US Department of Transportation **Federal Aviation Administration**

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

OMB No. 2120-0020 Exp: 5/31/2018 | 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	Serial No.		
N600ZE	B-100		
Make	**Model**	**Series**	
GRUMMAN	GOOSE	G-21	

2. Owner

Name *(As shown on registration certificate)*	Address *(As shown on registration certificate)*		
MIKE RINKER AIRCRAFT LLC	Address 313 E FLORIDA AVE		
	City UNION CITY	State TN	
	Zip 38261	Country United States	

3. For FAA Use Only

By Data [illegible] applicable airworthiness requirements and the above described [illegible] subject to conformity inspection by a person authorized in FAR 43.7

Date 2-12-2018 FAA Inspector [signature]

4. Type		5. Unit Identification			
Repair	Alteration	Unit	Make	Model	Serial No.
☐	☒	AIRFRAME	GRUMMAN	*(As described in Item 1 above)*	B-100
☐	☐	POWERPLANT			
☐	☐	PROPELLER			
☐	☐	APPLIANCE	Type / Manufacturer		

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency			
Name Justin Wright	X	U. S. Certificated Mechanic		Manufacturer
Address 1186 Mill Creek Rd		Foreign Certificated Mechanic	C. Certificate No.	
City Troy State TN		Certificated Repair Station	A&P 3084485	
Zip 38260 Country United States		Certificated 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] 1-6-2018

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 Flt. Standards Inspector	☐	Manufacturer	☐	Maintenance Organization	☐	Persons Approved by Canadian Department of Transport
	☐	FAA Designee	☐	Repair Station	X	Inspection Authorization		Other *(Specify)*

Certificate or Designation No. 327820

Signature/Date of Authorized Individual: [signature] 2/13/2018

FAA Form 337 (10/06)

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.)

N600ZE	2/6/2018
Nationality and Registration Mark	Date

Original 7/8 bore Grumman brake master cylinders Bendix PN: 56324 are no longer available or su pported by manufacturer, reference Grumman drawing number 12684. Installed Grove Aircraft 7/8 bore master cylinders PN: 679-2 using existing Grumman linkage and hardware configuration. Insta lled Grove Aircraft remote hydraulic reservoir PN: 067-054 to bulk head in front of pilot rudder pedals. All original Grumman G21A brake plumbing retained. Master cylinder functions with already approved 337 for Cleveland brake STC. SA99GL compatible with 5606 hydraulic fluid. All work performed in accordance with AC 43.13-1B and good aircraft practices.

Instructions for Continued Airworthiness. Inspect brake system in accordance with Cleveland brake inspection requirements and STC per each required inspection for airworthiness, operation, and safety. Weight and Balance and equipment list updated.

---------- END ----------

☐ Additional Sheets Are Attached

U.S. Department of Transportation
Federal Aviation Administration

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

Form Approved OMB No. 2120-0020 11/30/2007 | 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: USA N600ZE	Serial No.: B-100
	Make: GRUMMAN	Model: G-21A / Series:
2. Owner	Name (As shown on registration certificate): MIKE RINKER AIRCRAFT LLC	Address (As shown on registration certificate): 313 E FLORIDA AVE, UNION CITY, TN 38261-3957 USA

3. For FAA Use Only

THE ALTERATION/DATA IDENTIFIED HEREIN COMPLIES WITH APPLICABLE AIRWORTHINESS REQUIREMENTS AND IS APPROVED ONLY FOR THE ABOVE DESCRIBED AIRCRAFT SUBJECT TO CONFORMITY INSPECTION BY A PERSON AUTHORIZED IN FAR 43.7.

JUL 10 2017
DATE

FAA INSPECTOR

FAA-ASW-FSDO-11
APPROVED

4. Type: Repair	4. Type: Alteration	5. Unit Identification: Unit	Make	Model	Serial No.
☐	☒	AIRFRAME	[redacted]	*(As described in Item 1 above)*	[redacted]
☐	☐	POWERPLANT			
☐	☐	PROPELLER			
☐	☐	APPLIANCE	Type: / Manufacturer:		

6. Conformity Statement

A. Agency's Name and Address:
Wings Avionics, Inc.
421 Ernest Lancaster Dr.
Fayetteville, AR
72701 USA

B. Kind of Agency:
- ☐ U. S. Certificated Mechanic — ☐ Manufacturer
- ☐ Foreign Certificated Mechanic — C. Certificate No.
- ☒ Certificated Repair Station — W1NR105O RADIO; LIMITED AIRFRAME LIMITED RADIO
- ☐ Certificated 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: Brady N. Terry 7-19-2017

BRADY N TERRY

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

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

Certificate or Designation No.: W1NR105O

Signature/Date of Authorized Individual: Brady N. Terry 7-19-2017

BRADY N TERRY

FAA Form 337 (10-06)

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.)

USA N600ZE	Jul-05-2017
Nationality and Registration Mark	Date

1 REMOVED A GARMIN GNS530 GLOBAL NAVIGATION SYSTEM, PART NUMBER (P/N) 011-00550-10, SERIAL NUMBER (S/N) 78411401, THAT WAS PREVIOUSLY INSTALLED UNDER FAA FORM 337 FIELD APPROVAL DATED 10-27-2003 WITH ASSOCIATED GARMIN GNS530 FAA APPROVED FLIGHT MANUAL SUPPLEMENT (AFMS) DATED 10-21-2003; AND RETURNED UNIT TO GARMIN INTERNATIONAL FOR GNS530W WIDE AREA AUGMENTATION SYSTEM (WAAS) FACTORY UPGRADE.

2. THE FACTORY UPGRADED GNS530W GLOBAL NAVIGATION SYSTEM, P/N 011-01064-40, S/N 78411401, WAS INSTALLED IN THE EXISTING GNS530 RADIO RACK MOUNTING LOCATION, AND NO WIRING CHANGES WERE MADE TO THE PREVIOUS INSTALLATION. THE GNS530W WAAS UPGRADE WAS COMPLETED IN ACCORDANCE WITH THE GARMIN GNS500W SERIES TECHNICAL STANDARD ORDER (TSO) INSTALLATION MANUAL, P/N 190-00357-08, REVISION (REV) M, DATED 01-07-2016; THE GNS500W SERIES SUPPLEMENTAL TYPE CERTIFICATE (STC) INSTALLATION MANUAL, P/N 190-00357-02, REV L, DATED 02-24-2016; AND THE GARMIN 400W / 500W SERIES STC UPGRADE INSTALLATION MANUAL, P/N 190-00357-06, REVISION E, DATED JANUARY 15, 2014.

3. A GARMIN GNS500W SERIES PILOT'S GUIDE AND REFERENCE, P/N 190-00357-00, REV K, DATED DECEMBER 31, 2015; A GNS500W SERIES QUICK REFERENCE GUIDE, P/N 190-00357-01, REV J, DATED DECEMBER 31, 2015; A GARMIN 400W/500W SERIES OPTIONAL DISPLAYS PILOT'S GUIDE ADDENDUM, P/N 190-00356-30, REV M, DATED DECEMBER 31, 2015; AND A GARMIN 400W/500W SERIES DISPLAY INTERFACES PILOT'S GUIDE ADDENDUM, P/N 190-00356-31, REV D, DATED DECEMBER 31, 2008; WERE PLACED IN THE AIRCRAFT RECORDS. A FAA APPROVED GNS500W SERIES AFMS, P/N 190-00357-03, REV E, DATED NOVEMBER 20, 2014, WAS PLACED IN THE AIRCRAFT RECORDS.

4. THE MAXIMUM CONTINUOUS ELECTRICAL LOAD DOES NOT EXCEED 80% OF TOTAL RATED CAPACITY PER AC 43.13-1B CHANGE 1, PARAGRAPH 11-35.

5. A LOGBOOK ENTRY UNDER WORK ORDER NUMBER 6645 WAS ENTERED IN THE AIRCRAFT RECORDS. WEIGHT AND BALANCE RECORDS AND EQUIPMENT LIST REVISED.

6. POST-INSTALLATION GROUND CHECKS WERE PERFORMED IN ACCORDANCE WITH THE MANUFACTURER INSTALLATION MANUALS AND FOUND TO OPERATE PROPERLY.

7. FACTORY SUPPLIED GARMIN 500W SERIES INSTRUCTIONS FOR CONTINUED AIRWORTHINESS, DOCUMENT NUMBER 190-00357-65, REV D, DATED 11-20-2014, ARE ATTACHED AS ADDITIONAL SHEETS.***END***

☑ ADDITIONAL SHEETS ARE ATTACHED

Garmin International, Inc.
1200 E. 151st Street
Olathe, Kansas 66062 U.S.A.

FAA APPROVED

AIRPLANE FLIGHT MANUAL SUPPLEMENT
or
SUPPLEMENTAL AIRPLANE FLIGHT MANUAL
for the
Garmin GNS 500W, 500WT, 530W, 530AW, 530WT, or 530AWT
GPS/SBAS Navigation System
as installed in

Grumman G-21A
Make and Model Airplane

Registration Number: N6062E Serial Number: B-100

This document serves as an Airplane Flight Manual Supplement or as a Supplemental Airplane Flight Manual when the aircraft is equipped with the Garmin GNS 500W, 500WT, 530W, 530AW, 530WT, or 530AWT GPS/SBAS Navigation System. This document must be carried in the airplane at all times when the Garmin GNS unit is installed in accordance with STC SA01933LA-D. This document must be incorporated into the FAA Approved Airplane Flight Manual or provided as an FAA Approved Supplemental Airplane Flight Manual.

The information contained herein supplements the information in the FAA Approved Airplane Flight Manual. For limitations, procedures, loading and performance information not contained in this document, refer to the FAA Approved Airplane Flight Manual, markings, or placards.

FAA Approved By: 

Michael Warren
ODA STC Unit Administrator
Garmin International, Inc.
ODA-240087-CE

Date: 20-NOV-2014

LOG OF REVISIONS				
	Page			
Rev. No.	No.	Date	Description	FAA Approved
A Original	All	11-20-07	Complete Supplement	Seyed-Youssef Hashemi Mgr. Flt. Test Br., ANM-160L FAA, Los Angeles ACO Transport Airplane Directorate Date: Nov. 20, 2007
B	All	07/31/09	Added '-D' to STC number, added LP approach type	David G Armstrong ODA STC Unit Administrator ODA-240087-CE Garmin International, Inc.
C	All	03/21/13	Complete Rewrite	Michael Warren ODA STC Unit Administrator ODA-240087-CE Garmin International, Inc.
D	10, 14	01/27/14	Added LP +V approach type	Michael Warren ODA STC Unit Administrator ODA-240087-CE Garmin International, Inc.
E	8,9 11 14 15 22 23	11/20/14	Updated document revisions and added Flight Stream 210 Added note for Flight Stream 210 Added sections 2.14 and 2.15 Modified TAWS warning procedure Updated GTN Crossfill section Added Section 7.3	See Page 1

Table of Contents

Section 1. GENERAL

1.1 Garmin 5XXW Series GPS/WAAS Nav Com

The Garmin GNS Series GPS/WAAS Navigator is a panel-mounted product that contains a GPS/WAAS receiver for GPS approved primary navigation under TSO-C146a, (plus optional VHF Com and VHF Nav radios) in an integrated unit with a moving map and color display. The 5XXW Series unit features a graphical display which may also be used to depict traffic, weather, or terrain data. Optional TAWS annunciation and audio is available in some installations.

The navigation functions are operated by dedicated keys and graphical menus which are controlled by the buttons and the dual concentric rotary knob along the bottom and right side of the display.

Optional VHF Com and VHF Nav radio functions are controlled via dedicated buttons and knobs on the left side of the display and adjacent to frequencies they are controlling.

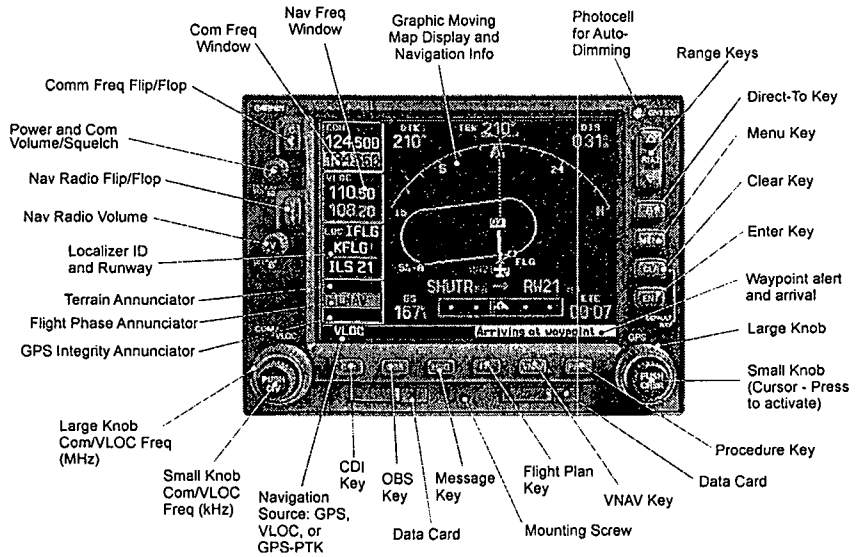


Figure 1 - 530W Series Control and Display Layout

1.2 GPS/SBAS TSO-C146a Class 3 Operation

The GNS complies with AC 20-138A and has airworthiness approval for navigation using GPS and SBAS (within the coverage of a Satellite Based Augmentation System complying with ICAO Annex 10) for IFR en route, terminal area, and non-precision approach operations (including those approaches titled "GPS", "or GPS", and "RNAV (GPS)" approaches). The Garmin GNSS navigation system is composed of the GNS navigator and antenna, and is approved for approach procedures with vertical guidance including "LPV" and "LNAV/VNAV" and without vertical guidance including "LP" and "LNAV," within the U.S. National Airspace System.

The Garmin GNSS navigation system complies with the equipment requirements of AC 90-105 and meets the equipment performance and functional requirements to conduct RNP terminal departure and arrival procedures and RNP approach procedures without RF (radius to fix) legs. Part 91 subpart K, 121, 125, 129, and 135 operators require operational approval from the FAA.

The Garmin GNSS navigation system complies with the equipment requirements of AC 90-100A for RNAV 2 and RNAV 1 operations. In accordance with AC 90-100A, Part 91 operators (except subpart K) following the aircraft and training guidance in AC 90-100A are authorized to fly RNAV 2 and RNAV 1 procedures. Part 91 subpart K, 121, 125, 129, and 135 operators require operational approval from the FAA.

Applicable to dual installations consisting of two Garmin GNSS units: The Garmin GNSS navigation system has been found to comply with the requirements for GPS Class II oceanic and remote navigation (RNP-10) without time limitations in accordance with AC 20-138A and FAA Order 8400.12A. The Garmin GNSS navigation system can be used without reliance on other long-range navigation systems. This does not constitute an operational approval.

The Garmin GNSS navigation system has been found to comply with the navigation requirements for GPS Class II oceanic and remote navigation (RNP-4) in accordance with AC 20-138A and FAA Order 8400.33. The Garmin GNSS navigation system can be used without reliance on other long-range navigation systems. Additional equipment may be required to obtain operational approval to utilize RNP-4 performance. This does not constitute an operational approval.

The Garmin GNSS navigation system complies with the accuracy, integrity, and continuity of function, and contains the minimum system functions required for P-RNAV operations in accordance with JAA Administrative & Guidance Material Section One: General Part 3: Temporary Guidance Leaflets, Leaflet No 10 (JAA TGL-10 Rev 1). The GNSS navigation system has one or more TSO-C146a Class 3 approved Garmin GNS Navigation Systems. The Garmin GNSS navigation system complies with the accuracy, integrity, and continuity of function, and contains the minimum system functions required for B-RNAV operations in accordance with EASA AMC 20-4. The Garmin GNSS navigation system complies with the equipment requirements for P-RNAV and B-RNAV/RNAV-5 operations in accordance with AC 90-96A CHG 1. This does not constitute an operational approval.

Garmin International holds an FAA Type 2 Letter of Acceptance (LOA) in accordance with AC 20-153 for database integrity, quality, and database management practices for the navigation database. Flight crew and operators can view the LOA status at FlyGarmin.com then select "Type 2 LOA Status."

Navigation information is referenced to the WGS-84 reference system.

Note that for some types of aircraft operation and for operation in non-U.S. airspace, separate operational approval(s) may be required in addition to equipment installation and airworthiness approval.

Section 2. LIMITATIONS

2.1 Pilot's Guide

The Quick Reference Guide, part number and revision listed below (or later applicable revisions), must be immediately available for the flight crew whenever navigation is predicated on the use of the 5XXW Series unit.

- 500W Series Quick Reference Guide P/N 190-00357-01 Rev H

The Pilot's Guide Addendum, part number and revision listed below (or later applicable revision), must be immediately available for the flight crew whenever one or more of the following units are installed and utilized with the 5XXW Series unit:

GDL 69/69A XM Satellite Data link
GDL 88 ADS-B Transceiver
GTX 330/330D TIS
Garmin TAWS (GPS 500WT & GNS 530WT)
GTS 8XX Series TAS
Flight Stream 210

- 400W/500W Series Optional Displays P/N 190-00356-30 Rev L

The Pilot's Guide Addendum, part number and revision listed below (or later applicable revision), must be immediately available for the flight crew whenever one or more of the following units are installed and utilized with the 5XXW Series unit:

Stormscope® Lightning Detection System
Skywatch® Traffic Advisory System
Bendix/King® Traffic Advisory System
Avidyne/Ryan TCAD Traffic System

- 400W/500W Series Display Interfaces P/N 190-00356-31 Rev D

2.2 Kinds of Operation

This AFM supplement does not grant approval for IFR operations to aircraft limited to VFR operations. Additional aircraft systems may be required for IFR operational approval. Systems limited to VFR shall be placarded in close proximity to the 5XXW Series unit: "**GPS LIMITED TO VFR USE ONLY**".

2.3 System Software

This AFMS/AFM is applicable to the software versions shown in Table 1.

The Main and GPS software versions are displayed on the start-up page immediately after power-on.

Software Item	**Approved Software Version** *(or later FAA approved versions for this STC)*	
	SW version	As displayed on unit
Main SW Version	5.20	5.20
GPS SW Version	5.0	5.0
Flight Stream 210	2.11	2.11 (Displayed on GNS)

Table 1 – Required Equipment

2.4 Navigation database

GPS/SBAS based IFR enroute, oceanic, and terminal navigation is prohibited unless the flight crew verifies and uses a valid, compatible, and current navigation database or verifies each waypoint for accuracy by reference to current approved data.

"GPS", "or GPS", and "RNAV (GPS)" instrument approaches using the Garmin navigation system are prohibited unless the flight crew verifies and uses the current navigation database. GPS based instrument approaches must be flown in accordance with an approved instrument approach procedure that is loaded from the navigation database.

Discrepancies that invalidate a procedure should be reported to Garmin International. The affected procedure is prohibited from being flown using data from the navigation database until a new navigation database is installed in the aircraft and verified that the discrepancy has been corrected. Navigation database discrepancies can be reported at FlyGarmin.com by selecting "Aviation Data Error Report." Flight crew and operators can view navigation database alerts at FlyGarmin.com then select "NavData Alerts."

If the navigation database cycle will change during flight, the flight crew must ensure the accuracy of navigation data, including suitability of navigation facilities used to define the routes and procedures for flight. If an amended chart affecting navigation data is published for the procedure, the database must not be used to conduct the procedure.

2.5 Flight Planning

For flight planning purposes, in areas where SBAS coverage is not available, the flight crew must check RAIM availability.

- Within the United States, RAIM availability can be determined using the Garmin WFDE Prediction program, Garmin part number 006-A0154-04 software version 3.00 or later approved version with Garmin approved antennas or the FAA's enroute and terminal RAIM prediction website: www.raimprediction.net, or by contacting a Flight Service Station.
- Within Europe, RAIM availability can be determined using the Garmin WFDE Prediction program or Europe's AUGER GPS RAIM Prediction Tool at http://augur.ecacnav.com/augur/app/home.
- For other areas, use the Garmin WFDE Prediction program.

This RAIM availability requirement is not necessary if SBAS coverage is confirmed to be available along the entire route of flight. The route planning and WFDE prediction program may be downloaded from the Garmin website on the internet. For information on using the WFDE Prediction Program, refer to Garmin WAAS FDE Prediction Program, part number 190-00643-01, 'WFDE Prediction Program Instructions'.

For flight planning purposes, for operations within the U.S. National Airspace System on RNP and RNAV procedures when SBAS signals are not available, the availability of GPS RAIM shall be confirmed for the intended route of flight. In the event of a predicted continuous loss of RAIM of more than five minutes for any part of the intended route of flight, the flight shall be delayed, canceled, or rerouted on a track where RAIM requirements can be met. The flight may also be re-planned using non-GPS based navigational capabilities.

For flight planning purposes for operations within European B-RNAV/RNAV-5 and P-RNAV airspace, if more than one satellite is scheduled to be out of service, then the availability of GPS RAIM shall be confirmed for the intended flight (route and time). In the event of a predicted continuous loss of RAIM of more than five minutes for any part of the intended flight, the flight shall be delayed, canceled, or rerouted on a track where RAIM requirements can be met.

Applicable to dual installations consisting of two Garmin GNSS units:

For flight planning purposes, for operations where the route requires Class II navigation the aircraft's operator or flight crew must use the Garmin WFDE Prediction program to demonstrate that there are no outages on the specified route that would prevent the Garmin GNSS navigation system to provide GPS Class II navigation in oceanic and remote areas of operation that requires RNP-10 or RNP-4 capability. If the Garmin WFDE Prediction program indicates fault exclusion (FDE) will be unavailable for more than 34 minutes in accordance with FAA Order 8400.12A for RNP-10 requirements, or 25 minutes in accordance with FAA Order 8400.33 for RNP-4 requirements, then the operation must be rescheduled when FDE is available.

Both Garmin GPS navigation receivers must be operating and providing GPS navigation guidance for operations requiring RNP-4 performance.

North Atlantic (NAT) Minimum Navigational Performance Specifications (MNPS) Airspace operations per AC 91-49 and AC 120-33 require both GPS/SBAS receivers to be operating and receiving usable signals except for routes requiring only one Long Range Navigation sensor. Each display computes an independent navigation solution based on its internal GPS receiver.

Whenever possible, RNP and RNAV routes including Standard Instrument Departures (SIDs), and Standard Terminal Arrival (STAR), routes should be loaded into the flight plan from the database in their entirety, rather than loading route waypoints from the database into the flight plan individually. Selecting and inserting individual named fixes from the database is permitted, provided all fixes along the published route to be flown are inserted. Manual entry of waypoints using latitude/longitude or place/bearing is prohibited.

It is not acceptable to flight plan a required alternate airport based on RNAV(GPS) LP/LPV or LNAV/VNAV approach minimums. The required alternate airport must be flight planned using an LNAV approach minimums or available ground-based approach aid.

Navigation information is referenced to the WGS-84 reference system, and should only be used where the Aeronautical Information Publication (including electronic data and aeronautical charts) conform to WGS-84 or equivalent.

NOTE

If flight plan information is imported from a portable electronic device utilizing the Flight Stream 210 Bluetooth® system, all waypoints and flight plan sequences must be verified by the crew.

2.6 Approaches

- Instrument approaches using GPS guidance may only be conducted when the GNS is operating in the approach mode. (LNAV, LNAV+V, L/VNAV, LPV, LP, or LP +V)

NOTE

Advisory vertical guidance deviation is provided when the GNS annunciates LNAV+V or LP +V. The controlling minimums remain LNAV or LP even when advisory vertical guidance is provided. Advisory vertical guidance information displayed on the VDI in this mode is only an aid to help flight crews comply with altitude restrictions. When using advisory vertical guidance, the flight crew must use the primary barometric altimeter to ensure compliance with all

altitude restrictions in accordance with the LNAV or LP approach procedure.

- When conducting instrument approaches referenced to true North, the NAV Angle on the AUX-Units/Position page must be set to **True**.
- The navigation equipment required to join and fly an instrument approach procedure is indicated by the title of the procedure and notes on the IAP chart. Navigating the final approach segment (that segment from the final approach fix to the missed approach point) of an ILS, LOC, LOC-BC, LDA, SDF, MLS, VOR, TACAN approach, or any other type of approach not approved for GPS, is not authorized with GPS navigation guidance. GPS guidance can only be used for approach procedures with GPS or RNAV in the procedure title. When using the Garmin VOR/LOC/GS receivers to fly the final approach segment, VOR/LOC/GS navigation data must be selected and presented on the CDI of the pilot flying.
- Not all published Instrument Approach Procedures (IAP) are in the navigation database. Flight crews planning to fly an RNAV instrument approach must ensure that the navigation database contains the planned RNAV Instrument Approach Procedure and that approach procedure must be loaded from the navigation database into the GNS system flight plan by its name. Users are prohibited from flying any approach path that contains manually entered waypoints.
- IFR approaches are prohibited whenever any physical or visual obstruction (such as a throw-over yoke) restricts pilot view or access to the GNS and/or the CDI.

2.7 Autopilot Coupling

IFR installations of a Garmin 5XXW Series unit allow the operator to fly all phases of flight based on the navigation information presented to the pilot; however, not all modes may be coupled to the autopilot. All autopilots may be coupled in Oceanic (OCN), Enroute (ENR), and Terminal (TERM) modes; however, the FAA requires that vertical coupling of an autopilot for approaches be demonstrated to meet their intended function and provide safe and proper operation to published minimums. This installation is limited to:

☐ Lateral coupling only for GPS approaches. Coupling to the vertical path for GPS approaches is not authorized.

2.8 Terrain Proximity Function (All Units)

Terrain and obstacle information appears on the map and terrain display pages as red and yellow tiles or towers, and is depicted for advisory use only. Aircraft maneuvers and navigation must not be predicated upon the use of the terrain display. Terrain and obstacle information is advisory only and is not equivalent to warnings provided by TAWS.

The terrain display is intended to serve as a situational awareness tool only. By itself, it may not provide either the accuracy or the fidelity on which to base decisions and plan maneuvers to avoid terrain or obstacles.

