

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

1A16
Revision No. 24
Allied Ag Cat Productions, Inc.
G-164
G-164A
G-164B
G-164B with 73"
G-164B-15T
G-164B-34T
G-164B-20T
G-164C
G-164D
G-164D with 73" wing gap
February 22, 2001

TYPE CERTIFICATE DATA SHEET NO. 1A16

This data sheet which is a part of type certificate No. 1A16 prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Civil Air Regulations.

Type Certificate Holder	Allied Ag Cat Productions, Inc. 301 West Walnut Street P.O. Box 482 Walnut Ridge, AR 72476
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I - Model G-164, 1 POLB or 1 PCLB (Restricted Agricultural Category) approved January 20, 1959.

Engine	Continental W-670-6N (R-670-4) 479 lb. (+53.5)		
	Continental W-670-16 (R-670-11) 486 lb. (+53.5)		
	Continental W-670-6A (R-670-5) 470 lb. (+53.5)		
	Continental W-670-240 (Gulf Coast) 516 lb. (+53.5)		
	<i>(See G-164 NOTE 3 for operating restrictions)</i>		
	Jacobs R-755-A2M1 503 lb. (+52.5)		
	<i>(See G-164 NOTE 6 for optional Jacobs engine installations)</i>		
	Pratt & Whitney R-985-AN-1, -AN-3, -25, -27, -39, -39A, -AN-14B; Wasp Jr. T1B2, T1B3 (One 4 1/2 and one 9th order crankcase damper)		
Fuel	80/87 Minimum octane aviation gasoline	(R-985 series)	
	80 Minimum octane aviation gasoline	(W-670 Series, R-755 Series)	
Engine Limits:	For all operations:		
	(W-670-6A, -6N or -16 engines)	2075 r.p.m.	(220 hp.)
	(W-670-240 engine)	2075 r.p.m.	(225 hp.) with item 1 propeller
	(W-670-240 engine)	2200 r.p.m.	(240 hp.) with item 3 propeller
	(R-985 series engines)	2300 r.p.m.	(450 hp.) with item 4 propeller
	(R-755-A2M1)	2200 r.p.m.	(330 hp.) with item 3 propeller
	Manifold Pressure: (R-985-AN-14B):	36.5 in. Hg (sea level)	
		35.5 in. Hg (3500 ft.)	
	Manifold Pressure: (R-985-AN-1, -AN-3, -25, -27, -39, -39A, T1B2, T1B3)	37.5 in Hg (sea level)	
		37.0 in. Hg (1500 ft.)	
	Manifold Pressure: (W-670 series):	28.0 in. Hg (sea level)	
		26.5 in. Hg (1500 ft.)	
	Manifold Pressure (R-755):	28.0 in. Hg (sea Level)	
		26.5 in Hg (1500 ft.)	
	Straight line variation between points		

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This revision incorporates the new type certificate holder and adds Model G-164B-20T.

Model G-164 (cont'd)	4. Hamilton Standard: 2D30/6101A-12-13-14 with P&W R-985 Series engines Diameter: 108 in. max., 106 in. min. (No further reduction permitted) 2D30 Hub, Pacific Propeller AG-100-2 blades, diameter 106 in. (2% cutoff permitted) Pitch Setting: 11.75° low, 14° high (2 pos.): 10.0° low, 16.5° high at 42 in. Sta. (constant speed) Governor: 1A2-5, 1A2G-5, or 4A2-1 Static r.p.m. at maximum permissible throttle setting: Not over 2070, not under 1970 (2 position)			
Airspeed Limits (CAS)	V _{NE} (Never Exceed)	131 m.p.h.	(114 knots)	
	V _A (Maneuvering)	104 m.p.h.	(90 knots)	
C.G. Range	(+122.0) to (+124.0) at 3750 lb. (+122.0) to (+125.3) at 2460 lb. Straight line variation between points			
Empty Weight	None			
C.G. Range				
Datum	+99.1 in. ahead of firewall bulkhead.			
Leveling Means	Longitudinal: Leveling lugs welded on tubular fuselage frame 27 in. below upper longeron and forward lug at station 100, left hand side.			
Maximum Weight	<u>Configuration</u>	<u>Engine</u>	<u>Prop Pitch</u>	<u>Weight</u>
	<u>With Item 1 or 2 installed</u>			
	Sprayer	W-670-6A, -6N or -16	9.5°	3700 lb.
	Sprayer	W-670-6A, -6N or -16	9°, 10°, 10.5°, 11°	3550 lb.
	Duster	W-670-6A, -6N or -16	9.5°	3600 lb.
	Duster	W-670-6A, -6N or -16	9°, 10°, 10.5°, 11°	3450 lb.
	Sprayer or Duster	W-670-240	9.7°	3750 lb.
	Sprayer or Duster	R-755-A2M1	-	3750 lb.
	<u>Configuration</u>	<u>Engine</u>	<u>Prop Pitch</u>	<u>Weight</u>
	<u>With Item 3 installed</u>			
	Sprayer	W-670-6A, -6N or -16	14.1°	3600 lb.
	Sprayer or Duster	W-670-240	14.5°	3750 lb.
	Sprayer or Duster	R-755-A2M1	15.0°	3750 lb.
	<u>Configuration</u>	<u>Engine</u>	<u>Prop Pitch</u>	<u>Weight</u>
	<u>With Item 4 installed</u>			
	Sprayer or Duster	R-985 series	16.5° high, 10° low	3750 lb.
No. of Seats	1 (+180)			
Maximum Hopper Capacity	1200 lb. (+122) S/N 1 through 300 2000 lb. (+122) S/N 301 and up			
Fuel Capacity	46.3 gal. or 33 gal. (+112.5) (One tank in upper wing center section (See G-164 Note 7))			
Oil Capacity	7 gal. (+94)	(6.5 gal. usable)	(R-985 series)	
	5 gal. (+94)	(4.5 gal. usable)	(W-670 series, R-755 series)	
Serial No. Eligible	S/N 1 through 400			
Certification Basis	CAR 8.10 (a)(1) effective October 11, 1950, and CAM 8, Appendix B as amended March 19, 1957, except CAR 3.241 utilized for Ground Loads. Restricted Type Certificate No. 1A16 issued January 20, 1959. Date of application for Type Certificate June 21, 1957.			

Model G-164 (cont'd)
Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see certification basis and CAM 8, Appendix B, subparagraph .51) must be installed in aircraft for certification. In addition, the following items of equipment are required:

- (a) For aircraft with no electrical system:
Pre-stall warning indicator, Safe Flight Instrument Corporation Kit No. 164-R, 6 volt. (Dry batteries powering this unit must be dated and replaced every six months.)
- (b) For aircraft incorporating an electrical system:
Pre-stall warning indicator, (Safe Flight Instrument Corporation 12V or 24V P/N C-35407 or P/N 164-3) Installation per Drawing No. A1011.
- (c) Winter front installation per Gulfstream Drawing A1605. For all aircraft with Continental W-670 series Gulf Coast W-670-240 engines if operated when the OAT is below 35°F.
- (d) Nose Ballast installation per Gulfstream Drawing A1073A on aircraft equipped with Continental W-670 series engines or Gulf Coast W-670-240 engines. Required only when aircraft C.G. would otherwise be outside the specific aft limits.
- (e) Tail Ballast installation per Gulfstream Drawing A1072B. Required only when aircraft C.G. would otherwise be outside the specified forward limit. Maximum permissible weight. (Use actual weight).
- (f) Cylinder head Temperature Gage and Manifold Pressure Gage required on aircraft equipped with R985 series powerplant.

Agricultural Dispersal
Equipment

The following Agricultural Dispersal Equipment may be installed:

- (a) Sprayer dispensing installation per Gulfstream Drawings A1011, S/N 1 and up, A1921, S/N 1 and up, A1960, S/N 1 through 300, A1480, S/N 301 through 400.
- (b) Dust dispensing installation per Gulfstream Drawing
 - (1) A1970C Sheet 3 applicable S/N 1 through 100
 - (2) A1970D Sheet 4 applicable S/N 101 through 300
 - (3) A1970F Sheet 5 applicable S/N 301 through 400
(R-755 series and R985 series)

II - Model G-164A 1 PCLB (Restricted Agricultural Category) approved March 4, 1966.

Engines (See G-164A
NOTE 1)

Pratt and Whitney R-985-AN-1, -AN-3, -25, -27, -39, -39A
-AN-14B, Wasp Jr. T1B2, T1B3
(One 4 1/2 and one 9th order crankshaft damper)

Pratt and Whitney R-1340-AN-1, S1H1, S3H1 (eligible S/N 526 and up only) (One 4 1/2 and one 9th order crankshaft damper)

Fuel

80/87 minimum octane aviation gasoline

Engine Limits

R-985

2300 r.p.m. (450 hp.) all operations

Manifold Pressure: (R-985-AN-14B)

36.5 in. Hg (sea level)

35.5 in. Hg (3500 ft.)

Manifold Pressure: (All others)

37.5 in. Hg (sea level)

37.0 in. Hg (1500 ft.)

Straight line variation between points.

Model G-164A (cont'd)
Engine Limits (cont'd)

R-1340

2250 r.p.m. (600 hp.) Takeoff (5 minutes)

2200 r.p.m. (550 hp.) Max Continuous

Manifold Pressure: (R-1340-AN-1, S3H1)

600 hp. 2250 r.p.m. 36.0 in. Hg (Sea Level)

550 hp. 2200 r.p.m. 34.0 in. Hg (Sea Level) to 32.5 in. Hg (5000 ft.)

Manifold Pressure: (R-1340-S1H1)

600 hp. 2250 r.p.m. 36.5 in. Hg (Sea Level)

550 hp. 2200 r.p.m. 35.0 in. Hg (Sea Level) to 33.0 in. Hg (8000 ft.)

Straight line variation between points

Propeller and Propeller Limits

R-985:

Hamilton Standard 2D30 hub, 6101A-12, -13, -14 blades

Diameter: 108 in. max., 106 in. min: (No further reduction permitted)

Pitch Setting: 11.75° low, 14° high (2 pos.)

At 42 in. station: 10° low, 16.5° high (constant speed)

Governor: 1A2G-5, 1A2-5 or 4A2-1

Hamilton Standard 2D30 hub, Pacific Propeller AG-100-2 blades

Diameter 106 in. (2% cutoff permitted)

Pitch Setting: 11.75° low, 14° high (2 pos.)

At 42 in. station: 10° low, 16.5° high (2 pos.)

Governor: 1A2G-5, 1A2-5 or 4A2-1

Static r.p.m. at maximum permissible throttle setting:

not over 2070, not under 1970 (2 position)

R-1340:

Hamilton Standard 12D40 hub, 6101A-12 blades

Diameter: 108 in. (2% cutoff permitted)

Pitch Setting: 11° low, 20° high

Governor: 1M12

Hamilton Standard 12D40 hub, Pacific Propeller AG-100-2 blades

Diameter: 106 in. (2% cutoff permitted)

Pitch Setting: 11° low, 20° high

Governor: 1M12 or EDO-AIRE 34-828-021

Airspeed Limits
(CAS)

 V_{ne} (Never exceed) 147 m.p.h. (128 knots) V_a (Maneuvering) 117 m.p.h. (102 knots)

C.G. Range
R-985

Aircraft S/N 1571, 1583, 1616 up (401 through 1570, 1572 through 1582
and 1584 through 1615 retroactive)
(+122.0) to (+125.4) at 4500 lb.

C.G. Range
R-1340

Aircraft S/N 526 and Up
(+122.0) to (+124.0) at 4500 lb.
(+120.3) to (+125.3) at 3525 lb.

Empty Weight
C.G. Range
R-985

Aircraft S/N 401 and Up
None

Empty Weight
C.G. Range
R-1340

Aircraft S/N 526 and Up
None

Datum

+99.1 in. ahead of firewall bulkhead.

