



US Department
of Transportation
Federal Aviation
Administration

MAJOR REPAIR AND ALTERATION
(Airframe, Powerplant, Propeller, or Appliance)

Form Approved
OMB No. 2120-0020
2/28/2011

Electronic Tracking Number

For FAA Use Only

INSTRUCTIONS: Print or type all entries. See Title 14 CFR §43.9, Part 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. §44701). Failure to report can result in a civil penalty for each such violation. (49 U.S.C. §46301(a))

1. Aircraft	Nationality and Registration Mark U.S. N6674K	Serial No. 160	
	Make Grumman	Model G164	Series C
2. Owner	Name (As shown on registration certificate) RICHTER AVIATION INC	Address (As shown on registration certificate) Address [REDACTED]	
		City Maxwell	State CA
		Zip 95955-0612	Country USA

3. For FAA Use Only

4. Type		5. Unit Identification			
Repair	Alteration	Unit	Make	Model	Serial No.
☒	☐	AIRFRAME	_____	(As described in Item 1 above)	_____
☐	☐	POWERPLANT	_____	_____	_____
☐	☐	PROPELLER	_____	_____	_____
☐	☐	APPLIANCE	Type _____ Manufacturer _____	_____	_____

6. Conformity Statement

A. Agency's Name and Address		B. Kind of Agency	
Name Ryan Leon Helms	Address [REDACTED]	☒ U. S. Certificated Mechanic	Manufacturer
City Walnut Ridge	State AR	☐ Foreign Certificated Mechanic	C. Certificate No.
Zip 72476	Country USA	☐ Certified Repair Station	[REDACTED]
		☐ Certified Maintenance Organization	

D. I certify that the repair and/or alteration made to the unit(s) identified in item 5 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

Extended range fuel per 14 CFR Part 43 App. B ☐	Signature/Date of Authorized Individual [Signature] 04/12/2018
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7. Approval for Return to Service

Pursuant to the authority given persons specified below, the unit identified in item 5 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ Approved ☐ Rejected

BY	FAA Fit. Standards Inspector	Manufacturer	Maintenance Organization	Persons Approved by Canadian Department of Transport
	FAA Designee	Repair Station	XX Inspection Authorization	Other (Specify)

Certificate or Designation No. A&P [REDACTED] IA

Signature/Date of Authorized Individual [Signature] Justin Gott 04/12/2018

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. Description of Work Accomplished

(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

Grumman G174C Serial 16C

U.S. N6674K

04/12/2018

Note: Wherever applicable, certain of the following repairs and/or alterations have been accomplished under CAM 8.

