

根据经批准的型号设计, 生产序号5001起的GV-SP型飞机 (即G550型和G500型), 被认为符合《FAA 91-减小垂直飞行间隔(RVSM)文件》的减小垂直飞行间隔 (RVSM)的技术要求; 然而, 在减小垂直飞行间隔空间内的飞行运行批准还必须经主管的飞行标准组织批准。/Per the approved Type Design, GV-SP S/N 5001 and subsequent (i.e., G550 and G500 model aircraft) are considered to be compliant with the Reduced Vertical Separation Minima (RVSM) technical requirements contained in FAA Document 91-RVSM; however, operational approval to fly in RVSM airspace must still be granted by the cognizant Flight Standards organization.

注释12/NOTE12

驾驶舱视频显示器/Cockpit Video Display:

GV-SP 型飞机的航空电子结构体系包含了驾驶舱飞行员正前方直视位置显示装置上的分类视频输入多重复合显示能力。由于这些显示器影响机组工作量, 对已批准的视频输入源的变化 (包括附加新的视频源或能力) 需要 FAA 的专项批准 (包括专项确认和 FAA 航空器合格审定办公室同意)。/The avionics architecture of the GV-SP models includes a capability to display multiple, assorted video inputs on the cockpit display units positioned directly in front of the pilots. Because these displays affect crew workload, changes to the approved video input sources (including the addition of new video sources or capabilities) will require a specific FAA approval, including specific acknowledgement and concurrence from an FAA Aircraft Certification Office.

注释13/NOTE13

航向指示仪表要求/Direction Indicator Requirements:

GV-SP型飞机，以下述方法，通过安装备份数字阅读磁指示系统满足14 CFR25部 25.1303(a)(3)条款关于航向指示器（非稳定磁罗盘）的要求：/Gulfstream Models GV-SP meet 14 CFR part 25.1303(a)(3) requirements for a direction indicator (non-stabilized magnetic compass) by installation of Standby Digital Reading Magnetic Indicator Systems through the following means:

由磁力计驱动集成式备份仪表系统（ISIS）和电子方位距离指示器/ Integrated Standby Instrument System (ISIS) and Electronic Bearing Distance Indicator (EBDI) system driven by magnetometer

注释14/NOTE 14

APU限制/APU Limitations

对于序列号5205、5218、5220至5224、5226至5244以及 5246至5249的GV-SP系列（G550/G500）飞机，下面注明的湾流飞机飞行手册补充页必须附在2003年8月14日的G550飞机飞行手册或2003年12月05日的G500飞机飞行手册上。如果其中任意飞机后续装备ASC090A，或装备ASC090加上090Am1，则将不再需要这些飞机飞行手册补充页。/For GV-SP series (G550/G500) airplane serial numbers 5205, 5218, 5220 through 5224, 5226 through 5244, and 5246 through 5249, the Gulfstream Airplane Flight Manual Supplements noted below must be attached to the G550 AFM dated 14 August 2003, or the G500 AFM dated 05 December 2003. If any of these aircraft is subsequently outfitted with ASC 090A, or with ASC 090 plus 090Am1, then it will no longer require the AFMS:

序列号 S/N	飞行手册补充页 AFMS #	序列号 S/N	飞行手册补充页 AFMS #
5205	G550-2009-02 or G550-2009-05-5205	5235	G550-2009-05-5235
5218	G550-2009-05-5218	5236	G550-2009-05-5236
5220	G550-2009-02 or G550-2009-05-5220	5237	G550-2009-05-5237
5221	G550-2009-02 or G550-2009-05-5221	5238	G550-2009-05-5238
5222	G550-2009-02 or G550-2009-05-5222	5239	G550-2009-05-5239
5223	G550-2009-02 or G550-2009-05-5223	5240	G550-2009-05-5240
5224	G550-2009-05-5224	5241	G550-2009-05-5241
5226	G550-2009-02 or G550-2009-05-5226	5242	G550-2009-05-5242
5227	G550-2009-02 or G550-2009-05-5227	5243	G550-2009-05-5243
5228	G550-2009-02 or G550-2009-05-5228	5244	G550-2009-05-5244
5229	G550-2009-02 or G550-2009-05-5229	5246	G550-2009-05-5246
5230	G550-2009-02 or G550-2009-05-5230	5247	G550-2009-05-5247
5231	G550-2009-05-5231	5248	G550-2009-05-5248
5232	G550-2009-05-5232	5249	G550-2009-05-5249
5233	G550-2009-05-5233	5246	G550-2009-05-5246
5234	G550-2009-05-5234		

注释15 /Note15

第4阶段噪音/Stage 4 Noise

安装了飞机服务变更ASC089“第4阶段”的湾流GV-SP型飞机（有效序列号5001-5288）符合14CFR36部至36-28修正案第4阶段噪音要求。湾流GV-SP型飞机（有效序列号5289及后续）通过生产线贯彻符合14CFR 36部至36-28修正案第4阶段噪音要求。证明数据记录在湾流的报告GVSP-GER-5866中。/NOTE: Gulfstream model aircraft GV having installed ASC 197 “Stage 4” (Serial Number Effectivity 5001-5288) are compliant to 14 CFR Part 36, through amendment 36-28, Stage 4 Noise requirements. GV-SP (serial number effectivity 5289 and subsequent) at production cut-in are compliant to 14 CFR Part 36, through amendment 36-28, Stage 4 Noise requirements. Substantiating data is documented in Gulfstream reports GVSP-GER-5866.

注释16/ Note16

飞机型号设计为绿构型，不包括外观油漆、标记标牌和座椅等旅客相关设施。当批准的座位布置和必要的乘客设施按照审定基础加入航空器后，客舱允许载客。/ The type design is “Green” configuration, does not include the external painting, markings and placards, and other passenger facilities such as seats etc. When approved seats arrangement and necessary passenger facilities added to the aircraft according to the certification basis, the cabin compartment is allowed to carry passengers.

第 5 部分/SECTION 5: Gulfstream IV-X

I. 总则/General

- | | |
|--------------------------------------|---|
| 1. 型别/Model: | Gulfstream IV |
| 2. 适航类别/Airworthiness Category: | 运输类航空器/Transport Category Aircraft |
| 3. 型号合格证持有人/Type Certificate Holder: | Gulfstream Aerospace Corporation
P.O. Box 2206
Savannah, Georgia 31402-2206 |
| 4. FAA 批准日期/FAA Approved Date: | 2004.08.12/ Aug 12, 2004 |
| 5. CAAC 批准日期/CAAC Approved Date: | 2007.11.16/Nov 16, 2007 |

II. 认可审定基础/Validation Certification Basis

CAAC的认可审定基础由FAA的审定基础和CAAC的附加技术条件组成。

/The CAAC validation basis consists of the FAA certification basis and the CAAC additional technical conditions.