2.9 TAWS Function (Equipped Units)

Flight crews are authorized to deviate from their current ATC clearance to the extent necessary to comply with TAWS warnings. Navigation must not be predicated upon the use of TAWS.

If an external TAWS annunciator panel is installed in the aircraft, this annunciator panel must be fully functional in order to use the TAWS system.

2.10 VNAV – Vertical Navigation Calculation Page

VNAV information accessible by pressing the "VNAV" button may be utilized for advisory information only. Use of VNAV information for Instrument Approach Procedures does not guarantee Step-Down Fix altitude protection, or arrival at approach minimums in a normal position to land.

2.11 Weather Display (Optional)

This limitation applies to data linked weather products from SiriusXM via a GDL 69/69A or FIS-B via a GDL 88.

Do not use data link weather information for maneuvering in, near, or around areas of hazardous weather. Information provided by data link weather products may not accurately depict current weather conditions.

Do not use the indicated data link weather product age to determine the age of the weather information shown by the data link weather product. Due to time delays inherent in gathering and processing weather data for data link transmission, the weather information shown by the data link weather product may be significantly older than the indicated weather product age.

Do not rely solely upon data link services to provide Temporary Flight Restriction (TFR) or Notice to Airmen (NOTAM) information. Not all TFRs and NOTAMS can be depicted on the GNS.

2.12 Traffic Display (Optional)

Traffic may be displayed on the GNS when connected to an approved optional TCAS I, TAS, TIS, or ADS-B traffic device. These systems are capable of providing traffic monitoring and alerting to the flight crew. Traffic shown on the display may or may not have traffic alerting available. The display of traffic is an aid to visual acquisition and may not be utilized for aircraft maneuvering.

2.13 Manual GTN Crossfill

When Manual GTN Crossfill is in use, the crew must verify each flight plan leg prior to using the GNS to navigate. See section 7.2 for additional information.

2.14 Flight Stream 210 (Optional)

The Flight Stream 210 provides the ability for the crew to import flight plans from a portable electronic device to the GNS. The crew must verify all flight plan and waypoint information imported from a portable electronic device prior to use on the GNS. See section 7.3 for additional information.

2.15 Portable Electronic Devices

This STC does not relieve the operator from complying with the requirements of 91.23 or any other operational regulation regarding portable electronic devices.

Section 3. EMERGENCY PROCEDURES

3.1 Emergency Procedures

3.1.1 TAWS WARNING

Red annunciator and aural "PULL UP":
Autopilot ..... **DISCONNECT**
Aircraft Controls ..... **INITIATE MAXIMUM POWER CLIMB**
Airspeed ..... **BEST ANGLE OF CLIMB SPEED**

After Warning Ceases:
Altitude ..... **CLIMB AND MAINTAIN SAFE ALTITUDE**
Advise ATC of Altitude Deviation, if appropriate.

NOTE

Only vertical maneuvers are recommended, unless either operating in visual meteorological conditions (VMC), or the flight crew determines, based on all available information, that turning in addition to the vertical escape maneuver is the safest course of action, or both.

3.2 Abnormal Procedures

3.2.1 LOSS OF GPS/SBAS NAVIGATION DATA

When the GPS/SBAS receiver is inoperative or GPS navigation information is not available or invalid, the GNS will enter one of two modes: Dead Reckoning mode (DR) or Loss Of Integrity mode (LOI). The mode is indicated on the GNS by an amber "DR" or "INTEG".

If the Loss Of Integrity annunciation is displayed, revert to an alternate means of navigation appropriate to the route and phase of flight.

If the Dead Reckoning annunciation is displayed, the map will continue to be displayed with an amber ownship icon. Course guidance will be removed on the CDI. Aircraft position will be based upon the last valid GPS position, then estimated by Dead Reckoning methods. Changes in true airspeed, altitude, heading, or winds aloft can affect the estimated position substantially. Dead Reckoning is only available in Enroute and Oceanic modes. Terminal and Approach modes do not support Dead Reckoning.

If Alternate Navigation Sources (ILS, LOC, VOR, DME, ADF) Are Available:

Navigation ..... **USE ALTERNATE SOURCES**

If No Alternate Navigation Sources Are Available:

DEAD RECKONING (DR) MODE:

Navigation ..... **USE GNS**

NOTE

All information normally derived from GPS will become less accurate over time.

LOSS OF INTEGRITY (LOI) MODE:

Navigation ..... **FLY TOWARDS KNOWN VISUAL CONDITIONS**

NOTE

All information derived from GPS will be removed.

NOTE

The airplane symbol is removed from all maps. The map will remain centered at the last known position. "No GPS Position" will be annunciated in the center of the map.

3.2.2 GPS APPROACH DOWNGRADE

During a GPS LPV, LNAV/VNAV, LP +V, or LNAV+V approach, if GPS accuracy requirements cannot be met by the GPS receiver prior to the Final Approach Fix, the GNS will downgrade the approach. The downgrade will remove vertical deviation indication from the VDI and change the approach annunciation accordingly from LPV, L/VNAV, LP +V, or LNAV+V to LNAV. The approach may be continued using the LNAV only minimums. After the Final Approach Fix has been passed, the approach will be aborted using the indications described below.

During a GPS approach in which GPS accuracy requirements cannot be met by the GPS receiver for any GPS approach type, the GNS will flag all CDI guidance and display a system message "ABORT APPROACH - Loss of Navigation". Immediately upon viewing the message, the unit will revert to Terminal navigation mode alarm limits. If the position integrity is within these limits lateral guidance will be restored and the GPS may be used to execute the missed approach, otherwise alternate means of navigation must be utilized.

3.2.3 LOSS OF COM RADIO TUNING FUNCTIONS

If alternate COM is available:
Communications ..... **USE ALTERNATE COM**

If no alternate COM is available:
COM RMT XFR key (if installed).....**PRESS AND HOLD FOR 2 SECONDS**

NOTE

This procedure will tune the active COM radio the emergency frequency 121.5, regardless of what frequency is displayed on the GNS. Certain failures of the tuning system will automatically tune 121.5 without flight crew action.

3.2.4 TAWS CAUTION (Terrain or Obstacle Ahead, Sink Rate, Don't Sink)

When a TAWS CAUTION occurs, take corrective action until the alert ceases. Stop descending or initiate either a climb or a turn, or both as necessary, based on analysis of all available instruments and information.

3.2.5 TAWS INHIBIT

The TAWS Forward Looking Terrain Avoidance (FLTA) and Premature Descent Alerts (PDA) functions may be inhibited to prevent alerting, if desired. Refer to GNS 400W/500W Optional Displays Addendum for additional information.

To Inhibit TAWS:
Go to TERRAIN Page
Menu Button .....PRESS
"Inhibit Terrain?".....SELECT
Enter Button .....PRESS

3.2.6 TER N/A and TER FAIL

If the amber **TER N/A** or **TER FAIL** status annunciator is displayed, the system will no longer provide TAWS alerting or display relative terrain and obstacle elevations. The crew must maintain compliance with procedures that ensure minimum terrain and obstacle separation.

Section 4. NORMAL PROCEDURES

Refer to the 5XXW Series unit Quick Reference Guide defined in paragraph 2.1 on page 7 of this document for normal operating procedures. This includes all GPS operations, VHF COM and NAV, and Multi-Function Display information. For information on TIS traffic, data linked weather, or TAWS see the Pilot's Guide addendum for optional displays. For information on active traffic device or Stormscope operation and displays see the Pilot's Guide addendum for display interfaces.

The 5XXW Series unit requires a reasonable degree of familiarity to prevent operations without becoming too engrossed at the expense of basic instrument flying in IMC and basic see-and-avoid in VMC. Pilot workload will be higher for pilots with limited familiarity in using the unit in an IFR environment, particularly without the autopilot engaged. Garmin provides training tools with the Pilot's Guide and PC based simulator. Pilots should take full advantage of these training tools to enhance system familiarization.

4.1 Unit Power On

Database ..... **REVIEW EFFECTIVE DATES**
Self Test ..... **VERIFY OUTPUTS TO NAV INDICATORS**
Self Test - TAWS Remote Annunciator (If Installed):
- PULL UP ..... **ILLUMINATED**
- TERR ..... **ILLUMINATED**
- TERR N/A ..... **ILLUMINATED**
- TERR INHB ..... **ILLUMINATED**

Self Test - GPS Remote Annunciator (If Installed):
- VLOC ..... **ILLUMINATED**
- GPS ..... **ILLUMINATED**
- INTG ..... **ILLUMINATED**
- TERM ..... **ILLUMINATED**
- WPT ..... **ILLUMINATED**
- APR ..... **ILLUMINATED**
- MSG ..... **ILLUMINATED**
- SUSP ..... **ILLUMINATED**

4.2 Before Takeoff

System Messages and Annunciators ..... **CONSIDERED**

4.3 HSI and EHSI Operation

If an HSI is used to display navigation data from the GNS the pilot should rotate the course pointer as prompted on the GNS.

If an EHSI is used to display navigation data from the GNS the course pointer may autoslew to the correct course when using GPS navigation. When using VLOC navigation the course pointer will not autoslew and must be rotated to the correct course by the pilot. For detailed information about the functionality of the EHSI system, refer to the FAA approved Flight Manual or Flight Manual Supplement for that system.

CAUTION

The pilot must verify the active course and waypoint for each flight plan leg. The pilot must verify proper course selection each time the CDI source is changed from GPS to VLOC.

4.4 Autopilot Operation

The GNS may be coupled to an optional autopilot, if installed in the aircraft, when operating as prescribed in the LIMITATIONS section of this manual.

Autopilots coupled to the GNS system in an analog (NAV) mode will follow GPS or VHF navigation guidance as they would with existing VOR receivers.

Autopilots that support GPSS or GPS Roll Steering in addition to the analog course guidance will lead course changes, fly arcing procedures, procedure turns, and holding patterns if coupled in GPSS mode.

For autopilot operating instructions, refer to the FAA approved Flight Manual or Flight Manual Supplement for the autopilot.

4.5 Coupling the Autopilot during approaches

CAUTION

When the CDI source is changed on the GNS, autopilot mode may change. Confirm autopilot mode selection after CDI source change on the GNS. Refer to the FAA approved Flight Manual or Flight Manual Supplement for the autopilot.

☐ This installation prompts the flight crew and requires the pilot to enable the approach outputs just prior to engaging the autopilot in APR mode.

To couple an approach:
Once established on the final approach course with the final approach fix as the active waypoint, the GNS will issue a flashing message indication with the following message "APR Guidance Available, Use PROC before A/P APR".

PROC Button..... **PRESS**
"Enable A/P APR Outputs?"..... **SELECT**
ENT Button..... **PRESS**

If coupled, Autopilot will revert to ROL mode at this time.

Autopilot..... **ENGAGE APPROACH MODE**

☑ This installation supports coupling to the autopilot in approach mode once vertical guidance is available.

To couple an approach:
Once established on the final approach course with the final approach fix as the active waypoint, the GNS will enable vertical guidance.

Vertical Guidance..... **CONFIRM AVAILABLE**
Autopilot..... **ENGAGE APPROACH MODE**

☐ The autopilot does not support any vertical capture or tracking in this installation.

Analog only autopilots should use APR mode for coupling to LNAV approaches. Autopilots which support digital roll steering commands (GPSS) may utilize NAV mode and take advantage of the digital tracking during LNAV only approaches.

4.6 Traffic Mode Selection (Optional)

If the GNS is interfaced to a traffic device, the GNS can be used to control the mode of the traffic system. This is accomplished by pressing the cursor knob while on the dedicated traffic page to enter/exit the traffic device menu. It is important to note that while the traffic device menu is active, the current state of the traffic system is *not* displayed. The state of the traffic device is only displayed once the traffic device menu is exited.

Section 5. PERFORMANCE

No change.

Section 6. WEIGHT AND BALANCE

See current weight and balance data.

Section 7. SYSTEM DESCRIPTIONS

7.1 Pilot's Guide

See Garmin 5XXW Series unit Pilot's Guide for a complete description of the 5XXW Series unit.

7.2 Manual GTN Crossfill

Manual GTN Crossfill is a feature that will keep the GNS system in sync with a flight plan that is being used on the GTN system. The GTN *will not* automatically keep its flight plan in sync with changes made on the GNS system. Manual crossfill feature is "one way" – from the GTN to the GNS.

The GTN systems support a variety of procedure leg types that the GNS systems do not support. As such, it is normal and expected that the flight plan leg that is displayed on the GNS system will not always match the flight plan leg on the GTN system. Departure, arrival and approach procedures contain leg types that the GNS does not support. The GNS typically "skips" over these leg types and provides no guidance. Guidance may be available on the GTN but not on the GNS in these cases. The GNS will sequence the procedure as it normally would if Crossfill were not active. Once a leg type is reached that is supported on both the GTN and GNS systems, the systems will automatically sync to the same leg.

If the GNS is interfaced with a GTN and the GTN Crossfill feature is enabled on the GNS, then auto-switching from GPS to VLOC guidance on the CDI for ILS/LOC approaches will be disabled on the GNS.

If the flight plan on an interfaced GTN is altered while in a hold, the GNS will reinitiate guidance to the holding waypoint and sequence into the hold upon crossing the waypoint.

If the Missed Approach is activated on the GTN prior to reaching the Missed Approach Point, the GTN will automatically resume leg sequencing upon reaching the Missed Approach Point. The GNS will remain suspended upon reaching the Missed Approach Point and leg sequencing must be manually resumed.

7.3 Flight Stream 210

The Flight Stream 210 provides wireless communication of specific flight plan information and GPS sensor data to a PED (Personal Electronic Device) from the GNS.

For details on the operation and features of the Flight Stream 210, please refer to the GNS 400W/500W Series Optional Displays, P/N 190-00356-30 Rev J.

For additional details about the Garmin supported devices and apps for use with the Flight Stream 210, please visit:
http://garmin.com/connext/supported_devices

500W Series

Instructions for Continued Airworthiness

Document Number 190-00357-65 Rev. D

Garmin International, Inc.
1200 E. 151st Street
Olathe, Kansas 66062 USA

Record of Revision

Rev.	Date	Description of Change
1	10-19-06	Initial Release
A	11-03-06	Revision for STC Issuance
B	07-30-09	Add the "-D" to STC number when reissued under ODA
C	02-28-13	Revise to support software version 5.02. Clarify inspections. Add electrical bonding check.
D	11-20-14	Revise to support software version 5.20 with Flight Stream 210

1. INTRODUCTION

1.1 PURPOSE

This document is designed for use by the installing agency of the Garmin Model 500W series GPS/WAAS Nav/Com as Instructions for Continued Airworthiness in response to Federal Aviation regulation (FAR) Part 23.1529, and Part 23 Appendix G. The ICA includes information required by the operator to adequately maintain the Garmin Models 500W series installed under Approved Model List (AML) STC SA01933LA-D.

1.2 Scope

This document identifies the Instruction for Continued Airworthiness for the modification of the aircraft for installation of the Garmin Models 500W series GPS/WAAS Nav/Com installed under Approved Model List (AML) STC SA01933LA-D. This includes the optional accessory to the GNS 500W, the Flight Stream 210.

1.3 Document Control

This document shall be released, archived, and controlled in accordance with the Garmin document control system. When this document is revised, refer to Section 2.15 for information on how to gain FAA acceptance or approval and how to notify customers of changes.

1.4 Airworthiness Limitations Section

There are no additional Airworthiness Limitations as defined in 14 CFR § 23, Appendix G. G23.4 that result from this modification.

The Airworthiness Limitations section is FAA approved and specifies maintenance required under §43.16 and §91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved.

FAA APPROVED

Michael Warren
ODA STC Unit Administrator
ODA-240087-CE

20-NOV-2014
Date

1.5 Permission to Use Certain Documents

Permission is granted to any corporation or person applying for approval of a Garmin Model 500W series to use and reference appropriate STC documents to accomplish the Instructions for Continued Airworthiness and show compliance with STC engineering data. This permission does not construe suitability of the documents. It is the responsibility of the applicant to determine the suitability of the documents for the ICA.

1.6 Definitions

The following terminology is used within this document:

1) **AC:** Advisory Circular
2) **ACO:** Aircraft Certification Office
3) **AEG:** Aircraft Evaluation Group
4) **BIT:** Built In Test
5) **CFR:** Code of Federal Regulations

6) **DER:** Designated Engineering Representative
7) **FAA:** Federal Aviation Administration
8) **IAW:** In Accordance With
9) **ICA:** Instructions for Continued Airworthiness
10) **MFD:** Multi-Function Display unit
11) **ODA:** Organization Designation Authorization
12) **PED:** Portable Electronic Device
13) **PMI:** Primary Manufacturing Inspector
14) **POI:** Primary Operations Inspector
15) **STC:** Supplemental Type Certificate
16) **TC:** Type Certification or Type Certificate
17) **TSO:** Technical Standard Order

2. INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

2.1 Introduction

Content, Scope, Purpose and Arrangement:	This document identifies the Instructions for Continued Airworthiness for the modification of the aircraft by installation of the Garmin Models 500W series GPS/WAAS NAV/COM.
Applicability:	Applies to aircraft altered by installation of the Garmin Models 500W series GPS/WAAS NAV/COM.
Definition of Abbreviations:	See Section 1.6
Precautions:	None
Units of measurement:	None
Referenced publications:	190-00357-02 Rev. K *500W Series Installation Manual* or later revision 005-C0221-01 Rev. J *500W Series STC Master Data List* or later revision
Retention:	This document, or the information contained within, will be included in the aircraft's permanent records.

2.2 Description of Alteration

The Garmin Model 500W Series GPS/WAAS Nav/Com unit is a 6 ¼ inch wide panel mounted unit with all the interface connections behind the instrument panel. Installation of the Garmin Model 500W series GPS/WAAS Nav/Com system interfaces, specific for the aircraft installation, is documented in the GNS 500W Series Post-Installation Checkout Log that is retained as part of the aircraft's permanent records. The 500W series units combine a large number of easily acceptable controls to use the color multi-function display, Nav and Com transceiver, GPS/WAAS navigator in a single unit.

The Flight Stream 210 brings Bluetooth connectivity to the cockpit, allowing portable electronics to stream data to and from the installed avionics.

The Flight Stream 210 interfaces to the GNS 500W via RS-232. The Flight Stream 210 may also interface to the GDL 88 through RS-422 and the GDL 69 through RS-232. The Flight Stream unit is a remote mount LRU that may be located in a variety of places around the aircraft. The suggested locations are in the cabin/cockpit area, or in the forward or aft avionics bay. See Section 3.10 in the 500W Series Installation Manual, 190-00357-02 for suggested locations and mounting information.

2.3 Control, Operating Information

See the 500W Series Installation Manual, listed under the reference documentation in paragraph 2.1 of this document, for system operation and self-test information.

2.4 Servicing Information

None. In the event of system failure, return the unit to the manufacturer or an approved Garmin repair station.

2.5 Periodic Maintenance Instructions

The 500W Series units are designed to detect internal failure. A thorough self-test is executed automatically upon application of power to the units, and built-in test is continuously executed. Detected errors are indicated on the equipment via failure annunciations and maintenance is on-condition.

Operation of the 500W Series unit is not permitted unless an inspection as described in this section has been completed within the preceding 12 calendar months. Conduct a visual inspection on the 500W series unit, its wire harness, and the Flight Stream 210 (if installed) to insure installation integrity:

1. Inspect the 500W and Flight Stream units for security of attachment. If the Flight Stream 210 is installed and the screws are not securely attached, tighten any loose Flight Stream 210 mounting screws as necessary to snug plus ¼ turn. If required, re-torque bonding strap hardware for Flight Stream 210 to 12-15 in-lbs.

CAUTION
Care should be taken when tightening to the mounting screws of the Flight Stream 210. Excessive tightening may damage the mounting flange.

2. Inspect for signs of corrosion.
3. Inspect all knobs and buttons for legibility.
4. Inspect condition of wiring, shield terminations, routing and attachment/clamping.
5. Inspect electrical bonding components. Perform bonding check, if due (see Section 2.5.4).

2.5.1 Cleaning the Front Panel

The front bezel, keypad, and display can be cleaned with a soft cotton cloth dampened with clean water. DO NOT use any chemical-cleaning agents. Care should be taken to avoid scratching the surface of the display.

2.5.2 Display Backlight

The display backlight lamp is rated by the manufacturer as having a usable life of 20,000 hours. This life may be more or less than the rated time depending on the operating conditions of the 500W series unit. Over time, the backlight lamp may dim and the display may not perform as well in direct sunlight conditions. The user must determine by observation when the display brightness is not suitable for its intended use. Contact the Garmin factory repair station when the backlight lamp requires service.

2.5.3 Battery Replacement

The 500W series has an internal keep-alive battery that will last about 10 years. The battery is used for GPS system information. Regular planned replacement is not necessary. The 500W series will display a 'low battery' message when replacement is required. Once the low battery message is displayed, the battery should be replaced within 1 to 2 months.

If the battery is not replaced and becomes totally discharged, the 500W series unit will remain fully operational, but the GPS signal acquisition time may be increased. This acquisition time can be reduced by entering a new seed position each time the unit is powered on. There is no loss of function or accuracy of the 500W series unit with a dead battery.

The battery must be replaced by the Garmin factory repair station or factory authorized repair station.

2.5.4 Bonding Check (IFR-certified aircraft only)

Every 2000 flight hours or ten (10) years, whichever is first, perform an electrical bonding check on the GNS 500W Series Unit and if installed, the Flight Stream 210. If a bonding check was not done during the initial installation, it must be done to support electromagnetic interference and lightning compliance.

2.5.4.1 GNS 500W Series Unit in Metallic or Tube/Fabric Aircraft

Perform an electrical bonding check as follows:

1. Remove the 500W unit from the mounting rack.
2. Remove the backplate assembly from the rack.
3. Measure the resistance between the mounting rack and nearby exposed portion of aircraft metallic structure and verify it is less than 10 milliohms.

In the event of bonding test failure, remove the 500W rack and clean the attachment points with a bonding brush at both the 500W rack and the aircraft and reattach the rack to the rails in the panel. Verify the resistance between the mounting rack and nearby exposed portion of aircraft metallic structure is less than 2.5 milliohms.

4. Reinstall the backplate assembly and reinstall the 500W in the mounting rack.

2.5.4.2 GNS 500W Series Unit in Composite Aircraft

Perform an electrical bonding check as follows:

1. Remove the 500W unit from the mounting rack.
2. Remove the backplate assembly from the rack.
3. Measure the resistance between the mounting rack and the instrument panel, verify it is less than 10 milliohms.

   In the event of bonding test failure, remove the 500W rack and clean the attachment points with a bonding brush at both the 500W rack and the aircraft and reattach the rack to the rails in the panel. Verify the resistance between the mounting rack and the instrument panel is less than 5 milliohms.

4. Reinstall the backplate assembly and reinstall the 500W in the mounting rack.

2.5.4.3 Flight Stream 210 in Metallic or Tube/Fabric Aircraft

1. Disconnect the shield terminations from the Flight Stream 210 connector backshell.
2. Measure the resistance between the connector and nearby exposed portion of aircraft metallic structure and verify that it is less than or equal to 20 milliohms.

   In the event of bonding test failure, remove the Flight Stream 210 connector bonding strap from the aircraft ground plane and clean the attachment point with a bonding brush. Re-attach the bonding strap to the aircraft ground plane, torque to 12-15 in-lbs. Verify the resistance between the Flight Stream 210 connector and aircraft structure is less than or equal to 10 milliohms. If cleaning the far side of the strap is not enough, remove, clean, and re-attach the Flight Stream 210 side.

3. Connect the shield terminations to the Flight Stream 210 connector backshell.

2.5.4.4 Flight Stream 210 in Composite Aircraft

1. Disconnect the shield terminations from the Flight Stream 210 connector backshell.
2. Measure the resistance between the connector and instrument panel (or other aircraft ground) and verify that it is less than or equal to 20 milliohms.

   In the event of a bonding test failure, remove the Flight Stream 210 connector bonding strap from the aircraft ground plane and clean the attachment point with a bonding brush. Re-attach the bonding strap to the aircraft ground plane, torque to 12-15 in-lbs. Verify the resistance between the Flight Stream 210 connector and aircraft ground is less than or equal to 10 milliohms. If cleaning the far side of the strap is not enough, remove, clean, and re-attach on the Flight Stream 210 side.
3. Connect the shield terminations to the Flight Stream 210 connector backshell.

2.6 Troubleshooting Information

If error indications are displayed on the 500W series unit, consult the Troubleshooting section contained in the 500W Series Installation Manual, listed under reference documentation in paragraph 2.1 of this document. The same troubleshooting section also contains troubleshooting information for the Flight Stream 210. The '500W Series Post-Installation Checkout Log' in the aircraft permanent records includes the configuration information for the installation. (See Section 5 in the 500W Series Installation Manual for a sample Log).

2.7 Removal and Replacement Information

2.7.1 GNS 500W

If the 500W series unit is removed and reinstalled, verify that the 500W series unit power-up self-test sequence is successfully completed and no failure messages are annunciated.

If the 500W series unit is removed for repair and reinstalled, or if the 500W unit is removed and replaced with a different 500W series unit, then follow 'Post Installation Configuration & Checkout Procedures' contained in the 500W Series Installation Manual listed in Section 2.1 of this document, and verify the 500W unit power-up self-test sequence is successfully completed and no failure messages are annunciated.

If any work has been done on the aircraft that could affect the system wiring, antenna cable, or any interconnected equipment, verify the 500W series unit power-up self-test sequence is successfully completed and no failure messages are annunciated.

To remove the 500W series unit from the mounting rack, insert a 3/32-inch hex drive tool into the access hole at the bottom of the unit face. Rotate the hex tool counterclockwise until the unit is forced out about 3/8 inches and can be freely pulled from the rack.

The 500W unit is installed in the rack by sliding it straight in until it stops, about 1 inch short of the final position. Insert the hex drive tool into the access hole at the bottom of the unit face. Rotate the hex tool clockwise while pressing on the left side of the bezel until the unit is firmly seated in the rack.

Note: There are no special handling requirements for the 500W series units.

2.7.2 Flight Stream 210 (If Installed)

See Figure 1 when performing the following steps:

Removal

1. Locate and open the BT Link circuit breaker.
2. Unscrew the two jackscrews on the Flight Stream 210 connector. Remove connector.
3. Remove the four #6 mounting screws to remove the Flight Stream 210.