Model G-164A (cont'd) Leveling Means	Longitudinal: Level lugs welded on tubular fuselage frame 27 in. below upper longeron and forward lug at station 100, left hand side.
No. of Seats	1 (+180)
Maximum Hopper Capacity	2000 lb. (+126.2)
Fuel Capacity	46.3 gal. (+112.5) (One Tank in wing center section) (See G-164A NOTE 3)
Oil Capacity	7 gal. (+94.0) (6.5 gal. usable) (See G-164A NOTE 6) 8.7 gal. (+94.0) (8.2 gal. usable) (See G-164A NOTE 6)
Serial No. Eligible	S/N 401 and Up
Certification Basis	CAR 8.10 (a)(1) effective October 11, 1950, and CAM 8, Appendix B, as amended March 19, 1957. Amended Restricted Type Certificate No. 1A16 issued March 1966. Date of Application for Type Certificate Amendment November 12, 1964.
Equipment	<p>The basic required equipment as prescribed in the applicable airworthiness regulations (see certification basis and CAM 8, Appendix B, subparagraph .51) must be installed in aircraft for certification. In addition, the following items of equipment are required:</p> <ul style="list-style-type: none"> (a) For aircraft with no electrical system: Pre-stall warning indicator, Safe Flight Instrument Corp. Kit No. 164-R, 6 volt. (Dry batteries powering this unit must be dated and replaced every six months) (b) For aircraft incorporating an electrical system: Pre-stall warning indicator, Safe Flight Instrument Corp. 12V or 24V P/N C-35407 or P/N 164-3. Installation per A1011, Sheet 2 (c) Cylinder head temperature gage and manifold pressure gage required on aircraft equipped with R-985 and R1340 series powerplants. (d) Tail ballast per Gulfstream Drawing A1074 required on all R-1340 series engine installations only when aircraft C.G. would otherwise be outside the specified forward limit.
Agricultural Dispersal Equipment	<p>The following Agricultural Dispersal Equipment may be installed:</p> <ul style="list-style-type: none"> (a) Sprayer Dispensing Installation per Gulfstream Drawings <ul style="list-style-type: none"> (1) A1480 (Leading Edge Booms), through S/N 750 (2) A2930 (Leading Edge Booms), S/N 751 through 1725 (3) A2901 (Trailing Edge Booms), S/N 751 through 1726 and up (4) A5740 (Trailing Edge Booms), S/N 1726 and up (b) Dust dispensing installation per Gulfstream Drawing <ul style="list-style-type: none"> (1) A1970F Sheet 5, Dust System Installation (2) A1398, Spreader Installation (R-985 and R-1340 Only) (Alternate) (3) A1490, Spreader Installation (R-985 and R-1340 Only)

III - Model G-164B 1 PCLB (Restricted Agricultural Category) approved November 18, 1975.
Model G-164B (with 73" wing gap) - 1 PCLB (Restricted Agricultural Category) approved November 18, 1982
Model G-164B-15T and G-164B-34T 1 PCLB (Restricted Agricultural Category) approved December 23, 1985
Model G-164B-20T, 1 PCLB (Restricted Agricultural Category) approved April 1991

Engine	Pratt and Whitney R-985-AN-1, AN-3, -25, -27, -39, -39A, -AN-14B; T1B2, T1B3 (One 4 1/2 and one 9th order crankshaft damper)	
	Continental/Page R-975-46/A2	
	Pratt & Whitney R-1340-AN-1, S1H1, S3H1 (One 4 1/2 and one 9th order crankshaft damper)	
	Pratt & Whitney of Canada Ltd. PT6A-15AG - G-164B-15T only.	
	Pratt & Whitney of Canada Ltd. PT6A-34AG - G-164B-34T only.	
	Pratt & Whitney of Canada LTD. PT6A-20B - G-164B-20T only.	
Fuel	R-985 & R-1340 80/87 minimum octane aviation gasoline R-975 100 minimum octane aviation gasoline	
	PT6A-15AG & PT6A-34AG, and PT6A-20B Jet A/Jet A-1/Jet B Automotive Diesel Fuel permitted for agricultural operations when free air temperature is above +5°C (+41°F) for grade DF-2 -4°C (+25°F) for grade DF-1	
Engine Limits	R-985 2300 r.p.m. (450 hp.) all operations	
	Manifold Pressure (R-985-AN-14B)	36.5 in. Hg (sea level) 35.5 in. Hg (3500 ft.)
	Manifold Pressure (all others)	37.5 in. Hg (sea level) 37.0 in. Hg (1500 ft.)
	Straight line variation between points.	
	R-975-46/PA2 2300 r.p.m. (525 hp.)	Takeoff (5 minutes)
	2300 r.p.m. (500 hp.)	Max. Continuous
	Manifold Pressure:	
	525 hp. 42.1 in. Hg (Sea Level)	
	500 hp. 40.7 in. Hg (Sea Level)	
	R-1340 2250 r.p.m. (600 hp.) Takeoff (5 minutes)	
	2200 r.p.m. (550 hp.) Max. Continuous	
	Manifold Pressure: (R-1340-AN-1, S3H1)	
	600 hp. 2250 r.p.m. 36.0 in. Hg (Sea Level)	
	550 hp. 2200 r.p.m. 34.0 in. Hg (Sea Level) to 32.5 in. Hg (5000 ft.)	
	Straight line variation between points	
	Manifold Pressure: Wasp S1H1	
	600 hp. 2250 r.p.m. 36.5 in. Hg (Sea Level)	
	550 hp. 2200 r.p.m. 35.0 in. Hg (Sea Level) to 33.0 in. Hg (8000 ft.)	
	Straight line variation between points	

Model G-164B (cont'd)

PT6A-15AG

Operating Conditions	OPERATING LIMITS						
	SHP	TORQUE PSI	MAXIMUM ITT °C	Ng RPM %	Np RMP %	OIL PRESSURE PSIG	OIL TEMP °C
TAKEOFF (5 MINUTES)	680	53.3	725	38100 101.5	2200 100	80-100	10-99
MAXIMUM CONTINUOUS	600	47	695	-- --	2200 100	80-100	10-99
MAX. CLIMB/ MAX CRUISE	600	47	695	-- --	-- --	80-100	0-99
IDLE GROUND			660	19000 52		40 (MIN)	-40-99
IDLE FLIGHT	--	--	660	25500 68	-- --	40 (MIN)	-40-99
STARTING	--	--	1090	-- --	-- --	--	-40 (MIN)
ACCELERATION	--	68.8	825	38500 102.6	2420 110	--	0-99
MAX. REVERSE	600	49.2	725	38100 101.5	2100 95.5	80-100	0-99

PT6A-34AG

Operating Conditions	OPERATING LIMITS						
	SHP	TORQUE PSI	MAXIMUM ITT °C	Ng RPM %	Np RMP %	OIL PRESSURE PSIG	OIL TEMP °C
TAKEOFF (5 MINUTES)	750	58.7	790	38100 101.5	2200 100	85-105	10-99
MAXIMUM CONTINUOUS	600	47	740	-- --	2200 100	85-105	10-99
MAX. CLIMB/ MAX CRUISE	600	47	740	-- --	-- --	85-105	0-99
IDLE GROUND			685	19000 52		40 (MIN)	-40-99
IDLE FLIGHT	--	--	685	25500 68	-- --	40 (MIN)	-40-99
STARTING	--	--	1090	-- --	-- --	--	-40 (MIN)
ACCELERATION	--	68.4	850	38500 102.6	2420 110	--	0-99
MAX. REVERSE	600	49.2	780	38100 101.5	2100 95.5	85-105	0-99

PT6A-20B

Operating Conditions	OPERATING LIMITS						
	SHP	TORQUE PSI	MAXIMUM ITT	Ng RPM %	Np RMP %	Oil Press PSIG	Oil Temp °C
Take-off* Max. Cont.**	550	42.5	750	38100 101.5	2200 100	65-85	10-99
Max. Climb	538 ISA	42.5	725	-- --	2200 100	65-85	0-99
Max. Cruise	495 ISA	42.5	705	-- --	2200 100	65-85	0-99
Idle - Grnd			685	19000 52		40 (MIN)	-40-99
Idle - Flight	--	--	685	25500 68	-- --	40 (MIN)	-40-99
Starting	--	--	1090	-- --	-- --	--	-40 (MIN)
Acceleration	--	48.5	850	38500 102.6	2420 110	--	0-99
Max Reverse	500	40.5	750	38100 101.5	2100 95.5	65-85	0-99

*Takeoff -5 mintes

**Maximum Continuous - enroute emergency

Model G-154B (cont'd)
Propeller and Propeller
Limits

R-985:

Hamilton Standard 2D30 hub, 6101A-12, -13, -14 blades
Diameter: 108 in. max., 106 in. min: (No further reduction permitted)

Pitch Setting: 11.75⁰ low, 14⁰ high (2 pos.)
At 42 in. station: 10⁰ low, 16.5⁰ high (constant speed)
Governor: 1A2G-5, 1A2-5 or 4A2-1

Hamilton Standard 2D30 Hub, Pacific Propeller AG-100-2 blades
Diameter: 106 in. (2% cutoff permitted)
Pitch Setting: 11.75⁰ low, 14⁰ high (2 pos.)
At 42 in. station: 10⁰ low, 16.5⁰ high (constant speed)
Governor: 1A2G-5, 1A2-5 or 4A2-1
Static r.p.m. at maximum permissible throttle setting:
not over 2070, not under 1970 (2 position)

Hamilton Standard 2D30 hub, Pacific Propeller AG-100-48 blades
Diameter: 104 in. max., 102 in. min.
Pitch Settings at 42 in. station 9.5⁰ low, 16.5⁰ high (Constant Speed)

R-975-46/PA2:

Hamilton Standard 2D30 Hub, Pacific Propeller AG-100-48 blades
Diameter: 104 in. max., 102 in. min.
Pitch Settings at 42 in. station 9.5⁰ low, 16.5⁰ high (Constant Speed)

Avoid continuous operation 1300-1450 r.p.m.
Governor: 1A4-R-975 (Pacific Propeller)

R-1340:

Hamilton Standard 12D40 hub, 6101A-12 blades
Diameter: 108 in. (2% cutoff permitted)
Pitch Setting: 11⁰ low, 20⁰ high
Governor: 1M12

Hamilton Standard 2D40 Hub, Pacific Propeller AG-100-48 blades
Diameter: 104 in. max., 102 in. min.
Pitch Settings at 42 in. station 10.5⁰ low, 20 high (Constant Speed)
Governor: 1M12

Hamilton Standard 2D40 Hub, Pacific Propeller AG-100-48 blades
Diameter: 104 in. max., 102 in. min.
Pitch Settings at 42 in. station 10.5⁰ low, 20 high (Constant Speed)
Governor: 1M12

Hamilton Standard 22D40 Hub, Pacific Propeller AG-100-48 blades 549B & up
Diameter: 104 in. (2% cutoff permitted)
Pitch Settings 11.⁰ low, 20⁰ high
Governor: 4G10-21

PT6A-15AG, PT6A-34AG, and PT6A-20B
Hartzell HC-B3TN-3D hub, T10282 + 4 blades
Diameter: 106 in. max., 100 in. min.
Pitch Setting: at 30 in. station low 18⁰, reverse 8⁰, feather 90⁰

Airspeed Limits
(CAS)

V _{ne} (Never exceed)	147 m.p.h. (128 knots)	Through S/N 548B
V _a (Maneuvering)	117 m.p.h. (102 knots)	
<u>S/N 549B and Up</u>		
V _{ne} (Never exceed)	145 m.p.h. I.A.S. (126 knots)	
V _a (Maneuvering)	116 m.p.h. I.A.S. (101 knots)	