1. FAA 的审定基础/FAA Certification Basis

规章/Regulation:

14 CFR 25 部(生效日期: 1965 年2 月1日), 包括修正案25-1 到修正案25-101, 除了下述章节外/ 14 CFR Part 25, effective February 1, 1965, including Amendments 25-1 through 25-101 with the exceptions listed below::

章节/Section	标题/Title	修正案/Amendment
25.21 (e)	符合性证明/Proof of compliance.	25-7
25.305	强度与变形/Strength and deformation.	25-54, 25-86**
25.321	飞行载荷-总则/Flight loads - General.	25-23, 25-86**
25.333	飞行机动包线/Flight maneuvering envelope.	25-0, 25-86**
25.335(b)	设计空速(速度裕度)/Design airspeeds (speed margin).	25-23
25.341	突风和紊流载荷/Gust and turbulence loads.	25-0, 25-86**
25.343	设计燃油和滑油载重/Design fuel and oil loads.	25-18, 25-86**
25.365	增压舱载荷/Pressurized compartment loads.	25-54, 25-87**
25.373	速度控制装置/Speed control devices.	25-0, 25-86**
25.391	操纵面载荷-总则/Control surface loads - General.	25-0, 25-86**
25.427	非对称载荷/Unsymmetrical loads.	25-0, 25-86**
25.445	辅助气动力面/Auxiliary aerodynamic surfaces.	25-0, 25-86**
25.459	特殊装置/Special devices.	25-0*
25.491	起飞滑跑/Take off run	25-0, 25-91**
25.561	应急着陆条件/Emergency landing conditions.	25-23, 25-64(座椅/seats) 25-91(新结构 /new structure)**
25.571	损伤容限和疲劳/Damage tolerance and fatigue	25-54(机翼和尾翼 /wing and empennage)
	结构评估/evaluation of structure.	25-96(机身变化 /fuselage changes)**
25.677(c)	配平系统/Trim systems	25-0
25.693	关节接头/Joints	25-0*
25.695	动力推进和动力操纵系统 /Power-boost and power-operated control system	25-0
25.807	应急出口/Emergency exits	25-55*
25.807(c)(2),(d)(4)	应急出口/Emergency exits	25-15*

25.813 (a)(b)(c)(d)(e)(f)	应急出口通路/Emergency exit access	25-46*
25.841	增压座舱/Pressurized cabins	25-38, 25-87**
25.857	货舱等级/Cargo compartment classification	25-32*
25.858	货舱或行李舱烟雾和火警探测系统 /Cargo or baggage compartment smoke or fire detection systems.	25-54*
25.963	燃油箱/Fuel Tanks	25-40*
25.973	燃油箱加油接头/Fuel tank filler connection	25-40*
25.1013	滑油箱/Oil tanks	25-36*
25.1447	分氧装置设置的规定 /Equipment standards for oxygen dispensing units	25-41, 25-87**
25.1517	颠簸气流速度/Rough air speed, VRA	25-86(新章节 /new paragraph-NA)*
25.1557	其它标牌和配重/Miscellaneous markings and pounds	25-38*

*这些系统与Gulfstream IV 基本型并无变化，因此这些章节仍保留原来的审定基础并未采用后继修正案。修正案25-0就是1965年2月1日颁布的FAR25部原版本。/These systems have no changes from the basic GIV model; therefore the paragraphs remain at the original GIV certification basis and the later amendment was not adopted. Amendment 25-0 is the original published version of Part 25, February 1, 1965.

**未更改结构保留所列前一修正案的符合性，新的或更改的结构则为后一修正案的符合性。
/Unmodified structure remains in compliance with the earlier amendment listed. New or modified structure is in compliance with the later amendment level listed.

34部，包括修正案36-3/Part 34, Amendments 36-3.

36部，包括修正案36-24 生产序号 4001至4200/Part 36, Amendments 36-24 S/N 4001-4200.

36部，包括修正案36-1 到 36-28 四阶段噪声水平，生产序号 4201及以后/Part 36, Amendments 36-1 through 36-28. Stage 4, S/N 4201 and subsequent.

所有座椅肩带将替换为经演示符合修正案25-64的 § 25.562 (c) (5) 和(c) (6) 试验要求的肩带。由于特许，关于 § 25.562 (c) (5)和(c) (6) 的 § 25.785 试验要求的符合性并不需要演示。这些规定适用于单个或多个，向前、向后或和侧座乘员的座椅系统。/Shoulder harness on all seats will be in lieu of demonstrated compliance to the test requirements of §25.562(c)(5) and (c)(6) per Amendment 25-64. Compliance to the test requirements of §25.785 in reference to §25.562(c)(5) and (c)(6) need not be demonstrated due to this concession. These provisions are acceptable for single or multiple occupant seating systems which are forward, aft, or side facing.

选择性水上迫降要求的符合性已确立：涵盖水上迫降要求25.801(包含25.563, 25.807 (d) 和25.1585 (a)，但不包含25.1411)的数据已获批准。营运规则要求应急设备时，必须演示25.1411和 25.1415的条款符合性。Gulfstream 公司的报告《水上迫降FAA合格审定的装机要求(No. 1159-GER-7)》提供了表明25.1411 和25.1415 的条款符合性的可接受方法。/Compliance with the following Optional Ditching Requirements has been established: Data covering ditching requirements of 25.801, including 25.563, 25.807 (d) and 25.1585 (a) (but excluding 25.1411) are approved. When the operating rules require emergency ditching equipment, compliance with 25.1411 and 25.1415 must be demonstrated. Gulfstream Report 1159-GER-7 entitled "Outfitting Requirements for FAA Certification for Ditching" provides an acceptable means for showing compliance with 25.1411 and 25.1415.

修正案25-46给出的 § 25.813 (e) 不包含在审定基础中。/FAR 25.813(e) at Amendment 25-46 is not included in the certification basis.

专用条件/Special Conditions:

No. 25-262-SC, HIRF (高强度辐射场/High Intensity Radiated Fields).

No. 25-180-SC, 增强型目视系统/Enhanced Vision System (EVS).

No. 25-258-SC, 系统和结构的交互作用/Interaction of Systems and Structure.

No. 25-342-SC, 使用防水涂层替代风挡雨刮/Windshield Coating in Lieu of Wipers

豁免/Exemptions:

No. 8142 [FAR 25.901(c)], 不可控高推力失效状态/Uncontrolled High Thrust Failure Condition.

注释:美国联邦航空局已决定任何不可控高推力失效状态的发生,或适用飞机的《维修手册》的05-50-00章节所列出的任何相关原因的故障发生"可能危及飞机的安全运行",并因此在FAR 121.703、125.409 和135.415是值得报告的。/NOTE: The FAA has concluded that the occurrence of any uncontrollable high thrust failure condition, or any of the associated causal failures listed in Section 05-50-00 of the applicable airplane Maintenance Manual "may endanger the safe operation of an airplane" and hence are reportable under FAR 121.703, 125.409, and 135.415.