Reinstallation

1. Check that the BT Link circuit breaker is open.
2. Reinstall the Flight Stream 210 using the four previously removed #6 mounting screws.
3. Tighten fasteners until snug, plus an additional 1/4 turn.

Note: *Ensure that the Flight Stream 210 is mounted with the arrow pointing in the direction of flight.*

4. Attach the connector, tightening the two jackscrews.
5. Close the BT Link circuit breaker.
6. Complete the interface checkout procedures contained in Section 5.5.8 of the 500W Series Installation Manual.

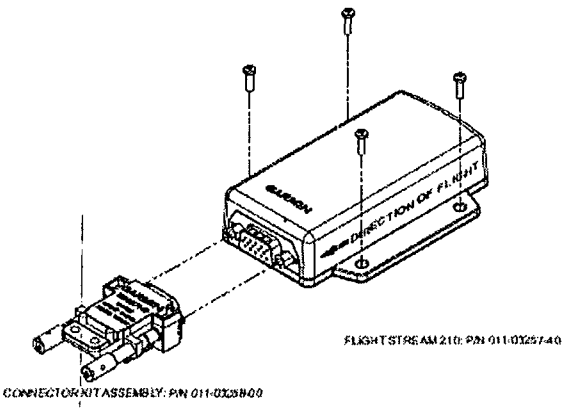


Figure 1. Flight Stream 210 Assembly Overview (Bonding Strap Not Shown)

2.7.3 Flight Stream 210 Bonding Strap

The following removal and replacement steps are provided as guidance for replacing the Flight Stream 210 bonding strap. The bonding strap assembly drawing is shown in Figure 2.

Note: *Aircraft structure side of bonding strap may be mounted using a nut in lieu of a nut plate. If a nut was used in lieu of a nut plate, further disassembly of the aircraft may be required to gain access to the nut.*

Removal

1. Disconnect one end of the bonding strap from the aircraft ground location.
2. Disconnect the other end of the bonding strap from the shield block on the Flight Stream 210 connector backshell.
3. Remove the bonding strap.

Replacement

Note: *The Flight Stream 210 bonding strap should be as short as practical. When installed, the bonding strap must not loop back on itself.*

1. Construct a bonding strap no longer than 20" by attaching clean terminal lugs to both ends of clean braid (see Table 1 for parts required).
2. Clean the attachment locations with a bonding brush.
3. Secure each end of the bonding strap to the previously installed locations. Ensure that the strap does not loop back on itself and that the hardware is as shown in Figure 2. The washers must seat fully against the aircraft metallic structure without overhang or interference with other hardware.
4. Using a milliohm meter, verify that the resistance between the connected structure is less than 10 milliohms.

   In the event of a bonding test failure, remove the bonding strap from the aircraft ground point and clean the attachment points with a bonding brush. Re-install the bonding strap and perform the electrical bonding test in accordance with Section 2.5.4.
5. Replace any damaged hardware, otherwise hardware may be reused.

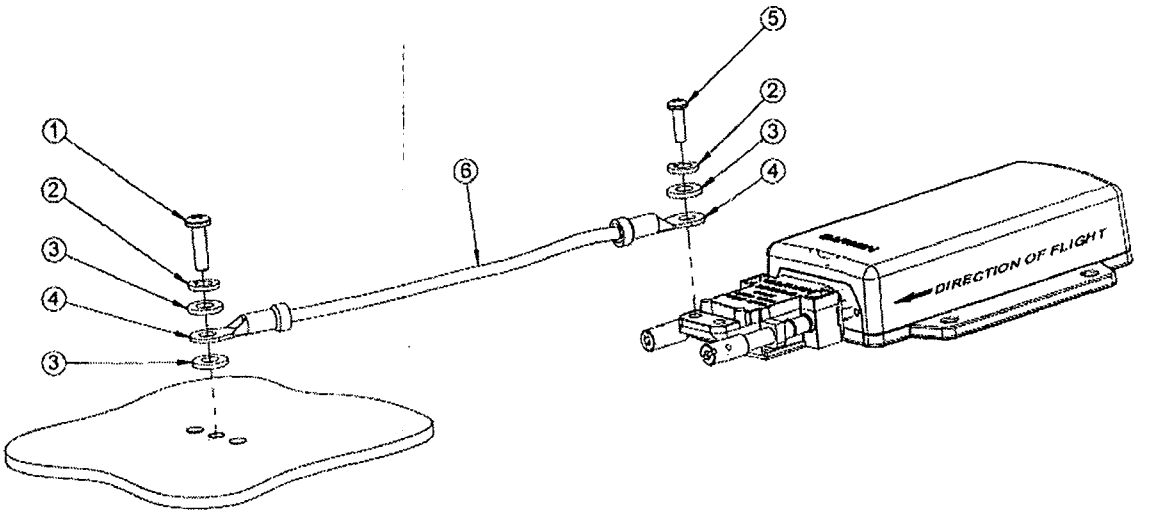


Figure 2. Flight Stream 210 Bonding

Table 1. Flight Stream 210 Bonding Hardware

See Figure 2	Hardware	P/N
1	Screw	MS35206 (AN515) #8 Pan Head Screw
2	Lock Washer	MS35338-42 #8 Lock Washer
3	Flat Washer	NAS1149FN832P (AN960C8) #8 Washer
4	#8 Ring Terminal	MS25036 #8 Ring Terminal
5	Screw	MS51957-42 #6 Screw
6	Braid	QQB575R36T0250 or larger

2.8 Diagrams

Refer to the 500W Series Installation Manual (listed under reference documentation in section 2.1 of this document) for drawings applicable to this installation. Point to point wiring diagrams are in Appendix H of the 500W Series Installation Manual. Refer to the GNS 500W Series Post-Installation Checkout Log retained in the aircraft permanent records for a list of the interfaced equipment. The antenna cables are routed between the 500W series unit and the antenna with disconnects at each unit. The antenna cable typically is routed behind interior panels in the fuselage.

2.9 Special Inspection Requirements

None, N/A.

2.10 Application of Protective Treatments

None, N/A.

2.11 Data Relative to Structural Fasteners

None, N/A.

2.12 Special Tools

A milliohm meter with an accuracy of +/- 0.1 milliohms ohms (or better) is required to measure the electrical bonding between the 500W system components and aircraft ground.

No special tools are required for system checkout. See 500W Series Installation Manual listed in reference documentation in section 2.1 of this document.

2.13 Additional Instructions

None.

2.14 Overhaul Period

The system does not require overhaul at a specific time period. Power on self-test and continuous BIT will monitor the health of the 500W series unit. If the unit indicates an internal failure, the unit may be removed and replaced. See troubleshooting section contained in the 500W Series Installation Manual, listed under reference documentation in section 2.1 of this document.

2.15 ICA Revision and Distribution

To revise this ICA, Garmin will follow the Garmin ODA Procedures Manual SOP-0055/ACP-0016 for Instructions for Continued Airworthiness. The latest revision of this ICA document is available on the Garmin Dealer Resource Center (www.garmin.com). A Garmin Service Bulletin describing ICA revision will be sent to Garmin dealers if a revision is determined to be significant.

2.16 Assistance

Flight Standards Inspectors or the certificate holder's PMI have the required resources to respond to questions regarding this ICA. In addition, the customer may refer questions regarding this equipment and its installation to the manufacturer, Garmin. Garmin customer assistance may be contacted during normal business hours via telephone 913-397-8200 or email from the Garmin web site at www.garmin.com.

2.17 Implementation and Record Keeping

Modification of an aircraft by this Supplemental Type Certificate obligates the aircraft operator to include the maintenance information provided by this document in the operator's aircraft maintenance manual and/or the operator's aircraft scheduled maintenance program.

U.S. Department of Transportation
Federal Aviation Administration

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

Form Approved OMB No. 2120-0020 11/30/2007 | 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: USA N600ZE	Serial No.: B-100	
	Make: GRUMMAN	Model: G-21A	Series:
2. Owner	Name *(As shown on registration certificate)*: MIKE RINKER AIRCRAFT LLC	Address *(As shown on registration certificate)*: 313 E FLORIDA AVE UNION CITY, TN 38261-3957 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		
Wings Avionics, Inc. 421 Ernest Lancaster Dr. Fayetteville, AR 72701 USA	☐ U. S. Certificated Mechanic	☐ Manufacturer	
	☐ Foreign Certificated Mechanic	C. Certificate No.	
	☒ Certificated Repair Station	W1NR105O RADIO, LIMITED AIRFRAME LIMITED RADIO	
	☐ Certificated 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	
☐	Brady N. Terry	BRADY N TERRY 19-July-2017

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

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

Certificate or Designation No.	Signature/Date of Authorized Individual	
W1NR105O	Brady N. Terry	BRADY N TERRY 19-July-2017

FAA Form 337 (10-06)

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.)

USA N600ZE	Jul-19-2017
Nationality and Registration Mark	Date

1. REMOVED A GARMIN GA56 GLOBAL POSITIONING SYSTEM (GPS) ANTENNA (ANT).

2. INSTALLED A GARMIN GA35 GPS/WIDE AREA AUGMENTATION SYSTEM (WAAS) ANT.

3. THE GARMIN GA35 GPS/WAAS ANT, PART NUMBER (P/N) 013-00235-00, SERIAL NUMBER (S/N) 137677, WAS INSTALLED ON THE TOP FUSELAGE STATION LOCATION VACATED BY THE PREVIOUSLY REMOVED GA56 GPS ANT USING A FACTORY PROVIDED ANT DOUBLER, AND WAS INTERFACED TO THE GARMIN GNS530W GPS INPUT USING THE EXISTING RG400 COAXIAL CABLE ASSEMBLY WITH A BNC TO TNC ADAPTER. INSTALLATION COMPLETED IN ACCORDANCE WITH SUPPLEMENTAL TYPE CERTIFICATE (STC) NUMBER SA02018SE-D, WITH A REISSUE DATE OF 11-28-2011; USING APPROVED MODEL LIST (AML) FOR STC NUMBER STC SA02018SE-D, WITH A REVISED DATE OF 11-28-2011.

4. POST-INSTALLATION GROUND CHECKS WERE PERFORMED IN ACCORDANCE WITH THE MANUFACTURER INSTALLATION MANUAL AND FOUND TO OPERATE PROPERLY.

5. A LOGBOOK ENTRY UNDER WORK ORDER NUMBER 6645 WAS ENTERED IN THE AIRCRAFT RECORDS. WEIGHT AND BALANCE RECORDS AND EQUIPMENT LIST REVISED.

6. FACTORY SUPPLIED GARMIN GPS/XM ANTENNA STC INSTRUCTIONS FOR CONTINUED AIRWORTHINESS, P/N 005-00638-09, REV 3, DATED 03-16-2012, ARE ATTACHED AS ADDITIONAL SHEETS.***END***

☑ ADDITIONAL SHEETS ARE ATTACHED

United States of America
Department of Transportation -- Federal Aviation Administration

Supplemental Type Certificate

Number SA02018SE-D

This certificate issued to Garmin International, Inc.
1200 East 151st Street
Olathe, KS 66062

certifies that the change in the type design for the following product with the limitations and conditions thereto as specified hereon meets the airworthiness requirements of Part 23* *of the Federal Aviation Regulations.*

Original Product - Type Certificate Number: *See attached Approved Model List (AML) NO. SA02018SE-D
Make: dated November 28, 2011 or later FAA approved revision for list of
Model: approved aircraft models and applicable airworthiness regulations.

Description of Type Design Change: Provisions installation of Garmin GPS/XM Antennas in accordance with FAA Approved Model List (AML) SA02018SE-D, dated November 28, 2011, or later FAA approved revision, and FAA Approved GPS/XM Antenna STC Master Drawing List, Document No.: 005-00638-01, Revision "1", approved on January 4, 2011, or later FAA approved revision.

Limitations and Conditions:

1. Compatibility of this design change with previously approved modifications must be determined by the installer.
2. A copy of this certificate must be maintained as part of the permanent records for the modified aircraft.
3. If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission.
4. Aircraft modified by this STC must be maintained in accordance with the Instructions for Continued Airworthiness (ICA) listed in the MDL identified above.

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: July 22, 2010

Date reissued: November 28, 2011

Date of issuance: January 4, 2011

Date amended:

By direction of the Administrator

Robert M. Grove

(*Signature*)

Robert M. Grove
ODA STC Unit Administrator
ODA-240087-CE
Garmin International, Inc.

(*Title*)

United States of America

Department of Transportation - Federal Aviation Administration

Supplemental Type Certificate

(Continuation Sheet)

Number SA02018SE-D

Date of Issuance: November 28, 2011

*Certification Basis

Based on 14 CFR §§ 21.115 and 21.101, and the FAA policy for significant changes in FAA Order 8110.48, the certification basis for this change is as follows:

a. The certification basis for parts **not changed** or **not affected** by this change is shown on the attached AML.

b. The certification basis for parts **changed** or **affected** by this change is:

Regulations at the latest amendment: No Amdt through 23-59

Section	Amdt		Section	Amdt
23.251	23-45		23.609	No Amdt
23.301(a)(b)(c)	23-48		23.611	23-48
23.303	No Amdt		23.613(a)	23-45
23.305(a)	23-45		23.867	23-49
23.307(a)	No Amdt		23.1301	23-20
23.571(c)*	23-48		23.1308(a)(b)(c)	23-57
23.573(b)*	23-48		23.1309(a)(1)(b)(1)(e)	23-49
23.603	23-23		23.1431(a)(b)	23-49
23.605(a)	23-23		23.1529	23-26
23.607(a)	23-48			

**Note: This regulation is not applicable for all aircraft on the AML; please see AML for aircraft that are compliant with this regulation.*

----------END----------

FAA Approved Model List (AML) STC SA02018SE-D

Aircraft Make (TCDS Holder) [common name or previous make]	**Aircraft Model (Alias)**	**Type Certificate Number**	**TC Certification Basis ***	**Master Drawing List**		**AML Revision Date**
				Document Number	**Revision** (or later FAA approved revision)	
Cessna (Cessna Aircraft Company)	336	A2CE	CAR 3	005-00638-01	1	01/04/2011 Original
Cessna (Cessna Aircraft Company)	337, 337A, 337B, T337B, 337C, 337E, T337E, T337C, 337D, T337D, 337F, T337F, 337G, T337G, 337H, T337H, T337H-SP	A6CE	CAR 3	005-00638-01	1	01/04/2011 Original
Cessna (Cessna Aircraft Company)	401, 401A, 401B, 402, 402A, 402B, 402C, 411, 411A	A7CE	CAR 3	005-00638-01	1	01/04/2011 Original
Cessna (Cessna Aircraft Company)	404, 406	A25CE	FAR 23	005-00638-01	1	01/04/2011 Original
Cessna (Cessna Aircraft Company)	T303 (Crusader)	A34CE	FAR 23	005-00638-01	1	01/04/2011 Original
CPAC, Inc. (CPAC, Inc.) [Commander Aircraft Co.]	112, 112TC, 112B, 112TCA, 114, 114A, 114B, 114TC	A12SO	CAR 3	005-00638-01	1	01/04/2011 Original
deHavilland (Viking Air Limited)	DHC-2 Mark I, DHC-2 Mark II, DHC-2 Mark III	A-806	CAR 3	005-00638-01	1	01/04/2011 Original
DORNIER (Dornier-Werke G.m.b.H.)	Do 27 Q-6	A8IN	CAR 3	005-00638-01	1	01/04/2011 Original
DORNIER LUFTFAHRT GmbH (DORNIER LUFTFAHRT GmbH)	Do 28 D, Do 28 D-1, Dornier 228-100, Dornier 228-101, Dornier 228-200, Dornier 228-201, Dornier 228-202, Dornier 228-212	A16EU	FAR 21 FAR 23	005-00638-01	1	01/04/2011 Original
EADS-PZL "Warszawa-Okęcie" (EADS-PZL "Warszawa-Okęcie" S.A.) [Panstwowe Zaklady Lotnicze]	PZL-104 WILGA 80, PZL-104M WILGA 2000, PZL-104MA WILGA 2000	A55EU	FAR 23	005-00638-01	1	01/04/2011 Original
EADS-PZL "Warszawa-Okęcie" (EADS-PZL "Warszawa-Okęcie" S.A.) [Panstwowe Zaklady Lotnicze]	PZL-KOLIBER 150A, PZL-KOLIBER 160A	A69EU	FAR 23	005-00638-01	1	01/04/2011 Original
Embraer (Empresa Brasileira de Aeronautica S. A.)	EMB-110P1, EMB-110P2	A21SO	FAR 23 FAR 25	005-00638-01	1	01/04/2011 Original
Found Aircraft Canada, Inc. (Found Brothers Aviation Limited)	FBA Centennial "100"	A13EA	FAR 23	005-00638-01	1	01/04/2011 Original
Found Aircraft Canada, Inc. (Found Aircraft Canada, Inc.)	FBA-2C, FBA-2C1 (Bush Hawk), FBA-2C2 (Bush Hawk XP), FBA-2C3(Expedition E350)	A7EA	CAR 3 FAR 23	005-00638-01	1	01/04/2011 Original
GA8 Airvan (Pty) Ltd (GA 8 Airvan (PTY) Ltd) [Gippsland Aeronautics Pty. Ltd]	GA8	A00011LA	FAR 23	005-00638-01	1	01/04/2011 Original
Grumman (Grumman American Aviation Corporation)	Grumman G-21, Grumman G-21A	TC 654	Aero 7A	005-00638-01	1	01/04/2011 Original

GPS/XM® Antenna STC

Instructions for Continued Airworthiness

as installed in

Gumman G-21A

(Make and Model Airplane)

Reg. No. N600ZE **S/N** G-21A

Antenna location(s) on aircraft

Top Fuselage above Cockpit

Document Number 005-00638-09 Rev. 3

Garmin International, Inc.
1200 E. 151st Street
Olathe, Kansas 66062 USA

Record of Revision

Rev.	Date	Description of Change
1	11/23/10	Initial STC Issuance
2	08/30/11	Add GA 55 and GA 55A XM-only antennas
3	03/16/12	Add Cessna 337 pressurized instructions, update XM to Sirius XM.

1. INTRODUCTION

1.1 Purpose

This document is designed for use by the installing agency of the antenna models listed in Table 1 below as Instructions for Continued Airworthiness in response to 14 CFR § 23.1529, and Part 23 Appendix G. This ICA includes information required by the operator to adequately maintain the antenna models listed in Table 1 installed under Approved Model List (AML) STC SA02018SE-D.

1.2 Scope

This document identifies the Instructions for Continued Airworthiness for the modification of the aircraft for installation of the antenna models listed in Table 1.

Table 1 - List of Antenna Models

Manufacturer	Antenna Model	Description
Garmin	GA 35	GPS/WAAS Antenna
Garmin	GA 36	GPS/WAAS Antenna
Garmin	GA 37	GPS/WAAS with XM Antenna
Garmin	GA 55	XM Antenna
Garmin	GA 55A	XM Antenna

1.3 Document Control

This document shall be released, archived, and controlled in accordance with Garmin document control system. When this document is revised, refer to Section 2.15 for information on how to gain FAA acceptance or approval and how to notify customers of changes.

1.4 Permission to Use Certain Documents

Permission is granted to any corporation or person applying for approval of the antenna models listed in Table 1 to use and reference appropriate STC documents to accomplish the Instructions for Continued Airworthiness and show compliance with STC engineering data. This permission does not construe suitability of the documents. It is the responsibility of the applicant to determine the suitability of the documents for the ICA.

1.5 Definitions

The following terminology is used within this document:

1) **AC:** Advisory Circular
2) **ACO:** Aircraft Certification Office
3) **AEG:** Aircraft Evaluation Group
4) **CFR:** Code of Federal Regulations
5) **FAA:** Federal Aviation Administration
6) **ICA:** Instructions for Continued Airworthiness
7) **PMI:** Primary Manufacturing Inspector
8) **STC:** Supplemental Type Certificate

2. INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

2.1 Introduction

Content, Scope, Purpose and Arrangement:	This document identifies the Instructions for Continued Airworthiness for the modification of the aircraft by installation of the antenna models listed in Table 1.
Applicability:	Applies to aircraft altered by installation of the antenna models listed in Table 1.
Definition of Abbreviations:	See Section 1.5
Precautions:	None
Units of measurement:	None
Referenced publications: *(or later revisions)*	190-01284-00 Rev. D *Garmin GPS/XM® Antenna STC Installation Manual* 005-00638-01 Rev. 4 *Master Drawing List, GPS/ XM® Antenna STC*
Distribution:	This document, or the information contained within, will be included in the aircraft's permanent records.

2.2 Description of Alteration

Installation of the antenna models listed in Table 1.

2.3 Control, Operating Information

There are no pilot controls or operating information. All pilot controls and operating information is through the interfaced GPS/WAAS and XM receiver unit.

2.4 Servicing Information

The antenna models listed in Table 1 are non-repairable. The antenna must be replaced in the event of failure.

2.5 Periodic Maintenance Instructions

This STC is for physical installation and mounting of the antenna models listed in Table 1 and does not include functional operation. The antenna models listed in Table 1, when interfaced to other receiving equipment, are functionally tested by the interfaced GPS/WAAS and XM receiver.

Operation of the system connected to antenna(s) installed under this STC is not permitted unless the inspections described in this section have been completed within time intervals prescribed in Appendix A.

2.6 Troubleshooting Information

Troubleshooting is performed with the interfaced GPS/WAAS and XM receiver unit.

2.7 Removal and Replacement Information

If the antenna is removed and replaced, verify proper operation by successful completion of the self test or checkout procedure of the interfaced GPS/WAAS and XM receiver equipment, if any.

Note: There are no special handling requirements for the antennas.

2.7.1 Removal

1. Verify that the power to the interfaced GPS/WAAS and XM receiver unit is off.
2. Disconnect the coaxial antenna connector(s) on the antenna.
3. Remove the sealant from the antenna and fuselage.
4. Remove the mounting screws on the antenna.
5. Retain the screws for reinstallation.
6. Remove the antenna.

2.7.2 Installation

1. Clean the area of debris or excess sealant.
2. Install the antenna according to Section 3.1.1.2 (non-pressurized aircraft) or 3.2.1.2 (pressurized aircraft) of the STC Antenna Installation Manual (listed in Section 2.1 of this document). This includes verifying the electrical bond of the antenna in accordance with the requirements of Section 2.6 in that installation manual.
3. Connect the antenna connector(s) to the antenna ensuring each connecter is secured.

2.8 Diagrams

Refer to the STC Antenna Installation Manual (listed under reference documentation in section 2.1 of this document) for drawings applicable to this installation. There are no wiring diagrams since this STC does not provide wiring interconnections. Location of the antenna varies with aircraft and installation. Refer to the cover page of this document for the mounting location of the antenna(s) specific to the aircraft tail number.

2.9 Special Inspection Requirements

2.9.1 Antenna Visual Inspection - Suspected lightning strike

In the event of a suspected or actual lightning strike to the aircraft, the antenna(s) and its associated installation shall be inspected.

If the antenna was struck by lightning then the antenna and the surrounding installation shall be inspected to ensure that there is no structural damage around the areas where lightning may have attached. See Table 2 for inspection criteria.

Execute the system checkout procedure for the GPS/WAAS and/or XM system using the antenna, to ensure the system is operating correctly.

2.10 Application of Protective Treatments

None, N/A.

2.11 Data Relative to Structural Fasteners

For fastener torque information and other fastener information, refer to Section 3.1.1.2 (non-pressurized aircraft) or 3.2.1.2 (pressurized aircraft) of the STC Antenna Installation Manual (listed in Section 2.1 of this document).

2.12 Special Tools

For electrical bonding testing, a milli-ohm meter is required.

2.13 Additional Instructions

There are no additional ICA instructions for this STC.

2.14 Overhaul Period

This STC is for physical installation and mounting of the antenna(s) and does not include functional operation. The antenna(s) do not require overhaul at a specific time period. Antenna health is monitored and self-test conducted by the interfaced GPS/WAAS and XM receivers.

2.15 ICA Revision and Distribution

To revise this ICA, Garmin will follow the Garmin ODA procedures manual SOP-055/ACP-016 for Instructions for Continued Airworthiness.

The latest revision of this document will be available on the Garmin website (www.garmin.com). A Garmin Service Bulletin, describing the ICA revision, will be sent to dealers if revision is determined to be significant.

2.16 Assistance

Flight Standards Inspectors or the certificate holder's PMI have the required resources to respond to questions regarding this ICA. In addition, the customer may refer questions regarding this equipment and its installation to the manufacturer, Garmin. Garmin customer assistance may be contacted during normal business hours via telephone 913-397-8200 or email from the Garmin website at garmin.com.

2.17 Implementation and Record Keeping

Modification of an aircraft by this Supplemental Type Certificate obligates the aircraft operator to include the maintenance information provided by this document in the operator's aircraft maintenance manual and/or operator's aircraft scheduled maintenance program.

3. AIRWORTHINESS LIMITATIONS

There are no additional Airworthiness Limitations as defined in 14 CFR § 23, Appendix G. G23.4 that result from this modification.

NOTE

The Airworthiness Limitations section is FAA approved and specifies maintenance required under §§43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved.