Model G-164B (cont'd)	<u>G-164B-15T, G-164B-34T, and G-164B-20T</u> V _{ne} (Never exceed) 157 m.p.h. I.A.S. (136 knots) V _a (Maneuvering) 125 m.p.h. I.A.S. (109 knots)
C.G. Range	<u>G-164B (through S/N 708B)</u> R-985 (+122.0) to (+125.0) at 4500 lb. R-975-46/PA2 (+122.0) to (+124.8) at 4500 lb. R-1340 (+122.0) to (+124.0) at 4500 lb. <u>G-164B with 73" Wing Gap (S/N 709B and Up)</u> R-1340 (+122.0) to (+125.5) at 5200 lb. (S/N 709B and up) R-985 (+122.0) to (+126.0) at 5200 lb. (S/N 752B and up) PT6A-15AG & (+122.0) to (+125.5) at 5200 lb. PT6A-34AG (+122.0) to (+125.5) at 5200 lb. PT6A-20B (+122.0) to (+125.5) at 5200 lb.
Empty Weight	<u>G-164B (through S/N 708B) and G-164B with 73" Wing Gap (S/N 709B and Up)</u>
C.G. Range	None
Datum	+99.1 in. ahead of firewall bulkhead.
Leveling Means	Longitudinal: Leveling lugs welded on tubular fuselage frame 27 in. below upper longeron and forward lug at station 100, left hand side.
No. of Seats	1 (+180)
Maximum Hopper Capacity	2000 lb. (+126.2)
Fuel Capacity	46.3 gal. (+112.5) (One tank in wing center section) (See G-164B NOTE 3) 80 gal. (+112.5) (S/N 660B through 708B) 80 gal. (+112.6) (S/N 709B and up with 73" in. wing gap) (see G-164B Note 6).
Oil Capacity	8.7 gal. (+94.0) (8.2 gal. usable) 2.8 gal. (+72.0) (PT6A-15AG & PT6A-34AG), and PT6A-20B
Serial No. Eligible	Model G-164B 1B and up Model G-164B-15T, -34T, & -20T 709B & up
Certification Basis	G-164B and G-164B with 73" wing gap: CAR 8.10(a)(1) effective October 11, 1950, and CAM 8, Appendix B, as amended March 19, 1957. Amended Restricted Type Certificate No. 1A16 issued November 18, 1975. Date of application for Type Certificate Amendment March 11, 1975. G-164B-15T and G-164B-34T CAR 8.10(a)(1) effective October 11, 1950 and CAM 8, Appendix B, as amended March 19, 1957, and applicable FAR paragraphs. Amended Restricted Type Certificate No. 1A16 issued December 23, 1985. Date of application for Type Certificate Amendment, January 23, 1983. G-164B-20T CAR 8.10(a)(1) effective October 11, 1950 and CAM 8, Appendix B, as amended March 19, 1957, and applicable FAR paragraphs. Amended Restricted Type Certificate No. 1A16 issued April 23, 1991. Date of application for Type Certificate Amendment, March, 1991.

Model G-164B (cont'd)
Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see certification basis and CAM 8, Appendix B, subparagraph .51) and applicable FAR 23 paragraphs for the models G-164B-15T, G-164B-34T, and G-164B-20T must be installed in aircraft for certification. In addition, the following items of equipment are required:

- (a) For aircraft with no electrical system:
Pre-Stall warning indicator, Safe Flight Instrument Corporation
Kit No. 164-R, 6 volt. (Dry batteries powering this unit must be dated and replaced every six months).
- (b) For aircraft incorporating an electrical system:
Pre-stall warning indicator, (Safe Flight Instrument Corporation 12v or 24v
P/N C-35407) or P/N 164-3 Installation per drawing A3011.
- (c) Cylinder head temperature gage and manifold pressure gage.
(R975, R985, R1340 only).
- (d) Fixed Ballast Inst. STA 46.5 (G-164B-15T & G-164B-34T) or sta 45.8 (G-164B-20T) per drawing A7534.

Agricultural Dispersal
Equipment

The following Agricultural Equipment may be installed: Equipment

- (a) Sprayer dispensing installation per Gulfstream Drawing:
 - (1) A2901 (Trailing Edge Booms) through A/C 334B.
 - (2) A3740 (Trailing Edge Booms) 335B through 659B
 - (3) A3740 (Trailing Edge Booms) 660B and up. (R-1340 Eng.)
 - (4) A3723 (Trailing Edge Booms) 752B and up. (R-985 Eng.)
- (b) Dust Dispensing Installation per Gulfstream Drawing:
 - A1970A Sheet 6, Dust System Installation (S/N 1B through 659B).
 - (1) A1398 Spreader Installation.
 - (2) A1490 Spreader Installation.
 - A3709 Dust Spreader Installation (660B and up). (R-1340 and PT6A Engine).
 - A7740 Dust Spreader and Emergency Dump Installation -
(R-985 Eng.) S/N 752B and up.

IV - Model G-164C 1 PCLB (Restricted Agricultural Category) approved November 23, 1977

Engine

Pratt and Whitney R-1340-AN-1, S1H1, S3H1
(One 4 1/2 and one 9th order crankshaft damper)

Fuel

80/87 minimum octane aviation gasoline

Engine Limits

R-1340

2250 r.p.m. (600 hp.) Take off (5 minutes)
2200 r.p.m. (550 hp.) Max. Continuous

Manifold Pressure: (R-1340-AN-1, S3H1)
600 hp. 2250 r.p.m. 36.0 in. Hg (Sea Level)
550 hp. 2200 r.p.m. 34.0 in. Hg (Sea Level) to 32.5 in. Hg (5000 ft.)

Manifold Pressure: (R-1340-S1H1)
600 hp. 2250 r.p.m. 36.5 in. Hg (Sea Level)
550 hp. 2200 r.p.m. 35.0 in. Hg (Sea Level) to 33.0 in. Hg (8000 ft.)

Straight line variation between points

Propeller and Propeller
Limits

R-1340:
Hamilton Standard 12D40 hub, 6101A-12 blades
Diameter: 108 in. (2% cutoff permitted)
Pitch Setting: 11° low, 20° high
Governor: 1M12

Model G-164C (cont'd)	
Propeller and Propeller Limits (cont'd)	Hamilton Standard 12D40 hub, Pacific Propeller AG-100-2 blades Diameter: 106 in. (2% cutoff permitted) Pitch Setting: 11° low, 20° high Governor: 1M12 or EDO-AIRE 34-828-021
Airspeed Limits (CAS)	
	<u>Through S/N 42C</u>
	V _{ne} (Never exceed) 147 m.p.h. (128 knots)
	V _a (Maneuvering) 117 m.p.h. (102 knots)
	<u>Aircraft S/N 43C and Up</u>
	V _{ne} (Never exceed) 139 m.p.h. I.A.S. (121 knots)
	V _a (Maneuvering) 112 m.p.h. I.A.S. (97 knots)
C.G. Range	(+121.0) to (+125.2) at 6300 lb. (+121.0) to (+125.2) at 4400 lb.
Empty Weight	None
C.G. Range	
Datum	+81.1 in. ahead of firewall bulkhead.
Leveling Means	Longitudinal: Level lugs welded on tubular fuselage frame 27 in. below upper longeron and forward lug at station 82.0, left hand side.
No. of Seats	1 (+206)
Maximum Hopper Capacity	4000 lb. (See Weight and Balance Data)
Fuel Capacity	80 gal. (+112.5)
Oil Capacity	8.7 gal. (+94.0) (8.2 gal. usable)
Serial No. Eligible	S/N 1C and up
Certification Basis	CAR 8.10 (a)(1) effective October 11, 1950, and CAM 8, Appendix B, as amended March 19, 1957. Amended Restricted Type Certificate No. 1A16 issued November 23, 1977. Date of Application for Type Certificate Amendment July 21, 1976.
Equipment	The basic required equipment as prescribed in the applicable airworthiness regulations (see certification basis and CAM 8, Appendix B, subparagraph .51) must be installed in aircraft for certification. In addition, the following equipment is required: (a) <u>For aircraft with no electrical system:</u> Pre-stall warning indicator, Safe Flight Instrument Corp. Kit No. 164-R, 6 volt. (Dry batteries powering this unit must be dated and replaced every six months) (b) <u>For aircraft incorporating an electrical system:</u> Pre-stall warning indicator, Safe Flight Instrument Corp. 12V or 24V P/N C-35407 or P/N 164-3) installation per drawing A3011
Agricultural Dispersal Equipment	The following Agricultural Dispersal Equipment may be installed: (a) Sprayer Dispensing Installation per Gulfstream Drawings A5740. (b) Dust dispensing installation per Gulfstream Drawing A5760.

V - Model G-164D 1 PCLB (Restricted Agricultural Category) Approved March 26, 1979.**Model G-164D (with 73" wing gap) - 1 PCLB (Restricted Agricultural Category) Approved June 15, 1981.**

Engine Pratt and Whitney of Canada Ltd. PT6A-15AG
Pratt & Whitney of Canada Ltd. PT6A-34AG

Fuel Jet A/Jet A-1/Jet B
Automotive Diesel Fuel permitted for agricultural operations when free air temperature is above
+5°C (+41°F) for grade DF-2
-4°C (+25°F) for grade DF-1

ENGINE LIMITS PT6A-15AG

Operating Conditions	OPERATING LIMITS								
	SHP	TORQUE PSI	MAXIMUM ITT °C	Ng RPM %		Np RMP %		OIL PRESSURE PSIG	OIL TEMP °C
TAKEOFF (5 MINUTES)	680	53.3	725	38100	101.5	2200	100	80-100	10-99
MAXIMUM CONTINUOUS	600	47	695	--	--	2200	100	80-100	10-99
MAX. CLIMB/ MAX CRUISE	600	47	695	--	--	--	--	80-100	0-99
IDLE GROUND	--	--	660	19000	52	--	--	40 (MIN)	-40-99
IDLE FLIGHT	--	--	660	27400	73	--	--	40 (MIN)	-40-99
STARTING	--	--	1090	--	--	--	--	--	-40 (MIN)
ACCELERATION	--	68.8	825	38500	102.6	2420	110	--	0-99
MAX. REVERSE	600	49.2	725	38100	101.5	2100	95.5	80-100	0-99

ENGINE LIMITS PT6A-34AG

Operating Conditions	OPERATING LIMITS								
	SHP	TORQUE PSI	MAXIMUM ITT °C	Ng RPM %		Np RMP %		OIL PRESSURE PSIG	OIL TEMP °C
TAKEOFF (5 MINUTES)	750	58.7	790	38100	101.5	2200	100	85-105	10-99
MAXIMUM CONTINUOUS	600	47	740	--	--	2200	100	85-105	10-99
MAX. CLIMB/ MAX CRUISE	600	47	740	--	--	2200	100	85-105	0-99
IDLE GROUND	--	--	685	19000	52	--	--	40 (MIN)	-40-99
IDLE FLIGHT	--	--	685	27400	73	--	--	40 (MIN)	-40-99
STARTING	--	--	1090	--	--	--	--	--	-40 (MIN)
ACCELERATION	--	68.4	850	38500	102.6	2420	110	--	0-99
MAX. REVERSE	600	49.2	780	38100	101.5	2100	95.5	85-105	0-99

Propeller and Propeller Limits Hartzell HC-B3TN-3D hub, T10282 + 4 blades
Diameter: Max. 106 in.
Min. 100 in.
Pitch Setting: Low 18°
Reverse 8°
Feather 90°
at 30 in. Station

Airspeed Limits V_{ne} (Never exceed) 164 m.p.h. I.A.S. (142 knots)
 V_A (Maneuvering) 131 m.p.h. I.A.S. (114 knots)