Nationality and Registration Mark

Date

1. Damaged A/C dis-mantled for inspection, repair & repaint. Removed all fabric from un-damaged empennage. Fuselage dis-assembled to tubular fuselage weld assy.
2. All 4130 frameworks IRAN'd using original factory jigs & fixtures. OHC frames bead-blasted, epoxy primed, Ranthane Gray painted & internally linseed oiled.
3. Installed OHC A5300-0101P fuselage weld assy, OHC hopper assy, new main landing gear train assy & OHC tailgear assy w/all new hdwe. IRAN'd & reinstalled main & tail wheels w/new axles/bushings/bearings/seals/discs/hoses & hdwe. IRAN'd brake calipers & tailwheel swivel/steering assy.
4. Empennage recovered Ceconite 101 as per AirTech STC #SA7965SW.
5. Reassembled fuselage installing OHC canopy w/new glass, OHC bulkheads/cockpit flooring/rails/rudder pedals & columns/seat assy/control sectors/torque tubes/turtleneck/fairings, and all new cables/pulleys/springs/boots/bearings/bushings, seat covers & harness/master cylinders/bellyskins/side panels/camlocs/lines, hoses & hdwe. Installed new instrument panel w/new or OHC instruments.
6. Installed Flight Grip Model 135 as per STC #SA1151NW.
7. Reinstalled empennage w/new bearings/bushings/fairings/cables & hdwe.
8. Installed OHC Center-Section w/new struts/wires/fuel gauge & hdwe.
9. Installed OHC Wing Group w/new A1730-80120 fuel system, AKP-B-1 factory metalization kit, A5830-3 Nav-Strobes, wingtips, flying & landing wires, dampeners, fairings & gapbands. OHC N-Struts/I-Struts/Ailerons, w/all new bearings/wiring/bushings & hdwe.
10. A/C Epoxy Primed & Ranthane Yellow painted.
11. Installed new Tansland #22373 Adaptor Box, #22575 Gatebox & #22324 Spray valve.
12. Installed new Ag-Jet FWF mount package assy (engine S/N P-36075, propeller S/N CDA5722) w/New Barry Mounts/fuel filter/boost pump/unfeather pump/oil cooler/control cables, OHC starter-generator/tach generator/voltage regulator/reverse-current-relay, and New wiring/switches/relays/connectors/batteries & hdwe.
13. A/C weighed (annexed Wt. & Bal. Report) and Master Equipment List up-dated.
14. Performed Annual Inspection IAW Manufacturer's Maintenance Manual.
15. A/C rigged, ground-ran, prop-balanced, taxi & flight-checked 04/18/2018 @ Walnut Ridge Municipal Airport (Field Elev. 270' ASL, Temp 62 °F) and determined safely controllable in all flight attitudes, full fuel & oil, and with a special purpose hopper load of 804 Lbs (369 Gals water) ~~XXXXXXXXXXXXXXXXXXXX~~

Com'l Pilot/ ~~XXXXXXXXXX~~

ALL WORK ACCOMPLISHED IAW Grumman/Gulfstream/Schweizer SERVICE MANUALS, A.C. 43.13-1B/2A and C.A.M. 8.

-----END-----

Legend: A/C = Aircraft, IAW = In Accordance With, S/N = Serial Number
IRAN = Inspect & Repair as Necessary, OHC = Overhauled Condition
Assy = Assembly, Hdwe = Hardware, FWF = Firewall Forward Assembly

☒ Additional Sheets Are Attached (4 Pages)

HARTZELL

PROPELLER LOGBOOK

PROPELLER MODEL HC-B4TN-5PL/LT10890N

PROPELLER S/N CDA5722

LOGBOOK # _____

THIS SERVICE RECORD shall accompany the propeller equipment at all times. When equipment is installed as part of an Aircraft or engine, this record shall be maintained concurrently with and become a part of the Aircraft and Engine Service Records.

PROPELLER MAINTENANCE RECORD

Position _____

PITCH RANGE

Propeller Model HC-B4TN-5PL

High/Feather _____

Propeller S/N CDA5722

Start Lock _____

Blade Design LT10890N

Low _____

Blade S/N's

Reverse _____

No. 1 L81022

No. 2 L81016

No. 3 L81017

No. 4 L81023

No. 5 _____

No. 6 _____

Aircraft Manufacturer Grumman

Aircraft Model G164C

S/N 16C

Registration N6674K

Spinner Assembly Part No. _____

SERIAL NUMBER P-36075

ENDORSE ALL INSPECTIONS AND REPAIRS WITH NAME, RATING AND CERTIFICATE NUMBER.

PAGE _____

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PX-3107-51 BACK

P-36075

ENDORSE ALL INSPECTIONS AND REPAIRS WITH NAME, RATING AND CERTIFICATE NUMBER.