APPENDIX A – AIRCRAFT MAINTENANCE INTERVALS

Table 2 - Maintenance Intervals

All Aircraft models on Approved Model List		
Item	**Description/Procedure**	**Interval**
Electrical Bonding Test	An electrical bonding test must be performed on antennas installed by this STC. 1. Gain access to the antenna installation. 2. Disconnect coaxial cable(s) from the antenna connector(s). 3. Measure the resistance between the antenna connector (TNC external ground) and a nearby exposed portion of conductive aircraft structure (example: exposed rivet on fuselage stringer). 4. Verify the resistance is equal to or less than 10 milliohms. 5. Reconnect the coaxial cable to the antenna connector(s) and ensure it is secured. In the event of bonding test failure, remove antenna, clean and re-install using unit replacement procedures in Section 2.7. Any reworked antenna installation shall have a resistance less than or equal to 2.5 milliohms.	**Every 2000 flight hours or ten (10) years, whichever is first**
Antenna Exterior Inspection	Conduct a visual inspect on the antenna. 1. Clean antenna with water and mild soap. 2. Verify there are no cracks on the antenna and around attachment fasteners. 3. Verify that all sealing fillets around the antenna are in good condition. If the antenna is broken, cracked, or dented it must be replaced. In the event attachment is not secure, re-attach antenna and complete the Electrical Bonding Test. In the event antenna seal shows signs of damage or decomposition, complete the Electrical Bonding Test and re-seal antenna.	**12 Calendar Months**
Antenna Attachment to Airplane Structure	Conduct a visual inspect of the aircraft structure supporting antenna installation. 1. Clean exterior of aircraft skin within 10 inch radius from antenna location with water and mild soap. 2. Inspect aircraft skin around antenna footprint to verify there are no cracks and aircraft skin is not deformed. 3. Inspect aircraft skin around rivets attaching antenna doubler and verify there are no cracks originating at the edge of fastener heads. Use high intensity light and, optionally, 5X or 10X magnifying glass. 4. Verify that antenna fasteners are not loose. If the aircraft skin is cracked, or deformed, the aircraft internal structure must also be inspected for degradation in the local area. Refer to approved method defined in Aircraft Structural Repair Manual for aircraft skin repairs.	**12 Calendar Months**

Pressurized Aircraft models on Approved Model List		
Hawker Beechcraft B90, C90, C90A, C90GT, 200, 200C, B200, B200C model airplanes	Conduct visual inspect of the aircraft structure supporting antenna installation at time intervals defined by Maintenance Inspection Program defined in the Aircraft Approved Maintenance Manual[1]. 1. Clean exterior of aircraft skin within 10 inch radius from antenna location with water and mild soap. 2. Inspect exterior aircraft skin around antenna footprint to verify there are no cracks and aircraft skin is not deformed. 3. Verify that antenna fasteners are not loose. If the aircraft skin is cracked, or deformed, the aircraft internal structure must also be inspected for degradation in the local area. Skin with cracks 0.50 inch or larger must be repaired. Refer to approved method defined in Aircraft Structural Inspection and Repair Manual for aircraft skin repairs.	**Every 200 hours or 12 months, whichever is first**
	Conduct visual inspect of the aircraft structure supporting antenna installation at time intervals defined by Special Inspection Program for exterior airframe skin defined in the Aircraft Approved Maintenance Manual[2]. 1. Clean exterior of aircraft skin within 10 inch radius from antenna location with water and mild soap. 2. Inspect exterior aircraft skin around antenna footprint for cracks and deformations. 3. Inspect exterior aircraft skin for cracks around antenna doubler rivets. Use high intensity light and 5X or 10X magnifying glass. 4. Inspect antenna doubler installation for missing fasteners. 5. Verify that antenna fasteners are not loose. If the aircraft skin is cracked, or deformed, the aircraft internal structure must also be inspected for degradation in the local area. Skin with cracks 0.50 inch or larger must be repaired. Refer to approved method defined in 98-39006 King Air Structural Inspection and Maintenance Manual, Chapter 20-10-16 *Skin Damage Repair (Pressurized Area)*. In the event some of the antenna doubler rivets are loose or missing, install new fasteners. Refer to Appendix B in the 190-01284-00 Garmin GPS and XM® Antenna STC Installation Manual for fastener type details.	**10,000 cycles initial; 1,000 cycles recurring**

[1] chapter 5-00-00 of 90-590012-13 *King Air 90 Series Maintenance Manual*, or chapter 5-00-00 of 101-590010-19 *King Air 200 Series Maintenance Manual.*

[2] chapter 5-21-05 or chapter 5-25-05 of 90-590012-13 *King Air 90 Series Maintenance Manual*, as applicable to aircraft serial number, or chapter 5-20-05 of 101-590010-19 *King Air 200 Series Maintenance Manual.*

Pressurized Aircraft models on Approved Model List		
Cessna T337G, P337H, T337H-SP model airplanes	Conduct visual inspect of the aircraft structure supporting antenna installation per procedure and at time intervals defined by Maintenance Inspection Program defined in Section 2 of D2516-8-13 *Model 337 Pressurized Series Service Manual (1973 Thru 1980).* 1. Clean exterior of aircraft skin within 10 inch radius from antenna location with water and mild soap. 2. Inspect exterior aircraft skin around antenna footprint to verify there are no cracks and aircraft skin is not deformed. 3. Verify that antenna fasteners are not loose. If the aircraft skin is cracked, or deformed, the aircraft internal structure must also be inspected for degradation in the local area. Skin with detectable cracks must be repaired. Refer to approved method and procedures defined in Section 16-18 of of D2516-8-13 *Model 337 Pressurized Series Service Manual (1973 Thru 1980).*	**Every 200 hours or 12 months, whichever is first**

US Department of Transportation
Federal Aviation Administration

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

OMB No. 2120-0020
Exp: 5/31/2018

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	Serial No.	
N600ZE	B-100	
Make	**Model**	**Series**
GRUMMAN	GOOSE	G-21

2. Owner

Name *(As shown on registration certificate)*	Address *(As shown on registration certificate)*
MIKE RINKER AIRCRAFT LLC	Address 313 E FLORIDA AVE
	City UNION CITY State TN
	Zip 38261 Country United States

3. For FAA Use Only

4. Type		5. Unit Identification			
Repair	Alteration	Unit	Make	Model	Serial No.
☐	☒	AIRFRAME	GRUMMAN	*(As described in Item 1 above)*	B-100
☐	☐	POWERPLANT			
☐	☐	PROPELLER			
☐	☐	APPLIANCE	Type / Manufacturer		

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency		
Name Justin Wright	☒	U. S. Certificated Mechanic	☐ Manufacturer
Address 1186 Mill Creek Rd	☐	Foreign Certificated Mechanic	C. Certificate No.
City Troy State TN	☐	Certificated Repair Station	A&P 3084485
Zip 38260 Country United States	☐	Certificated 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] 3-30-17

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 Flt. Standards Inspector	☐	Manufacturer	☐	Maintenance Organization	☐	Persons Approved by Canadian Department of Transport
	☐	FAA Designee	☐	Repair Station	☒	Inspection Authorization		Other *(Specify)*

Certificate or Designation No. 3376620 IA

Signature/Date of Authorized Individual: [signature] 3/30/2017

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.)

N600ZE	3/28/17
Nationality and Registration Mark	Date

Installed two Airwolf oil filter kits AFC-K015 at station 98 on left and right engine mount. Kits were installed per STC SA01282NY and Airwolf Filter Corp. installation manual revision C dated 11/11/2010. Kits weigh 9.5 lbs each. All AN fittings and hardware are new. All work was done in accordance with AC43.13-1B/2A and Airwolf Filter Corp. installation manual.
Weight & Balance and Equipment List have been updated.

---------- END ----------

☐ Additional Sheets Are Attached

United States of America

Department of Transportation -- Federal Aviation Administration

Supplemental Type Certificate

Number SA01282NY

This certificate issued to

Airwolf Filter Corp
15369 Madison Rd.
Middlefield, OH 44062

*certifies that the change in the type design for the following product with the limitations and conditions therefor as specified hereon meets the airworthiness requirements of Part * of the * Regulations.*

Original Product - Type Certificate Number: * See attached FAA Approved Model List (AML)
Make: * No. SA01282NY for list of approved airplane models
Model: * and applicable installation instructions

Description of Type Design Change:

Installation of Airwolf remote mounted engine oil filter kit AFC-K015 on aircraft powered by Pratt & Whitney radial reciprocating engine Series R-985, R-1340 and R-1830.

Limitations and Conditions:

1. Airwolf Oil Filter Model AFC-600 (Champion) is eligible only with R-985 series engines.
2. Airwolf Oil Filter Model AFC-700 (Fram) is eligible on R-985, R-1340 and R-1830 series engines.
3. Airwolf Instructions for Continued Airworthiness, AFC-K000-ICA, revision IR, dated July 5, 2012 or later FAA accepted revision is required with this installation.
4. Engine compartment firewall for mounting oil filter shall be of .021 inch minimum thickness ASTM A527 galvanized steel or equivalent (Ref. CAR 3.624(b), 14CFR PART 23.1191(h)).
5. Compatibility of this design change with previously approved modifications must be determined by the installer.
6. If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission.

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: September 01, 1999

Date of issuance: January 23, 2001

Date reissued:

Date amended: October 31, 2012

By direction of the Administrator

(Signature)

Timothy Smyth
Manager, Propulsion & Program Management Branch
Chicago Aircraft Certification Office

(Title)

Any alteration of this certificate is punishable by a fine of not exceeding $1,000, or imprisonment not exceeding 3 years, or both.

This certificate may be transferred in accordance with FAR 21.47.

US Department of Transportation
Federal Aviation Administration

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

OMB No. 2120-0020
Exp: 5/31/2018

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	Serial No.
N600ZE	B-100

Make	Model	Series
GRUMMAN	GOOSE	G-21

2. Owner

Name *(As shown on registration certificate)*: MIKE RINKER AIRCRAFT LLC

Address *(As shown on registration certificate)*
Address: 313 E FLORIDA AVE
City: UNION CITY State: TN
Zip: 38261 Country: United States

3. For FAA Use Only

4. Type		5. Unit Identification			
Repair	Alteration	Unit	Make	Model	Serial No.
☐	☒	AIRFRAME	GRUMMAN	*(As described in Item 1 above)*	B-100
☐	☐	POWERPLANT			
☐	☐	PROPELLER			
☐	☐	APPLIANCE	Type / Manufacturer		

6. Conformity Statement

A. Agency's Name and Address
Name: Justin Wright
Address: 1186 Mill Creek Rd
City: Troy State: TN
Zip: 38260 Country: United States

B. Kind of Agency

X	U. S. Certificated Mechanic	☐ Manufacturer
☐	Foreign Certificated Mechanic	C. Certificate No.
☐	Certificated Repair Station	A&P 3084485
☐	Certificated 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: Justin Wright 3-30-17

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 Flt. Standards Inspector	☐	Manufacturer	☐	Maintenance Organization	☐	Persons Approved by Canadian Department of Transport
	☐	FAA Designee	☐	Repair Station	X	Inspection Authorization		Other *(Specify)*

Certificate or Designation No.: 3271820 IA

Signature/Date of Authorized Individual: Jeffrey Alan Houseman 3/30/2017

FAA Form 337 (10/06)

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.)

N600ZE	3/28/17
Nationality and Registration Mark	Date

Installed two JPI EDM-700 scanners at station 93 in cockpit upper panel. Kits were installed per STC SA2586NM and JPI Instruments installation manual for EGT-701 dated 01/13/99. SN: 35663 for left engine and SN: 38651 for right engine. Kits weigh 1.12 lbs each. Installed probes for EGT and CHT on each engine where prescribed by JPI installation manual. Units were wired to the aircrafts Avionics bus and each protected by an 5 amp breaker. All work was done in accordance with AC43.13-1B/2A and JPI installation manual.
Weight & Balance and Equipment List have been updated.

---------- END ----------

☐ Additional Sheets Are Attached

United States Of America

Department of Transportation - Federal Aviation Administration

Supplemental Type Certificate

Number SA2586NM

This Certificate issued to: J. P. INSTRUMENTS
PO Box 7033
Huntington Beach, CA 92646

certifies that the change in the type design for the following product with the limitations and conditions thereof as specified hereon meets the airworthiness requirements of Part 3 of the Civil Aviation Regulations, including respective Amendments as specified in the attached Approved Model List.

Original Product Type Certificate Number: * *See attached FAA Approved J.P. Instruments

Make: * Master Eligibility List No. SA2586NM for list

Model: * of approved aircraft models and applicable TCDS

Description of Type Design Change:
Installation of J. P. Instruments temperature monitoring systems in accordance with FAA Approved J. P. Instruments Drawing List Report No. 100, Revision D, dated December 19, 1996, or later FAA approved revisions. FAA Approved Airplane/Rotorcraft Flight Manual Supplement No. 1 for EGT-701 temperature indicator, Revision A, dated December 13, 1996, or later FAA approved revisions.

Limitations and Conditions: The approval of the change in type design applies to the basic airplane of the specific models that are otherwise unmodified. This approval should not be extended to other specific airplanes of these models on which other previously approved modifications are incorporated, unless it is determined that the interrelationship between this installation and any previously approved configuration will not introduce any adverse effect upon the airworthiness of that airplane. If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission. (See continuation sheet)

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: December 31, 1984

Date of issuance: August 14, 1985

Date reissued:

Date amended: July 13, 1987, November 13, 1992, December 19, 1996, May 15, 1998, June 17, 1999

By direction of the Administrator

(Signature)

Manager, Propulsion Branch
Los Angeles Aircraft Certification Office

(Title)

Any alteration of this certificate is punishable by a fine of not exceeding $1,000, or imprisonment not exceeding 3 years, or both.

 This certificate may be transferred in accordance with FAR 21.47.

U.S Department of Transportation
Federal Aviation Administration

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

Form Approved OMB No. 2120-0020 11/30/2007

Electronic Tracking Number

For FAA Use Only

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 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. 1421). Failure to report can result in a civil penalty not to exceed $1,000 for each such violation (Section 901 Federal Aviation Act 1958)

1. Aircraft	Nationality and Registration Mark: N600ZE	Serial No.: B-100	
	Make: GRUMMAN	Model: GOOSE	Series: G-21A
2. Owner	Name *(As shown on registration certificate)*: William R. Rose	Address *(As shown on registration certificate)*: Address 15 S. Mundhank Road; City SO Barrington; State IL; Zip 60010; Country USA	

3. For FAA Use Only

4. Type		5. Unit Identification			
Repair	Alteration	Unit	Make	Model	Serial Number
☐	☒	AIRFRAME	—	*(As described in Item 1 above)*	—
☐	☐	POWERPLANT			
☐	☐	PROPELLER			
☐	☐	APPLIANCE	Type: / Manufacturer:		

6. Conformity Statement

A. Agency's Name and Address
Name Victor Serrano
Address 2626 Skoike Drive
City Rockford State IL
Zip 61108 Country USA

B. Kind of Agency
- ☒ U.S. Certificated Mechanic
- ☐ Foreign Certificated Mechanic
- ☐ Certificated Repair Station
- ☐ Certificated Maintenance Organization
- ☐ Manufacturer

C. Certificate No.: A&P 3076686

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
Victor Serrano Victor Serrano 10/30/2007

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 Flt Standards Inspector	☐	Manufacturer	☐	Maintenance Organization	☐	Person Approved by Canadian Department of Transport
	☐	FAA Designee	☐	Repair Station	X	Inspection Authorization		Other *(Specify)*

Certificate or Designation No.: A&P 3076686IA

Signature/Date of Authorized Individual
Victor Serrano Victor Serrano 10/30/2007

FAA Form 337 (10-08)

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.)

N600ZE	10/30/2007
Nationality and Registration Mark	Date

COMPLIED WITH AND PERFORMED THE FOLLOWING STC AS PER INSTALLATIION MANUAL: STC #:SA39CH

Report #: 9600-1A

Report Date: 23 July, 1992

Revision Date: 09 June, 2004

LAKE & AIR - AMPHIBIAN LANDING GEAR POSITION ADVISORY SYSTEM STC #: SA39CH

Equipment list updated - Weight & Balance performed and updated as required.

STC Holder: Lake & Air Inc.

400 North Airport Service road

South St. Paul, MN 55075

END

☐ Additional Sheets Are Attached

United States of America

Department of Transportation -- Federal Aviation Administration

Supplemental Type Certificate

Number SA39CH

This certificate issued to Lake & Air Inc.
400 North Airport Service Road
South St. Paul, MN 55075

certifies that the change in the type design for the following product with the limitations and conditions therefor as specified hereon meets the airworthiness requirements of Part * of the * Regulations. *

Original Product - Type Certificate Number: *
Make: *
Model: *

* See attached FAA Approved Model List (AML) No. SA39CH for list of approved airplane models and applicable airworthiness regulations.

Description of Type Design Change:
Installation of an Amphibian Landing Gear Position Advisory System in accordance with Lake & Air, Inc. Installation Manual as listed on AML No. SA39CH, or later FAA approved revision.

Limitations and Conditions:
1) Compatibility of this design change with previously approved modifications must be determined by the installer.
2) A copy of this certificate and FAA Approved Model List (AML) No. SA39CH issued April 21, 1993, or later FAA approved revision, must be maintained as part of the permanent records for the modified aircraft.

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: March 02, 1993

Date of issuance: April 21, 1993

Date reissued:

Date amended: January 31, 1994; January 17, 1996; July 02, 1997

By direction of the Administrator

Charles L. Smalley

(Signature)

Charles L. Smalley
Manager, Systems & Flight Test Branch
Chicago Aircraft Certification Office

(Title)

Any alteration of this certificate is punishable by a fine of not exceeding $1,000, or imprisonment not exceeding 3 years, or both.

This certificate may be transferred in accordance with FAR 21.47.

U.S Department of Transportation
Federal Aviation Administration

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

Form Approved OMB No. 2120-0020 11/30/2007

Electronic Tracking Number

For FAA Use Only

GL03

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 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. 1421). Failure to report can result in a civil penalty not to exceed $1,000 for each such violation (Section 901 Federal Aviation Act 1958)

1. Aircraft	Nationality and Registration Mark: N600ZE	Serial No.: B-100	
	Make: GRUMMAN AMERICAN	Model: G-21A	Series:
2. Owner	Name *(As shown on registration certificate)*: WILLIAM R. ROSE	Address *(As shown on registration certificate)*: Address 15 W. MUNDHANK RD. City SOUTH BARRINGTON State ILL Zip 60010 Country USA	

3. For FAA Use Only

4. Type		5. Unit Identification			
Repair	Alteration	Unit	Make	Model	Serial Number
☐	☐	AIRFRAME	—	*(As described in item 1 above)*	—
☐	☒	POWERPLANT	PRATT & WHITNEY A/C	R-983 AN-14B	24009
☐	☐	PROPELLER			
☐	☐	APPLIANCE	Type / Manufacturer		

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency			
Name VICTOR SERRANO	☒	U.S. Certificated Mechanic	☐	Manufacturer
Address 2626 SKOIKE DRIVE	☐	Foreign Certificated Mechanic	C. Certificate No.	
City ROCKFORD State ILL	☐	Certificated Repair Station	A&P3076686	
Zip 61108 Country USA	☐	Certificated 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: Victor Serrano 6/16/07

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 Flt Standards Inspector	☐	Manufacturer	☐	Maintenance Organization	☐	Person Approved by Canadian Department of Transport
	☐	FAA Designee	☐	Repair Station	X	Inspection Authorization	Other *(Specify)*	

Certificate or Designation No.: A&P3076686IA

Signature/Date of Authorized Individual: VICTOR SERRANO Victor Serrano

FAA Form 337 (10-06)

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.)

N600ZE	6/16/2007
Nationality and Registration Mark	Date

[1]Complied with STC: 5141NM [SOL Company] as per instructions.
[2] Installation of "BLOWPROOF" exhaust gaskets.
[3] Gaskets installed as per STC supplied instructions.
[4] No servicing required.
[5] Recommended service life 1600 hours.
[6] No special instructions.
[7] Replacement recommended at 1600 hours.
[8] N/A
[9] N/A
[10] N/A
[11] Torque retention nuts to 15-20 ft/lbs.
[12] N/A
[13] N/A
[14] N/A
[15] No change to weight and balance

STC Holder: SOL Company
571 Winslow Way West
Bainbridge Island, WA 98110

.....END.....

☐ Additional Sheets Are Attached

U.S Department of Transportation
Federal Aviation Administration

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

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification GL AC DICS

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 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. 1421). Failure to report can result in a civil penalty not to exceed $1,000 for each such violation (Section 901 Federal Aviation Act 1958)

1. Aircraft	Make: Grumman	Model: G-21A
	Serial No.: B-100	Nationality and Registration Mark: N 600ZE
2. Owner	Name *(As shown on registration certificate)*: William R. Rose	Address *(As shown on registration certificate)*: 15 S. Mundhank Road South Barrington, IL 60010

3. For FAA Use Only

The data identified herein complies with the applicable airworthiness requirements and is approved for the above described aircraft, subject to conformity inspection by a person authorized in FAR 43.71.

Date 7-19-2005 FAA Inspector, DPA-FSDO

4. Unit Identification / **5. Type**

Unit	Make	Model	Serial No.	Repair	Alteration
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	C. Certificate No.
J.A. Air Center DuPage Airport West Chicago, IL 60185	☐ U.S. Certified Mechanic ☐ Foreign Certified Mechanic ☒ Certified Repair Station ☐ Manufacturer	NF2R029L Rating: Radio Class 1,2,3

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

Date	Signature of Authorized Individual
19 July 2005	Steven J. Carton

7. Approval for Return to Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ APPROVED ☐ REJECTED

BY						Other *(Specify)*
	☐ FAA Flt Standards Inspector	☐ Manufacturer	☐ Inspection Authorization			
	☐ FAA Designee	☒ Repair Station	☐ Person Approved by Transport Canada Airworthiness Group			

Date of Approval or Rejection	Certificate or Designation No.	Signature of Authorized Individual
20 July 2005	NF2R029L	David I.L. Bruhn

FAA Form 337 (12-88)

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 G-21A (Goose)

N 600ZE

Installed Garmin GDL-69 Data Link Receiver in accordance with Installation Manual #190-00355-02 Revision B dated February 2005, with reference to STC # SA01487SE.

The Garmin GDL-69 provides weather information to the Garmin GNS-530 GPS/Nav/Comm/GS/Map.

Installed Garmin GA-55 Data Link Antenna at fuselage station 109.00" aft of datum on the top fuselage.

The Garmin GDL-69 uses a 5 amp circuit breaker located in the avionics bus area.

This equipment has been ground checked and functions properly. There were no adverse effects with any of the other aircraft systems.

All work was done in accordance with AC43.13-1B Chapters 10, 11, 12 and AC43.13-2A Chapters 1, 2, 3.

No additional maintenance due beyond the requirements of 14 CFR, Part 91, Subpart E ("Maintenance, Preventive Maintenance And Alterations"). See attached checklist for Continued Airworthiness.

Weight & Balance and Equipment List have been updated.

——————— end ———————

☒ Additional Sheets Are Attached

U.S.GPO:1989-0-663-171

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 G-21A
N 600ZE
19 July 2005

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS CHECKLIST

1. INTRODUCTION: See block #4 of Form 337.

2. DESCRIPTION: See block #8 of Form 337.

3. CONTROL/OPERATION INFORMATION: Operating Manual has been included in aircraft paperwork.

4. SERVICING INFORMATION: Not applicable.

5. MAINTENANCE INSTRUCTIONS: Not applicable.

6. TROUBLESHOOTING INFORMATION: Not applicable.

7. REMOVAL AND REPLACEMENT INFORMATION: Weight & Balance was calculated. Equipment List was updated.

8. DIAGRAMS: Not applicable.

9. SPECIAL INSPECTION REQUIREMENTS: Not applicable.

10. APPLICATION OF PROTECTIVE TREATMENTS: Not applicable.

11. DATA (STRUCTURAL FASTENERS, INSTALLATION REQUIREMENTS): Not applicable.

12. LIST OF SPECIAL TOOLS: Not applicable.

13. COMMUTER CATEGORY AIRCRAFT: Not applicable.

14. RECOMMENDED OVERHAUL PERIODS: Not applicable.

15. AIRWORTHINESS LIMITATION SECTION: No additional airworthiness limitations.

16. REVISION: Should a revision of this ICA become necessary, a letter will be submitted to the local FSDO with a copy of the revised FAA Form 337 and revised ICA.

☐ Additional Sheets Are Attached

U.S.GPO:1989-0-663-171

U.S Department of Transportation
Federal Aviation Administration

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

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification GL03 NG

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 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. 1421). Failure to report can result in a civil penalty not to exceed $1,000 for each such violation (Section 901 Federal Aviation Act 1958)

1. Aircraft	Make: Grumman	Model: G-21A
	Serial No.: B-100	Nationality and Registration Mark: N 600ZE
2. Owner	Name (As shown on registration certificate): William R. Rose	Address (As shown on registration certificate): 15 S. Mundhank Road SO Barrington, IL 60010

3. For FAA Use Only

The data identified herein complies with the applicable airworthiness requirements and is approved for the above described aircraft, subject to conformity inspection by a person authorized in FAR 43.7.

OCT 2 1 2003
Date

FAA Inspector, DPA-FSDO

4. Unit Identification / 5. Type

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

6. Conformity Statement

A. Agency's Name and Address: J.A.Air Center, DuPage Airport, West Chicago, IL 60185

B. Kind of Agency:
- ☐ U.S. Certified Mechanic
- ☐ Foreign Certified Mechanic
- ☒ Certified Repair Station
- ☐ Manufacturer

C. Certificate No.: NF2R029L
Rating: Radio Class 1, 2, 3

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

Date: 21 October 2003

Signature of Authorized Individual: Steven J. Carton

7. Approval for Return to Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ APPROVED ☐ REJECTED

BY
- ☐ FAA Flt Standards Inspector
- ☐ FAA Designee
- ☐ Manufacturer
- ☒ Repair Station
- ☐ Inspection Authorization
- ☐ Person Approved by Transport Canada Airworthiness Group
- Other (Specify)

Date of Approval or Rejection	Certificate or Designation No.	Signature of Authorized Individual
27 October 2003	NF2R029L	Steven J. Carton

FAA Form 337 (12-88)

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 G-21A (Goose)

N 600ZE

Installed Garmin GNS-530 GPS/Nav/Comm/GS/Map in accordance with Garmin 500 Series Installation Manual #190-00181-02 Revision F dated December 2002, with reference to STC #SA00864WI.

Installation has been done using steering information to the #1 Nav Indicator (Bendix/King KI-525A HSI) interfaced to S-TEC 60-2 Autopilot.

Lightning strike data detected by the Goodrich WX-500 Stormscope Weather Mapping System will appear on the moving map and weather display pages of the GNS-530.

Traffic data detected by the Goodrich Skywatch Traffic Advisory System will appear on the moving map and traffic display pages of the GNS-530.

Garmin GA-56 GPS Antenna has been installed at fuselage station 49.00" aft of datum on the top fuselage. This antenna meets the requirements of TSO-C129.

The Garmin GNS-530 uses two (2) 5 amp circuit breakers located in the avionics bus area.

