

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A-766
Revision 19
SWIFT
(Globe, TEMCO)
GC-1A
GC-1B
September 4, 2018

TYPE CERTIFICATE DATE SHEET NO. A-766

Type Certificate Holder: Swift Museum Foundation, Inc.
223 County Road 552
Athens, Tennessee 37303-6416

Type Certificate Holder Record: Globe Aircraft Company transferred TC 766 to Texas Engineering & Manufacturing Company (TEMCO) in 1947.
TEMCO transferred TC 766 to Universal Aircraft Industries on May 14, 1956.
Universal Aircraft Industries transferred TC 766 to Univair Aircraft Corporation on April 29, 1966.
Univair Aircraft Corporation transferred TC 766 to Swift Museum Foundation, Inc. on July 14, 1980.

I - Model GC-1A, 2 PCLM, Approved May 7, 1946

Engine	Continental, C-85-12 or C-85-12F		
Fuel	73 min. octane aviation gasoline		
Engine limits	For all operations, 2575 rpm (85 hp)		
Airspeed limits	Level flight or climb	140 mph (122 knots) True Ind.	
	Glide or dive	185 mph (161 knots) True Ind.	
	Flaps extended	90 mph (78 knots) True Ind.	
C.G. Range	(+31.4) to (+35.5) with L.G. extended. Moment change due to retraction of gear +157 in. lbs.		
Empty weight C.G. range	(+29.3) to (+30.4) If empty weight C.G. falls within pertinent range, it is unnecessary to check critical forward and aft C.G. positions. Ranges are not valid for non-standard arrangements.		
Maximum weight	1570 lbs.		
No. seats	2 (+42.5)		
Maximum baggage	50 lbs. (+60.5)		
Fuel capacity	27.8 gals. (+47)		
Oil capacity	4.5 qts. (-14.5)		
Control surface movements	Flaps		Down 39° or 30°
	Elevators	Up 22°	Down 20°
	Elevator trim tab	Up 23°	Down 17°
	Ailerons	Up 19.5°	Down 15°
	Rudder	Right 24°	Left 26°

Page No.	1	2	3	4	5	6
Rev. No.	18	16	11	16	13	16

Serial Nos. eligible	2 to 1000, inclusive (also eligible as GC-1B upon completion of conversion according to TEMCO Customer Service Maintenance Bulletin No. 27, dated June 18, 1948.)
Required equipment	In addition to the pertinent required basic equipment specified in CAR 4a, the following items of equipment must be installed: Items 1, 101; 105 or 110 and 111; 201, 202, 301, 302, and 303.

II - Model GC-1B, 2PCLM, approved September 20, 1946

Engine	Continental C-125-1 or C-125-2 (See NOTE 3 for optional engine)		
Fuel	80 min. octane aviation gasoline		
Engine limits	For all operations, 2550 rpm (125 hp)		
Airspeed limits	Level flight or climb	140 mph (122 knots) True Ind.	
	Glide or dive	185 mph (161 knots) True Ind.	
	Flaps extended	90 mph (78 knots) True Ind.	
C.G. Range	(+29.6) to (+34.7) with L.G. extended. (Moment change due to retraction of gear +157 in. lbs.)		
Empty weight C.G. range	None		
Maximum weight	1710 lbs.		
No. of seats	2 (+42.5)		
Maximum baggage	100 lbs. (+60.5)		
Fuel capacity	27.8 gals. (+47)		
Oil capacity	2 gals. (-20.3)		
Control surface movements	Flaps		Down 30°
	Elevators	Up 24°	Down 18.5°
	Elevator trim tab	Up 10°	Down 22°
	Ailerons	Up 19.5°	Down 16°
	Rudder	Right 24°	Left 26°
Serial Nos. eligible	1001 and up. (GC-1A, serial numbers 2 to 1000 inclusive are eligible as GC-1B upon completion of conversion according to TEMCO Customer Service Maintenance Bulletin No. 27, dated June 18, 1948.)		
Required equipment	In addition to the pertinent required basic equipment specified in CAR 4a, the following items of equipment must be installed: Items 3, 107, 110, 111, 201, 202, 301, 302, and 303.		

Specifications Pertinent to All Models

Datum	Forward face of firewall at bottom
Leveling means	Window sill between (+37) and (+62)
Certification basis	Type Certificate No. 766 (CAR 4a)
Production basis	None. Prior to original certification a CAA agent must perform a detailed inspection for workmanship, materials, and conformity with the approved technical data and a check of the flight characteristics.
Export eligibility	Eligible for export to all countries subject to the provisions of MOP 2-4, except as follows: Canada - Landplane - eligible. - Skiplane - not eligible.