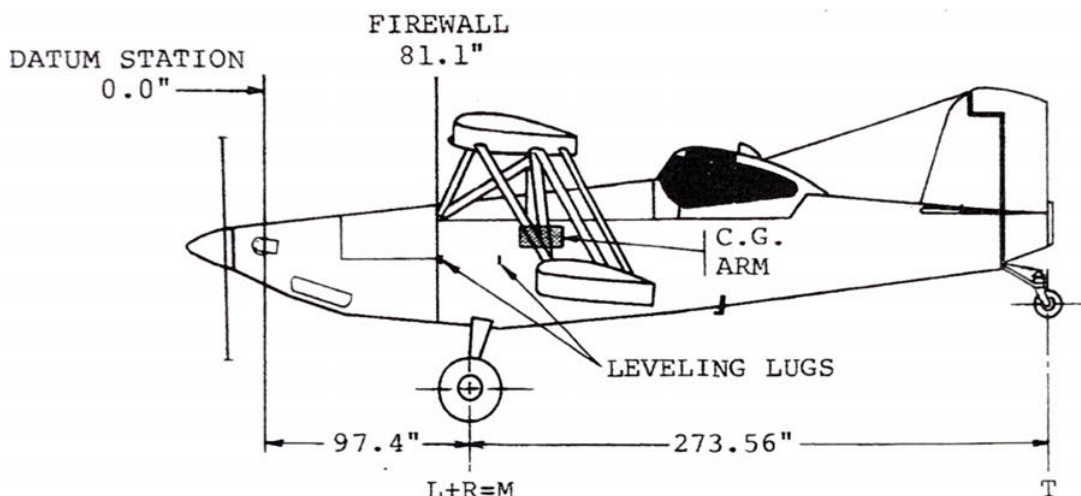
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GULFSTREAM AMERICAN CORPORATION WITH 73" WING-GAP SECTION 6
 AG-CAT,G-164D MODEL & G164C MODEL w/Turbine Conversion WEIGHT AND BALANCE

X	ACTUAL
	COMPUTED

AIRCRAFT SERIAL NO. 16C
 AIRCRAFT REGISTRATION NO. N6674K
 DATE 4/5/2018



WEIGHING FORM

SCALE POSITION	SCALE READINGS (LBS)	(-)TARE (#)	(=)WEIGHT (#) & SYMBOL
LEFT WHEEL	1970		1970 (L)
RIGHT WHEEL	1965		1965 (R)
TOTAL MAIN	3935		3935 (M)
TAIL WHEEL	378		378 (T)
TOTAL NET WGT.	4313		4313 (W)

EMPTY WEIGHT (#) = M + T	C.G ARM (Inches) = $\frac{T (273.56")}{W} + 97.4"$
$4313 = 3935 + 378$	$121.38 = \frac{378 (273.56)}{4313} + 97.4"$

COMPUTATION OF BASIC EMPTY WEIGHT FORM

ITEM	WEIGHT (LBS)	ARM (INCHES X AFT OF DATUM)	MOMENT (IN. LBS.)
WEIGHT (AS WEIGHED)	4313.	121.38	523,511.94
(MINUS) USEFUL LOAD ITEMS			
(PLUS) RESIDUAL FLUIDS *	49.0	110.8	5430
Add: Pump, Strut, Plumbing, Booms & Nozzles	198.	121.9	24,136.06
BASIC EMPTY WEIGHT	4560.	121.29	553,078.

* UNDRAINABLE FUEL, OIL AND SPRAY SYSTEM RESIDUALS

WEIGHT AND BALANCE FORM
 FIGURE 6-1

ISSUE DATE: 3/26/79

SECTION 6
WEIGHT AND BALANCE

WITH 73" WING-GAP

GULFSTREAM AMERICAN CORPORATION

AG-CAT G-164D MODEL
& G164C MODEL w/Turbine Conversion

AIRCRAFT SERIAL NO. 16C

AIRCRAFT REG. NO. N6674K

LOADING CONDITION: Most Forward C.G. at Max. Weight			
ITEMS	WEIGHT (LBS.)	ARM (INCHES)	MOMENT (IN. LBS.)
BASIC A/C EMPTY WEIGHT	4560.	121.29	553,078
HOPPER LOAD 93gals @ 8 Lbs	744.	123.0	91,512
120 GAL. FUEL AT 6.7#/GAL.	804.0	112.5	90,458
2.8 GAL. OIL AT 7.7#/GAL.	22.0	36.0	792
PILOT	170.0	206.0	35,020
WEIGHT AND BALANCE	6300.	122.36	770,860