Model 164D (cont'd)	
C.G. Range	<p><u>G-164D</u> (+120.5) to (+123.6) at 6300 lb. (+120.5) to (+125.0) at 4000 lb. Straight line variation between points</p> <p><u>G-164D (with 73" GAP)</u> (+120.8) to (+122.8) at 6300 lb. (+120.8) to (+123.6) at 4000 lb Straight line variation between points</p>
Empty weight C.G. Range	None.
Datum	+81.1 in. ahead of firewall bulkhead.
Leveling Means	Longitudinal: Leveling lugs welded on tubular fuselage frame 27 in. below upper longeron and forward lug at station 82.0, left hand side.
No. of Seats	1 (+206)
Maximum Hopper Capacity	4000 lb. (See Weight and Balance Data)
Fuel Capacity	80 gal. (+112.5) With 73" Wing Gap 80 gal. (+112.7)
Oil Capacity	2.8 gal. (+36.0)
Serial No. Eligible	S/N 1D and up
Certification Basis	CAR 8.10(a)(1) effective October 11, 1950, and CAM 8, Appendix B, as amended March 19, 1957 and applicable FAR 23 paragraphs. Amended Restricted Type Certificate No. 1A16 issued March 26, 1979. Date of application for Type Certificate Amendment May 23, 1977. Reissued to Schweizer Aircraft Corporation May 12, 1981.
Equipment	<p>The basic required equipment as prescribed in the applicable airworthiness regulations (see certification basis and CAM 8, Appendix B, subparagraph .51 and applicable FAR 23 paragraphs) must be installed in aircraft for certification. In addition, the following items of equipment are required:</p> <p>(a) Pre-stall warning indicator, (Safe Flight Instrument Corporation 24v P/N C-35407 or P/N 164-3) Installation per drawing A3011.</p> <p>(b) Fixed ballast installed at fuselage Sta 60.4 per drawing A5173 (Model G-164D with 73" wing gap)</p>

DATA PERTINENT TO ALL MODELS

Control Surface
Movements
(See G-164D Note 3)

G-164A, G-164B (through 708B), G-164C

Ailerons	27 ⁰ (+3.5 ⁰ -2 ⁰) Up	13 1/2 ⁰	(+ or -2 ⁰) Down
Elevator	25 ⁰ (+ or -2 ⁰) Up	15 ⁰	(+ or -2 ⁰) Down
Rudder (Respect to Fin)	33 ⁰ (+ or -2 ⁰) Left	27 ⁰	(+ or -2 ⁰) Right
Elevator Trim Tab	18 ⁰ (+3 ⁰ -2 ⁰) Up	13 ⁰	(+ or - 2 ⁰) Down

G-164B, (S/N 709B and up)

Ailerons	27 ⁰ (+3.5 ⁰ -2 ⁰) Up	13 1/2 ⁰	(+ or -2 ⁰) Down
Elevator	25 ⁰ (+ or -2 ⁰) Up	15 ⁰	(+ or -2 ⁰) Down
Rudder (Respect to Fin)	30 ⁰ (+ or -2 ⁰) Left	30 ⁰	(+ or -2 ⁰) Right
Elevator Trim Tab	18 ⁰ (+3 ⁰ -2 ⁰) Up	13 ⁰	(+ or - 2 ⁰) Down

G-164B-15T, -34T, -20T

Ailerons	27 ⁰ (+3.5 ⁰ -2 ⁰) Up	13 1/2 ⁰	(+ or -2 ⁰) Down
Elevator	25 ⁰ (+ or -2 ⁰) Up	15 ⁰	(+ or -2 ⁰) Down
Rudder (Respect to Fin)	18 ⁰ (+0 or -1 ⁰) Left	30 ⁰	(+ or -2 ⁰) Right
Elevator Trim Tab	18 ⁰ (+3 ⁰ -2 ⁰) Up	13 ⁰	(+ or - 2 ⁰) Down

G-164D

Ailerons	27 ⁰ (+3.5 ⁰ -2 ⁰) Up	13 1/2 ⁰	(+ or -2 ⁰) Down
Elevator	25 ⁰ (+ or -2 ⁰) Up	15 ⁰	(+ or -2 ⁰) Down
Rudder (Respect to Fin)	14 ⁰ (+0 or -1 ⁰) Left	27 ⁰	(+ or -2 ⁰) Right
Elevator Trim Tab	18 ⁰ (+3 ⁰ -2 ⁰) Up	13 ⁰	(+ or - 2 ⁰) Down

Production Basis

Production Basis - Production Certificate No. 101

Notice:

Aircraft with the letter "E" prefix on the serial no., ie. E1B, were manufactured under license in Ethiopia. These aircraft are not eligible for certification in the United States.

Notice:

Prior to Revision 15, dated August 21, 1978, there was a single set of NOTES for all models. From Revision 15 and up each model has a separate set of NOTES.

Pilots Operating
Handbook Required

G-164B - S/N 549B and subsequent.
G-164B-15T, G-164B-34T, and G-164B-20T
G-164C - S/N 43C and subsequent.
G-164D - S/N 1D and subsequent.

NOTES PERTINENT TO MODEL G-164

NOTE 1

Current weight and balance report including lists of equipment included in the certificated empty weight, and loading instructions when necessary, must be provided for each aircraft at the time of original certification.

The certificated empty weight and corresponding center of gravity locations must include unusable residual fluids of:

R985:

System Oil	14.5 lb.	(+90.0)
Unusable Fuel	1.8 lb.	(+123.0)

All other engines:

System Oil	6.5 lb.	(+80.0)
Unusable Fuel	1.8 lb.	(+123.0)

Note 2 for
G-164

- (11) When Jasco 24 volt alternator is installed the following placard must be displayed:
"THE ALTERNATOR IN THIS ELECTRICAL SYSTEM ONLY TESTED TO 35 AMPS
MAXIMUM."
- (12) "SULPHUR DUSTING IS PROHIBITED UNLESS SPECIAL FIRE
PREVENTION MEASURES HAVE BEEN INCORPORATED IN THE AIRCRAFT."
- (13) Adjacent to fuel control valve:
- (1) Aircraft S/N 1 through 400 with R-985 series powerplant
"32.7 gal. usable capacity - 80/87 Minimum Octane"
(Standard Tank)
"46.0 gal. usable capacity - 80/87 Minimum Octane"
(Optional Tank)
- (2) Aircraft S/N 1 through 400 with all other powerplants
"32.7 gal. usable capacity - 80 Minimum Octane"
(Standard Tank)
"46.0 gal. usable capacity - 80 Minimum Octane"
(Optional Tank)
- (a) On hopper compartment near filler opening:
"MAXIMUM HOPPER CAPACITY 1200 LB." (S/N 1 through 300)
"MAXIMUM HOPPER CAPACITY 2000 LB" (S/N 301 and Up)
- (b) Adjacent to hopper emergency dump cable:
"EMERGENCY DUMP CABLE - PULL TO DUMP LOAD"
- (c) Printed on safe-flight battery shield:
"DRY BATTERIES POWERING THIS UNIT MUST BE DATED
AND REPLACED EVERY SIX MONTHS"

NOTE 3 When the W-670-240 engine is installed, this airplane shall not be operated over congested areas and is not eligible for waiver to conduct special purpose operations over densely populated areas, and in congested airspaces, or in the vicinity of busy airports conducting passenger transport operations.

NOTE 4 Approved in Patrolling and/or Surveying configuration without normally exposed portions of the dust and spray equipment, but with the hopper remaining installed, at the same gross weights, center of gravity range and powerplant limitations as presently applied to the Agricultural Configuration aircraft.

NOTE 5 When the aircraft is operating with approved 7AA Flight Manual dated April 17, 1959, revised July 29, 1960, March 7, 1961, and September 6, 1961, placards in NOTE 2, Nos. (a)(6) and (a)(7) need not be displayed and placard Nos. (a)(1) and (a)(4) must be modified as follows:

- (a) (1) "THIS AIRCRAFT CERTIFICATED UNDER CAR 8 AS A SPECIAL PURPOSE
AGRICULTURAL AIRCRAFT AND MUST BE OPERATED IN ACCORDANCE WITH
OPERATING LIMITATIONS STATED IN THE FORM OF PLACARDS, MARKINGS, AND
FAA APPROVED MANUAL."
- (a) (4) "WINTER FRONT MUST BE INSTALLED IF OAT IS BELOW 35°F AND REMOVED IF
OAT EXCEEDS 60°F."
(Continental W-670 series engines only)

NOTE 6 (a) Jacobs R-755-A2M, R-755-A2M1, R-755-B2M, L-4M or L-4MB engine eligible for installation with short mount Gulfstream Drawing A1681, carburetor air filter box and funnel Gulfstream Drawing A1667 and Gulfstream (Sensenich) Model J5404/MA96K propeller in accordance with "LIST OF GULFSTREAM G-164 DRAWINGS. APPLICABLE TO JACOBS R-755 (SHORT MOUNT) P.P. KITS" Revised 12-2-63.

- NOTE 6 for G-164
- (b) Static r.p.m. at Maximum Permissible Throttle Setting :
(No additional tolerance permitted). Jacobs L-4M or L-4MB Not over 2010, not under 2010.
Jacobs R-755-B2M
Not over 2080, not under 2050
- Jacobs R-755-A2M and -A2M1
Not over 2090, not under 1990
- (c) Jacobs L-4MB engines must be modified for dual magneto ignition.
- (d) Left exhaust in accordance with Gulfstream ECO's S164-1455,S164-1456 and S164-1457 all dated 4-13-64 is eligible as optional equipment.
- (e) Alternate right hand and/or left hand carburetor heat muffers per Gulfstream Drawing A1691 and ECO's S164-1526 dated 1-18-65.
- NOTE 7 Optional 46.3 gallon fuel tank eligible for installation per Gulfstream Drawing A1775.

NOTES PERTINENT TO MODEL G-164A

- NOTE 1 Current weight and balance report including lists of equipment included in the certificated empty weight, and loading instructions when necessary, must be provided for each aircraft at the time of original certification.
- The certificated empty weight and corresponding center of gravity locations must include unusable residual fluids of:
- R985 and R-1340 series:
- | | | |
|---------------|----------|----------|
| System Oil | 14.5 lb. | (+90.0) |
| Unusable Fuel | 1.8 lb. | (+123.0) |
- All other engines:
- | | | |
|---------------|---------|----------|
| System Oil | 6.5 lb. | (+80.0) |
| Unusable Fuel | 1.8 lb. | (+123.0) |
- NOTE 2 The following placards must be displayed:
- (a) In front of and in clear view of the pilot:
- (1) Aircraft S/N 401 through 1570, 1572 through 1582 and 1584 through 1615:
"THIS AIRCRAFT CERTIFICATED UNDER CAR 8 AS A SPECIAL PURPOSE AGRICULTURAL AIRCRAFT AND MUST BE OPERATED IN COMPLIANCE WITH OPERATING LIMITATIONS STATED IN THE FORM OF PLACARDS AND MARKINGS. THIS AIRCRAFT APPROVED FOR DAY VFR FLIGHT ONLY."
- (2) Aircraft S/N 401 through 1570, 1572 through 1582 and 1584 through 1615:
MAXIMUM AIRSPEEDS S/N 401 and up with R-985 powerplant only
and S/N 526 and up with R-985 or R-1340 powerplant only.
- | | |
|------------------|-------------------------|
| NEVER EXCEED | 147 MPH CAS (128 Knots) |
| ABRUPT MANEUVERS | 117 MPH CAS (102 Knots) |
- MAXIMUM AIRSPEEDS S/N 401 and up with R-985 powerplant only
and S/N 526 and up with R-985 or R-1340 powerplant only.
- | | |
|------------------|-------------------------|
| NEVER EXCEED | 131 MPH CAS (114 Knots) |
| ABRUPT MANEUVERS | 104 MPH CAS (90 Knots) |
- (3) Aircraft S/N 401 through 1570, 1572 through 1582 and 1584 through 1615:
"NO ACROBATIC OR INVERTED MANEUVERS, INCLUDING SPINS, APPROVED."

NOTE 2 for
G-164A

- (4) Aircraft S/N 401 through 1570, 1572 through 1582 and 1584 through 1615:
"FLIGHT LOAD FACTORS:
MAX. POSITIVE LOAD FACTOR +4.2G
MAX. NEGATIVE LOAD FACTOR -1.0G"
- (5) When Jasco 12 volt alternator is installed, the following placard must be displayed:
"THE ALTERNATOR IN THIS ELECTRICAL SYSTEM ONLY TESTED TO 45 AMPS
MAXIMUM."
- (6) When Jasco 24 volt alternator is installed, the following placard must be displayed:
"THE ALTERNATOR IN THIS ELECTRICAL SYSTEM ONLY TESTED TO 35 AMPS
MAXIMUM."
- (7) Aircraft S/N 526 through 1175:
Adjacent to wobble pump handle when R-1340 series engines are installed.
"EMERGENCY HAND WOBBLE FUEL PUMP MAINTAIN 3 TO 6 PSI FUEL
PRESSURE."
- (8) Aircraft S/N 1571, 1583, and 1616 up (R-985 Only):

"THIS AIRCRAFT CERTIFICATED UNDER PART 8 AS A SPECIAL PURPOSE
AGRICULTURAL AIRCRAFT AND MUST BE OPERATED IN COMPLIANCE WITH
OPERATING LIMITATIONS STATED IN THE FORM OF PLACARDS AND
MARKINGS."