Equipment:

A plus (+) or minus (-) sign preceding the weight of an optional item indicates the net weight change when that item is installed.

Approval for the installation of all items of equipment listed herein has been obtained by the aircraft manufacturer except those items preceded by an asterisk (*). The asterisk denotes that approval has been obtained by someone other than the aircraft manufacturer. An item marked with an asterisk may not have been manufactured under a CAA monitored or approved quality control system, and therefore attention should be paid to workmanship and conformity with pertinent data called for in this specification.

<u>Propellers and Propeller Accessories</u>		<u>GC-1A</u>	<u>GC-1B</u>
1	Propeller - Beech controllable, R002 or R003 with R002-205-72, R003-230-72 or R003-235-72 blades. Dia. 72 in. Pitch at 26 in. sta.: Low 14°, high 19°	30 lbs. (-35)	-----
2.	Propeller - Koppers Aeromatic, F200 with 00-72C, 00-72D or 00-72F blades. Dia. 72 in. Pitch at 27 in. sta.: Low 11°, high 23.5°	29 lbs. (-34)	-----
3.	Propeller - Sensenich 73KR59, 73BR54 or any other fixed pitch wood propeller eligible for the engine speed and power and which meets the following limits: Static rpm at max. permissible throttle setting: Not over 2250, not under 2000. No additional tolerance permitted. Dia: Not over 73 in., not under 71.5 in.	-----	14 lbs. (-40)
4.	Propeller - Koppers Aeromatic, F200 with 00-73D, 00-73E, or 00-73F blades with the following limits:		
	(a) Model GC-1A Parts List Assembly 4305A. Low pitch setting 11° at 24 in. sta. Static rpm at maximum permissible throttle setting: Not over 2525, not under 2525. No additional tolerance permitted. Dia: Not over 73 in., not under 71.5 in. Installation and operation must be accomplished in accordance with Koppers "Installation and Operation Procedure No. 18C."	29 lbs. (-34)	-----
	(b) Model GC-1B Item 108 required. Parts List assembly 4261 or 4277. Low pitch setting 13.6° at 24 in. sta. Static rpm at maximum permissible throttle setting: Not over 2500, not under 2500. No additional tolerance permitted. Dia: Not under 73 in., not under 71.5 in. Installation and operation must be accomplished in accordance with Koppers "Installation and Procedure No. 9B."	-----	29 lbs. (-41)
5.	Propeller - Beech controllable, R002 or R003 with R003-201-72T or R003-231-72T blades. Dia. 72 in. Pitch at 27 in. sta.: Low 14.5°, high 19.5°	29 lbs. (-35)	-----
6.	Propeller - Beech controllable R100-101 hub with R100-217-73T blades. Static rpm at maximum permissible throttle setting: Not over 2275, not under 2175 No additional tolerance permitted. Pitch at 3/4 radius: Low 15°, high 23°. Item 108 required with this item.	-----	+26 lbs. (-40)

	<u>GC-1A</u>	<u>GC-1B</u>
7. Hampton Spinner Model No. 1B, Dwg. No. 100 (Optional with Koppers Aeromatic F-200 propeller)	-----	2 lbs. (-40)
8. Propeller - McCauley 1A170		
(a) Model 1A170-DM7357	-----	33 lbs. (-40)
Static rpm at maximum permissible throttle setting: Not over 2050, not under 1950. No additional tolerance permitted. Diameter: Not over 73 in., not under 71.5 in. Approved on Continental C125-2 engine only		
(b) Model 1A170-DM7359	-----	33 lbs. (-40)
Static rpm at maximum permissible throttle setting: Not over 2180, not under 2080. No additional tolerance permitted. Diameter: Not over 73 in., not under 71.5 in. Approved on Continental C125-2 engine only		
*9. Propeller - Sensenich M74DR-1, fixed pitch metal	-----	30 lbs. (-40)
Static rpm at maximum permissible throttle setting: Not over 2250, not under 2000. No additional tolerance permitted. Diameter: Not over 73 in., not under 71.5 in. Approved on Continental C125-2 engine only.		
10. Propeller – Hartzell BHC-C2YF-1BF/7663DR, constant speed	-----	46 lbs. (-40)
Pitch settings at 30" station: low $12.8^{\circ} \pm 0.2^{\circ}$ high $30.0^{\circ} \pm 1.0^{\circ}$ Diameter: Not over 76", not under 72", in one inch increments Spinners: Hartzell A-2298-2(P), D-4798P Maintain propeller in accordance with Hartzell Owners Manual #115N and Hartzell Maintenance Manual #113B Approved on Continental IO-360 series engine installed per STC SA53NW only.		
11. Propeller – Hartzell HC-C2YK-1BF or HC-C2YR-1BF with F7666A-2, constant speed (See NOTE 4)	-----	51 lbs. (-40)
Pitch settings at -30 station: low $12.8^{\circ} \pm 0.2^{\circ}$ high $35.9^{\circ} \pm 1.0^{\circ}$ Diameter: Not over 74", not under 72", in one inch increments Spinners: Hartzell A-2298-2(P), D-4798P Maintain propeller in accordance with Hartzell Owners Manual #115N and Hartzell Maintenance Manual #113B Only approved on Lycoming O-360-A1A engine installed per STC SA803SO. See NOTE 2.		