A post installation checkout was performed in accordance with Garmin Installation Manual. Transmit check was completed for the following frequencies: 121.125, 121.150, 121.175, 121.200, 121.225, 121.250, 131.200, 131.225, 131.250, 131.275, 131.300, 131.325 and 131.350 MHz.

Garmin GNS-530 is approved for VFR/IFR enroute terminal and non-precision approach operation when successful check flight conducted in accordance with AC20-138 has been completed (date 27 Oct 2003 JA Representative Victor) and the "GPS NOT APPROVED FOR NAVIGATION PURPOSES" placard has been removed.

FAA Approved Flight Manual Supplement dated October 21, 2003 is required for this approval.

This equipment has been ground checked and functions properly. There were no adverse effects with any of the other aircraft systems.

All work has been done in accordance with AC43.13-1B Chapters 10, 11 & 12, and AC43.13-2A Chapters 2 & 3, and AC20-138, and TSO-C129a Class A(1), and TSO-C37d Class 4 & 6, and TSO-C38d Class C & E, and TSO-C40c, and TSO-C36e, and TSO-C34e.

No additional maintenance due beyond the requirements of 14CFR, Part 91, Subpart E ("Maintenance, Preventive Maintenance and Alterations"). See attached checklist for Continued Airworthiness.

Weight and Balance and Equipment List have been updated.

end

☒ Additional Sheets Are Attached

U.S.GPO:1989-0-663-171

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 G-21A
N 600ZE
21 October 2003

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS CHECKLIST

1. INTRODUCTION: See block #4 of Form 337.

2. DESCRIPTION: See block #8 of Form 337.

3. CONTROL/OPERATION INFORMATION: Operating Manual has been included in aircraft paperwork.

4. SERVICING INFORMATION: Not applicable.

5. MAINTENANCE INSTRUCTIONS: Not applicable.

6. TROUBLESHOOTING INFORMATION: Not applicable.

7. REMOVAL AND REPLACEMENT INFORMATION: Weight & Balance was calculated. Equipment List was updated.

8. DIAGRAMS: Not applicable.

9. SPECIAL INSPECTION REQUIREMENTS: Not applicable.

10. APPLICATION OF PROTECTIVE TREATMENTS: Not applicable.

11. DATA (STRUCTURAL FASTENERS, INSTALLATION REQUIREMENTS): Not applicable.

12. LIST OF SPECIAL TOOLS: Not applicable.

13. COMMUTER CATEGORY AIRCRAFT: Not applicable.

14. RECOMMENDED OVERHAUL PERIODS: Not applicable.

15. AIRWORTHINESS LIMITATION SECTION: No additional airworthiness limitations.

16. REVISION: Should a revision of this ICA become necessary, a letter will be submitted to the local FSDO with a copy of the revised FAA Form 337 and revised ICA.

☐ Additional Sheets Are Attached

U.S.GPO:1989-0-663-171

U.S Department of Transportation
Federal Aviation Administration

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

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification GL03 MCG

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 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. 1421). Failure to report can result in a civil penalty not to exceed $1,000 for each such violation (Section 901 Federal Aviation Act 1958)

1. Aircraft	Make: Grumman	Model: G-21A
	Serial No.: B-100	Nationality and Registration Mark: N 600ZE
2. Owner	Name *(As shown on registration certificate)*: William R. Rose	Address *(As shown on registration certificate)*: 15 S. Mundhank Road SO Barrington, IL 60010

3. For FAA Use Only

4. Unit Identification / **5. Type**

Unit	Make	Model	Serial No.	5. Repair	5. Alteration
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	C. Certificate No.
J.A. Air Center DuPage Airport West Chicago, IL 60185	☐ U.S. Certified Mechanic ☐ Foreign Certified Mechanic ☒ Certified Repair Station ☐ Manufacturer	NF2R029L Rating: Radio Class 1, 2, 3

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

Date	Signature of Authorized Individual
21 October 2003	Steven J. Carton

7. Approval for Return to Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ APPROVED ☐ REJECTED

BY							
	☐	FAA Flt Standards Inspector	☐	Manufacturer	☐	Inspection Authorization	Other *(Specify)*
	☐	FAA Designee	☒	Repair Station	☐	Person Approved by Transport Canada Airworthiness Group	

Date of Approval or Rejection	Certificate or Designation No.	Signature of Authorized Individual
21 October 2003	NF2R029L	Andrew R. Vrchota

FAA Form 337 (12-88)

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 G-21A (Goose)

N 600ZE

Removed Bendix/King KT-76A Transponder S/N 7289.

Existing Aero mech. 8140B-20 Encoding Altimeter meets or exceeds requirements and specifications of TSO-C88 and is interconnected with Bendix/King KT-79 Transponder S/N 2227, installed this date, that meets or exceeds the requirements and specifications of TSO-C74B or TSO-C74C. This transponder has been checked with IFR, ATC-600 Test Set in accordance with Part 43, Appendix E and Appendix F for compliance with FAR91.411 and FAR91.413 this date. This transponder used a 3 amp circuit breaker located in the avionics bus area.

Static system has been tested in accordance with FAR91.411 and FAR91.413.

This equipment has been ground checked and functions properly. There were no adverse effects with any other aircraft systems.

All work has been done in accordance with AC43.13-1B Chapters 10, 11 & 12, and AC43.13-2A Chapters 2 & 3.

Weight & Balance and Equipment List have been updated.

end

☐ Additional Sheets Are Attached

U.S.GPO:1989-0-663-171

U.S Department of Transportation
Federal Aviation Administration

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

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification GL03 MCS

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 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. 1421). Failure to report can result in a civil penalty not to exceed $1,000 for each such violation (Section 901 Federal Aviation Act 1958)

1. Aircraft	Make: Grumman	Model: G-21A
	Serial No.: B-100	Nationality and Registration Mark: N 600ZE
2. Owner	Name *(As shown on registration certificate)*: William R. Rose	Address *(As shown on registration certificate)*: 15 S. Mundhank Road SO Barrington, IL 60010

3. For FAA Use Only

4. Unit Identification / **5. Type**

Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	~~~~~~~~~~~~~~~~~~~~*(As described in item 1 above)*~~~~~~~~~~~~~~~~~~~~			☐	☒
POWERPLANT				☐	☐
PROPELLER				☐	☐
APPLIANCE	Type			☐	☐
	Manufacturer			☐	☐

6. Conformity Statement

A. Agency's Name and Address: J.A. Air Center, DuPage Airport, West Chicago, IL 60185

B. Kind of Agency: ☐ U.S. Certified Mechanic ☐ Foreign Certified Mechanic ☒ Certified Repair Station ☐ Manufacturer

C. Certificate No.: NF2R029L

Rating: Radio Class 1, 2, 3

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

Date: 21 October 2003

Signature of Authorized Individual: Steven J. Carton

7. Approval for Return to Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ APPROVED ☐ REJECTED

BY: ☐ FAA Flt Standards Inspector ☐ FAA Designee ☐ Manufacturer ☒ Repair Station ☐ Inspection Authorization ☐ Person Approved by Transport Canada Airworthiness Group Other *(Specify)*

Date of Approval or Rejection: 21 October 2003

Certificate or Designation No.: NF2R029L

Signature of Authorized Individual: Andrew R. Vrchota

FAA Form 337 (12-88)

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 G-21A (Goose)

N 600ZE

Installed S-TEC GPS Steering (GPSS) Converter in accordance with S-TEC Corporation Bulletin 901.

This converter provides the S-TEC System 60-2 Autopilot with the capability of accepting GPS roll steering outputs and using them to control aircraft track through the autopilot heading mode.

S-TEC Pilot's Operating Handbook for GPS Steering (GPSS) Converter has been included with aircraft paperwork.

All work has been done in accordance with S-TEC Service Letter No. SL00-003 dated 2-18-00/ revised 12-06-01, FARS 1.1, 43.5, 43.7, 43.9 and Appendix A to Part 43. All work has been done in accordance with AC43.13-1B Chapters 10, 11 & 12 and AC43.13-2A Chapters 2 & 3.

Weight & Balance and Equipment List have been updated.

end

☐ Additional Sheets Are Attached

U.S.GPO:1989-0-663-171

U.S Department of Transportation
Federal Aviation Administration

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

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification GL03 NCS

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 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. 1421). Failure to report can result in a civil penalty not to exceed $1,000 for each such violation (Section 901 Federal Aviation Act 1958)

1. Aircraft	Make: Grumman	Model: G-21A
	Serial No.: B-100	Nationality and Registration Mark: N 600ZE
2. Owner	Name *(As shown on registration certificate)*: William R. Rose	Address *(As shown on registration certificate)*: 15 S. Mundhank Road SO Barrington, IL 60010

3. For FAA Use Only

4. Unit Identification / 5. Type

Unit	Make	Model	Serial No.	5. Repair	5. Alteration
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	C. Certificate No.
J.A. Air Center DuPage Airport West Chicago, IL 60185	☐ U.S. Certified Mechanic ☐ Foreign Certified Mechanic ☒ Certified Repair Station ☐ Manufacturer	NF2R029L Rating: Radio Class 1, 2, 3

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

Date	Signature of Authorized Individual
21 October 2003	Steven J. Carton

7. Approval for Return to Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ APPROVED ☐ REJECTED

BY						
☐	FAA Flt Standards Inspector	☐	Manufacturer	☐	Inspection Authorization	Other *(Specify)*
☐	FAA Designee	☒	Repair Station	☐	Person Approved by Transport Canada Airworthiness Group	

Date of Approval or Rejection	Certificate or Designation No.	Signature of Authorized Individual
21 October 2003	NF2R029L	Andrew R. Vrchota

FAA Form 337 (12-88)

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 G-21A (Goose)

N 600ZE

Installed Garmin GMA-340 Audio/Marker/Intercom in accordance with Installation Manual P/N 190-00149-01 Revision K dated May 2002, with reference to STC # SA00710WI. This Garmin GMA-340 meets the criteria of TSO-C50a and TSO-C35d.

This Garmin GMA-340 uses a 5 amp circuit breaker located in the avionics bus area.

Installed equipment has been ground checked and functions properly. There were no adverse effects with any of the other aircraft systems.

All work was done in accordance with AC43.13-1B Chapters 10, 11, 12 and AC43.13-2A Chapters 2 & 3.

Weight & Balance and Equipment List have been updated.

end

☐ Additional Sheets Are Attached

U.S.GPO:1989-0-663-171

U.S Department of Transportation
Federal Aviation Administration

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

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification GL03

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 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. 1421). Failure to report can result in a civil penalty not to exceed $1,000 for each such violation (Section 901 Federal Aviation Act 1958)

1. Aircraft	Make: Grumman	Model: G-21A
	Serial No.: B-100	Nationality and Registration Mark: N 600ZE
2. Owner	Name *(As shown on registration certificate)*: William R. Rose	Address *(As shown on registration certificate)*: 15 S. Mundhank Road, So Barrington, IL 60010

3. For FAA Use Only

The data identified herein complies with the applicable airworthiness requirements and is approved for the above described aircraft, subject to conformity inspection by a person authorized in FAR 43.7.

OCT 2 1 2003
Date

FAA Inspector, DPA-FS-

4. Unit Identification / **5. Type**

Unit	Make	Model	Serial No.	5. Repair	5. Alteration
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	C. Certificate No.
J.A. Air Center DuPage Airport West Chicago, IL 60185	☐ U.S. Certified Mechanic ☐ Foreign Certified Mechanic ☒ Certified Repair Station ☐ Manufacturer	NF2R029L Rating: Radio Class 1,2,3

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

Date	Signature of Authorized Individual
21 October 2003	Steven J. Carton

7. Approval for Return to Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ APPROVED ☐ REJECTED

BY						
☐	FAA Flt Standards Inspector	☐	Manufacturer	☐	Inspection Authorization	Other *(Specify)*
☐	FAA Designee	☒	Repair Station	☐	Person Approved by Transport Canada Airworthiness Group	

Date of Approval or Rejection	Certificate or Designation No.	Signature of Authorized Individual
21 October 2003	NF2R029L	Andrew R. Vrchota

FAA Form 337 (12-88)

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 G-21A (Goose)

N 600ZE

Installed Goodrich WX-500 Stormscope Weather Mapping System in accordance with Installation Manual #009-11500-001 Revision D dated 09 November 2001.

The Goodrich WX-500 Stormscope Weather Mapping System consists of WX-500 Processor and NY-163 Antenna. Goodrich NY-163 Stormscope Antenna is located at fuselage station 80.00" aft of datum on the lower fuselage.

Lightning strike data detected by the WX-500 will display on the Garmin GNS-530 GPS/Nav/Comm/GS/Map.

The WX-500 uses a 3 amp circuit breaker located in the avionics bus area.

This equipment has been ground checked and functions properly. There were no adverse effects with any of the other aircraft systems.

All work was done in accordance with AC43.13.1B Chapters 10, 11, 12, and AC43.13-2A Chapters 1, 2, 3, and AC23.1309-1.

No additional maintenance due beyond the requirments of 14 CFR, Part 91, Subpart E ("Maintenance, Preventive Maintenance And Alterations"). See attached checklist for Continued Airworthiness.

Weight & Balance and Equipment List have been updated.

———— end ————

☒ Additional Sheets Are Attached

U.S.GPO:1989-0-663-171

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 G-21A (Goose)
N 600ZE
21 October 2003

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS CHECKLIST

1. INTRODUCTION: See block #4 of Form 337.
2. DESCRIPTION: See block #8 of Form 337.
3. CONTROL/OPERATION INFORMATION: Operating Manual has been included in aircraft paperwork.
4. SERVICING INFORMATION: Not applicable.
5. MAINTENANCE INSTRUCTIONS: Not applicable.
6. TROUBLESHOOTING INFORMATION: Not applicable.
7. REMOVAL AND REPLACEMENT INFORMATION: Weight & Balance was calculated. Equipment List was updated.
8. DIAGRAMS: Not applicable.
9. SPECIAL INSPECTION REQUIREMENTS: Not applicable.
10. APPLICATION OF PROTECTIVE TREATMENTS: Not applicable.
11. DATA (STRUCTURAL FASTENERS, INSTALLATION REQUIREMENTS): Not applicable.
12. LIST OF SPECIAL TOOLS: Not applicable.
13. COMMUTER CATEGORY AIRCRAFT: Not applicable.
14. RECOMMENDED OVERHAUL PERIODS: Not applicable.
15. AIRWORTHINESS LIMITATION SECTION: No additional airworthiness limitations.
16. REVISION: Should a revision of this ICA become necessary, a letter will be submitted to the local FSDO with a copy of the revised FAA Form 337 and revised ICA.

☐ Additional Sheets Are Attached

U.S.GPO:1989-0-663-171

U.S Department of Transportation
Federal Aviation Administration

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

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification GL03 DICS

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 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. 1421). Failure to report can result in a civil penalty not to exceed $1,000 for each such violation (Section 901 Federal Aviation Act 1958)

1. Aircraft	Make: Grumman	Model: G-21A
	Serial No.: B-100	Nationality and Registration Mark: N 600ZE
2. Owner	Name *(As shown on registration certificate)*: William R. Rose	Address *(As shown on registration certificate)*: 15 S. Mundhank Road SO Barrington, IL 60010

3. For FAA Use Only

The data identified herein complies with the applicable airworthiness requirements and is approved for the above described aircraft, subject to conformity inspection by a person authorized in FAR 43.7.

OCT 21 2003
Date

FAA Inspector, DPA-FSDO

4. Unit Identification / **5. Type**

Unit	Make	Model	Serial No.	5. Type: Repair	5. Type: Alteration
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	C. Certificate No.
J.A. Air Center DuPage Airport West Chicago, IL 60185	☐ U.S. Certified Mechanic ☐ Foreign Certified Mechanic ☒ Certified Repair Station ☐ Manufacturer	NF2R029L Rating: Radio Class 1, 2, 3

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

Date	Signature of Authorized Individual
21 October 2003	Steven J. Carton

7. Approval for Return to Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ APPROVED ☐ REJECTED

BY						
☐	FAA Flt Standards Inspector	☐	Manufacturer	☐	Inspection Authorization	Other *(Specify)*
☐	FAA Designee	☒	Repair Station	☐	Person Approved by Transport Canada Airworthiness Group	

Date of Approval or Rejection	Certificate or Designation No.	Signature of Authorized Individual
21 October 2003	NF2R029L	Andrew R. Vrchota

FAA Form 337 (12-88)

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 G-21A (Goose)

N 600ZE

Installed Garmin GDL-49 Data Link in accordance with Installation Manual #190-00231-00 Revision A dated May 2002, with reference to STC #SA01073WI.

The Garmin GDL-49 receives weather information from ORBCOMM Satellite Constellation and displays the information on the Garmin GNS-530 GPS/Nav/Comm/GS/Map.

Installed Comant CI-177-4 Data Link Antenna at fuselage station 109.00" aft of datum on the top fuselage.

The Garmin GDL-49 uses one (1) 3 amp fuse and one (1) 5 amp circuit breaker located in the avionics bus area.

This equipment has been ground checked and functions properly. There were no adverse effects with any of the other aircraft systems.

All work was done in accordance with AC43.13-1B Chapters 10, 11, 12 and AC43.13-2A Chapters 1, 2, 3.

No additional maintenance due beyond the requirements of 14 CFR, Part 91, Subpart E ("Maintenance, Preventive Maintenance And Alterations"). See attached checklist for Continued Airworthiness.

Weight & Balance and Equipment List have been updated.

end

☒ Additional Sheets Are Attached

U.S.GPO:1989-0-663-171

GL03

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 G-21A (Goose)
N 600ZE
21 October 2003

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS CHECKLIST

1. INTRODUCTION: See block #4 of Form 337.
2. DESCRIPTION: See block #8 of Form 337.
3. CONTROL/OPERATION INFORMATION: Operating Manual has been included in aircraft paperwork.
4. SERVICING INFORMATION: Not applicable.
5. MAINTENANCE INSTRUCTIONS: Not applicable.
6. TROUBLESHOOTING INFORMATION: Not applicable.
7. REMOVAL AND REPLACEMENT INFORMATION: Weight & Balance was calculated. Equipment List was updated.
8. DIAGRAMS: Not applicable.
9. SPECIAL INSPECTION REQUIREMENTS: Not applicable.
10. APPLICATION OF PROTECTIVE TREATMENTS: Not applicable.
11. DATA (STRUCTURAL FASTENERS, INSTALLATION REQUIREMENTS): Not applicable.
12. LIST OF SPECIAL TOOLS: Not applicable.
13. COMMUTER CATEGORY AIRCRAFT: Not applicable.
14. RECOMMENDED OVERHAUL PERIODS: Not applicable.
15. AIRWORTHINESS LIMITATION SECTION: No additional airworthiness limitations.
16. REVISION: Should a revision of this ICA become necessary, a letter will be submitted to the local FSDO with a copy of the revised FAA Form 337 and revised ICA.

☐ Additional Sheets Are Attached

U.S.GPO:1989-0-663-171

U.S Department of Transportation
Federal Aviation Administration

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

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification GL03 DLG

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 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. 1421). Failure to report can result in a civil penalty not to exceed $1,000 for each such violation (Section 901 Federal Aviation Act 1958)

1. Aircraft	Make: Grumman	Model: G-21A
	Serial No.: B-100	Nationality and Registration Mark: N 600ZE
2. Owner	Name *(As shown on registration certificate)*: William R. Rose	Address *(As shown on registration certificate)*: 15 S. Mundhank Road SO Barrington, IL 60010

3. For FAA Use Only

The data identified herein complies with the applicable airworthiness requirements and is approved for the above described aircraft, subject to conformity inspection by a person authorized in FAR 43.7.

OCT 2 1 2003
Date

FAA Inspector, DPA-FSDO

4. Unit Identification / **5. Type**

Unit	Make	Model	Serial No.	5. Type: Repair	5. Type: Alteration
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	C. Certificate No.
J.A. Air Center DuPage Airport West Chicago, IL 60185	☐ U.S. Certified Mechanic ☐ Foreign Certified Mechanic ☒ Certified Repair Station ☐ Manufacturer	NF2R029L Rating: Radio Class 1, 2, 3

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

Date	Signature of Authorized Individual
21 October 2003	Steven J. Carton

7. Approval for Return to Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ APPROVED ☐ REJECTED

BY						
☐ FAA Flt Standards Inspector	☐ Manufacturer	☐ Inspection Authorization	Other *(Specify)*
☐ FAA Designee	☒ Repair Station	☐ Person Approved by Transport Canada Airworthiness Group	

Date of Approval or Rejection	Certificate or Designation No.	Signature of Authorized Individual
21 October 2003	NF2R029L	Andrew R. Vrchota

FAA Form 337 (12-88)

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 G-21A (Goose)

N 600ZE

Installed Goodrich SkyWatch Traffic Advisory System (TAS) in accordance with Installation Manual P/N 009-10800-001 Revision C dated 23 February 2001, and also in accordance with STC #SA00733CH.

The SkyWatch System consists of (1) TRC-497 Transmitter/Receiver Computer mounted under the floor board and (1) NY-164 Directional Antenna mounted on the top fuselage.

Traffic information detected by the SkyWatch System displays on the moving map and traffic pages of the Garmin GNS-530 GPS/Nav/Comm/GS/Map.

SkyWatch heading information is received from the Bendix/King KCS-55A Slaved Compass System. Connection to a pressure switch automatically reverts the SkyWatch Transmitter to standby mode when the aircraft is on the ground.

The SkyWatch System is interfaced to the AeroMech 8140B-20 Encoding Altimeter and also to the aircraft transponder supression bus. Static System has been checked in accordance with Part 43, Appendix "E" and "F" for compliance with FAR91.217 and FAR91.413 this date.

Garmin GMA-340 Audio/Marker/Intercom has been interfaced to the SkyWatch System using unmuted audio input.

The SkyWatch System uses a 5 amp circuit breaker located in the avionics bus area.

This system has been ground checked and functions properly. A complete operational test was performed and was found to be satisfactory and did not interfere with any navigation or communication equipment on board aircraft.

Required FAA Approved Flight Manual Supplement dated OCT 2 1 2003 has been included in the aircraft paperwork.

No additional maintenance due beyond the requirements of 14 CFR, Part 91, Subpart E ("Maintenance, Preventive Maintenance And Alterations"). See attached checklist for Continued Airworthiness.

All work has been done in accordance with AC43.13-1B Chapters 10, 11, 12, 13 and AC43.13-2A Chapters 2, 3.

Weight & Balance and Equipment List have been updated.

_____ end _____

☒ Additional Sheets Are Attached

U.S.GPO:1989-0-663-171

GI 03

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 G-21A (Goose)
N 600ZE
21 October 2003

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS CHECKLIST

1. INTRODUCTION: See block #4 of Form 337.
2. DESCRIPTION: See block #8 of Form 337.
3. CONTROL/OPERATION INFORMATION: Operating Manual has been included in aircraft paperwork.
4. SERVICING INFORMATION: Not applicable.
5. MAINTENANCE INSTRUCTIONS: Not applicable.
6. TROUBLESHOOTING INFORMATION: Not applicable.
7. REMOVAL AND REPLACEMENT INFORMATION: Weight & Balance was calculated. Equipment List was updated.
8. DIAGRAMS: Not applicable.
9. SPECIAL INSPECTION REQUIREMENTS: Not applicable.
10. APPLICATION OF PROTECTIVE TREATMENTS: Not applicable.
11. DATA (STRUCTURAL FASTENERS, INSTALLATION REQUIREMENTS): Not applicable.
12. LIST OF SPECIAL TOOLS: Not applicable.
13. COMMUTER CATEGORY AIRCRAFT: Not applicable.
14. RECOMMENDED OVERHAUL PERIODS: Not applicable.
15. AIRWORTHINESS LIMITATION SECTION: No additional airworthiness limitations.
16. REVISION: Should a revision of this ICA become necessary, a letter will be submitted to the local FSDO with a copy of the revised FAA Form 337 and revised ICA.

☐ Additional Sheets Are Attached

U.S.GPO:1989-0-663-171

TDS AUG 16 2001

U.S Department of Transportation
Federal Aviation Administration

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

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification
g GL03

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 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. 1421). Failure to report can result in a civil penalty not to exceed $1,000 for each such violation (Section 901 Federal Aviation Act 1958)

1. Aircraft	Make: grumman	Model: G-21A
	Serial No.: B-100	Nationality and Registration Mark: U.S. N600ZE
2. Owner	Name *(As shown on registration certificate)*: W.R.ROSE	Address *(As shown on registration certificate)*: 15 SOUTH MUNDHANK RD. SOUTH BARRINGTON,ILLINOIS 60010

3. For FAA Use Only

4. Unit Identification / **5. Type**

Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	~~~~~~~~~~~~~~~~~~~~*(As described in item 1 above)*~~~~~~~~~~~~~~~~~~~~			X	
POWERPLANT					
PROPELLER					
APPLIANCE	Type / Manufacturer				

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency	C. Certificate No.
EDWIN BOBENG 204 SOUTH JANE DRIVE ELGIN.ILLINOIS 60123-5912	☒ U.S. Certified Mechanic ☐ Foreign Certified Mechanic ☐ Certified Repair Station ☐ Manufacturer	A&P 1392773

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

Date	Signature of Authorized Individual
08/13/2001	Edwin Boberg

7. Approval for Return to Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ APPROVED ☐ REJECTED

BY						
	☐ FAA Flt Standards Inspector	☐ Manufacturer	X	Inspection Authorization	Other *(Specify)*
	☐ FAA Designee	☐ Repair Station	☐	Person Approved by Transport Canada Airworthiness Group	

Date of Approval or Rejection	Certificate or Designation No.	Signature of Authorized Individual
08/13/2001	IA 1392773	Edwin Boberg

FAA Form 337 (12-88)

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.)

08/13/2001 N600ZE GRUMMAN G-21A S/N B-100

HOURMETER READS 1305.4 HRS.