No. 10044 [FAR 25.1447(c)(1)], 旅客氧气设备在15,000英尺展开/Passenger Oxygen Equipment Deployed at 15,000 feet

注释:当飞机进入或离开高度在14,000和15,000英尺之间的高原机场时,本豁免允许旅客氧气面罩展开的座舱压力高度为15,750 ± 250英尺/NOTE: Exemption permits passenger oxygen mask deployment at cabin pressure altitudes of 15,750 ± 250 feet when operating into and out of airports with landing-field elevations between 14,000 and 15,000 feet.

等效安全/Equivalent Safety Findings:

(1) FAR 25.807, 具有水平主轴的椭圆翼上应急门, TAD ELOS备忘录(No. AT5080AT-T-A-2)/FAR 25.807, Elliptical Overwing Emergency Exits with a Horizontal Major Axis, TAD ELOS Memo No. AT5080AT-T-A-2.

(2) FAR 25.841 (b) (6), 座舱增压-高高度起飞和着陆机场, TAD ELOS 备忘录(No. AT5177AT-T-S-29)/Cabin Pressurization - High Altitude Takeoff and Landing Field Elevations, TAD ELOS Memo No. AT5177AT-T-S-29.

(3) FAR 25.811 (d) & 25.812 (b), 定位器、标记和隔框/分割器符号, TAD ELOS 备忘录(No. AT5177A-T-T-C-1)/Locator, Marker, and Bulkhead/Divider Signs, TAD ELOS Memo. No. AT5177AT-T-C-1.

(4) FAR 25.853, 25.869, 电气设备可燃性证明, TAD ELOS 备忘录(No. AT5177AT-T-A-9)/Flammability Substantiation for Electrical Equipment, TAD ELOS Memo No. AT5177AT-T-A-9.

(5) FAR 25.933, 飞行中临界反推, TAD ELOS 备忘录(No. AT5080AT-T-P-1)/Flight Critical Thrust Reverser, TAD ELOS Memo No. AT5080AT-T-P-1.

2. CAAC 的附加技术条件

见第一部分 总则。

III. 技术特征和运行限制 /Technical Characteristics and Operational Limitations

除了以下差异外, Gulfstream GIV-X 与 Gulfstream GIV 型飞机相同。/The Gulfstream GIV-X is the same as the Gulfstream GIV except for the following differences:

- 一套霍尼韦尔公司先进的飞行显示系统(与 Gulfstream GV-SP 型飞机相同), 以提高飞行机组形势警觉性和操作能力/A Honeywell advanced flight deck display suite (common with the GV-SP) to improve flight crew situational awareness and operational capabilities.
- 与 Gulfstream GV-SP 型飞机相同的机头/Airframe nose common with the GV-SP.
- 为了增加航程和商载, 改进了机身气动力和发动机性能/Airframe aerodynamic improvements and engine improvements for increased range and payload.
- 客舱主舱门后移与机身加长 12 英寸为一体/Cabin main entry door relocated aft and fuselage 12 inch extension incorporated.
- Tay 611 型发动机替换为增装了 FADEC 的 Tay 611-8C 型发动机/Tay 611 engine replaced with derivative Tay 611-8C. Added engine FADEC.
- 重新设计了反推、短舱和挂架/Redesigned thrust reverser, nacelle and pylon.
- 系统改进/System improvements
 - 发电机(与 Gulfstream GV-SP 型飞机相同)/Electrical power generation (common with GV-SP)
 - 双套数字客舱温度控制与压调(与 Gulfstream GV-SP 型飞机相同)/Dual digital cabin temperature control and pressurization (common with GV-SP)
 - 前起落架(与 Gulfstream GV-SP 型飞机相同)/Nose landing gear (common with GV-SP)
 - 更换了霍尼韦尔 36-150 型 APU/Replaced APU with Honeywell 36-150 APU.

- 重新设计了襟翼/稳定器作动数字控制系统/Redesigned flap/stab actuation system with digital control
- 重新设计了主起机轮和刹车/Redesigned main landing gear wheels and brakes.
- 增加了飞控系统极偏保护系统/Added flight control system hard-over protection system.

注释: Gulfstream GIV-X 有两个型别(见注释 5): (1) G450, 等同于 GIV-X; 和(2) G350, 减少了燃油容量。/NOTE: There are two variants of the GIV-X (see Note 5): (1) The G450, which is identical to the GIV-X, and (2) the G350, which has a reduced fuel capacity.

发动机/Engines:

2 台罗尔斯.罗伊斯公司的发动机, 型号: TayMark611-8C, 型号合格证: E25NE, 型号认证: VTC0199E。

2 Rolls Royce Tay Mark 611-8C (Type Certificate E25NE, VTC0199E).

发动机限制/Engine Limits:

稳态推力 (海平面标准大气) /Static Thrust (std. day) S.L.

额定起飞 (见注释 9) /Rated Takeoff (See Note 9) 13,850 lb.

额定最大连续/Rated Maximum continuous 12,420 lb.

最大允许连续转速/Maximum permissible continuous rotor operating speeds:

N1 (低压压气机/low compressor) (95.5%) 8,015 rpm

N2 (高压压气机/high compressor) (97.5%) 12,172 rpm

最大允许温度/Maximum permissible temperatures (°C):

第一级低压涡轮前的导向叶片处测量的涡轮燃气温度/Turbine gas temp measured at nozzle guide vanes ahead of first low stage pressure turbine:

起飞 (见注释 9) /Takeoff (See Note 9) 800°

最大连续/Maximum continuous 715°

地面启动瞬时最大/Momentary maximum during ground starts 700°

空中开车瞬时最大/Momentary maximum during airstarts (relights) 780°

最大超温(20 秒)/Maximum over-temperature (20 second limit) 820°

滑油温度(最小启动)/Oil temp (minimum for starting) -40°

滑油温度(最大启动)/Oil temp (maximum) 105°

滑油温度(15 分钟限制)/Oil temp (15 minute limit) 120°

高压泵燃油进口温度/Fuel inlet temp to engine high pressure pump 90°

燃油进口温度(15 分钟限制)/Fuel inlet temperature (15 min. limit) 120°

最大允许引气量/Maximum Permissible Air Bleed Extraction

第 7 级高压引气/7th Stage HPC Bleed 7.0 lb./sec

第 12 级高压引气(最大连续及以下)
/12th Stage HPC Bleed (max continuous and below) 6.9 lb./sec

高压全部引气 (最大连续及以下) 10.0 lb./sec

/HPC Bleed Total (max continuous and below)

风扇引气/Fan Bleed 10.5 lb./sec

辅助动力装置(APU)

/Auxiliary Power Unit (APU)

Honeywell 36-150

最大允许排气温度/Maximum permissible exhaust gas temperature-

启动期间直到 60%转速/Up to 60% rpm during start 985°C

启动期间 60% - 100%/ 60% - 100% during start 985°C 至 757°C

(线性减少/linear decrease)