Engines and Engine Accessories - Fuel and Oil System

101. Carburetor air heater	2 lbs. (-15)	-----
102. Cabin air heater	2 lbs. (-11)	-----
103. Oil radiator	4 lbs. (-13)	-----
104. Starter - Delco-Remy 1109656	16 lbs. (- 8)	-----
105. Two engine-driven fuel pumps (Upper AC10538-III or Continental 40585-III, lower Continental 40452)	4 lbs. (-26)	-----
106. Carburetor air filter	X	X
107. Carburetor air heater	-----	1 lb. (-19)
108. Oil radiator (Harrison 3875) Required when item 4 or 6 is installed.	-----	4 lbs. (-13)
109. Starter - Delco-Remy A-40098	-----	15 lbs. (- 7)
110. Engine-drive fuel pump (AC1523066)	2 lbs. (-26)	2 lbs. (-33)
111. (a) Wobble pump (Air Corps. Type D-2)	3 lbs. (+34)	3 lbs. (+34)
(b) Wobble pump (Aero Supply No. 54609)	1 lb. (+34)	1 lb. (+34)

		<u>GC-1A</u>	<u>GC-1B</u>
112.	9-gallon auxiliary fuel tank installation GC-1B eligible for this installation in the baggage compartment in accordance with Texas Engineering & Manufacturing Company Drawing No. 11-420-5016, Rev A.	-----	14 lbs. (+61)
113.	Fuel tank venting system (TEMCO Drawing No. 11-420-5060). GC-1A (except serial nos. 2 thru 128) and GC-1B below serial no. 3501 eligible for this item in accordance with TEMCO Customer Service Maintenance Bulletin No. 25 dated December 10, 1947. GC-1A, Serial Nos. 2 through 128 eligible for this item in accordance with TEMCO Customer Service Maintenance Bulletin No. 25 Supplement No. 1 dated June 18, 1948.		
114.	Fram oil-filter (CAA Approved Fram Installation Sheet No. 62604 and 62605)	5 lbs. (- 3)	5 lbs. (- 3)
115.	"CODA" exhaust silencers	-----	3 lbs. (-22)
116.	Davis Model W-125 exhaust silencer installed in accordance with Davis Installation Dwg. No. W-125-C and Davis Photograph No. P-125-1 (with Item 401 only)	-----	+8 lbs. (-18)
117.	Hanlon-Wilson Model 193 muffler-heater exhaust system per TEMCO Dwg. No. 11-440-5046 "C".	-----	+6 lbs. (-25)

Landing Gear and Floats

201.	6.00-6 wheels and brakes (Goodyear L6H/MBL or LF6H/MDB) with 6.00-6 tires	31 lbs. (+24)	31 lbs. (+24)
202.	Tail wheel assemblies		
	(a) Scott 6x2.00	4 lbs. (+179)	4 lbs. (+179)
	(b) 6x2.00, steerable, installed in accordance with Firestone Dwg. DFA-277. (Item 203 required).	4 lbs. (+179)	4 lbs. (+179)
	(c) 6x2.00, steerable, installed in accordance with TEMCO Dwg. 11-350-5002. (Item 203 required.)	5 lbs. (+179)	5 lbs. (+179)
	(d) 6x2.00, steerable, TEMCO Assy. No. 11-350-5120. (Item 203 required)	5 lbs. (+179)	5 lbs. (+179)
	(e) Scott 3250, steerable, installed in accordance with TEMCO Dwg. 11-351-3630, C change. (Item 203 required)	7 lbs. (+179)	7 lbs. (+179)
203.	Tail wheel steering mechanism	2 lbs. (+170)	2 lbs. (+170)
204.	Copilot brake pedal installation.	5 lbs. (+9)	5 lbs. (+9)