THIS AIRCRAFT APPROVED FOR DAY VFR FLIGHT ONLY.

FLIGHT LOAD FACTORS:

MAX POSITIVE LOAD FACTOR	+4.2G
MAX. NEGATIVE LOAD FACTOR	-1.0G

MAXIMUM AIRSPEEDS:

NEVER EXCEED	147 MPH CAS (128 Knots)
ABRUPT MANEUVERS	117 MPH CAS (102 Knots)

NO ACROBATIC OR INVERTED MANEUVERS, INCLUDING SPINS, APPROVED.

ALTITUDE LOSS IN STALL RECOVERY	200 FT.
---------------------------------	---------

WITH HAMILTON STANDARD 2D30 PROPELLER HUB AND PACIFIC PROPELLER AG-100-2
BLADES INSTALLED ON R-985 ENGINE.

MAXIMUM WEIGHT AND C.G. RANGE (INCHES FROM DATUM)

(+122.0) TO (+125.4) AT 4500 LBS.

(+122.0) TO (+125.4) AT 2970 LBS.

Straight line variation between points.

SULPHUR DUSTING IS PROHIBITED UNLESS SPECIAL FIRE PREVENTION MEASURES HAVE
BEEN INCORPORATED IN THE AIRCRAFT"

(P/N A2815-1)

- (9) Aircraft S/N 1571, 1583 and 1616 up (R-1340 only):
"THIS AIRCRAFT CERTIFICATED UNDER CAR 8 AS A SPECIAL PURPOSE
AGRICULTURAL AIRCRAFT AND MUST BE OPERATED IN COMPLIANCE WITH
OPERATING LIMITATIONS STATED IN THE FORM OF PLACARDS AND
MARKINGS.

THIS AIRCRAFT APPROVED FOR DAY VFR FLIGHT ONLY.

"FLIGHT LOAD FACTORS:

MAX. POSITIVE LOAD FACTOR	+4.2G
MAX. NEGATIVE LOAD FACTOR	-1.0G"

NOTE 2 for
G-164A

MAXIMUM AIRSPEEDS:
NEVER EXCEED 147 MPH CAS (128 Knots)
ABRUPT MANEUVERS 117 MPH CAS (102 Knots)

NO ACROBATIC OR INVERTED MANEUVERS, INCLUDING SPINS, APPROVED.

WITH HAMILTON STANDARD 12D40 PROPELLER HUB AND PACIFIC
PROPELLER AG-100-2 BLADES INSTALLED ON R-1340 ENGINE.

MAXIMUM WEIGHT AND C.G. RANGE (INCHES FROM DATUM)
(+122.0) TO (+124.0) AT 4500 LBS.
(+120.3) TO (+125.3) AT 3300 LBS. THROUGH 3525 LBS.
Straight line variation between points.

SULPHUR DUSTING IS PROHIBITED UNLESS SPECIAL FIRE PREVENTION MEASURES
HAVE BEEN INCORPORATED IN THE AIRCRAFT"
(P/N A2815-2)

- (b) Adjacent to fuel control valve:
Aircraft S/N 401 and up with R-985 series powerplant and S/N 526 and up with R-1340 series powerplant.
- | | |
|------------------------------|--|
| "46.0 gal. usable capacity - | 80/87 minimum octane (Standard Tank) |
| 64.0 gal. usable capacity - | 80/87 minimum octane (Standard Tank plus two Optional wing tanks)" |
| 80.0 gal. usable capacity - | 80/87 minimum octane (Standard Tank plus two Optional wing tanks)" |
- (c) On hopper compartment near filler opening:
"MAXIMUM HOPPER CAPACITY 2000 LB."
- (d) Adjacent to hopper emergency dump cable:
"EMERGENCY DUMP CABLE - PULL TO DUMP LOAD"
- (e) Printed on safe-flight battery shield:
"DRY BATTERIES POWERING THIS UNIT MUST BE DATED AND REPLACED EVERY SIX MONTHS"
- (f) On tail ballast used with R-1340 powerplant installation:
"Ballast - 54 lb. - Do Not Remove"
(Aircraft S/N 526 through 1683)
"Ballast - 51 lb. - Do Not Remove"
(Aircraft S/N 1684 and Up)
- (g) Near entrance door:
"RESTRICTED AGRICULTURAL AIRCRAFT"
- (h) On control stick lock A/C S/N 1686, 1695 and up
"CONTROL LOCK/PARKING BRAKE WITH FLIGHT CONTROLS LOCKED, DEPRESS PEDALS FOR PARKING BRAKE, PARKING BRAKES OFF WHEN CONTROL LOCK STOWED"
- (i) Adjacent to oil heat control A/C S/N 1726 and up:
"OIL HEAT - SHALL BE OFF FOR TAKEOFF"
- (j) When JASCO 24 volt alternator is installed the following placard must be displayed:
"THE ALTERNATOR IN THIS ELECTRICAL SYSTEM ONLY TESTED TO 35 AMPS MAXIMUM"

- NOTE 2 for G-164A
- (k) Stenciled on the inside of the baggage compartment door S/N 1571, 1583 and 1616 and up:
"BAGGAGE COMPARTMENT 25 LBS. - SECURED LIMIT"
 - (l) Located above the windshield:
WARNING - 3 POINT READING OF FUEL GAUGE NOT ACCURATE. READ IN LEVEL FLIGHT ONLY"
 - (m) Located above the right hand window:
"DO NOT OPEN RH WINDOW IN FLIGHT"
 - (n) Located on the battery box cover (When 24V electrical system is installed) S/N 1701 and up:
"TWIN 12V BATTERIES IN SERIES - OUTPUT 24 VOLTS"
 - (o) Above the strobe light switch (When optional strobe lights are installed):
WARNING: TURN OFF STROBE LIGHTS WHEN TAXIING IN VICINITY OF OTHER AIRCRAFT OR DURING FIGHT THROUGH CLOUDS, FOG OR HAZE"
 - (p) Located in the step hole on the left side of the fuselage below the cockpit. (When optional auxiliary power receptacle is installed):
"24 VOLT STARTER POWER (NEG. GRD)"
 - (q) Located on the right side of the cockpit. (When optional spray system is installed):
"FAN BRAKE - PULL TO LOCK."
 - (r) Located on the spray/spreader control handle adjustable limit stop rod. (When optional spray system is installed):
"SPRAY PUMP INTAKE VALVE - PULL TO CLOSE"
 - (s) Located on the fan brake lever mounting bracket. (When optional spray system is installed):
"SPRAY PUMP INTAKE VALVE - PULL TO OPEN"
- NOTE 3 Optional 18 gal. wing tanks eligible on S/N 401 and up when installed per Gulfstream Wing Modification Drawing A2003 and fuel Tank Installation Drawing A1730.
- NOTE 4 All R-985 Series Engine Installations S/N 401 through 458 made per Gulfstream Short Mount Drawing A1692. S/N 401 through 458 eligible for Long Mount Installation.
- NOTE 5 Gulfstream Exhaust System G88-42005-75 eligible for all R-1340 installations per Gulfstream Installation Drawing A1550.
- NOTE 6 Optional 8.7 gallon oil tank with integral hopper is eligible for installation on Model G-164A using R-985 or R-1340 engines installed on long engine mounts per Gulfstream Drawing A1360. (Note eligible for installation with R-985 engine in short engine mount).
- NOTE 7 All engines listed for the model G-164 are eligible for installation on Model G-164A. The model G-164 limits, placards, weights and other data apply (See G-164 data and NOTES).

NOTES PERTINENT TO MODEL G-164B

NOTE 1 Current weight and balance report including lists of equipment included in the certificated empty weight, and loading instructions when necessary, must be provided for each aircraft at the time of original certification.

The certificated empty weight and corresponding center of gravity locations must include unusable residual fluids and fixed ballast:

R-975, R985 and R-1340 series:
 System Oil 14.5 lb. (+90.0)
 Unusable Fuel 1.8 lb. (+123.0)

NOTE 1 for G-164B	PT6A-15AG, PT6A-34AG, and PT6A-20B	
	Unusable Fuel	10.0 lb (+116.8)
	Fixed Ballast:	
	PT6A-15AG, -34AG, & -20B	xxx lb (+92.8)
	PT6A-15AG & -34AG	xxx lb (+46.5)
	PT6A-20B	xxx lb (+45.8)
	(use actual weight stamped on wts)	

NOTE 2 The following placards must be displayed:

(a) In front of and in clear view of the pilot:

(1) R-985 Engine through S/N 548B

"THIS AIRCRAFT CERTIFICATED UNDER PART 8 AS A SPECIAL PURPOSE AGRICULTURAL AIRCRAFT AND MUST BE OPERATED IN COMPLIANCE WITH OPERATING LIMITATIONS STATED IN THE FORM OF PLACARDS AND MARKINGS.

THIS AIRCRAFT APPROVED FOR DAY VFR FLIGHT ONLY."

FLIGHT LOAD FACTORS:

MAX. POSITIVE LOAD FACTOR	+4.2G
MAX. NEGATIVE LOAD FACTOR	-1.0G"

MAXIMUM AIRSPEEDS:

NEVER EXCEED	147 MPH CAS (128 Knots)
ABRUPT MANEUVERS	117 MPH CAS (102 Knots)

NO ACROBATIC OR INVERTED MANEUVERS, INCLUDING SPINS, APPROVED.

ALTITUDE LOSS IN STALL RECOVERY 200 FT.

WITH HAMILTON STANDARD 2D30 PROPELLER HUB AND AG-100-2 BLADES INSTALLED ON R-985 ENGINE.

MAXIMUM WEIGHT AND C.G. RANGE (INCHES FROM DATUM)

(+122.0) TO (+125.0) AT 4500 lb.
(+122.0) TO (+125.0) AT 3130 lb.

Straight line variation between points.

SULPHUR DUSTING IS PROHIBITED UNLESS SPECIAL FIRE PREVENTION MEASURES HAVE BEEN INCORPORATED IN THE AIRCRAFT"

(P/N A3615-1)

(2) R-975-46/PA2 Engine through S/N 548B

"THIS AIRCRAFT CERTIFICATED UNDER PART 8 AS A SPECIAL PURPOSE AGRICULTURAL AIRCRAFT AND MUST BE OPERATED IN COMPLIANCE WITH OPERATING LIMITATIONS STATED IN THE FORM OF PLACARDS AND MARKINGS."

THIS AIRCRAFT SHALL NOT BE OPERATED OVER CONGESTED AREAS AND IS NOT ELIGIBLE FOR A WAIVER TO CONDUCT SUCH OPERATIONS. THIS AIRCRAFT APPROVED FOR DAY VFR FLIGHT ONLY.

FLIGHT LOAD FACTORS:

MAX POSITIVE LOAD FACTOR	+4.2G
MAX. NEGATIVE LOAD FACTOR	-1.0G

MAXIMUM AIRSPEEDS:

NEVER EXCEED	147 MPH CAS (128 Knots)
ABRUPT MANEUVERS	117 MPH CAS (102 Knots)

NO ACROBATIC OR INVERTED MANEUVERS, INCLUDING SPINS, APPROVED.

NOTE 2 for
G-164B

ALTITUDE LOSS IN STALL RECOVERY 200 FT.

WITH HAMILTON STANDARD 2D30 PROPELLER HUB AND PACIFIC PROPELLER AG-100-2 BLADES INSTALLED ON R-975 ENGINE, AVOID CONTINUOUS OPERATION BETWEEN 1300 AND 1450 RPM.

MAXIMUM WEIGHT AND C.G. RANGE (INCHES FROM DATUM)

(+122.0) TO (+124.8) AT 4500 LBS.