运转/Running	757°C
最大转速-所有状态/Maximum rotor speed - all conditions:	107%
APU 交流发电载荷(额定)/APU alternator load rating	40Kva
APU 额定输出轴功率/APU rated output shaft power	61hp
(环境温度 103°F, 引气量每分钟 62.4 磅的情况下/with 62.4lb. per min. bleed air and ambient temp of 103°F)	

燃油/Fuel:

	<u>煤油/Kerosene</u>
美国/American	ASTM D 1655, Jet A ASTM D 1655, Jet A-1 MIL-T-83133, Grade JP8* MIL-DTL-83133, Grade JP8
英国/British	DEF STAN 91-87 DEF STAN 91-91
加拿大/Canadian	CAN/CGSB-3.23
中国/Chinese	GB 6537-2006, 包括以下按照附录 A 中限定浓度的燃油添加剂: / GB 6537-2006 including the following fuel additives limited to the concentrations stated in Annex A of GB 6537-2006: 1. 抗静电剂: Stadis 450 / Static Dissipater additive:Stadis 450 2. 抗氧化剂 2,6-二叔丁基对甲基苯酚 / Antioxidant: 2,6-ditertiary-butyl-4-methyl-phenol 3. 防冰剂: 乙二醇甲醚或二乙二醇甲醚/ Icing Inhibitor: Ethylene Glycol Monomethyl Ether or Diethylene Glycol Monomethyl Ether 4. 金属钝化剂: N,N'-二水杨基-1,2-丙烷二胺 / Metal Deactivator: N,N'-disalicylidene 1,2-propanediamine 以下燃油添加剂未批准在本型别的湾流飞机上使用: 抗静电剂 T1502 以及抗磨剂 T1601 和 T1602 。 / The following Chinese fuel additives are not approved for use on this Gulfstream aircraft model: Static Dissipater additive T1502 and antifriction additives T1601 and T1602.独联体/CIS GOST 10227-86, T-1, TS-1 & RT
法国/French	DCSEA 134
	<u>JP-4 宽馏分型 (见注释 3)</u> <u>/JP-4 Wide Cut Type (See NOTE 3)</u>
美国/American	ASTM D 1655, Jet B ASTM D6615 MIL-PRF-5624 Grade JP4* MIL-DTL-5624, Grade JP4
英国/British	DEF STAN 91-86
加拿大/Canadian	CAN/CGSB-3.22
	<u>JP-5 高闪点型/JP-5 High Flash - Point Type</u>
美国/American	MIL-DTL-5624, Grade JP5 MIL-PRF-5624 Grade JP5
英国/British	Def. Stan. 91-88
加拿大/Canadian	CAN 3-GP-3.24
法国/French	DCSEA 144

燃油应符合所列规范，及其后继版次，依照最新批准的《飞机飞行手册》。

/Fuel shall conform to the specification as listed or to subsequent revisions found in the latest approved Airplane Flight Manual.

*带燃油系统结冰抑制剂。最大体积浓度为 0.15%。DERD 2451 版本 2 和 3 MIL-I-27686E，或任何精确等效的标准。/*With fuel system icing inhibitor (FSII). Maximum concentration 0.15% by volume. DERD 2451 Issue 2 and 3 MIL-I-27686E. or any exact equivalent.

滑油/Oil:

发动机和辅助动力装置使用下列经批准的滑油：

/ The following oils are approved for use in the engine and APU:

3 Centistoke (I 型/Type I)

Aeroshell Turbo Oil 390

Castrol 325 Engine Oil

ESSO/Exxon Turbo 2389

5 Centistoke (II 型/Type II)

Esso/Exxon Turbo Oil 2380

Mobil Jet Oil II

Mobil Jet Oil 254

Castrol Aero 5000

Aeroshell Turbine Oil 500

Royco Turbine oil 500

注释：辅助动力装置不推荐使用混合滑油。

/Note: Mixing of oils is not recommended for APU.

注释：不推荐使用混合滑油，但各个牌号制作实质可能是混合物。当翻新罗尔斯·罗伊斯公司已获批准关于粘性和等级的标准时，上述牌号的滑油已经批准。

/NOTE: Mixing of oils is not recommended but brands may be mixed if operationally essential. Oils of the above brands, when reclaimed to the approved Rolls-Royce standard for viscosity and grade, are approved for use.

滑油应符合所列的规范或最新批准的《飞机飞行手册》中规定的后续版本。

/ Oil shall conform to the specification as listed or to subsequent revisions in the latest approved Airplane Flight Manual.

空速限制（校准空速）：

/Airspeed Limits (CAS):

Vmo/Mmo (最大使用速度/Maximum operating)

见AFM的高度/马赫数使用包线

/See AFM for Altitude/Mach Flight Operating Envelope

Va	(机动/Maneuvering)	235 mph	206 knots
Vfe	(襟翼放下到39°/Flaps down to 39°)	207 mph	180knots
	(襟翼放下到20°/Flaps down to 20°)	253 mph	220 knots
	(襟翼放下到10°/Flaps down to 10°)	288 mph	250 knots
Vlo	(起落架收放速度)		
	/Landing gear operation)	259 mph	225 knots
Vle	(起落架伸态速度)		
	/Landing gear extended)	288 mph	250 knots
Vmcg	(地面最小可操纵速度)/	125 mph	109 knots
	(Minimum control ground)		
Vmca	(空中最小可操纵速度，起飞)	122 mph	106 knots

V_{mc1} / (Minimum control air, takeoff)
 (空中最小可操纵速度, 着陆) 114 mph 99 knots
 / (Minimum control air, landing)

最大重量:

/Maximum Weight (lb.):

飞机序号/Aircraft S/N	最大零燃油重量/ Max. Zero Fuel	最大停机重量/ Max. Ramp	最大起飞重量/ Max. Take-Off	最大着陆重量/ Max. Landing
4001 至 4239 (带 ASC 005 (G450))/4001 to 4239 with ASC 005 (G450)	49,000	74,300	73,900	66,000
4001 及后续(带 ASC 004 改装)(G350)/ 4001 and subs with ASC 004 (G350)	49,000	71,300	70,900	66,000
4001 至 4239(带 ASC 016 改装)(仅 G450)/ 4001 to 4239 with ASC 016 (G450 only)	49,000	75,000	74,600	66,000
4240 及后续 (带 ASC 005 (G450)) /4240 and subs with ASC 005 (G450)	49,000	75,000	74,600	66,000

燃油容积

/Fuel Capacity

重力加油或压力加油/Gravity or Pressure Fueling:

GIV-X (G450)

总量/Total 29,605 lb

可用/Usable 29,500 lb.

力臂/Arm* +430.4

燃油重量基于每加仑 6.75 磅/Fuel weights based upon fuel density of 6.75 lb. per gal.