REPAIRED DAMAGED RUDDER TRAILING EDGE BETWEEN WATERLINE # 40.1/2 AND 56 9/16
REMOVED FABRIC BOTH SIDES OF RUDDER FROM SPAR BACK TO TRAILING EDGE & FROM
WATERLINE # 33 3/16 TO 81 5/16 TO INSPECT FOR ANY HIDDEN DAMAGE
REPLACED RIB @ W/L # 56 9/16 & REPAIRED RIB @ W/L # 48 1/2 STRAIGHTEN TRAILING EDGE
AND NAVIGATION MOUNT
REPLACED MATERIAL WAS SAME WEIGHT AND TYPE AS REMOVED.
BARE ALUMINUM WAS TREATED WITH,
DUPONT ALUMINUM REFINISHING SYSTEM STEP A #225 & STEP B #226
COATED WITH COLAR PRIMER EPOXY PRIMER #824S & ACTIVATOR
NEW FABRIC WAS ATTACHED USING SUPERFLITE #102 AND SUPERFLITE U-500 ADHESIVE.
1" RIB STITCH SPACING WAS USED PER THE ORGINAL COVERING AND THE PATCH WENT OVER THE
EXISTING FABRIC AND RIB LACING AND WAS RESTITCHED OVER THE ORGINAL LACING.
AFTER LACING AND TAPES WERE INSTALLED THE FINISH WAS BUILT UP WITH SUPERFLITE SYSTE VI.
SF6500 PRIMER FILLER,SF6600 PRIMER CATALST,SF6700 FLEX AGENT & SF6820 REDUCER.
COLOR COAT WAS IMRON,MATERHORN WHITE #N3090HN.
ALL MATERIAL USED WAS SAME AS ORGINAL OR EQUIVLENT.
MANUALS REFERENCED AS FOLLOWS,
GRUMMAN STRUCTURAL MANUAL NAV.AER. 01-85VA-3
PAGES 89,93 FIG.48,94 FIG49,SECTON 1 PARAGRAPH 17 & FIG,120
AC.43.13-1B
CHAPTER 4 SECTION 4 PARAGRAPH 4-36 (A),(B),(D),4-37,4-52 & 4-58.
CHAPTER 2 SECTION 1,PARAGRAPH 2-1 TO 2-15,2-42 (A),(B),(D),(E),(G) & (H).
SUPERFLITE SYSTEM VI COVERING MANUAL # D-102B

END

☒ ~~Additional Sheets Are Attached~~

U.S.GPO:1989-0-663-171

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

US Department of Transportation
Federal Aviation Administration

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification DPA-FSDO

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This form is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed $1,000 for each such violation (Section 901 Federal Aviation Act of 1958).

1. Aircraft	Make: Grumman American	Model: G-21A
	Serial No.: B-100	Nationality and Registration Mark: N 600ZE
2. Owner	Name *(As shown on registration certificate)*: Rose Packing Co.	Address *(As shown on registration certificate)*: 65 S. Barrington Road, Barrington, IL 60010

3. For FAA Use Only

The data identified herein complies with the applicable airworthiness requirements and is approved for the above described aircraft, subject to conformity inspection by a person authorized in FAR 43.7.

DEC 0 3 1998
Date

FAA Inspector, DPA FSDO

4. Unit Identification

Unit	Make	Model	Serial No.	5. Type: Repair	5. Type: Alteration
AIRFRAME	(As described in item 1 above)				X
POWERPLANT					
PROPELLER					
APPLIANCE	Type / Manufacturer				

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency	C. Certificate No.
J.A. Air Center DuPage Airport West Chicago, IL 60185	[ ] U.S. Certificated Mechanic [ ] Foreign Certificated Mechanic [X] Certificated Repair Station [ ] Manufacturer	RATING: RADIO Class 1, 2, 3 NF2R029L

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

Date	Signature of Authorized Individual
12/3/98	Charles D. Walling

7. Approval for Return to Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is [x] APPROVED [ ] REJECTED

BY						Other (Specify)
	[ ] FAA Flt. Standards Inspector		[ ] Manufacturer		[ ] Inspection Authorization	
	[ ] FAA Designee	x	[ ] Repair Station		[ ] Person Approved by Transport Canadian Airworthiness Group	

Date of Approval or Rejection	Certificate or Designation No.	Signature of Authorized Individual
12-03-98	NF2R029L	Steven J. Carton

FAA Form 337 (12-88)

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 G-21A
N 600ZE

Inspected and updated Northstar M3 Global Positioning System (previously installed on Form 337 dated 18 June 1996) in accordance with Installation Manual P/N GM611 Rev. C dated May 1, 1997, and also in accordance with manufacturer's original installation per STC #SA00464NY.

Update was done using steering information to the #1 Nav Indicator (Bendix/King KI-525A HSI) interfaced to S-TEC System 60-2 Autopilot using switch and relay. Indicator light illuminates when information is presented on Nav #1 or GPS. If ILS frequency is selected on Nav #1, HSI automatically reverts to Nav #1.

Existing AmeriKing AK-350 Encoder remains interfaced to the Northstar M3.

Existing Aero Antenna GPS Antenna (P/N AT-575-9) remains located on the top fuselage and meets the requirements of TSO-C129.

A post installation check out was performed in accordance with Northstar Installation Manual. Transmit check was completed for the following frequencies: 121.125, 121.150, 121.175, 121.200, 121.225, 121.250, 131.200, 131.225, 131.250, 131.275, 131.300, 131.325 and 131.350 MHz. Also, interference check out between GPS and VOR has been performed.

This equipment has been ground checked and functions properly. There were no adverse effects with any of the other aircraft systems.

This equipment is approved for VFR/IFR domestic en route, terminal and non-precision approach operation when successful test flight has been completed (date 12-03-98 pilot name William Meier pilot certificate # 2057222) and the "GPS NOT APPROVED FOR NAVIGATION PURPOSES" placard has been removed.

FAA Approved Flight Manual Supplement dated _____ is required for this approval.

All work was done in accordance with AC43.13-1A Chapters 11, 13, 15 and AC43.13-2A Chapters 2, 3 and AC20-138 and TSO-C129.

No additional maintenance due beyond the requirements of 14 CFR, Part 91, Subpart E ("Maintenance, Preventive Maintenance, And Alterations"). See attached checklist for Continued Maintenance.

No change to Weight & Balance.

----------END----------

☑ Additional Sheets Are Attached

U.S. GOVERNMENT PRINTING OFFICE: 1992-769-012/60157

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 G-21A
N 600ZE

Instructions for Continued Airworthiness checklist:

1. INTRODUCTION: See block #4 of Form 337.
2. DESCRIPTION: See block #8 of Form 337.
3. CONTROL/OPERATION INFORMATION: Equipment operating manual has been included with aircraft paperwork.
4. SERVICING INFORMATION: Not applicable
5. MAINTENANCE INSTRUCTIONS: Not applicable
6. TROUBLESHOOTING INFORMATION: Not applicable
7. REMOVAL AND REPLACEMENT INFORMATION: Not applicable
8. DIAGRAMS: Not applicable
9. SPECIAL INSPECTION REQUIREMENTS: Not applicable
10. APPLICATION OF PROTECTIVE TREATMENTS: Not applicable
11. DATA (STRUCTURAL FASTENERS, INSTALLATION REQUIREMENTS): Not applicable
12. LIST OF SPECIAL TOOLS: Not applicable
13. COMMUTER CATEGORY AIRCRAFT: Not applicable
14. RECOMMENDED OVERHAUL PERIODS: Not applicable
15. AIRWORTHINESS LIMITATION SECTION: No additional airworthiness limitations
16. REVISION: Should a revision of this ICA become necessary, a letter will be submitted to the local FSDO with a copy of the revised FAA Form 337 and revised ICA.

----------E N D----------

☐ Additional Sheets Are Attached

U.S. GOVERNMENT PRINTING OFFICE: 1992-769-012/60157

US Department of Transportation
Federal Aviation Administration

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

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification: DKS

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This form is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed $1,000 for each such violation (Section 901 Federal Aviation Act of 1958).

1. Aircraft	Make: Grumman	Model: G21A
	Serial No.: B100	Nationality and Registration Mark: N 600ZE
2. Owner	Name *(As shown on registration certificate)*: Rose Packing Co.	Address *(As shown on registration certificate)*: 65 S. Barrington Road, Barrington, IL 60010

3. For FAA Use Only

~~THE DATA~~ IDENTIFIED HEREIN COMPLIES WITH APPLICABLE AIRWORTHINESS REQUIREMENTS AND IS APPROVED ONLY FOR THE ABOVE DESCRIBED AIRCRAFT SUBJECT TO CONFORMITY INSPECTION BY A PERSON AUTHORIZED IN FAR 43.7

JUL 23 1998
Date

FAA Inspector.

4. Unit Identification / 5. Type

Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	~~~~~~~~~~ *(As described in item 1 above)* ~~~~~~~~~~				X
POWERPLANT					
PROPELLER					
APPLIANCE	Type / Manufacturer				

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency	C. Certificate No.
J.A. Air Center Du Page Airport West Chicago, IL 60185	[ ] U.S. Certificated Mechanic [ ] Foreign Certificated Mechanic [X] Certificated Repair Station [ ] Manufacturer	RATING: RADIO Class 1, 2, 3 NF2R029L

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

Date	Signature of Authorized Individual
07-23-1998	David H. Krant

7. Approval for Return to Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is [ ] APPROVED [ ] REJECTED

BY						Other (Specify)
	[ ] FAA Flt. Standards Inspector		[ ] Manufacturer		[ ] Inspection Authorization	
	[ ] FAA Designee	x	[ ] Repair Station		[ ] Person Approved by Transport Canadian Airworthiness Group	

Date of Approval or Rejection	Certificate or Designation No.	Signature of Authorized Individual
07-23-1998	NF2R029L	David H. Krant

FAA Form 337 (12-88)

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 G21A
N 600ZE

Removed Quietflite Intercom Model Number SRC 10B, S/N 2420.

Installed an N.A.T. AA85-001 Intercom S/N 1129 in accordance with N.A.T. AA85-001 InterVox II Intercom Manual, Rev. 1.00, dated Oct 09 1997.

This equipment has been ground checked and functions properly. There were no adverse effects with any of the other aircraft systems.

All work was done in accordance with AC43.13-1A Chapters 11, 13, 15 and AC43.13-2A Chapters 2 and 3.

No additional maintenance due beyond the requirements of 14 CFR, Part 91, Subpart E ("Maintenance, Preventive Maintenance and Alterations") and also manufacturer's installation manual dated Oct 09 1997.

Weight change negligible.

---------- E N D ----------

☐ Additional Sheets Are Attached

U.S. GOVERNMENT PRINTING OFFICE: 1992-769-012/60157

US Department of Transportation
Federal Aviation Administration

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

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification MQR

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This form is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed $1,000 for each such violation (Section 901 Federal Aviation Act of 1958).

1. Aircraft	Make: Grumman American	Model: G-21A
	Serial No.: B-100	Nationality and Registration Mark: N 600ZE
2. Owner	Name *(As shown on registration certificate)*: Rose Packing Co.	Address *(As shown on registration certificate)*: 65 S. Barrington Road, Barrington, IL 60010

3. For FAA Use Only

The data identified herein complies with the applicable airworthiness requirements and is approved for the above described aircraft, subject to conformity inspection by a person authorized in FAR 43.7.

DEC 18 1997 — Date — FAA Inspector, DPA FSDO

4. Unit Identification / 5. Type

Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	(As described in item 1 above)				X
POWERPLANT					
PROPELLER					
APPLIANCE	Type				
	Manufacturer				

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency	C. Certificate No.
Joliet Avionics, Inc. DuPage Airport West Chicago, IL 60185	U.S. Certificated Mechanic	RATING: RADIO Class 1, 2, 3
	Foreign Certificated Mechanic	
	X Certificated Repair Station	NF2R029L
	Manufacturer	

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

Date	Signature of Authorized Individual
12-17-97	Ernest F. Evinger — Ernest F. Evinger

7. Approval for Return to Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is [X] APPROVED [ ] REJECTED

BY						
	FAA Flt. Standards Inspector		Manufacturer		Inspection Authorization	Other (Specify)
	FAA Designee	X	Repair Station		Person Approved by Transport Canadian Airworthiness Group	

Date of Approval or Rejection	Certificate or Designation No.	Signature of Authorized Individual
19 December 1997	NF2R029L	Leonel C. Fritz — Leonel C. Fritz

FAA Form 337 (12-88)

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 G-21A (Goose)
N 600ZE

Upgraded existing S-TEC System 50 (previously installed on Form 337 dated 12-22-88) to an S-TEC System 60-2 Two Axis Automatic Flight Guidance System (28 volt system). Installation was done in accordance with General Installation Information Bulletin #100, Single Cue Flight Director/Steering Horizon Bulletin #361, and Altitude Vertical Speed Selector/Altitude Alerter Bulletin #360. Installation was done in accordance with previous installation done at this facility (see Form 337 dated 05-16-97 referencing FAA Approved installation of S-TEC System 60-2 in Grumman G-21A, N 37487).

The Trim Servo P/N 0106-T9 is mounted and centered between fuselage stations 132.00" and 143.50" aft of datum. The mounting was done using 6061-T6 x 3/16" alum. angle and AN hardware. The servo mounting was pull-tested with the following results: forward G force of 9.0g x 2.9 lbs = 26.10 lbs with no damage or distortion to existing bulkheads or mounting angles installed; downward G force of 6.6g x 2.9 lbs = 19.14 lbs with no damage or distortion to existing bulkheads or mounting angles installed; upward G force of 3.0g x 2.9 lbs = 8.70 lbs with no damage or distortion to existing bulkhead or mounting angle installed; sideward G force of 1.5g x 2.9 lbs = 4.35 lbs with no damage or distortion to existing bulkhead or mounting angles installed. A 12" extension was added to the trim cable to allow for adequate wraps on the servo capstan.

A torsional pull-test was conducted on the autopilot servo. The following information was received from S-TEC Engineering Department (per previous installation done at this facility referencing Grumman G-21A, N 37487) on how to arrive at a torsional pull valve: "Take the clutch setting torque, add 40%, times that by 1.5, take that valve times 1.15, then pull both forward and aft on each servo".

Trim servo clutch setting of 25 lbs. + 40% (or 10 lbs) = 35 lbs x 1.5 x 1.15 = 60.37 lbs. A pull-test of the servo mounting brackets plus an additional 25% was conducted with no deflection of the bracketry or associated bulkheads was noted.

The Pitch Flight Guidance Computer P/N 0110 and Roll Flight Guidance Computer P/N 0109 are installed forward of copilot instrument panel.

The Single Cue Flight Director/Steering Horizon P/N 6413-28L has been installed inplace of the existing pilot artificial horizon in the pilot panel. Pilot artificial horizon has been relocated to the pilot instrument panel.

The Altitude Vertical Speed Selector/Altitude Alerter P/N 0140 has been installed in place of the existing altitude alerter system in the pilot panel.

System was ground checked and functions properly. There were no adverse effects with any of the aircraft systems.

Aircraft has been flight tested on 12-19-97 by Bill Rose (pilot certificate # 1266379). FAA Approved Airplane Flight Manual Supplement dated DEC 19 1997 is required with this installation.

The completed S-TEC System 60-2 Two Axis Automatic Flight Guidance System was wired in accordance with S-TEC Drawing #9006, 9911-1, and 1002. All work was done in accordance with AC43.13-1A Chapter 2 Section 3, and Chapter 4 Sections 1 & 2, and Chapter 5 Section 1, and Chapter 6 Paragraph 251, and Chapter 11 Section 1 through 7, and Chapter 13. All work was done in accordance with AC43.13-2A Chapter 1.

Weight & Balance and Equipment List have been updated.

----------END----------

☐ Additional Sheets Are Attached

U.S. GOVERNMENT PRINTING OFFICE: 1992-769-012/60157

US Department of Transportation
Federal Aviation Administration

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

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification: MAO

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This form is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed $1,000 for each such violation (Section 901 Federal Aviation Act of 1958).

1. Aircraft	Make: Grumman American	Model: G-21A
	Serial No.: B-100	Nationality and Registration Mark: N 600ZE
2. Owner	Name *(As shown on registration certificate)*: Rose Packing Co.	Address *(As shown on registration certificate)*: 65 S. Barrington Road, Barrington, IL 60010

3. For FAA Use Only

4. Unit Identification / **5. Type**

Unit	Make	Model	Serial No.	5. Repair	5. Alteration
AIRFRAME	~~~~~ *(As described in item 1 above)* ~~~~~				X
POWERPLANT					
PROPELLER					
APPLIANCE	Type / Manufacturer				

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency	C. Certificate No.
Joliet Avionics, Inc. DuPage Airport West Chicago, IL 60185	[ ] U.S. Certificated Mechanic [ ] Foreign Certificated Mechanic [X] Certificated Repair Station [ ] Manufacturer	RATING: RADIO Class 1, 2, 3 NF2R029L

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

Date	Signature of Authorized Individual
12-17-97	Ernest F. Evinger Ernest F. Evinger

7. Approval for Return to Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is [X] APPROVED [ ] REJECTED

BY							
	[ ]	FAA Flt. Standards Inspector	[ ]	Manufacturer	[ ]	Inspection Authorization	Other (Specify)
	[ ]	FAA Designee	[X]	Repair Station	[ ]	Person Approved by Transport Canadian Airworthiness Group	

Date of Approval or Rejection	Certificate or Designation No.	Signature of Authorized Individual
12-17-97	NF2R029L	Ernest F. Evinger Ernest F. Evinger

FAA Form 337 (12-88)

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 G-21A (Goose)
N 600ZE

Installed Ameri-King AK-350 Encoder S/N 3521704 as per AC43.13-1A Chapter 2. This encoder meets or exceeds requirements and specifications of TSO-C88 and is interconnected with S-TEC Altitude Selector/Alerter P/N 0140 installed this date.

This equipment has been ground checked and functions properly. There were no adverse effects with any of the other aircraft systems.

Weight & Balance and Equipment List have been updated.

----------E N D----------

☐ Additional Sheets Are Attached

U.S. GOVERNMENT PRINTING OFFICE: 1992-769-012/60157

U.S. Department of Transportation
Federal Aviation Administration

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

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification DPA-FSDO

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 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. 1421). Failure to report can result in a civil penalty not to exceed $1,000 for each such violation (Section 901 Federal Aviation Act of 1958).

1. Aircraft	Make: Grumman	Model: G-21A
	Serial No.: B-100	Nationality and Registration Mark: N 600ZE
2. Owner	Name *(As shown on registration certificate)*: Rose Packing	Address *(As shown on registration certificate)*: 65 S. Barrington Road, Barrington, IL 60010

3. For FAA Use Only

4. Unit Identification / **5. Type**

Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	*(As described in Item 1 above)*				x
POWERPLANT					
PROPELLER					
APPLIANCE	Type / Manufacturer				

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency	C. Certificate No.
Joliet Avionics, Inc. DuPage Airport West Chicago, IL 60185	[ ] U.S. Certificated Mechanic [ ] Foreign Certificated Mechanic [x] Certificated Repair Station [ ] Manufacturer	Rating: Radio Class 1, 2, 3 NF2R029L

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

Date	Signature of Authorized Individual
18 November 1996	Douglas J. Mall

7. Approval for Return To Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is [x] APPROVED [ ] REJECTED

BY							
	[ ]	FAA Flt. Standards Inspector	[ ]	Manufacturer	[ ]	Inspection Authorization	Other *(Specify)*
	[ ]	FAA Designee	[x]	Repair Station	[ ]	Person Approved by Transport Canada Airworthiness Group	

Date of Approval or Rejection	Certificate or Designation No.	Signature of Authorized Individual
18 November 1996	NF2R029L	Steven J. Carton

FAA Form 337 (12-88)

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.)

Installed Shadin Company, Inc. Model 8800M Altitude Encoder in accordance with Operation/Installation Guide P/N 1N-IN8100A.

Altitude Encoder interfaces existing Shadin Company, Inc. Model AMS-2000 Altitude Management System.

This equipment has been ground checked and functions properly. There were no adverse effects with any of the other aircraft systems.

All work was done in accordance wtih AC43.13-1A Chapters 11, 13, 15 and AC43.13-2A Chapters 2 and 3 and TSO-C88a.

Weight & Balance and Equipment List have been updated.

====== end ======

☐ Additional Sheets Are Attached

☆U.S. GOVERNMENT PRINTING OFFICE: 1992–769–012/60157

US Department of Transportation
Federal Aviation Administration

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

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification DPA-FSDO MO

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 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. 1421). Failure to report can result in a civil penalty not to exceed $1,000 for each such violation (Section 901 Federal Aviation Act of 1958).

1. Aircraft	Make: Grumman	Model: G-21A
	Serial No.: B-100	Nationality and Registration Mark: N 600ZE
2. Owner	Name *(As shown on registration certificate)*: Rose Packing	Address *(As shown on registration certificate)*: 65 S. Barrington Road, Barrington, IL 60010

3. For FAA Use Only

THE DATA/ALTERATION IDENTIFIED HEREIN COMPLIES WITH APPLICABLE AIRWORTHINESS REQUIREMENTS AND IS APPROVED ONLY FOR THE ABOVE DESCRIBED AIRCRAFT SUBJECT TO CONFORMITY INSPECTION BY A PERSON AUTHORIZED IN FAR 43.7

JUN 18 1996 (Date) (FAA Inspector.)

4. Unit Identification / **5. Type**

Unit	Make	Model	Serial No.	5. Repair	5. Alteration
AIRFRAME	*(As described in Item 1 above)*				x
POWERPLANT					
PROPELLER					
APPLIANCE	Type / Manufacturer				

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency	C. Certificate No.
Joliet Avionics, Inc. DuPage Airport West Chicago, IL 60185	[ ] U.S. Certificated Mechanic [ ] Foreign Certificated Mechanic [x] Certificated Repair Station [ ] Manufacturer	Rating: Radio Class 1, 2, 3 NF2R029L

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

Date	Signature of Authorized Individual
11 June 1996	David H. Krantz

7. Approval for Return To Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is [x] APPROVED [ ] REJECTED

BY							Other *(Specify)*
	[ ]	FAA Flt. Standards Inspector	[ ]	Manufacturer	[ ]	Inspection Authorization	
	[ ]	FAA Designee	[x]	Repair Station	[ ]	Person Approved by Transport Canada Airworthiness Group	

Date of Approval or Rejection	Certificate or Designation No.	Signature of Authorized Individual
18 June 1996	NF2R029L	Steven J. Carton

FAA Form 337 (12-88)

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.)

Removed Northstar M1 Loran.

This upgrade references Form 337 dated 11 June 1996 when this facility installed Northstar M3 Global Positioning System in accordance with Installation Manual P/N GM610, Rev. A dated March 1, 1994 and also in accordance with similar installation per STC #SA00220NY.

Installation was done using steering information to the #1 Nav Indicator (Bendix/King KI-525A HSI) interfaced with S-TEC System 50 Autopilot using switch and relay. Indicator light illuminates when information is presented on Nav #1 or GPS. If ILS frequency is selected on Nav #1, HSI automatically reverts to Nav #1.

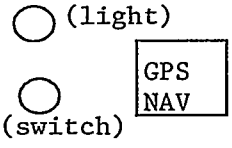
Existing Aeromech 8140B Encoding Altimeter is interfaced to the Northstar M3. Static system has been tested in accordance with FAR 91.411 and FAR 91.217.

Following is annunciator layout:

Center Pilot's Panel:

WRN PAR WP VFR RAIM

Upper R/H Pilot's Panel:



Northstar AN-120 GPS Antenna has been installed and is located at station 155.00" aft of datum on the top fuselage and meets the requirements of TSO C-129.

A post installation checkout was performed in accordance with Bendix/King Installation Manual. Transmit check was completed on both #1 and #2 comms for the following frequencies: 121.125, 121.150, 121.175, 121.200, 121.225, 121.250, 131.200, 131.225, 131.250, 131.275, 131.300, 131.325, and 131.350 MHz. Also, interference checkout between GPS and VOR has been performed.

This equipment has been ground checked and functions properly. There were no adverse effects with any of the other aircraft systems.

Aircraft has been flight tested in accordance with the requirements of AC20-138 on 06-12-96 by William R. Meier, pilot, and test results are attached. This system is approved for IFR/enroute and terminal operation when the FAA Approved Flight Manual Supplement dated JUN 18 1996 is received and the "GPS NOT APPROVED FOR NAVIGATION PURPOSES" placard has been removed.

All work was done in accordance with AC43.13-1A Chapters 11, 13, 15 and AC43.13-2A Chapters 2 & 3 and AC20-138 and TSO-C129 (Class A2) and also in accordance with FSAW 94-32A.

Weight and Balance has been computed and entered in appropriate aircraft paperwork.

==========END==========

☑ Additional Sheets Are Attached

*U.S.GPO:1994-568-012/00019

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. Any 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.)

GPS TEST FLIGHT

1. To certify GPS, it is necessary to flight check accuracy of GPS by flying and recording data between FAA recognized points (ie, any VORs, any NDB's, any Intersections, any Airports).

EXAMPLE:

Flight test from DuPage Airport or point of departure on the airport (Waypoint 0) and fly direct to the DuPage (DPA) VOR (Waypoint 1) intercepting a 176 degree course to the Joliet (JOT) VOR (Waypoint 2). Fly over the Joliet VOR and make left traffic to turn back on course (316 degrees) to fly direct to the Rockford (RFD) VOR (Waypoint 3). Fly over the Rockford VOR and make left traffic to intercept an on course heading of 117 degrees to fly direct to the DuPage VOR (Waypoint 1).

Check-point information
a. DuPage (DPA) 108.4 N 4153.4 W08821.0
b. Joliet (JOT) 112.3 N 4132.8 W08819.1
c. Rockford (RFD) 110.8 N 4213.5 W08912.0

EXAMPLE;

RECORD AND VERIFY:

DPA - JOT 176 NM 20.8 Degree
Over JOT Dist. to Go 0 NM±
Dist. L/R of course 0.1 NM

JOT - RFD 317° NM 36.5 Degree
Over RFD Dist. to Go .1 NM±
Dist. L/R of course 0 NM

RFD - DPA 42.8 NM 11.8 Degree
Over DPA Dist. To Go 0 NM±
Dist. L/R of course 0 NM

Pilot Name WILLIAM R. MEYER

Pilot License # 2057222

Pilot Signature D J Meyer

Aircraft Registration N 600ZE

Date 6/12/96

Customer Rose Packing

☐ Additional Sheets Are Attached

US Department of Transportation
Federal Aviation Administration

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

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification
DPA-FSDO

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 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. 1421). Failure to report can result in a civil penalty not to exceed $1,000 for each such violation (Section 901 Federal Aviation Act of 1958).