(+122.0) TO (+124.8) AT 3170 LBS.

Straight line variation between points.

SULPHUR DUSTING IS PROHIBITED UNLESS SPECIAL FIRE PREVENTION MEASURES HAVE BEEN INCORPORATED IN THE AIRCRAFT"

(P/N A3616-1)

(3) R-1340 Engine through S/N 548B

"THIS AIRCRAFT CERTIFICATED UNDER CAR 8 AS A SPECIAL PURPOSE AGRICULTURAL AIRCRAFT AND MUST BE OPERATED IN COMPLIANCE WITH OPERATING LIMITATIONS STATED IN THE FORM OF PLACARDS AND MARKINGS.

THIS AIRCRAFT APPROVED FOR DAY VFR FLIGHT ONLY.

"FLIGHT LOAD FACTORS:

MAX. POSITIVE LOAD FACTOR +4.2G

MAX. NEGATIVE LOAD FACTOR -1.0G"

MAXIMUM AIRSPEEDS:

NEVER EXCEED

147 MPH CAS (128 Knots)

ABRUPT MANEUVERS

117 MPH CAS (102 Knots)

NO ACROBATIC OR INVERTED MANEUVERS, INCLUDING SPINS, APPROVED.

ALTITUDE LOSS IN STALL RECOVERY 200 FT.

WITH HAMILTON STANDARD 12D40 PROPELLER HUB AND PACIFIC PROPELLER AG-100-2 BLADES INSTALLED ON R-1340 ENGINE.

MAXIMUM WEIGHT AND C.G. RANGE (INCHES FROM DATUM)

(+122.0) TO (+124.0) AT 4500 LBS.

(+122.0) TO (+124.0) AT 3300 LBS.

Straight line variation between points.

SULPHUR DUSTING IS PROHIBITED UNLESS SPECIAL FIRE PREVENTION MEASURES HAVE BEEN INCORPORATED IN THE AIRCRAFT"

(P/N A3818-1)

(4) R-985 Engine S/N 549B and Up

"THIS AIRCRAFT CERTIFICATED UNDER CAR 8 AS A SPECIAL PURPOSE AGRICULTURAL AIRCRAFT AND MUST BE OPERATED IN COMPLIANCE WITH OPERATING LIMITATIONS STATED IN THE FORM OF PLACARDS, MARKINGS AND PILOT'S OPERATING HANDBOOK.

THIS AIRCRAFT APPROVED FOR DAY VFR FLIGHT ONLY.

"FLIGHT LOAD FACTORS:

MAX. POSITIVE LOAD FACTOR +4.2G

MAX. NEGATIVE LOAD FACTOR -1.0G"

MAXIMUM AIRSPEEDS:

NEVER EXCEED

145 MPH CAS (126 Knots)

ABRUPT MANEUVERS

116 MPH CAS (101 Knots)

NOTE 2 for
G-164B

NO ACROBATIC OR INVERTED MANEUVERS, INCLUDING SPINS, APPROVED.
WITH HAMILTON STANDARD 2D30 PROPELLER HUB AND 6101A-12 BLADES OR
PACIFIC PROPELLER AG-100-2/OR -45 BLADES INSTALLED ON R-985 ENGINE.

MAXIMUM WEIGHT AND C.G. RANGE (INCHES FROM DATUM)
(+122.0) TO (+125.0) AT 4500 LBS.
(+122.0) TO (+125.0) AT 3170 LBS.

Straight line variation between points.

SULPHUR DUSTING IS PROHIBITED UNLESS SPECIAL FIRE PREVENTION
MEASURES HAVE BEEN INCORPORATED IN THE AIRCRAFT"
(P/N A3615-3)

(5) R-975 Engine S/N 549B and Up

"THIS AIRCRAFT CERTIFICATED UNDER CAR 8 AS A SPECIAL PURPOSE
AGRICULTURAL AIRCRAFT AND MUST BE OPERATED IN COMPLIANCE WITH
OPERATING LIMITATIONS STATED IN THE FORM OF PLACARDS, MARKINGS
AND PILOT'S OPERATING HANDBOOK.

THIS AIRCRAFT SHALL NOT BE OPERATED OVER CONGESTED AREAS.

THIS AIRCRAFT APPROVED FOR DAY VFR FLIGHT ONLY.

FLIGHT LOAD FACTORS:

MAX. POSITIVE LOAD FACTOR	+4.2G
MAX. NEGATIVE LOAD FACTOR	-1.0G"

MAXIMUM AIRSPEEDS:

NEVER EXCEED	145 MPH CAS (126 Knots)
ABRUPT MANEUVERS	116 MPH CAS (101 Knots)

NO ACROBATIC OR INVERTED MANEUVERS, INCLUDING SPINS, APPROVED.

ALTITUDE LOSS IN STALL RECOVERY 200 FT.

WITH HAMILTON STANDARD 2D30 PROPELLER HUB AND AG-100-4S BLADES
INSTALLED ON R-975 ENGINE. AVOID CONTINUOUS OPERATION BETWEEN 1300
AND 1450 RPM.

MAXIMUM WEIGHT AND C.G. RANGE (INCHES FROM DATUM)
(+122.0) TO (+124.8) AT 4500 LBS.
(+122.0) TO (+124.8) AT 3170 LBS.

Straight line variation between points.

SULPHUR DUSTING IS PROHIBITED UNLESS SPECIAL FIRE PREVENTION MEASURES
HAVE BEEN INCORPORATED IN THE AIRCRAFT"
(P/N A3615-3)

(6) R-1340 Engine S/N 549B through 694B

"THIS AIRCRAFT CERTIFICATED UNDER CAR 8 AS A SPECIAL PURPOSE
AGRICULTURAL AIRCRAFT AND MUST BE OPERATED IN COMPLIANCE WITH
OPERATING LIMITATIONS STATED IN THE FORM OF PLACARDS, MARKINGS
AND PILOT'S OPERATING HANDBOOK.

THIS AIRCRAFT APPROVED FOR DAY VFR FLIGHT ONLY.

"FLIGHT LOAD FACTORS:

MAX. POSITIVE LOAD FACTOR	+4.2G
MAX. NEGATIVE LOAD FACTOR	-1.0G"

NOTE 2 for
G-164B

MAXIMUM AIRSPEEDS:
NEVER EXCEED 145 MPH CAS (126 Knots)
ABRUPT MANEUVERS 116 MPH CAS (101 Knots)

NO ACROBATIC OR INVERTED MANEUVERS, INCLUDING SPINS, APPROVED.

ALTITUDE LOSS IN STALL RECOVERY 200 FT.

WITH HAMILTON STANDARD 2D30 PROPELLER HUB AND 610A-12 BLADES OR
PACIFIC PROPELLER AG-100-2/ OR4S BLADES OR HAMILTON STANDARD 22D40
PROPELLER HUB AND PACIFIC PROPELLER AG-200-4S BLADES INSTALLED ON
R-1340 ENGINE.

MAXIMUM WEIGHT AND C.G. RANGE (INCHES FROM DATUM)
(+122.0) TO (+125.4) AT 4500 LBS.
(+122.0) TO (+125.4) AT 3625 LBS.

Straight line variation between points.

SULPHUR DUSTING IS PROHIBITED UNLESS SPECIAL FIRE PREVENTION MEASURES
HAVE BEEN INCORPORATED IN THE AIRCRAFT"
(P/N A3618-3)

(7) R-1340 Engine S/N 695 through 708B

"THIS AIRCRAFT CERTIFICATED UNDER CAR 8 AS A SPECIAL PURPOSE
AGRICULTURAL AIRCRAFT AND MUST BE OPERATED IN COMPLIANCE WITH
OPERATING LIMITATIONS STATED IN THE FORM OF PLACARDS, MARKINGS
AND PILOT'S OPERATING HANDBOOK.

THIS AIRCRAFT APPROVED FOR DAY VFR FLIGHT ONLY.

FLIGHT LOAD FACTORS:
MAX. POSITIVE LOAD FACTOR +4.2G
MAX. NEGATIVE LOAD FACTOR -1.0G"

MAXIMUM AIRSPEEDS:
NEVER EXCEED 145 MPH CAS (126 Knots)
ABRUPT MANEUVERS 116 MPH CAS (101 Knots)

NO ACROBATIC OR INVERTED MANEUVERS, INCLUDING SPINS, APPROVED.

ALTITUDE LOSS IN STALL RECOVERY 200 FT.

WITH HAMILTON STANDARD 2D30 PROPELLER HUB AND 610A-12 BLADES OR
PACIFIC PROPELLER AG-100-2/ OR4S BLADES OR HAMILTON STANDARD 22D40
PROPELLER HUB AND PACIFIC PROPELLER AG-200-4S BLADES INSTALLED ON
R-1340 ENGINE.

MAXIMUM WEIGHT AND C.G. RANGE (INCHES FROM DATUM)
(+122.0) TO (+124.0) AT 4500 LBS.
(+122.0) TO (+124.0) AT 3300 LBS.

Straight line variation between points.

SULPHUR DUSTING IS PROHIBITED UNLESS SPECIAL FIRE PREVENTION MEASURES
HAVE BEEN INCORPORATED IN THE AIRCRAFT"
(P/N A3618-5)

(8) R-1340 Engine S/N 709B and Up

"THIS AIRCRAFT CERTIFICATED UNDER PART 8 AS A SPECIAL PURPOSE
AGRICULTURAL AIRCRAFT AND MUST BE OPERATED IN COMPLIANCE WITH
OPERATING LIMITATIONS STATED IN THE FORM OF PLACARDS, MARKINGS
AND PILOT'S OPERATING HANDBOOK.

NOTE 2 for
G-164B

R-1340 Engine S/N 709B and Up (cont'd)

THIS AIRCRAFT APPROVED FOR DAY VFR FLIGHT ONLY.

FLIGHT LOAD FACTORS:

MAX. POSITIVE LOAD FACTOR	+4.2G
MAX. NEGATIVE LOAD FACTOR	-1.0G

MAXIMUM AIRSPEEDS:

NEVER EXCEED	145 MPH CAS (126 Knots)
ABRUPT MANEUVERS	116 MPH CAS (101 Knots)

NO ACROBATIC OR INVERTED MANEUVERS, INCLUDING SPINS, APPROVED.

ALTITUDE LOSS IN STALL RECOVERY 200 FT.

WITH HAMILTON STANDARD 2D30 PROPELLER HUB AND 610A-12 BLADES OR PACIFIC PROPELLER AG-100-2/ OR 4S BLADES OR HAMILTON STANDARD 22D40 PROPELLER HUB AND PACIFIC PROPELLER AG-200-4S BLADES INSTALLED ON R-1340 ENGINE.

MAXIMUM WEIGHT AND C.G. RANGE (INCHES FROM DATUM)

(+122.0) TO (+125.5) AT 5200 LBS.

(+122.0) TO (+125.5) AT 3625 LBS.

Straight line variation between points.

SULPHUR DUSTING IS PROHIBITED UNLESS SPECIAL FIRE PREVENTION MEASURES HAVE BEEN INCORPORATED IN THE AIRCRAFT"

(P/N A3618-9)

(9) R-985 Engine S/N 752B and Up

THIS AIRCRAFT CERTIFICATED UNDER PART 8 AS A SPECIAL PURPOSE AGRICULTURAL AIRCRAFT AND MUST BE OPERATED IN COMPLIANCE WITH OPERATING LIMITATIONS STATED IN THE FORM OF PLACARDS, MARKINGS AND PILOT'S OPERATING HANDBOOK.

THIS AIRCRAFT APPROVED FOR DAY VFR FLIGHT ONLY.

FLIGHT LOAD FACTORS:

MAX. POSITIVE LOAD FACTOR	+4.2G
MAX. NEGATIVE LOAD FACTOR	-1.0G

MAXIMUM AIRSPEEDS:

NEVER EXCEED	145 MPH CAS (126 Knots)
ABRUPT MANEUVERS	116 MPH CAS (101 Knots)

NO ACROBATIC OR INVERTED MANEUVERS, INCLUDING SPINS, APPROVED.