*力臂地面静态(-1.5°FRL)/ *Arm based on ground static altitude (-1.5°FRL)

滑油容积

/Oil Capacity

单台发动机全部滑油容积 13.5 磅/14.4 美制品脱。

/Total engine oil capacity 13.5 lb./14.4 U.S. pints (each engine).

单台发动机可用滑油容积 10.1 磅/10.8 美制品脱。

/Usable engine oil capacity 10.1 lb./10.8 U.S. pints (each engine)

(力臂/Arm = +582.00)

重量基于每加仑 7.5 磅/Oil weights based upon oil density of 7.5 lb. per gal.

所表明的滑油容积仅为发动机的滑油箱容积。

/Capacities shown are for engine oil tankage only.

每台发动机的总滑油为 27 磅/28.8 美制品脱。

/Total engine oil is 27 lb/28.8 U.S. pints per engine.

系统滑油见注释 1/See NOTE 1 for system oil.

辅助动力装置的可用滑油量为 5.7 磅/6.0 美制品脱。

/Usable APU oil 5.7 lb./6.0 U.S. Pints

(力臂/Arm = +620.0)

最大使用高度

/Maximum Operating

45,000 英尺/45,000 feet

Altitude	
基准/ Datum	对于重量与平衡的目的, 基准零点位于前机轮舱飞机中心线的基点后27英寸处, 或机身206站位前的206英寸处。 /For weight and balance purposes, the zero datum is 27 inches aft of the jig point at the centerline of the airplane in the nose wheel well or 206 inches forward of Fuselage Station 206.
水平措施 /Levelling Means	纵向: 机头, 右侧纵梁站位61.5 & 72.5 舱门处耳状物/Longitudinal: Lugs at right nose well door longeron STA 61.5 & 72.5 横向: 前起机轮舱站位44.5 处隔框背面的耳状物/Lateral: Lugs on rear face of bulkhead STA 44.5 in nose wheel well.
平均气动弦/M.A.C	166.22英寸(平均气动弦前缘位于机身387.7站位处)。 / 166.22 in. (L.E. of M.A.C. = Fuselage Station 387.7).
最小飞行机组/ Minimum Crew	2 人(正驾驶和副驾驶)。/2 Persons (Pilot and Copilot).
最大乘员/ Maximum Occupants	19 人, 受限于是应急出口要求。(见注释16) /19 - limited by emergency exit requirements. (See Note 16)
行李或货物限制/ Baggage or Cargo Limitations	<u>客舱地板/Cabin Floor</u> <u>主客舱地板装载限制, 生产序号自4001 起/Main cabin floor loading limitations, GIV-X S/N 4001 and subsequent:</u> 主客舱地板。机翼上部增压区前地板(站位从145 至321.5): 在全部地板宽度上, 静负载货物装载最大均布载荷应为每平方英尺49磅; 中间下部20 英寸干净走廊上最大均布载应为每平方英尺93磅。除了中间 走廊外(此处最大静负载应为184 磅), 每一孤立平方英尺地板上的货物装载与另一货物装载间隔至少30 英寸, 最大静负载应为260磅。机翼上部增压区前地板(站位从321.5 至498): 静负载货物装载最大均布载荷应为每平方英尺100 磅。机翼上部增压区后地板(站位从498 至539.75): 静负载货物装载最大均布载荷应为每平方英尺65磅。/ Main cabin floor forward of the overwing pressure floor (Fuselage station 145 to 321.5): Dead weight cargo loading maximum uniform load over entire width of floor is 49 pounds per square foot. Maximum uniform load with a 20-inch clear aisle down the middle is 93 pounds per square foot. Maximum dead weight load on one isolated square foot, at least 30 inches from another load, is 260 pounds except in the center aisle where it is 184 pounds. Overwing pressure floor (Fuselage station 321.5 to 498): Dead weight cargo maximum uniform loading is 100 pounds per square foot. Main cabin floor structure aft of the overwing pressure floor (Fuselage station 498 to 539.75): Dead weight cargo maximum uniform loading is 65 pounds per square foot. <u>最大行李, 生产序号自4001 起/ Maximum baggage, GIV-X S/N 4001 and subsequent:</u> 机身后舱, 站位从539.75至596 (气密端框)。/ Compartment aft of fuselage station 539.75 to 596 (flat pressure bulkhead). 容量— 2000 磅, 设备处尽量少放。/Capacity - 2000 lb. less any weight added in equipment bay. 最大地板载荷, 每平方英尺65 磅。/ Maximum floor loading - 65 lb./sq. ft. 重心— 站位565 处2000 磅。如进一步后移, 所需容量相应减少。/ C.G. - STA 565 for 2000 lb. If further aft, corresponding reduction in capacity required.

操纵面运动量

/Control Surface Movements

升降舵/Elevators	上偏/Up	24°(+1/2°, -1/2°)	下偏/Down	13°(+0°, -1°)
升降舵调整片				
/Elevator trim tab	上偏/Up	8° (+1°, -1°)	下偏/Down	22° (+1°, -1°)
方向舵/Rudder	右偏/Right	22°-25°	左偏/Left	22°- 25°
方向舵配平				
/Rudder trim	右偏/Right	7.5°(+1°, -1°)	左偏/Left	7.5°(+1°, -1°)
副翼/Ailerons	上偏/Up	10°(+1°, -1°)	下偏/Down	10° (+1°, -1°)
副翼配平				
/Aileron trim	上偏/Up	15°(+4°, -4°)	下偏/Down	15°(+4°, -4°)
襟翼Flaps			下偏/Down	39°(+0°, -1 1/2°)
减速板(右&左)/Speed brakes (Right & Left)				
4块外制动板(飞行扰流板)				
/4 Outb'd Panels (Flight Spoilers)			上偏/Up	26° (+2°, -5°)
2块内制动板(地面扰流板)				
/2 Inb'd Panels (Ground Spoilers)			上偏/Up	26° (+2°, -2°)
地面扰流板(全部)/Ground spoilers (all)			上偏/Up	55° (+4°, -3°)

水平安定面运动范围—前缘下偏-1°(+1/4°, -1/4°)至 -4.6°(+1/4°, -1/4°)/Horizontal stabilizer travel range - Leading edge down: -1° (+1/4°, -1/4°) to -4.6° (+1/4°, -1/4°)

生产基础
/Production Basis

生产许可证编号7SO (1978年9月1日颁发, 2004年11月16日重新颁发), 生产序号4001及后续。/Production Certificate No. 7SO (issued September 1, 1978 and reissued November 16, 2004), S/N 4001 and subsequent.

设备/ Equipment

为了满足审定要求, 适用的适航要求(见审定基础)规定的基本所需设备必须安装在飞机上。批准的设备清单见《图解零件目录(IPC)》中, 另外, 还需下述设备项目: /The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. See the Illustrated Parts Catalog (IPC) for an approved equipment listing. In addition, the following items of equipment are required:
(a) 当飞机的装备用于装载旅客时, 必须安装FAA批准的旅客氧气系统。/When an airplane is outfitted to carry passengers, an FAA approved passenger oxygen system must be installed.
(b) FAA批准的《飞机飞行手册》。/FAA Approved Airplane Flight Manual.