LOADING CONDITION: Most Forward C.G. at Min. Weight			
ITEMS	WEIGHT (LBS.)	ARM (INCHES)	MOMENT (IN. LBS.)
BASIC A/C EMPTY WEIGHT	4560.	121.29	553,078
ZERO HOPPER LOAD	0.0	0	0
120 GAL. FUEL AT 6.7#/GAL.	804.0	112.5	90,458
2.8 GAL. OIL AT 7.7#/GAL.	22.0	36.0	792
PILOT	170.0	206.0	35,020
WEIGHT AND BALANCE	5556.	122.28	679,348

LOADING CONDITION: Most Aft C.G. at Min. Weight			
ITEMS	WEIGHT (LBS.)	ARM (INCHES)	MOMENT (IN. LBS.)
BASIC A/C EMPTY WEIGHT	4560.	121.29	553,078
ZERO HOPPER LOAD	0.0	0	0
28 GAL. FUEL AT 6.7#/GAL.	188	113.7	21,376
2.8 GAL. OIL AT 7.7#/GAL.	22	36.0	792
PILOT	170.0	206.0	35,020
WEIGHT AND BALANCE	4940.	123.54	610,266

WEIGHT AND BALANCE COMPUTED BY: [Signature] A&P [Signature] DATE: 4/5/2018

CHECKED BY: [Signature] Computer DATE: 4/5/2018

SAMPLE LOADING PROBLEMS

FIGURE 6-2

(Turbine)

MODEL G164C (S/N 1C and above) AIRCRAFT SERIAL NO. 16C
MODEL G164D (S/N 1D and above) AIRCRAFT REG. NO. N6674K

Weight & Balance computation @ MAXIMUM ALLOWABLE GROSS WEIGHT:

ITEMS	WEIGHT (LBS)	ARM (INCHES)	MOMENT (IN. LBS)
BASIC A/C EMPTY WEIGHT	4560.	121.29	553,078.
HOPPER LOAD 369gal @ 8 Lbs	2949.	123.0	362,727.
(120) GAL. FUEL AT 6 $\frac{1}{2}$ /GAL.	804.	112.68	90,595.
(2.8) GAL. OIL AT 7.5 $\frac{1}{2}$ /GAL.	22.	36.0	792.
PILOT	170.	180.0	35,020.
WEIGHT AND BALANCE	8505.	122.55	1,042,212.

of Inspections, Tests, Repairs and Alterations

endorsed with Name, Rating and Certificate Number of Repair Facility. (See back pages for other specific entries.)

2 H.M. Reading 6612.9, TTA 10,114.

2 New H.M. Reading 0.00.

YEAR 20 18 DATE	RECORDING TACH TIME	TODAY'S FLIGHT	TOTAL TIME IN SERVICE	Description of Inspections, Tests, Repairs and Alterations Entries must be endorsed with Name, Rating and Certificate Number of Technician or Repair Facility. (See back pages for other specific entries.)
4/18				Aircraft Repaired, re-conditioned & modified as per 337's of 04/12/18. Installed Factory Wing Metalization Kit and Factory 120-gal Fuel System. Recovered empennage with Aero Tech process. Installed A5830-3 Nav-Strobes. Installed Model 135 Flight Grip. Installed TPE331-10-511M Engine S/N P-36075 and HC-B4TN-5PL/LT10890N Propeller S/N CDA5722. A/C weighed and Master Equipment List amended. Complied with A.D.'s 78-23-11, 82-13-06, 89-18-02R1 & 08-22-21. A/C rigged, ground ran, taxied & flight-checked 4/18/18 by Com'l Pilot # [REDACTED] @ Max. Allowable Gross Wt. and determined safely controllable in all flight attitudes. Performed Annual Inspection and A/C determined to be in an Airworthy Condition...April 18, 2018. [Signature] A&P [REDACTED] IA [Signature] A&P [REDACTED] IA AMERICAN AGVIATION INC. [REDACTED] Walnut Ridge, AR 72476 (Phone [REDACTED])