Electrical and Radio Equipment

301.	(a) Reading R-24 battery and battery box - 12-volt, 23 amp. hr., 5 hr. rate	26 lbs. (-4)	24 lbs. (-4)
	(b) Willard AW-12-25 manifold vent-battery 12-volt, 25 amp. hr., 5 hr. rate	24 lbs. (-4)	24 lbs. (-4)
	(c) Concorde RG-35A battery 12-volt, 29 amp. hr., 5 hr. rate	29.5 lbs. (-4)	29.5 lbs. (-4)
302.	Engine-driven generator (Delco Remy 1101876)	10 lbs. (-8)	10 lbs. (-7)
303.	Hydraulic system energizer (Adel model N-15668)	6 lbs. (-3)	6 lbs. (-3)
304.	Two-way radio (General Electric AS-1B)	12 lbs. (+16)	12 lbs. (+16)
305.	Deleted (equipment same as Item 302)		
306.	(a) Dual fixed landing lights per TEMCO Dwg. No. 11-552-R3718, change "B"	5 lbs. (+21)	5 lbs. (+21)
	(b) "CODA" landing lights (Gordon Beach Aircraft Service, Installation Dwg. No. S-125-1102)	2.5 lbs. (+35)	2.5 lbs. (+35)
307.	Safe flight stall warning indicator per TEMCO Dwg. No. 11-600-5101, change "B".	1 lb. (+19)	1 lb. (+19)

Interior Equipment

401.	Draft seal bulkhead, TEMCO part 11-210-5014	No wt. change	No wt. change
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		<u>GC-1A</u>	<u>GC-1B</u>
<u>Miscellaneous (not listed above)</u>			
601.	(a) Cabin window installation TEMCO Dwg. 11-213-5096, Assembly Fuselage "New Look" Kit-without turnover ring.	+4 lbs. (+73)	+4 lbs. (+73)
	(b) Cabin window and turnover structure installation TEMCO dwg. 11-213-5095 change "A" fuselage window and Ring Turnover Structure "New Look" kit.	+7.5 lbs. (+68)	+7.5 lbs. (+68)
*602.	Hydraulic systems modified in accordance with Ruleto, Ruleto Industries, Inc., 4823 Rosecrans Avenue, Hawthorne, CA, Drawing Nos. R-1004, R-1005, R1006 and installation instructions SHK-1.		Use actual weight change

NOTE 1. Weight and balance report including list of equipment included in certificated weight empty, and loading instructions when necessary, must be in each aircraft at the time of original certification and at all times thereafter (except in the case of air carrier operators having an approved weight control system).

NOTE 2. Placard instrument panel:

- (a) "INTENTIONAL SPINS PROHIBITED."
- (b) "DO NOT LOWER LANDING GEAR ABOVE 100 MPH."
- (c) For GC-1B aircraft modified per STC SA803SO and utilizing Hartzell Propeller as provided in Item 11 above, Add placard "AVOID CONTINUOUS OPERATIONS BETWEEN 2000 AND 2250 RPM"

NOTE 3. Optional Engine – Teledyne Continental Motors (TCM) model IO-360-D installed in accordance with STC SA53NW. Eligible for installation on model GC-1B.

Engine Limits – For all operations: 2800 RPM, FT (210 HP)

Fuel, minimum octane – 100LL, B95/130CIS or RH95/130

Oil – 10 quarts (-21)

Maximum Weight – 1710 lbs.

Airplane CG Limits: (+29.6) to (+33.0) with L.G. extended (moment change due to retraction of gear +157 in. lbs.)

NOTE 4. When the Lycoming O-360-A1A is installed on the GC-1B per STC SA803SO, Hartzell hub models HC-C2YK-1BF or HC-C2YR-1BF can be used interchangeably with Hartzell blade model F7666A-2 per TC P-920 and the Hartzell Standard Practices Manual 202A 61-01-02 Volume 3 Section 12 Subsection A (Rev 35, dated July 2015).

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