标牌/Placards

所需的标牌列在对应的《飞机飞行手册》的第11章中。/The required placards are listed in Chapter 11 of the appropriate Airplane Maintenance Manual.

其它运行限制/Other
Operating Limitations

飞机必须依照最新批准版次的《飞机飞行手册》运行。/ The aircraft must be operated in accordance with the latest FAA approved revision to the Airplane Flight Manual.

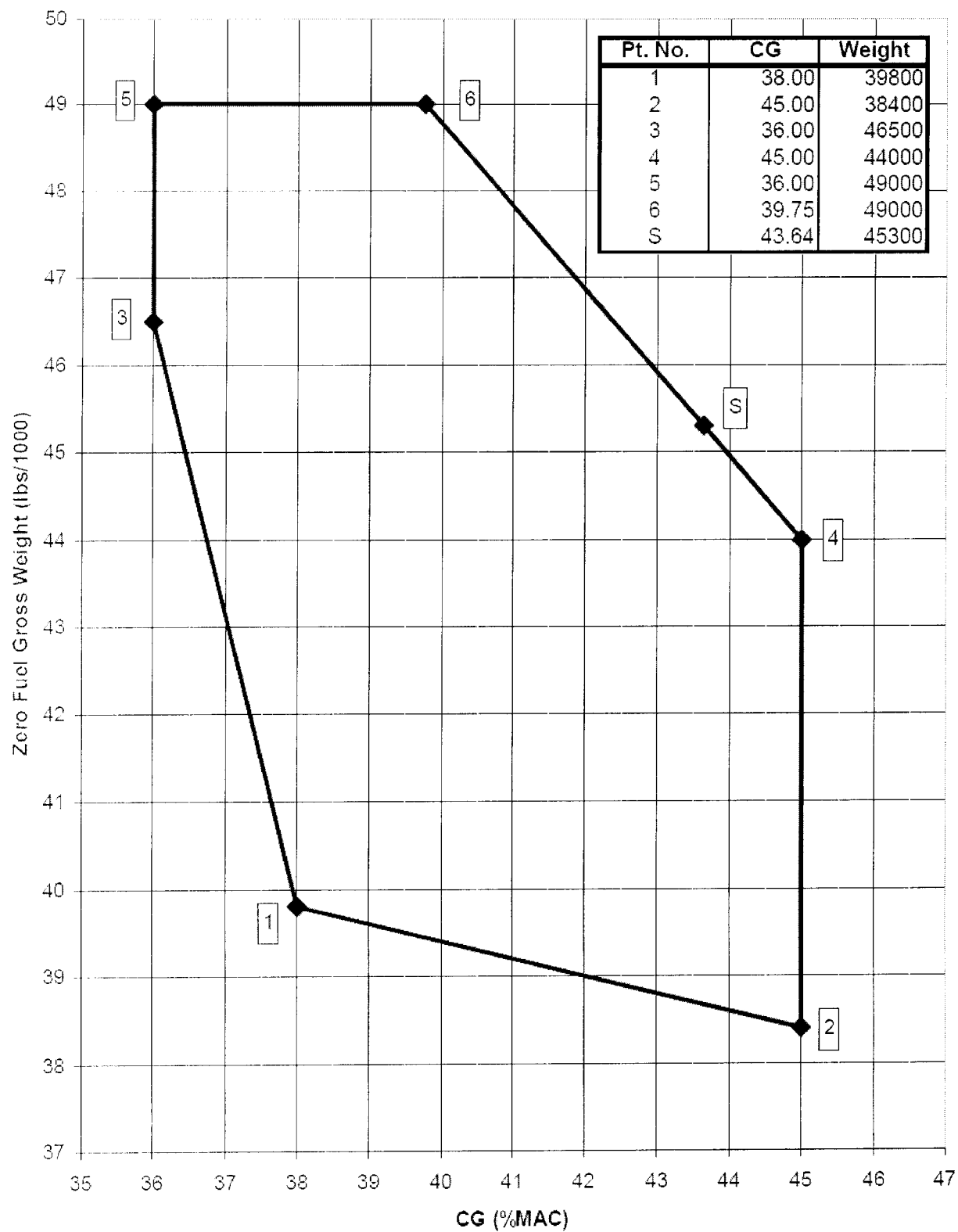
- GIV-X 型飞机飞行手册编号为: GAC-AC-G450-OPS-0001。/ The Model GIV-X Airplane Flight Manual is GAC-AC-G450-OPS-0001.
- GIV-X (G450) 型飞机飞行手册编号为: GAC-AC-G450-OPS-0001。/ The Model GIV-X (G450) Airplane Flight Manual is GAC-AC-G450-OPS-0001.
- GIV-X (G350) 型飞机飞行手册编号为: GAC-AC-G350-OPS-0001。/ The Model GIV-X (G350) Airplane Flight Manual is GAC-AC-G350-OPS-0001.

制造序号

/Serial No. Eligible 生产序号: 4001及后续/ S/N 4001and subsequent.

重心包线
/ C.G Envelope GIV-X的零燃油总重对重心包线图见下页 (S/N 4001 及后续)。
/See figure on next page for the GIV-X Zero Fuel Gross Weight vs. Center of Gravity envelope (S/N 4001 and subsequent).

GIV-X Zero Fuel Gross Weight Center of Gravity Envelope
(For S/N 4001 and Subsequent)



IV.注释/NOTES

注释1/NOTE 1

重量与平衡/Weight and Balance

(a) 必须为每架飞机提供最新的重量平衡报告, 包括原合格审定空机重量之中所包含的设备清单。重量与平衡报告应包括空机重量、系统燃油、全部滑油和液压油。/ Current weight and balance report, including list of equipment included in certificated empty weight, and loading instructions when necessary, must be provided for each airplane at the time of original certification. The weight and balance report shall include as part of the empty weight, system fuel, total oil and hydraulic fluid.

(b) 系统燃油: 填充所有管路和最临界飞行姿态下燃油箱计量仪器从零至可读点所需的全部燃油重量。/ System fuel: The weight of all fuel required to fill all lines and tanks up to zero/readable fuel point on the fuel gages in the most critical flight attitude.

生产序号从4001 起/ S/N 4001 and subsequent

不可用燃油*-105磅/Unusable fuel* - 105 lb.

燃油管路-45磅/Fuel lines - 45 lb.

系统燃油-150磅/System fuel - 150 lb.

*包括不可排放燃油 13磅/*Includes 13 lb. undrainable

(c) 系统滑油: 保留在发动机管路和滑油箱零读数时的滑油重量。/ System oil: The weight of oil remaining in the engine lines and tanks after subtracting the oil in the tanks which is above the "zero gage" levels.