1. Aircraft	Make: Grumman	Model: G-21A
	Serial No.: B-100	Nationality and Registration Mark: N 600ZE
2. Owner	Name *(As shown on registration certificate)*: Rose Packing	Address *(As shown on registration certificate)*: 65 S. Barrington Road Barrington, IL 60010

3. For FAA Use Only

THE DATA IDENTIFIED HEREIN COMPLIES WITH THE APPLICA AIRWORTHINESS REQUIREMENTS AND IS APPROVED FOR DUPLICATION ON IDENTICAL AIRCRAFT MAKE, MODEL AND ALTERED CONFIGURATION WHEN ACCOMPLISHED BY ORIGINAL MODIFIER.

DATE JUN 11 1996 Monte Rust

FAA INSPECTOR NM

4. Unit Identification / **5. Type**

Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	*(As described in Item 1 above)*				x
POWERPLANT					
PROPELLER					
APPLIANCE	Type / Manufacturer				

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency	C. Certificate No.
Joliet Avionics, Inc. DuPage Airport West Chicago, IL 60185	U.S. Certificated Mechanic Foreign Certificated Mechanic x Certificated Repair Station Manufacturer	Rating: Radio Class 1, 2, 3 NF2R029L

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

Date	Signature of Authorized Individual
11 June 1996	David H. Krant

7. Approval for Return To Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ APPROVED ☐ REJECTED

BY							Other *(Specify)*
		FAA Flt. Standards Inspector		Manufacturer		Inspection Authorization	
		FAA Designee	x	Repair Station		Person Approved by Transport Canada Airworthiness Group	

Date of Approval or Rejection	Certificate or Designation No.	Signature of Authorized Individual
11 June 1996	NF2R029L	Steven J. Carton

FAA Form 337 (12-88)

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.)

Removed Northstar M1 Loran.

Installed Northstar M3 Global Positioning System in accordance with Installation Manual P/N GM610, Rev. A dated March 1, 1994 and also in accordance with similar installation per STC #SA00220NY.

Installation was done using steering information to the #1 Nav Indicator (Bendix/King KI-525A HSI) interfaced with S-TEC System 50 Autopilot using switch and relay. Indicator light illuminates when information is presented on Nav #1 or GPS. If ILS frequency is selected on Nav #1, HSI automatically reverts to Nav #1.

Existing Aeromech 8140B Encoding Altimeter is interfaced to the Northstar M3. Static system has been tested in accordance with FAR 91.411 and FAR 91.217.

Northstar AN-120 GPS Antenna has been installed and is located at station 155.00" aft of datum on the top fuselage and meets the requirements of TSO C-129.

A post installation checkout was performed in accordance with Bendix/King Installation Manual. Transmit check was completed on both #1 and #2 comms for the following frequencies: 121.125, 121.150, 121.175, 121.200, 121.225, 121.250, 131.200, 131.225, 131.250, 131.275, 131.300, 131.325, and 131.350 MHz. Also, interference checkout between GPS and VOR has been performed.

This equipment has been ground checked and functions properly. There were no adverse effects with any of the other aircraft systems.

System has been placarded, "GPS NOT APPROVED FOR NAVIGATION PURPOSES" and is pending successful test flight for VFR/IFR enroute and terminal operation approval.

All work was done in accordance with AC43.13-1A Chapters 11, 13, 15 and AC43.13-2A Chapters 2 & 3 and AC20-138 and TSO-C129 (Class A2) and also in accordance with FSAW 94-32A.

Weight and Balance has been computed and entered in appropriate aircraft paperwork.

==========END==========

☐ Additional Sheets Are Attached

*U.S.GPO:1994-568-012/00019

US Department of Transportation
Federal Aviation Administration

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

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification DPA-FSDO MKE

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 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. 1421). Failure to report can result in a civil penalty not to exceed $1,000 for each such violation (Section 901 Federal Aviation Act of 1958).

1. Aircraft	Make: Grumman	Model: G-21A
	Serial No.: B-100	Nationality and Registration Mark: N 600ZE
2. Owner	Name *(As shown on registration certificate)*: Rose Packing	Address *(As shown on registration certificate)*: 65 S. Barrington Road, Barrington, IL 60010

3. For FAA Use Only

4. Unit Identification / **5. Type**

Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	*(As described in Item 1 above)*				x
POWERPLANT					
PROPELLER					
APPLIANCE	Type / Manufacturer				

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency	C. Certificate No.
Joliet Avionics, Inc. DuPage Airport West Chicago, IL 60185	[ ] U.S. Certificated Mechanic [ ] Foreign Certificated Mechanic [x] Certificated Repair Station [ ] Manufacturer	Rating: Radio Class 1, 2, 3 NF2R029L

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

Date	Signature of Authorized Individual
11 June 1996	David H. Krant

7. Approval for Return To Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is [x] APPROVED [ ] REJECTED

BY						
	[ ] FAA Flt. Standards Inspector		[ ] Manufacturer		Inspection Authorization	Other *(Specify)*
	[ ] FAA Designee	[x]	Repair Station		Person Approved by Transport Canada Airworthiness Group	

Date of Approval or Rejection	Certificate or Designation No.	Signature of Authorized Individual
11 June 1996	NF2R029L	David H. Krant

FAA Form 337 (12-88)

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.)

Installed Eventide Argus 7000 Moving Map Display. This Argus 7000 installation was accomplished per manufacturer's installation manual P/N 5003, Rev. 03.06 dated 07-08-94.

Data from Northstar M3 GPS Navigator, RS-232 input port interfaces to the Argus 7000 for its navigation information. The heading information is supplied by Bendix/King KCS-55A Compass System.

The Argus 7000 is not approved for IFR use and is not intended as a source of navigation.

This equipment has been ground checked and functions properly. There were no adverse effects with any of the other aircraft systems.

All work was done in accordance with AC43.13-1A Chapter 11, 13, 15 and AC43.13-2A Chapter 2, 3 and AC20-121A Appendix 1 paragraph 3.

Weight and Balance has been computed and entered in appropriate aircraft paperwork.

========== END ==========

☐ Additional Sheets Are Attached

*U.S.GPO:1994-568-012/00019

FEB 27 1996 FEB 26 1996

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

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

Form Approved
Budget Bureau No. 04-R060.1

FOR FAA USE ONLY

OFFICE IDENTIFICATION
DPA-FSDO

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE: Grumman	MODEL: G-21A
	SERIAL NO.: B-100	NATIONALITY AND REGISTRATION MARK: N600ZE
2. OWNER	NAME (As shown on registration certificate): William R. Rose	ADDRESS (As shown on registration certificate): 15 W. Mundhank Rd. South Barrington, Il. 60010

3. FOR FAA USE ONLY

4. UNIT IDENTIFICATION / 5. TYPE

UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE: REPAIR	5. TYPE: ALTERATION
AIRFRAME	********** (As described in item 1 above) **********			X	
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE / MANUFACTURER				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS	B. KIND OF AGENCY	C. CERTIFICATE NO.
Edwin Bobeng 204 South Jane Drive Elgin, Il 60123-5912	X U.S. CERTIFICATED MECHANIC	AP1392773
	FOREIGN CERTIFICATED MECHANIC	
	CERTIFICATED REPAIR STATION	
	MANUFACTURER	

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

DATE	SIGNATURE OF AUTHORIZED INDIVIDUAL
February 26, 1996	Edwin Bobeng

7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is [X] APPROVED [ ] REJECTED

BY						
	FAA FLT. STANDARDS INSPECTOR		MANUFACTURER	X	INSPECTION AUTHORIZATION	OTHER (Specify)
	FAA DESIGNEE		REPAIR STATION		CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	

DATE OF APPROVAL OR REJECTION	CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL
February 26, 1996	AP1392773IA	Edwin Bobeng

FAA Form 337 (7-67) (8320)

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.)*

N600ZE February 26,1996

As per STC 1351 WE

The following surface was inspected and prepared for Ceconite #101 fabric covering:

Left Elevator

All work was done in accordance with;

AC 43.13-1A Change 3 Section 1 Chapter 3
Para. 127 Through 136

Grumman Structual Repair Manual Nav aer 01-85VA-3
Section 1 para. 17
Section 8 para. 1,2

Ceconite Procedure Manual # 101 Rev. 12

END

☐ ADDITIONAL SHEETS ARE ATTACHED

☆ U.S. GPO: 1981 - 775-332/47

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

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

Form Approved
Budget Bureau No. 04-R060.1

FOR FAA USE ONLY

OFFICE IDENTIFICATION
DPA FSDO

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE Grumman	MODEL G-21A
	SERIAL NO. B-100	NATIONALITY AND REGISTRATION MARK N600ZE
2. OWNER	NAME *(As shown on registration certificate)* William R. Rose	ADDRESS *(As shown on registration certificate)* 15 W. Mundhank Rd. South Barrington, Il. 60010

3. FOR FAA USE ONLY

4. UNIT IDENTIFICATION / 5. TYPE

UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE: REPAIR	5. TYPE: ALTERATION
AIRFRAME	◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆ *(As described in item 1 above)* ◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆			X	
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS	B. KIND OF AGENCY		C. CERTIFICATE NO.
Andrew T. Spak 118 Hasting Way Poplar Grove, Il. 61065	X	U.S. CERTIFICATED MECHANIC	AP304649637
		FOREIGN CERTIFICATED MECHANIC	
		CERTIFICATED REPAIR STATION	
		MANUFACTURER	

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

DATE	SIGNATURE OF AUTHORIZED INDIVIDUAL
June 14, 1995	Andrew T. Spak

7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ APPROVED ☐ REJECTED

BY						OTHER *(Specify)*
	☐ FAA FLT. STANDARDS INSPECTOR	☐	MANUFACTURER	X	INSPECTION AUTHORIZATION	
	☐ FAA DESIGNEE	☐	REPAIR STATION	☐	CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	

DATE OF APPROVAL OR REJECTION	CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL
June 14, 1995	AP304649637IA	Andrew T. Spak

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.)*

N600ZE June 14, 1995

As per STC 1351 WE
the following surfaces were inspected and
prepared for Ceconite 101 fabric covering:
Left Aileron
Left Wing Panel
Right Aileron
Right Wing Panel

All work was done in accordance with;
AC 43.13-1A Change 3, Chapter 3 Section 1
Para. 127 through 136

Grumman Structural Repair Manual Navaer 01-85VA-3
Section 1 para. 17
Section 8 para. 1,2

Ceconite Procedure Manual #101 Rev. 12

END

☐ ADDITIONAL SHEETS ARE ATTACHED

☆ U.S. GPO: 1981 - 775-332/47

FAA AIRCRAFT REGISTRY
CAMERA NO. 2 DATE: 11-5-92

SEP 3 0 1992

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

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

Form Approved
Budget Bureau No. 04-R060.1

FOR FAA USE ONLY

OFFICE IDENTIFICATION DFA-FSDO

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT

MAKE	MODEL
GRUMMAN	G-21A
SERIAL NO.	NATIONALITY AND REGISTRATION MARK
B-100	N600ZE

2. OWNER

NAME (As shown on registration certificate)	ADDRESS (As shown on registration certificate)
WILLIAM R. ROSE	15 W. MUNDHANK RD. S. BARRINGTON, IL 60010

3. FOR FAA USE ONLY

4. UNIT IDENTIFICATION

UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE REPAIR	5. TYPE ALTERATION
AIRFRAME	(As described in item 1 above)				
POWERPLANT	PRATT & WHITNEY	R-985-AN3	----------		X
PROPELLER					
APPLIANCE (TYPE / MANUFACTURER)					

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS	B. KIND OF AGENCY	C. CERTIFICATE NO.
ANDREW T. SPAK 10409 CARLS RD. MARENGO, IL 60152	X U.S. CERTIFICATED MECHANIC	AP304649637
	FOREIGN CERTIFICATED MECHANIC	
	CERTIFICATED REPAIR STATION	
	MANUFACTURER	

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

DATE	SIGNATURE OF AUTHORIZED INDIVIDUAL
Sept. 28, 1992	Andrew V. Spak

7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ APPROVED ☐ REJECTED

BY						
	FAA FLT. STANDARDS INSPECTOR		MANUFACTURER	X	INSPECTION AUTHORIZATION	OTHER (Specify)
	FAA DESIGNEE		REPAIR STATION		CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	

DATE OF APPROVAL OR REJECTION	CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL
Sept 28, 1992	AP304649637IA	Andrew V. Spak

FAA Form 337 (7-67)

(8320)

FAA AIRCRAFT REGISTRY
CAMERA NO. 2 DATE: 11-5-92

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.)*

N600ZE SEPT 28, 1992

1. Installed Shadin digital fuel flow indicator and totalizer in accordance with STC SE318GL.

2. The following components were installed;

1	910522	Indicator
2	660526	Transducer
1	412250	Harness
4	546101	Seal

3. All work done in A/W Shadin Manual DGFLO521. MNL, and the procedures set forth in AC 43.13-1A CH 11 SEC 2 Para 429
CH 14 SEC 2 Para 708,709,715

AC 43.13-2A CH 11 Para 213.

----------END----------

[X] ADDITIONAL SHEETS ARE ATTACHED

C FAA AC 72-4906

U.S. GPO: 1981 - 775-332/47

United States of America
Department of Transportation — Federal Aviation Administration

Supplemental Type Certificate

Number SE318GL

This certificate, issued to Shadin Company Inc.
6950 Wayzata Blvd./Suite 221
Minneapolis, MN 55426

certifies that the change in the type design for the following product with the limitations and conditions thereof as specified hereon meets the airworthiness requirements of ~~Part~~ ~~XXXX~~ Type Certificate No. 5E-1.

Regulations.

Original Product — Type Certificate Number: 5E-1
Make: Pratt and Whitney
Model: R985-5, -13, -17, -19, -23, -25, -27, -39, -39A, -48, -50, -AN-1, -AN-3, -AN-1N1, -AN-2, -AN-4, -AN-5, -AN-6, -AN-6B, -AN-8, -AN-10, -AN-12, -AN-12B, -AN-14B, -AN-14BM1

Description of Type Design Change:

Installation of a Fuel Flow Transducer in accordance with Shadin Report Number 4066 dated June 4, 1984 or subsequent FAA approved revision.

Limitations and Conditions: This approval should not be extended to other engines of this model that incorporate any other previously approved modification, unless it is determined that the interrelationship between this change and any other previously approved modification will introduce no adverse effect on the airworthiness of these engines.

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: June 4, 1984 Date issued

Date of issuance: September 6, 1984 Date amended

By direction of the Administrator

W. F. Horn (Signature)
Manager, Chicago Aircraft Certification Office
Central Region, ACE-115C
(Title)

Any alteration of this certificate is punishable by a fine of not exceeding $1,000, or imprisonment not exceeding 3 years, or both.

FAA AIRCRAFT REGISTRY
CAMERA NO. 2 DATE: 11-5-92

FAA AIRCRAFT REGISTRY
CAMERA NO. 3N DATE: 8-4-92

JUN 16 1992

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

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

Form Approved
Budget Bureau No. 04-R060.1

FOR FAA USE ONLY

OFFICE IDENTIFICATION: DPA-FSDO

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT

MAKE	MODEL
GRUMMAN	G-21A
SERIAL NO.	**NATIONALITY AND REGISTRATION MARK**
B-100	N600ZE

2. OWNER

NAME (As shown on registration certificate)	ADDRESS (As shown on registration certificate)
WILLIAM R. ROSE	15 W. MUNDHANK RD. S. BARRINGTON, IL 60010

3. FOR FAA USE ONLY

4. UNIT IDENTIFICATION / **5. TYPE**

UNIT	MAKE	MODEL	SERIAL NO.	5. REPAIR	5. ALTERATION
AIRFRAME	◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆ (As described in item 1 above) ◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆			X	
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS	B. KIND OF AGENCY	C. CERTIFICATE NO.
ANDREW T. SPAK 10409 CARLS RD. MARENGO, IL 60152	X U.S. CERTIFICATED MECHANIC FOREIGN CERTIFICATED MECHANIC CERTIFICATED REPAIR STATION MANUFACTURER	AP304649637

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

DATE	SIGNATURE OF AUTHORIZED INDIVIDUAL
JUNE 15, 1992	Andrew T. Spak

7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is [X] APPROVED [ ] REJECTED

BY						OTHER (Specify)
		FAA FLT. STANDARDS INSPECTOR		MANUFACTURER	X	INSPECTION AUTHORIZATION
		FAA DESIGNEE		REPAIR STATION		CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT

DATE OF APPROVAL OR REJECTION	CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL
JUNE 15, 1992	AP304649637IA	Andrew T. Spak

(8320)

FAA Form 337 (7-67)

FAA AIRCRAFT REGISTRY
CAMERA NO. 3N DATE: 8-4-92

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.)*

JUNE 15, 1992 N600ZE

AIRCRAFT'S RUDDER INSPECTED AND PREPARED FOR FABRIC COVERING IN A/W AC43.13-1A, CH3, SECTION 1, PARAGRAPH 127 THROUGH 136.

INSTALLED CECONITE 101 FABRIC AS PER STC SA1351WE AND CECONITE PROCEDURE MANUAL #101, REV 11.

END

☐ ADDITIONAL SHEETS ARE ATTACHED

☆ U.S. GPO: 1981 - 775-332/47

FAA AIRCRAFT REGISTRY
CAMERA NO 3 N DATE: 11 - 7 - 91

SEP 2 4 1991

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

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

Form Approved
Budget Bureau No. 04-R060.1

FOR FAA USE ONLY

OFFICE IDENTIFICATION DPA-FSDO

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE: Grumman	MODEL: G-21A
	SERIAL NO.: B-100	NATIONALITY AND REGISTRATION MARK: N 600 ZE
2. OWNER	NAME (As shown on registration certificate): William R. Rose	ADDRESS (As shown on registration certificate): 15 W. Mundhank Rd. S. Barrington, IL 60010

3. FOR FAA USE ONLY

4. UNIT IDENTIFICATION

UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE: REPAIR	5. TYPE: ALTERATION
AIRFRAME	(As described in item 1 above)			X	
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE / MANUFACTURER				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS	B. KIND OF AGENCY	C. CERTIFICATE NO.
Andrew T. Spak 10409 Carls Rd. Marengo, IL 60152	X U.S. CERTIFICATED MECHANIC FOREIGN CERTIFICATED MECHANIC CERTIFICATED REPAIR STATION MANUFACTURER	AP304649637

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

DATE: Sept. 23, 1991

SIGNATURE OF AUTHORIZED INDIVIDUAL: Andrew T. Spak

7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is [X] APPROVED [ ] REJECTED

BY						OTHER (Specify)
		FAA FLT. STANDARDS INSPECTOR		MANUFACTURER	X	INSPECTION AUTHORIZATION
		FAA DESIGNEE		REPAIR STATION		CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT

DATE OF APPROVAL OR REJECTION	CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL
Sept 23, 1991	AP304649637IA	Andrew T. Spak

(8320)

FAA Form 337 (7-67)

FAA AIRCRAFT REGISTRY
CAMERA NO 3 N DATE: 11 - 7 - 91

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.)*

September 23,1991 N 600 ZE

Installed new forward keel part No. 12003-32 from hull station #1 to #16.5. All mating and exposed surfaces corrosion proofed by using Dupont Alodine process and then applying a Dupont Zinc Chromate Primer. Watertight integretity insured by use of proper sealing compound and testing after repair.

All work was performed in accordance with the procedures contained in:

Grumman Structural Repair Manual
Navaer 01-85VA-3
Sec. 1, Sec. 4 Figures 67,107

Ac 43.13-1A CH2 Sec. 3 Para. 94,100
CH6 Para. 251

END

☐ ADDITIONAL SHEETS ARE ATTACHED

☆ U.S. GPO: 1981 - 775-332/47

FAA AIRCRAFT REGISTRY
CAMERA NO. 1 N DATE: 11-27-90

FEDERAL AVIATION AGENCY

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

Form Approved
Budget Bureau No. 04-R060.1

FOR FAA USE ONLY

OFFICE IDENTIFICATION LAS FSDO 40-66

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE: Grumman	MODEL: G 21 A
	SERIAL NO.: B-100	NATIONALITY AND REGISTRATION MARK: N88U
2. OWNER	NAME (As shown on registration certificate): Collins Brothers Corporation	ADDRESS (As shown on registration certificate): P.O. Box 42427 Las Vegas, NV 89104

3. FOR FAA USE ONLY

4. UNIT IDENTIFICATION				5. TYPE	
UNIT	MAKE	MODEL	SERIAL NO.	REPAIR	ALTERATION
AIRFRAME	(As described in item 1 above)			X	X
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS	B. KIND OF AGENCY	C. CERTIFICATE NO.
Viking Air Limited Box 2004 Sidney, B.C. V8L 3S3	U.S. CERTIFICATED MECHANIC	VRM 601 "B" Category
	X FOREIGN CERTIFICATED MECHANIC	
	CERTIFICATED REPAIR STATION	
	MANUFACTURER	

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

DATE: 28 July 80

SIGNATURE OF AUTHORIZED INDIVIDUAL: [signature] VRM 601

7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Agency and is [X] APPROVED [ ] REJECTED

BY					
	FAA FLT. STANDARDS INSPECTOR	MANUFACTURER	X	INSPECTION AUTHORIZATION	OTHER (Specify)
	FAA DESIGNEE	REPAIR STATION		CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	

DATE OF APPROVAL OR REJECTION	CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL
30 Jul 80	IA 1174905	[signature] Harry L. Acor

FAA Form 337 (1-65) OBSOLETE PREVIOUS EDITION

0052-025-8000 (8320)

FAA AIRCRAFT REGISTRY
CAMERA NO. 1 N DATE: 11-27-90

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.)*

1. Picture window installation in accordance with McKinnon Enterprises Inc. drawing MPD 5100 and Engineering Order No. 1 & No. 2 as authorized by STC SA101WE.
2. Installation of Rudder Aerodynamic Balance in accordance with McKinnon drawing MPD 4003"B" as authorized by STC SA4-1467 (This item completes the intent of STC SA4-1467 which was accomplished elsewhere).
3. Installation of Goose G-21A water rudder per B.N.P. Airways Ltd drawing No. 1648. (DOT Approved April 5, 1961).
4. Installation of position/navigation lights in wing tip retractable floats in order to complete intent of STC SA4-682 which was accomplished elsewhere.
5. Installation of two additional Aft facing passenger seats between hull stations 16 & 17 in accordance with drawing FD 1001.
6. Installation of Co-pilot control wheel in accordance with Grumman drawing 12750.
7. Wing centre section rear lower spar cap at station 16 (RH side) repaired as per Viking Air approved drawing GCS-001. (DOT approval No. P80/003)
8. Bulkhead Web, stn 151, LH wing, repaired per Grumman Manual 01-85V-3, figure 9 (due to exfoliation corrosion).
9. Bulkhead Web, stn 151, RH wing, repaired per Grumman Manual 01-85V-3, figure 9 (Due to exfoliation corrosion).
10. Main longeron LH side of fuselage between stn's 16 and 24 replaced (Due to exfoliation corrosion)
11. Main longeron RH side of fuselage between stn's 16 and 23 replaced (Due to exfoliation corrosion).

☐ ADDITIONAL SHEETS ARE ATTACHED

U.S. GOVERNMENT PRINTING OFFICE 1965 O—751-748

FAA AIRCRAFT REGISTRY
CAMERA NO. 2N DATE: 10-30-89

SEP 1 6 1987

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

Form Approved
Budget Bureau No. 04-R060.1

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

FOR FAA USE ONLY

OFFICE IDENTIFICATION ACE-GA00 3

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE: Grumman	MODEL: G-21A
	SERIAL NO.: B-100	NATIONALITY AND REGISTRATION MARK: N600ZE
2. OWNER	NAME (As shown on registration certificate): Rose Packing Co.	ADDRESS (As shown on registration certificate): 65 S. Barrington Rd. Barrington, IL 60010

3. FOR FAA USE ONLY

4. UNIT IDENTIFICATION / 5. TYPE

UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE: REPAIR	5. TYPE: ALTERATION
AIRFRAME	(As described in item 1 above)				X
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE / MANUFACTURER				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS	B. KIND OF AGENCY	C. CERTIFICATE NO.
Joliet Avionics, Inc. DuPage Airport West Chicago, IL 60187	U.S. CERTIFICATED MECHANIC	
	FOREIGN CERTIFICATED MECHANIC	
	X CERTIFICATED REPAIR STATION	3159
	MANUFACTURER	

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

DATE	SIGNATURE OF AUTHORIZED INDIVIDUAL
September 14, 1987	Andrew R. Vrchota

7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ APPROVED ☐ REJECTED

BY						OTHER (Specify)
	FAA FLT. STANDARDS INSPECTOR		MANUFACTURER		INSPECTION AUTHORIZATION	
	FAA DESIGNEE	X	REPAIR STATION		CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	

DATE OF APPROVAL OR REJECTION	CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL
September 14, 1987	3159	Andrew R. Vrchota

FAA Form 337 (7-67) (8320)

FW

FAA AIRCRAFT REGISTRY
CAMERA NO. 2 N DATE: 10-30-89

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.)*

This Loran C installation was accomplished in accordance with previously approved data "for duplication" for Joliet Avionics, Inc. Certificated Repair Station No. 3159, per letter from AGL-GADO-3 dated July 11, 1985 and the original approved installation is on file at this repair station.

Installed Northstar M-1 Loran C Receiver in accordance with Installation Manual P/N GM-295 dated 1986 Revision D.

Installation was done using no steering information.

Aircraft placarded "VFR only not to be used for primary navigation."

All work was done in accordance with AC43.13-1A Chapter 11, 13 & 15 and and AC43.13-2A Chapters 2 & 3 and AC20-121 Appendix 1 Paragraph 3.

Weight and Balance was computed and entered in appropriate aircraft paperwork.