ALTITUDE LOSS IN STALL RECOVERY 200 FT.

WITH HAMILTON STANDARD 2D30 PROPELLER HUB AND 610A-12 BLADES OR PACIFIC PROPELLER AG-100-2/ OR 4S BLADES INSTALLED ON R-985 ENGINE.

MAXIMUM WEIGHT AND C.G. RANGE (INCHES FROM DATUM)

(+122.0) TO (+126.0) AT 5200 LBS.

(+122.0) TO (+126.0) AT 3100 LBS.

Straight line variation between points.

SULPHUR DUSTING IS PROHIBITED UNLESS SPECIAL FIRE PREVENTION MEASURES HAVE BEEN INCORPORATED IN THE AIRCRAFT"

(P/N A3615-5)

NOTE 2 for
G-164B

(10) PT6A-15AG & PT6A-34AG, and PT6A-20B Engine

THIS AIRCRAFT CERTIFICATED UNDER PART 8 AS A SPECIAL PURPOSE AGRICULTURAL AIRCRAFT AND MUST BE OPERATED IN COMPLIANCE WITH OPERATING LIMITATIONS STATED IN THE FORM OF PLACARDS AND MARKINGS.

THIS AIRCRAFT APPROVED FOR DAY VFR FLIGHT ONLY.

FLIGHT LOAD FACTORS:

MAX. POSITIVE LOAD FACTOR	+4.2G
MAX. NEGATIVE LOAD FACTOR	-1.0G

MAXIMUM AIRSPEEDS:

NEVER EXCEED	157 MPH IAS
ABRUPT MANEUVERS	125 MPH IAS

MAXIMUM WEIGHT AND C.G. RANGE (INCHES FROM DATUM)

(+122.0) TO (+125.7) AT 3500 LBS
(+122.0) TO (+125.5) AT 5200 LBS.

ALTITUDE LOSS IN STALL RECOVERY	200 FT.
MAXIMUM OPERATING ALTITUDE	13,000 FT.

NO ACROBATIC OR INVERTED MANEUVERS, INCLUDING SPINS, APPROVED.

OPERATION IN VISIBLE MOISTURE CONDITIONS BELOW IAT OF 7°C OR IN PROXIMITY OF THUNDERSTORMS PROHIBITED.

SULPHUR DUSTING IS PROHIBITED UNLESS SPECIAL FIRE PREVENTION MEASURES HAVE BEEN INCORPORATED IN THE AIRCRAFT"

(P/N A7618-3)

- (b) When Jasco 12 volt alternator is installed, the following placard must be displayed:
"THE ALTERNATOR IN THIS ELECTRICAL SYSTEM ONLY TESTED TO 45 AMPS MAXIMUM"
- (c) When Jasco 24 volt alternator is installed, the following placard must be displayed:
"THE ALTERNATOR IN THIS ELECTRICAL SYSTEM ONLY TEST TO 35 AMPS MAXIMUM"
- (d) Adjacent to fuel control valve:
- | | |
|--------------------------------|--|
| (1) R-985 and R-1340 | |
| "46.0 gal. usable capacity - | 80/87 minimum octane (Standard Tank) |
| 64.0 gal. usable capacity - | 80/87 minimum octane (Standard Tank plus |
| one Optional wing tank) | |
| 80.0 gal. usable capacity - | 80/87 minimum octane (Standard Tank plus |
| | two Optional wing tanks)" |
| 120.0 Gal usable fuel capacity | 80/87 octane |
| (S/N 828B and up eligible) | |
- (2) R-975-46/PA2
- | | |
|------------------------------|--|
| "46.0 gal. usable capacity - | 100 minimum octane (Standard Tank) |
| 64.0 gal. usable capacity - | 100 minimum octane (Standard Tank plus one Optional wing tank) |
| 80.0 gal. usable capacity - | 100 minimum octane (Standard Tank plus two Optional wing tanks)" |
- (3) PT6A-15AG and -34AG, and PT6A-20B
- 80 gal. usable capacity - Jet A/Jet A-1/Jet B or Diesel grades DF1 or DF2.
120.0 Gal. usable fuel capacity - Jet A/JetA1/Jet B or Diesel Grades DF1 or DF2. (s/n 828B and up eligible)

NOTE 2 for
G-164B

- (e) On hopper compartment near filler opening:
"MAXIMUM HOPPER CAPACITY 2000 LB."
- (f) Adjacent to hopper emergency dump cable: (through S/N 659B)
(S/N 752B and up with R-985 Eng.)
"EMERGENCY DUMP CABLE - PULL TO DUMP LOAD"
- (g) Printed on safe-flight battery shield:
"DRY BATTERIES POWERING THIS UNIT MUST BE DATED AND REPLACED EVERY SIX MONTHS"
- (h) On side of fuselage:
"RESTRICTED AGRICULTURAL AIRCRAFT"
- (i) On control lock stick A/C S/N 138B, 142B, 177B through S/N 510B:
"CONTROL LOCK/PARKING BRAKE WITH FLIGHT CONTROLS LOCKED DEPRESS PEDALS FOR PARKING BRAKE. PARKING BRAKE OFF WHEN CONTROL LOCK STOWED"
- (j) Adjacent to parking brake control S/N 511B and up.:
"PARKING BRAKE: TO BE OFF PRIOR TO LANDING
TO LOCK: PRESS PEDAL, PULL AND HOLD CONTROL
TO UNLOCK: PRESS PEDAL, OR RELEASE CONTROL"
- (k) Adjacent to oil heat control A/C S/N 335B through S/N 659B
"OIL HEAT - SHALL BE OFF FOR TAKEOFF"
- (l) Stenciled on the inside of the baggage compartment door:
"BAGGAGE COMPARTMENT 25 LBS. - SECURED LIMIT"
- (m) Located above the right hand window:
"DO NOT OPEN RH WINDOW IN FLIGHT"
- (n) Located on the battery box cover. (When optional 24V electrical system is installed):
"TWIN 12V BATTERIES IN SERIES - OUTPUT 24 VOLTS"
- (o) Above the strobe light switch (When optional strobe lights are installed):
"WARNING - TURN OFF STROBE LIGHTS WHEN TAXIING IN VICINITY OF OTHER AIRCRAFT OR DURING FLIGHT THROUGH CLOUDS, FOG OR HAZE"
- (p) Located above the windshield:
"WARNING - 3 POINT READING OF FUEL GAUGE NOT ACCURATE. READ IN LEVEL FLIGHT ONLY"
- (q) Located in the step hole on the left side of the fuselage below the cockpit. (When optional auxiliary power receptacle is installed):
"24 VOLT STARTER POWER (NEG. GRD.)"
- (r) Located on the right side of the cockpit (When optional spray system is installed):
"FAN BRAKE - PULL TO LOCK"
- (s) Located on the spray/spreader control handle adjustable limit stop rod. (When optional spray system is installed):
"SPRAY PUMP INTAKE VALVE - PULL TO CLOSE"
- (t) Located on the fan brake lever mounting bracket. (When optional spray system is installed):
"SPRAY PUMP INTAKE VALVE - PULL TO OPEN"
- (u) Located on magneto switch bracket when locking tail wheel is installed:
"TAIL WHEEL MUST BE LOCKED FOR TAKEOFF AND LANDING"

NOTE 2 for
G-164B

- (v) Located on dust gate control stick (S/N 660B and up): (R-1340 ENG.)
"EMERGENCY DUMP-PUSH TO DUMP LOAD"
- (w) On optional fixed tail ballast used with 73" wing gap:
"BALLAST _____LBS. -DO NOT REMOVE"
(Aircraft S/N 709B and Up)
- (x) Located on left side panel adjacent to fuel valve control.
(PT6A-15AG, PT6A-34AG, and PT6A-20B)

CAUTION

AUTOMOTIVE DIESEL FUEL APPROVED FOR AGRICULTURAL OPERATIONS
WITH THE FOLLOWING RESTRICTIONS:

AUTOMOTIVE DIESEL FUEL

PERMITTED WHEN FREE AIR TEMPERATURE IS ABOVE:

+5°C FOR GRADE DF-2

-4°C FOR GRADE DF-1

- (y) Located on upper left hand side of instrument panel
(PT6A-15AG, PT6A -34AG, and PT6A-20B Engine)

WARNING

DO NOT USE REVERSE POWER IN FLIGHT, USE REVERSE POWER ONLY ON
LANDING ROLL OR TAXI WHEN TAIL WHEEL IS HELD FIRMLY ON THE
GROUND.

- (z) Located on instrument panel adjacent to IAT Gauge
(PT6A-15AG, PT6A-34AG, and PT6A-20B Engine)

WARNING

PX-PY HEAT SHALL BE TURNED ON FOR FLIGHT AND GROUND OPERATIONS
WHEN IAT IS BELOW 6°C.

- (aa) Stenciled to the right of the fuel fill cap on the top of the center section fuel tank and near the fuel control valve:
(PT6A-15AG, PT6A-34AG, and PT6A-20B Engine).
80 GAL. USABLE CAP. JETA/JET A-1/JET B OR DIESEL GRADES DF1 OR DF2.
With optional 120 gal. fuel capacity:
"120 GAL USABLE CAPACITY JET A/JET A1/JET B OR DIESEL GRADES DF-1 OR DF-2"
- (ab) On fixed ballast at STA 46.5 used with PT6A-15AG & -34AG engine and at Sta. 45.8 with PT6A-20B Engine
(BALLAST WEIGHT "DO NOT REMOVE"
"WEIGHT _____LBS."
- (ac) On fixed ballast at Sta 92.8 with PT6A-15AG, -34AG and -20B engine, "BALLAST WEIGHT - DO NOT REMOVE. WEIGHT LBS."
- (ad) Stenciled to the right of the fuel fill cap on top of centersection fuel tank and near fuel control valve: (with optional 120 gal. fuel capacity, R-985 & R-1340, S/N 828B & up)
"120 GAL. USABLE CAP. 80/87 OCTANE"
- (ae) Stenciled to the right of the fuel fill cap on top of centersection fuel tank and near fuel control valve:
"46.0 gal usable capacity - 80/87 octane (standard tank)
64.0 gal usable capacity - 80/87 octane (standard tank plus one optional wing tank)
80.0 gal usable capacity - 80/87 octane (standard tank plus two optional wing tanks)"

164B (cont'd)

- NOTE 3 Optional 18 gal. wing tanks eligible on S/N 1B through 659B when installed per Gulfstream Wing Modification Drawing A2003 and Fuel Tank Installation Drawing A1730.
- NOTE 4 Gulfstream Exhaust System C88-42005-75 eligible for all R-1340 installations per Gulfstream Installation Drawing A1550.
- NOTE 5 73" Wing Gap eligible on S/N 1B through 708B with R1340 installations when reworked in accordance with Schweizer Retrofit Kits, Drawing Nos. A7175-1 or -3 (Wing) and 7175-5 (Vertical Tail)
- NOTE 6 Optional 120 gal. fuel system eligible on R-985, R-1340, PT6A-15AG, PT6A-34AG, and PT6A-20B, S/N 828B & up.

NOTES PERTINENT TO MODEL G-164C

- NOTE 1 Current weight and balance report including lists of equipment included in the certificated empty weight, and loading instructions when necessary, must be provided for each aircraft at the time of original certification.
The certificated empty weight and corresponding center of gravity locations must include unusable residual fluids of:
- | | | |
|---------------|----------|----------|
| System Oil | 14.5 lb. | (+72.0) |
| Unusable Fuel | 1.8 lb. | (+123.0) |
- NOTE 2 The following placards must be displayed:
- (a) In front of and in clear view of the pilot:
- (1) Through S/N 42C
"THIS AIRCRAFT CERTIFICATED UNDER PART 8 AS A SPECIAL PURPOSE AGRICULTURAL AIRCRAFT AND MUST BE OPERATED IN COMPLIANCE WITH OPERATING LIMITATIONS STATED IN THE FORM OF PLACARDS AND MARKINGS."

THIS AIRCRAFT APPROVED FOR DAY VFR FLIGHT ONLY.