(d) 上述的"不可用"燃油燃油箱中的燃油量, 其包括FAR 25. 959 定义的油箱截留燃油, 即最临界飞行状态下难以获得的燃油。每一机型的可用燃油在前面的"燃油容积"中给出。"不可用"燃油包含在前面 (a) 节的系统燃油之中, 并不需要分别计算。下述相关资料见FAA 批准的飞机飞行手册: /The above "unusable" fuel is that amount of fuel in the tanks, including tank trapped fuel as defined in CAR 4b.416 or FAR 25.959, which is unavailable to the engines under critical flight conditions. The usable fuel capacity is given under section entitled "Fuel Capacity" for each airplane model. The "unusable" fuel is included in the system fuel as indicated in (a) above and need not be accounted for separately. See FAA approved Airplane Flight Manual for information concerning the following:

(1) 起飞和飞行中的左右油箱间的最大不平衡/Maximum fuel unbalance between left and right tanks for take-off and in-flight operations.

(2) 为获得相等燃油量, 服役期间内推荐的地面飞机姿态/Recommended airplane ground attitude to obtain equal fuel quantities during servicing.

(3) 燃油添加剂/Fuel additives.

注释2/NOTE 2

退役期限/Retirement Times :

退役期限开列在适用《飞机维修手册》的05-10-00 章节, 没有FAA 的工程批准, 所列时限件的期限不得变更。/Retirement times are listed in Section 05-10-00 of the applicable Airplane Maintenance Manual. The retirement times of these life limited components cannot be altered without FAA Engineering approval.

多种构形飞机的剩余寿命限制起落时限, 请与Gulfstream 公司的工程部门联系。/For airplanes having time (landings) in more than one configuration, contact Gulfstream Aerospace Engineering for remaining life limitations.

注释 3/NOTE 3

JP-4 燃油的使用/Use of JP-4 Fuel:

运营者、罗尔斯.罗伊斯公司和适航当局同意的JP -4 (宽馏分)燃油的使用可能导致降低高压燃油泵的寿命。/The use of JP-4 fuel (wide cut) as agreed to by the operator, Rolls-Royce, and the appropriate airworthiness authority may result in a reduction of HP fuel pump life.

注释4/NOTE 4

飞机服务变更(ASC)/Aircraft Service Changes(ASC's):

下面列出的是各相应型号中较为重大的ASC, 其主要涉及重量限制、燃油系统和使用困难修正相关的更改, 并不是各型飞机完整的ASC清单。/The following are the more significant Aircraft Service Changes (ASC's) for the respective model aircraft, dealing primarily with weight limit changes, fuel system changes, and service difficulty corrections. This is not the complete list of ASC's for any of these models.

飞机服务变更第004号, "G350 修订"指明G- IV (G350) 型飞机。这些飞机应当依据《飞机飞行手册(GAC-AC-G350-OPS-0001)》运行。/Aircraft Service Change (ASC) 004, "G350 Modification" will designate those aircraft as Model GIV-X (G350). Those aircraft shall be operated under Airplane Flight Manual GAC-AC-G350-OPS-0001.

适用生产序号: 自4001起。/Applicable to S/N 4001 and subsequent.

飞机服务变更第005号, "G450 修订"指明G- IV (G450) 型飞机。这些飞机将依据《飞机飞行手册(GAC-AC-G450-OPS-0001)》运行。/Aircraft Service Change (ASC) 005, "G450 Modification" will designate those aircraft as Model GIV-X (G450). Those aircraft shall be operated under Airplane Flight Manual GAC-AC-G450-OPS-0001.

适用生产序号: 自4001起。/Applicable to S/N 4001 and subsequent.

飞机服务变更第016号, "G450 最大起飞总重增大"。/Aircraft Service Change (ASC) 016, "G450 Maximum Takeoff Gross Weight Increase."

适用生产序号: 自4001起。/Applicable to S/N 4001 and subsequent.

飞机服务变更065A "GIV-X辅助动力装置外罩-生产序号4001-4171(不包括4152)的隔热屏障安装"。/Aircraft Service Change (ASC) 065A "GIV-X Auxiliary Power Unit (APU) Enclosure –Thermal Barrier Installation to S/N 4001-4171 excluding 4152

飞机服务变更064 "GIV-X第4阶段" /Aircraft Service Change (ASC) 064 "GIV-X Stage 4"

适用于生产序号4001至4200。/Applicable to S/N 4001-4200.

注释5/NOTE 5

改变飞机标识/ Alternate Aircraft Identifications:

假设关联的飞机服务变更(ASC)合并的情况下, 下面提供了批准的改变飞机标识资料:/The following provides approved alternate aircraft identification information assuming incorporation of the associated (listed) ASC:

序列号自4001起, 按照GAC飞机服务变更第005号改进时, GIV-X型机具有GIV-X (G450)型机的资格。/Model GIV-X, serial number 4001 and subsequent are eligible for identification as Model GIV-X (G450) when modified in accordance with GAC Aircraft Service Change (ASC) 005.

序列号自4001起, 按照GAC飞机服务变更第004号改进时, GIV-X型机具有GIV-X (G350)型机的资格。/Model GIV-X, serial number 4001 and subsequent are eligible for identification as Model GIV-X (G350) when modified in accordance with GAC Aircraft Service Change (ASC) 004.

注释6/NOTE 6

驾驶舱视界/ Cockpit Field of View:

GIV-X 型机的驾驶舱前风挡尺寸对于前向视界的审定要求是临界的, 因此, 在未与FAA飞机审定办公室协调前, 不得在遮光罩的顶部安装任何设备。/The cockpit front windshield dimensions for the Model GIV-X airplanes are critical for forward field of view certification requirements; therefore, no equipment should be installed on top of the glare shield without prior coordination with an FAA Aircraft Certification Office.

- 注释7/NOTE 7 系统修改/Systems Modifications:
GIV-X 机型的综合航电系统使用基于软件的航线可更换单元 (LRU) (该装置分享数字信号传输总线)。对于驾驶舱仪表系统的正确工作来说,生产交付的 GIV-X 机型的航电构型是临界的。通过替换不同的 LRU 的、增加新的 LRU 或改变 LRU 的接口而对 LRU 的软件进行更改会对已审定产品的适航性产生不利影响。因此,改装者在未与辖区内的 FAA 航空器审定办公室协调的情况下,不得对综合航电系统进行更改。/The GIV-X models incorporate integrated avionics systems using software-based line replaceable units (LRU's) which share a digital signal transmission bus. The avionics configuration of the GIV-X as delivered from production, is critical to the proper operation of the cockpit instrumentation system. Modification to the LRU software supplied with the GIV-X, replacement of an LRU with a different LRU, addition of new LRU, or alteration of an LRU interface could adversely affect the airworthiness of the certified product. Accordingly, no changes to the integrated avionics system should be made without coordination with the Aircraft Certification Office having jurisdiction over the modifier.
- 注释8/NOTE8 驾驶舱更改/ Cockpit Modifications:
任何可能影响机组工作量、舱内噪声水平或昼间/夜间照明的驾驶舱构型的更改和变化必须经过FAA合格审定飞行试验驾驶员或飞行标准运行督察员评估。/ Any modification or changes in cockpit configuration which may affect aircrew workload, cockpit noise level or day/night lighting must be evaluated by an FAA Aircraft Certification Flight Test Pilot or Flight Standards Operation Inspector.
- 注释9/NOTE9 起飞推力的使用/ Use of Takeoff Thrust:
大于 5 分钟 (不超过 10 分钟) 的起飞推力的使用, 仅在发生一台发动机停车或故障期间获得批准。/Use of takeoff thrust for more than five (5) minutes [not to exceed ten (10) minutes] is approved for use only in the event of an inoperative engine due to shutdown or failure.
- 注释10/NOTE10 更改资料/Information to Modifiers:
影响 GIV-X 型飞机初始合格审定要求的限制方面的更改资料包含在《Gulfstream IV-X 内饰合格审定要求 (GIVX-GER-1619)》文件中。/ Information to modifiers on limitations which impact original certification requirements of the Gulfstream GIV-X are contained in Gulfstream Report GIVX-GER-1619, GIV-X Interior Certification Requirements Document.
- 注释11/NOTE11 减小垂直飞行间隔/RVSM:
根据经批准的型号设计,生产序号4001起的GIV-X型飞机(即G450型和G350型),被认为符合《FAA 91-减小垂直飞行间隔(RVSM)文件》的减小垂直飞行间隔(RVSM)的技术要求;然而,在减小垂直飞行间隔空间内的飞行运行批准还必须经主管的飞行标准组织批准。
Per the approved Type Design, GIV-X S/N 4001 and subsequent (i.e., G450 and G350 model aircraft) are considered to be compliant with the Reduced Vertical Separation Minima (RVSM) technical requirements contained in FAA Document 91-RVSM; however, operational approval to fly in RVSM airspace must still be granted by the cognizant Flight Standards organization.
- 注释12/NOTE12 驾驶舱视频显示器/Cockpit Video Display:
GIV-X 型飞机的航空电子结构体系包含了驾驶舱飞行员正前方直视位置显示装置上的分类视频输入多重复合显示能力。由于这些显示器影响机组工作量,对已批准的视频输入源的变化(包括附加新的视频源或能力)需要 FAA 的专项批准(包括专项确认和 FAA 航空器合格审定办公室同意)。/The avionics architecture of the GIV-X models includes a capability to display multiple, assorted video inputs on

the cockpit display units positioned directly in front of the pilots. Because these displays affect crew workload, changes to the approved video input sources (including the addition of new video sources or capabilities) will require a specific FAA approval, including specific acknowledgement and concurrence from an FAA Aircraft Certification Office.

注释13/NOTE13

航向指示仪表要求/Direction Indicator Requirements:

GIV-X型飞机, 以下述方法, 通过安装备份数字阅读磁指示系统满足14 CFR25部 25.1303(a)(3)条款关于航向指示器(非稳定磁罗盘)的要求: /Gulfstream Models GIV-X meet 14 CFR part 25.1303(a)(3) requirements for a direction indicator (non-stabilized magnetic compass) by installation of Standby Digital Reading Magnetic Indicator Systems through the following means:

由磁力计驱动集成式备份仪表系统 (ISIS) 和电子方位距离指示器/ Integrated Standby Instrument System (ISIS) and Electronic Bearing Distance Indicator (EBDI) system driven by magnetometer

注释14/NOTE 14

APU限制/APU Limitations

对于序列号4147、4151以及4153至4171的GIV-X系列(G450/G350)飞机, 下面注明的湾流飞机飞行手册补充页必须附在2004年8月12日的G450飞机飞行手册或2004年10月28日的G350飞机飞行手册上。如果其中任意飞机后续装备ASC065A, 或装备ASC065加上065Am1, 则将不再需要这些飞机飞行手册补充页。/For GIV-X series (G450/G350) airplane serial numbers 4147, 4151, and 4153 through 4171, the Gulfstream Airplane Flight Manual Supplements noted below must be attached to the G450 AFM dated 12 August 2004, or the G350 AFM dated 28 October 2004. If any of these aircraft is subsequently outfitted with ASC 065A, or with ASC 065 plus 065Am1, then it will no longer require the AFMS:

序列号 S/N	飞行手册补充页 AFMS #	序列号 S/N	飞行手册补充页 AFMS #
4147	G450-2009-04-4147	4162	G450-2009-04-4162
4151	G450-2009-04-4151	4163	G450-2009-04-4163
4153	G450-2009-02 or G450-2009-04-4153	4164	G450-2009-04-4164
4154	G450-2009-02 or G450-2009-04-4154	4165	G450-2009-04-4165
4155	G450-2009-02 or G450-2009-04-4155	4166	G450-2009-04-4166
4156	G450-2009-02 or G450-2009-04-4156	4167	G450-2009-04-4167
4157	G450-2009-02 or G450-2009-04-4157	4168	G450-2009-04-4168
4158	G450-2009-04-4158	4169	G450-2009-04-4169
4159	G450-2009-04-4159	4170	G450-2009-04-4170
4160	G450-2009-02 or G450-2009-04-4160	4171	G450-2009-04-4171
4161	G450-2009-04-4161		

注释15 /Note15

第4阶段噪音/Stage 4 Noise

安装了飞机服务变更ASC 064 “第4阶段”的湾流GIV-X型飞机(有效序列号4001-4200)符合14 CFR 36部至36-28修正案的4阶段噪音要求。湾流GIV-X型飞机(有效序列号4201及后续)通过生产线贯彻符合14CFR 36部至36-28修正案第4阶段噪声要求。证明数据记录在湾流报告GIVX-GER-1642和 GIVX-GER-7117 (针对G350)中。/Gulfstream model aircraft GIV-X having installed the ASC 064 “Stage 4” (Serial Number Effectivity 4001-4200) are compliant to 14 CFR Part 36, through amendment 36-28, Stage 4 Noise requirements. GIV-X (serial number effectivity 4201 and subsequent) at production cut-in are compliant to 14 CFR Part 36, through amendment 36-28, Stage 4 Noise requirements. Substantiating data is documented in Gulfstream reports GIVX-GER-1642 and GIVX-GER-7117 (for G350).

注释16/ Note16

飞机型号设计为绿构型, 不包括外观油漆、标记标牌和座椅等旅客相关设施。

当批准的座位布置和必要的乘客设施按照审定基础加入航空器后，客舱允许载客。/ The type design is “Green” configuration, does not include the external painting, markings and placards, and other passenger facilities such as seats etc. When approved seats arrangement and necessary passenger facilities added to the aircraft according to the certification basis, the cabin compartment is allowed to carry passengers.