FLIGHT LOAD FACTORS:
MAX. POSITIVE LOAD FACTOR +4.2G
MAX. NEGATIVE LOAD FACTOR -1.0G

MAXIMUM AIRSPEEDS:
NEVER EXCEED 147 MPH CAS (128 KNOTS)
ABRUPT MANEUVERS 117 MPH CAS (102 KNOTS)

NO ACROBATIC OR INVERTED MANEUVERS, INCLUDING SPINS, APPROVED.

ALTITUDE LOSS IN STALL RECOVERY 200 FT.

WITH HAMILTON STANDARD 12D40 PROPELLER HUB AND AG-100-2 BLADES INSTALLED ON R-1340 ENGINE.

MAXIMUM WEIGHT AND C.G. RANGE (INCHES FROM DATUM)
(+121.0) TO (+123.5) AT 6300 LBS.
(+121.0) TO (+125.2) AT 4400 LBS.
Straight line variation between points.

SULPHUR DUSTING IS PROHIBITED UNLESS SPECIAL FIRE PREVENTION MEASURES HAVE BEEN INCORPORATED IN THE AIRCRAFT"
(P/N A5618-1)

NOTE 2 for
G-164C

(2) S/N 43C AND UP

"THIS AIRCRAFT CERTIFICATED UNDER PART 8 AS A SPECIAL PURPOSE AGRICULTURAL AIRCRAFT AND MUST BE OPERATED IN COMPLIANCE WITH OPERATING LIMITATIONS STATED IN THE FORM OF PLACARDS, MARKINGS, AND PILOT'S OPERATING HANDBOOK.

THIS AIRCRAFT APPROVED FOR DAY VFR FLIGHT ONLY.

FLIGHT LOAD FACTORS

MAX. POSITIVE LOAD FACTOR	+4.2G
MAX. NEGATIVE LOAD FACTOR	-1.0G

MAXIMUM AIRSPEEDS:

NEVER EXCEED	139 MPH IAS (121 KNOTS)
ABRUPT MANEUVERS	112 MPH IAS (97 KNOTS)

NO ACROBATIC OR INVERTED MANEUVERS, INCLUDING SPINS, APPROVED.

ALTITUDE LOSS IN STALL RECOVERY	200 FT.
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WITH HAMILTON STANDARD 12D40 HUB AND 6101A-12 BLADES OR PACIFIC PROPELLER AG-100-2/4S BLADES INSTALLED ON R-1340 ENGINE.

MAXIMUM WEIGHT AND C.G. RANGE (INCHES FROM DATUM)

(+121.0) TO (+123.5) AT 6300 LBS.

(+121.0) TO (+125.2) AT 4400 LBS.

Straight line variation between points.

SULPHUR DUSTING IS PROHIBITED UNLESS SPECIAL FIRE PREVENTION MEASURES HAVE BEEN INCORPORATED IN THE AIRCRAFT"

(P/N A5618-3)

- (b) When Jasco 24 volt alternator is installed, the following placard must be displayed:
"THE ALTERNATOR IN THIS ELECTRICAL SYSTEM ONLY TESTED TO 35 AMPS MAXIMUM"
- (c) Adjacent to fuel control valve:
80.0 GAL. USABLE CAPACITY - 80/87 MINIMUM OCTANE
- (d) On hopper compartment near filler opening:
"MAXIMUM HOPPER CAPACITY 4000 LB."
- (e) Adjacent to hopper emergency dump cable:
"EMERGENCY DUMP CABLE - PULL TO DUMP LOAD"
- (f) Printed on safe-flight battery shield:
"DRY BATTERIES POWERING THIS UNIT MUST BE DATED AND REPLACED EVERY SIX MONTHS"
- (g) Near entrance door:
"RESTRICTED AGRICULTURAL AIRCRAFT"
- (h) Adjacent to parking brake control (A/C 1C through 37C)

"PARKING BRAKE TO BE OFF PRIOR TO LANDING
TO LOCK: PRESS PEDAL, PULL AND HOLD CONTROL
TO UNLOCK: PRESS PEDAL, OR RELEASE CONTROL"
- (I) Adjacent to oil heat control A/C 1C through 37C)
"OIL HEAT - SHALL BE OFF FOR TAKEOFF"

- NOTE 2 for G-164C
- (j) Stenciled on the inside of the baggage compartment door:
"BAGGAGE COMPARTMENT 25 LBS. - SECURED LIMIT"
 - (k) Located above the windshield:
"WARNING - 3 POINT READING OF FUEL GAUGE NOT ACCURATE. READ IN LEVEL FLIGHT ONLY"
 - (l) Located on the top of the hopper aft fairing:
"HYDRAULIC BRAKE RESERVOIR FILL TO MARK ON STICK"
 - (m) Located above the right hand window:
"DO NOT OPEN RH WINDOW IN FLIGHT"
 - (n) Located on the battery box cover. (When optional 24V electrical system is installed):
"TWIN 12V BATTERIES IN SERIES - OUTPUT 24 VOLTS"
 - (o) Above the strobe light switch (When optional strobe lights are installed):

"WARNING - TURN OFF STROBE LIGHTS WHEN TAXIING IN VICINITY OF OTHER AIRCRAFT OR DURING FLIGHT THROUGH CLOUDS, FOG OR HAZE"
 - (p) Located in the step hole on the left side of the fuselage below the cockpit. (When optional auxiliary power receptacle is installed):

"24 VOLT STARTER POWER (NEG. GRD.)"
 - (q) Located on the right side of the cockpit (When optional spray system is installed):
"FAN BRAKE - PULL TO LOCK"
 - (r) Located on the spray/spreader control handle adjustable limit stop rod. (When optional spray system is installed):
"SPRAY PUMP INTAKE VALVE - PULL TO CLOSE"
 - (s) Located on the fan brake lever mounting bracket. (When optional spray system is installed):
"SPRAY PUMP INTAKE VALVE - PULL TO OPEN"
- NOTE 3 Gulfstream Exhaust System G88-42005-75 eligible for all R-1340 installations per Gulfstream Installation Drawing A5510.

NOTES PERTINENT TO MODEL G-164D AND G-164D (WITH 73" GAP)

- NOTE 1 Current weight and balance report including lists of equipment included in the certificated empty weight, and loading instructions when necessary, must be provided for each aircraft at the time of original certification.
- The certificated empty weight and corresponding center of gravity locations must include unusable residual fluids of:
- | | | |
|---------------|---------|----------|
| Unusable Fuel | 2.0 lb. | (+123.0) |
|---------------|---------|----------|
- NOTE 2 The following placards must be displayed:
- (a) In front of and in clear view of the pilot:

"THIS AIRCRAFT CERTIFICATED UNDER PART 8 AS A SPECIAL PURPOSE AGRICULTURAL AIRCRAFT AND MUST BE OPERATED IN COMPLIANCE WITH OPERATING LIMITATIONS STATED IN THE FORM OF PLACARDS, MARKINGS, AND PILOTS OPERATING HANDBOOK."

THIS AIRCRAFT APPROVED FOR DAY VFR FLIGHT ONLY.

FLIGHT LOAD FACTORS:

MAX. POSITIVE LOAD FACTOR	+4.2G
MAX. NEGATIVE LOAD FACTOR	-1.0G

NOTE 2
for G-164D

MAXIMUM AIRSPEEDS:
NEVER EXCEED 164 MPH IAS
ABRUPT MANEUVERS 131 MPH IAS

G-164D

MAXIMUM WEIGHT AND C.G. RANGE (INCHES FROM DATUM)
(+121.0) TO (+123.5) AT 6300 LBS.
(+121.0) TO (+125.2) AT 4000 LBS.
Straight line variation between points.

G-164D (With 73" GAP)

MAXIMUM WEIGHT AND C.G. RANGE (INCHES FROM DATUM)
(+120.8) TO (+122.8) AT 6300 LBS.
(+120.6) TO (+123.6) AT 4000 LBS.
Straight line variation between points.

ALTITUDE LOSS IN STALL RECOVERY 200 FT.
MAXIMUM OPERATING ALTITUDE 13,000 FT

NO ACROBATIC OR INVERTED MANEUVERS, INCLUDING SPINS, APPROVED.

OPERATION IN VISIBLE MOISTURE CONDITIONS BELOW IAT OF 7°C OR IN PROXIMITY OF THUNDERSTORMS PROHIBITED.

SULPHUR DUSTING IS PROHIBITED UNLESS SPECIAL FIRE PREVENTION MEASURES HAVE BEEN INCORPORATED IN THE AIRCRAFT"

- (b) On lower RH instrument panel:
"CAUTION - AUTOMOTIVE DIESEL FUEL APPROVED FOR AGRICULTURAL OPERATION WITH THE FOLLOWING RESTRICTIONS:
Automotive diesel fuel permitted when free air temperature is above

+5°C FOR GRADE DF-2
-4°C FOR GRADE DF-1
- (c) Secured to the upper right hand side of the instrument panel:
"WARNING - DO NOT REVERSE POWER IN FLIGHT, USE REVERSE POWER ONLY ON LANDING ROLL OR TAXI WHEN TAILWHEEL IS HELD FIRMLY ON THE GROUND.

"WARNING - Px-Py HEAT SHALL BE TURNED ON FOR FLIGHT AND GROUND OPERATIONS WHEN IAT IS BELOW 6°C"
- (d) Secured to the lower left hand instrument panel:
"PARKING BRAKE to BE OFF PRIOR TO LANDING
TO LOCK: PRESS PEDAL, PULL AND HOLD CONTROL
TO UNLOCK: PRESS PEDAL, OR RELEASE CONTROL"
- (e) Stenciled on the left hand side of the hopper:
MAXIMUM HOPPER CAPACITY - 4000 LBS."
- (f) Stenciled to the right of the fuel fill cap on the top of the center section fuel tank and near the fuel control valve:
"80 GAL. USABLE CAP.
JET A/JET A-1/JET B OR
DIESEL GRADES DF1 OR DF2"
- (h) Stenciled on the inside of the baggage compartment door:
"BAGGAGE COMPARTMENT 25 LBS. - SECURED LIMIT"

NOTE 2 for
G-164D

- (i) Adjacent to hopper emergency dump cable:
"EMERGENCY DUMP CABLE - PULL TO DUMP LOAD"
- (j) Near entrance door:
"RESTRICTED AGRICULTURAL AIRCRAFT"
- (k) Located on the battery box cover.
"TWIN 12V BATTERIES IN SERIES - OUTPUT 24 VOLTS"
- (l) Above the strobe light switch (When optional strobe lights are installed):

"WARNING - TURN OFF STROBE LIGHTS WHEN TAXIING IN VICINITY OF OTHER AIRCRAFT OR DURING FLIGHT THROUGH CLOUDS, FOG OR HAZE"
- (m) Located above the windshield.
"WARNING - 3 POINT READING OF FUEL GAGE NOT ACCURATE. READ IN LEVEL FLIGHT ONLY"
- (n) Located on the top of the hopper aft fairing:
"HYD. BRAKE RESERVOIR
FILL TO MARK ON STICK"
- (o) Located above the right hand window:
"DO NOT OPEN RH WINDOW IN FLIGHT"
- (p) Located in the step hole on the left side of the fuselage below the cockpit. (When optional auxiliary power receptacle is installed):
"24 VOLT STARTER POWER (NEG. GRD.)"
- (q) Located on the right side of the cockpit (When optional spray system is installed):
"FAN BRAKE - PULL TO LOCK"
- (r) Located on the spray/spreader control handle adjustable limit stop rod. (When optional spray system is installed):
"SPRAY PUMP INTAKE VALVE - PULL TO CLOSE"
- (s) Located on the fan brake lever mounting bracket. (When optional spray system is installed):
"SPRAY PUMP INTAKE VALVE - PULL TO OPEN"
- (t) G-164D (With 73" Gap)
"BALLAST 68 LB. AT FUS. STA. 60.4
DO NOT REMOVE"

NOTE 3

Rudder motion (relative to neutral) - position must be 14° + or -2° left and 27° + or -2° right. Neutral position is actually 3° right - Rudder measured from aircraft center line.

.....END.....