THE END

☐ ADDITIONAL SHEETS ARE ATTACHED

FAA AC 72-4906

☆ U.S. GOVERNMENT PRINTING OFFICE: 1986-659-121/40146

FAA AIRCRAFT REGISTRY
CAMERA NO. 2N DATE: 10-30-87

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

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

Form Approved
Budget Bureau No. 04-R060.1

FOR FAA USE ONLY
OFFICE IDENTIFICATION

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE: Grumman	MODEL: G-21A
	SERIAL NO.: B-100	NATIONALITY AND REGISTRATION MARK: N-600ZE
2. OWNER	NAME (As shown on registration certificate): Richmor Aviation Inc.	ADDRESS (As shown on registration certificate): P.O. Box 423, Hudson, NY 12534

3. FOR FAA USE ONLY

The alteration/data identified herein complies with the applicable airworthiness requirements and is approved for the above described aircraft, subject to conformity inspection by a person authorized in FAR 43, Section 43.7.

Date 7/24/86 FAA Inspector C.D. Fisher

4. UNIT IDENTIFICATION

UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE: REPAIR	5. TYPE: ALTERATION
AIRFRAME	••••••••••••••••••••••(As described in item 1 above)••••••••••••••••••••••				XX
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS	B. KIND OF AGENCY	C. CERTIFICATE NO.
John C. Barker Box 411, Cty. Rte. 8 Germantown, NY 12526	X U.S. CERTIFICATED MECHANIC FOREIGN CERTIFICATED MECHANIC CERTIFICATED REPAIR STATION MANUFACTURER	A&P 2254031

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

DATE	SIGNATURE OF AUTHORIZED INDIVIDUAL
7/30/86	John C. Barker

7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ APPROVED ☐ REJECTED

BY						OTHER (Specify)
	FAA FLT. STANDARDS INSPECTOR		MANUFACTURER	X	INSPECTION AUTHORIZATION	
✓	FAA DESIGNEE		REPAIR STATION		CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	

DATE OF APPROVAL OR REJECTION	CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL
7/30/86	IA 2254031	John C. Barker

FAA Form 337 (7-67) (8320)

FAA AIRCRAFT REGISTRY
CAMERA NO. 2 N DATE: 10-30-89

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.)*

This 337 documents the previously installed auxillary battery charge and cabin light system consisting of a Lambda Model LM E28 power supply, S/N B96028, and associated wiring and circuit breakers. A circuit diagram and installation drawing is attached.

The unit is located on a .063 aluminum plate bolted directly to the two hull web members aft of station 7. Controls and power supplv are on the right hand side of the aircraft facing the walkway to the bow compartment. 110 volt input cord is stowed in the bow compartment.

Installation and wiring done in accordance with manufacturer's instruction manual and data set forth in AC 43.13-1A chapter 11 sections 2, 3, &7, and AC 43.13-2A chapter 1.

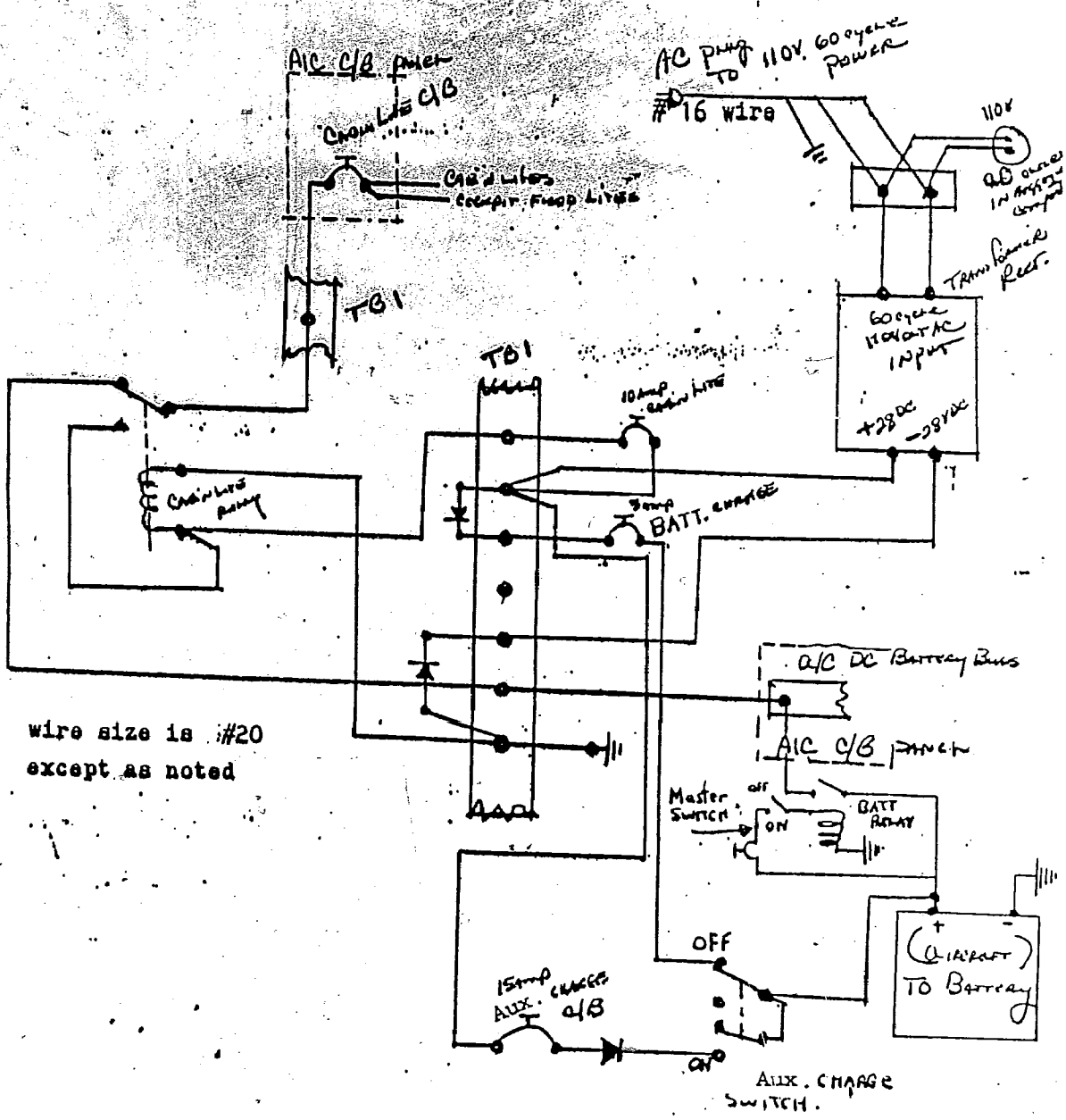
Aircraft equipment list and weight and balance data revised to reflect this change.

The operation of this unit is strictly as an auxillary battery charge and cabin light system and can not be activated in flight. This system is electrically separate from the aircraft's system and can not inadvertantly be used during flight.

Pilots information manual and aircraft maintenance manual contain pertinent data for operation and maintenance. A placard is installed reading, "To be operated only by qualified maintenance personnel."

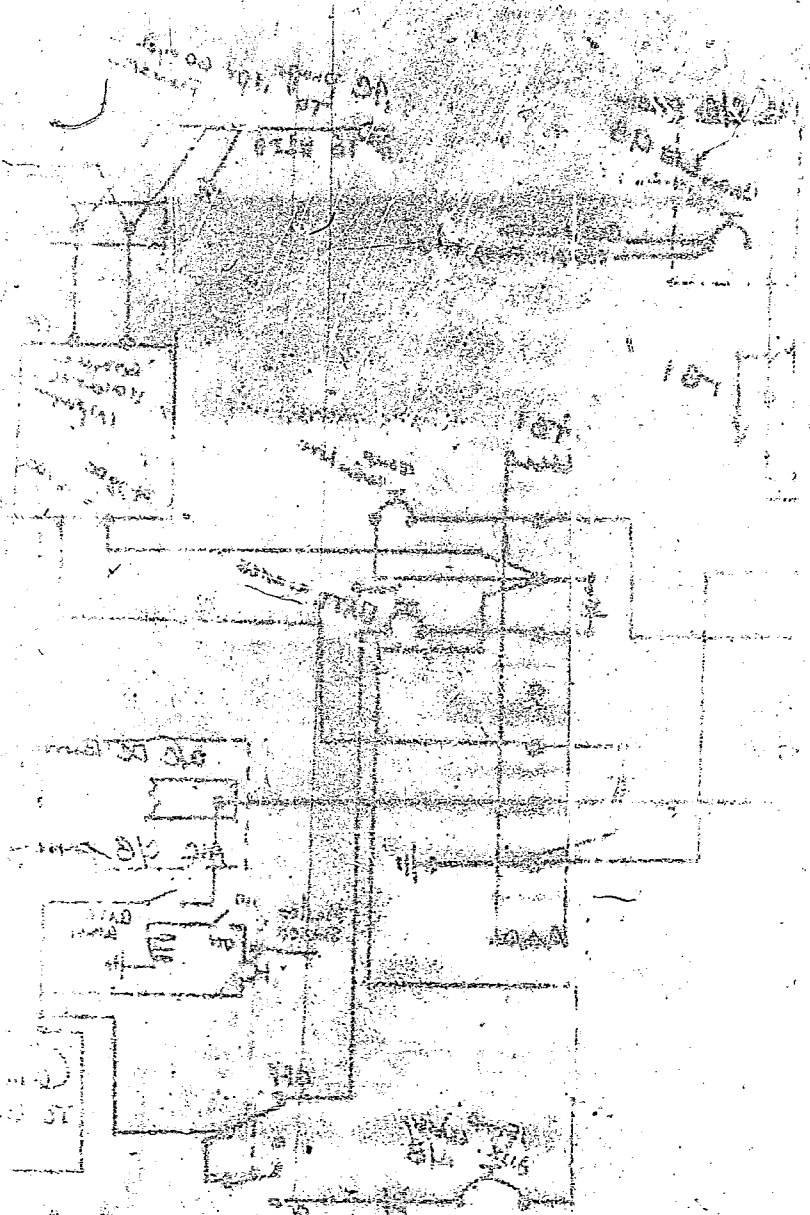
☒ ADDITIONAL SHEETS ARE ATTACHED

U.S. G.P.O. 1972/720-694/545/1303



Auxillary BATTERY CHARGE AND AUX. CABIN LIGHT SYSTEM
AS INSTALLED ON GRUMMAN GOOSE N600ZE, s/n B-100
Date of 337, June 3,1986

FAA AIRCRAFT REGISTRY
CAMERA NO. 2N DATE: 10-30-87



FAA AIRCRAFT REGISTRY
CAMERA NO. 2N DATE: 10-30-87

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

Form Approved
Budget Bureau No. 04-R060.1

FOR FAA USE ONLY

OFFICE IDENTIFICATION
AEA-GADO-1

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

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE: GRUMMAN	MODEL: G-21A
	SERIAL NO.: B-100	NATIONALITY AND REGISTRATION MARK: N-600ZE
2. OWNER	NAME (As shown on registration certificate): RICHMOR AVIATION, INC.	ADDRESS (As shown on registration certificate): P.O. BOX 423 HUDSON, NEW YORK 12534

3. FOR FAA USE ONLY

4. UNIT IDENTIFICATION

UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE REPAIR	5. TYPE ALTERATION
AIRFRAME	(As described in item 1 above)				X
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS	B. KIND OF AGENCY	C. CERTIFICATE NO.
MURRAY AVIONICS, INC. 19 AIRPORT RD. SCOTIA, N.Y. 12302 ~~TEL. 518-399-8173~~	U.S. CERTIFICATED MECHANIC	# 101-16
	FOREIGN CERTIFICATED MECHANIC	
	X CERTIFICATED REPAIR STATION	
	MANUFACTURER	

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

DATE: 7/16/86

SIGNATURE OF AUTHORIZED INDIVIDUAL: Richard B Murray

7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ APPROVED ☐ REJECTED

BY						
	FAA FLT. STANDARDS INSPECTOR		MANUFACTURER		INSPECTION AUTHORIZATION	OTHER (Specify)
	FAA DESIGNEE	X	REPAIR STATION		CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	

DATE OF APPROVAL OR REJECTION	CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL
7/16/86	101-16	Richard B Murray

FAA Form 337 (7-67) (8320)

FAA AIRCRAFT REGISTRY
CAMERA NO. 2N DATE: 10-30-89

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.)*

Inspected previously installed KNS 80 R-Nav system and KI 525 indicator. Equipment was installed IAW King radio installation manual. Indicator is approved for use with the KNS 80 by service memo 274. The installation conforms to guidelines in AC 43.13-2, chapters 1, 2, and 3. Aircraft weight and balance reflects this change. System operates IAW King installation manual and does not interfere with any other system. Aircraft equipment list revised. R-Nav is placarded for "VFR USE ONLY".

☐ ADDITIONAL SHEETS ARE ATTACHED

U.S. G.P.O. 1972/720-694/545/1302

FAA AIRCRAFT REGISTRY
CAMERA NO. 2 N DATE: 10-30-89

FEDERAL AVIATION AGENCY

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

Form Approved Budget Bureau No. 04-R060.1

FOR FAA USE ONLY

OFFICE IDENTIFICATION: AEA-GADO-1

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE: Grumman	MODEL: G-21A
	SERIAL NO.: B-100	NATIONALITY AND REGISTRATION MARK: N600ZE
2. OWNER	NAME (As shown on registration certificate): Richmor Aviation, Inc.	ADDRESS (As shown on registration certificate): P.O. Box 423 Hudson, NY 12534

3. FOR FAA USE ONLY

The alteration/data identified herein complies with the applicable airworthiness requirements and is approved for the above described aircraft, subject to conformity inspection by a person authorized in FAR 43, Section 43.7.

Date 7/10/86 FAA Inspector D W Fisher

4. UNIT IDENTIFICATION / 5. TYPE

UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE: REPAIR	5. TYPE: ALTERATION
AIRFRAME	(As described in item 1 above)				X
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS	B. KIND OF AGENCY	C. CERTIFICATE NO.
Foreign & Domestic Enterprises, Inc. 8201 Perimeter Road, Boeing - Field - South Seattle, Washington 98108	U.S. CERTIFICATED MECHANIC FOREIGN CERTIFICATED MECHANIC CERTIFICATED REPAIR STATION MANUFACTURER	17963

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

DATE	SIGNATURE OF AUTHORIZED INDIVIDUAL
7/11/86.	LLOYD.REKOW, Lloyd G Rekow

7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Agency and is ☒ APPROVED ☐ REJECTED

BY							OTHER (Specify)
	☐	FAA FLT. STANDARDS INSPECTOR	☐	MANUFACTURER	X	INSPECTION AUTHORIZATION	
	☐	FAA DESIGNEE	☐	REPAIR STATION	☐	CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	

DATE OF APPROVAL OR REJECTION	CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL
July 11, 1986	IA 1326268	Loren Chance

FAA Form 337 (1-65) OBSOLETE PREVIOUS EDITION 0052-025-8000 (8320)

FAA AIRCRAFT REGISTRY
CAMERA NO. 2N DATE: 10-30-89

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.)*

This 337 form documents the previously installed Jasco alternator system on the Pratt & Whitney R985-AN3 right engine.

Examination of the right engine alternator installation shows it is installed identical to the left engine alternator installation.

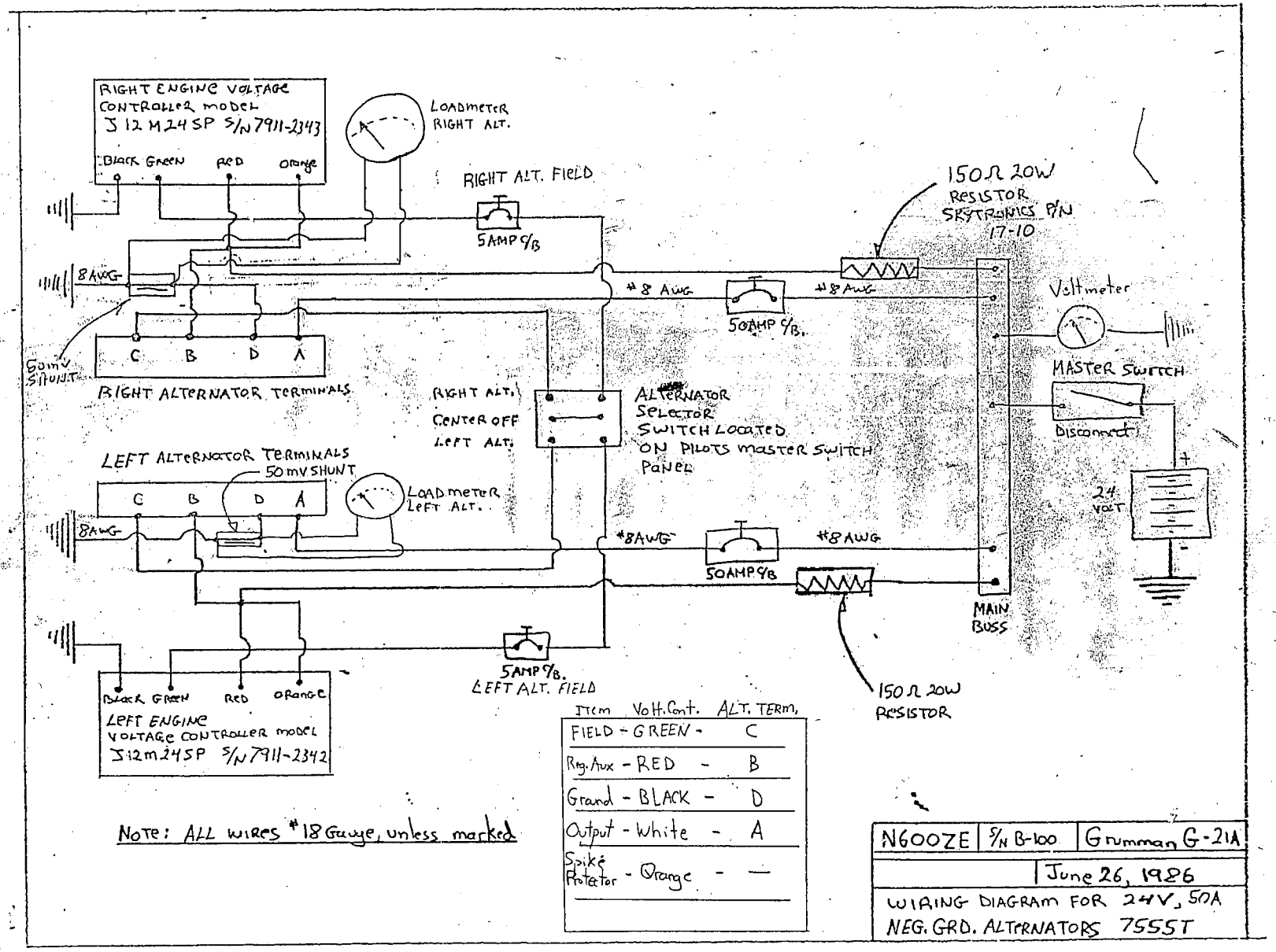
Alternator selection is controlled by one three position selector switch, left alternator, right alternator, or center off. Only one alternator can be selected at a time.

The alternator installation is in accordance with Skytronics drawings 5024 and 5016, and shown as a dual installation in the drawing dated June 26, 1986 for this aircraft.

System components Jasco model 7555T alternators, right engine s/n 7911-0789, left engine s/n 7911-0790, Skytronics voltage controllers, right 7911-2343, left s/n 7911-2342.

The left engine installation was field approved on a 337 form dated June 17,1975.

☒ ADDITIONAL SHEETS ARE ATTACHED



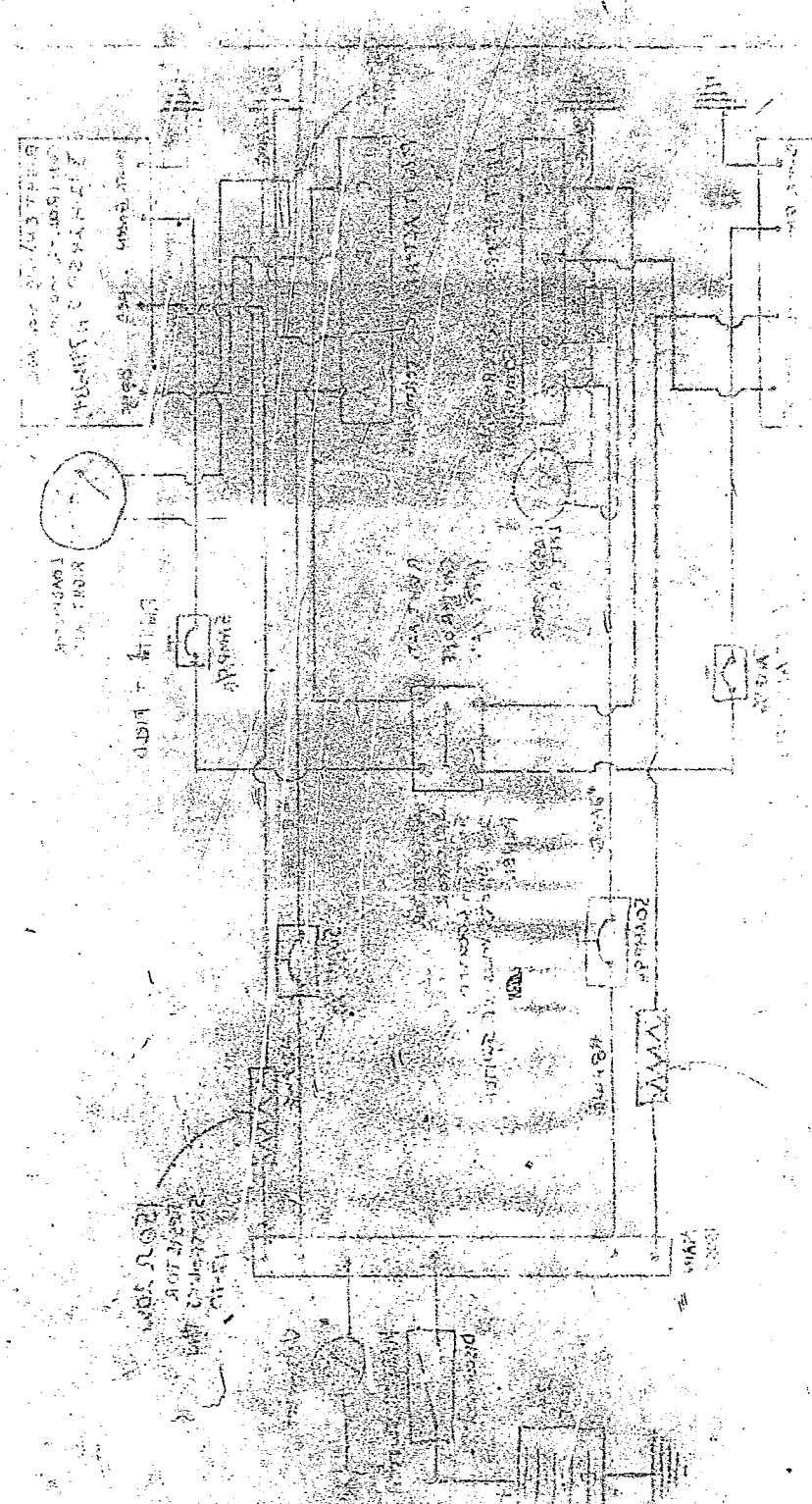
Item	Volt. Cont.	ALT. Term.
FIELD - GREEN -		C
Reg. Aux - RED -		B
Ground - BLACK -		D
Output - White -		A
Spike Protector - Orange -		—

NOTE: ALL WIRES #18 Gauge, unless marked

N600ZE	S/N B-100	Grumman G-21A
	June 26, 1986	
WIRING DIAGRAM FOR 24V, 50A NEG. GRD. ALTERNATORS 7555T		

FAA AIRCRAFT REGISTRY
CAMERA NO. 2 IN DATE: 10-30-89

FAA AIRCRAFT REGISTRY
CAMERA NO. 2N DATE: 10-30-89



FAA AIRCRAFT REGISTRY
CAMERA NO. 2 M DATE: 10-3 -89

JUN 1 5 1986

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

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

Form Approved
Budget Bureau No. 04-R060.1

FOR FAA USE ONLY

OFFICE IDENTIFICATION: AEA GADO 1

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE: Grumman	MODEL: G-21A
	SERIAL NO.: B-100	NATIONALITY AND REGISTRATION MARK: N600ZE
2. OWNER	NAME (As shown on registration certificate): Liberty Air	ADDRESS (As shown on registration certificate): POBox 423 Hudson, NY 12534

3. FOR FAA USE ONLY

The data identified herein complies with the applicable airworthiness requirements and is approved for the described aircraft, subject to conformity inspection by a person authorized in FAR 43 section 43.7.

June 10, 1986
Date

Robert A. Martin
Robert A. Martin
FAA Inspector AEA GADO 1

4. UNIT IDENTIFICATION

UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE REPAIR	5. TYPE ALTERATION
AIRFRAME	(As described in item 1 above)				X
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS	B. KIND OF AGENCY	C. CERTIFICATE NO.
John C. Barker Box 411 R.D. 2 Germantown, NY 12526	X U.S. CERTIFICATED MECHANIC FOREIGN CERTIFICATED MECHANIC CERTIFICATED REPAIR STATION MANUFACTURER	AP 2254031

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

DATE: June 12, 1986

SIGNATURE OF AUTHORIZED INDIVIDUAL: John C. Barker

7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is [X] APPROVED [ ] REJECTED

BY							OTHER (Specify)
		FAA FLT. STANDARDS INSPECTOR		MANUFACTURER	X	INSPECTION AUTHORIZATION	
		FAA DESIGNEE		REPAIR STATION		CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	

DATE OF APPROVAL OR REJECTION	CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL
June12,1986	IA 2254031	John C. Barker

FAA Form 337 (7-67)

(8320)

FAA AIRCRAFT REGISTRY
CAMERA NO. 2N DATE: 10-30-89

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.)*

An electric bilge pump system was previously installed by another agency on this aircraft. This 337 documents that installation.

The system consists of 7 Rule model 750 pumps and float operated switches. The entire system is protected by two 10amp circuit breakers. Wiring diagram attached. The control panel and wiring box for the system is located on the stringer above the co-pilots window. Circuit breakers and switches are labeled as to operation and placard installed, " Elec. Bilge Pump System- Manual/Auto". The pumps and float switches are located at the following points in the hull:

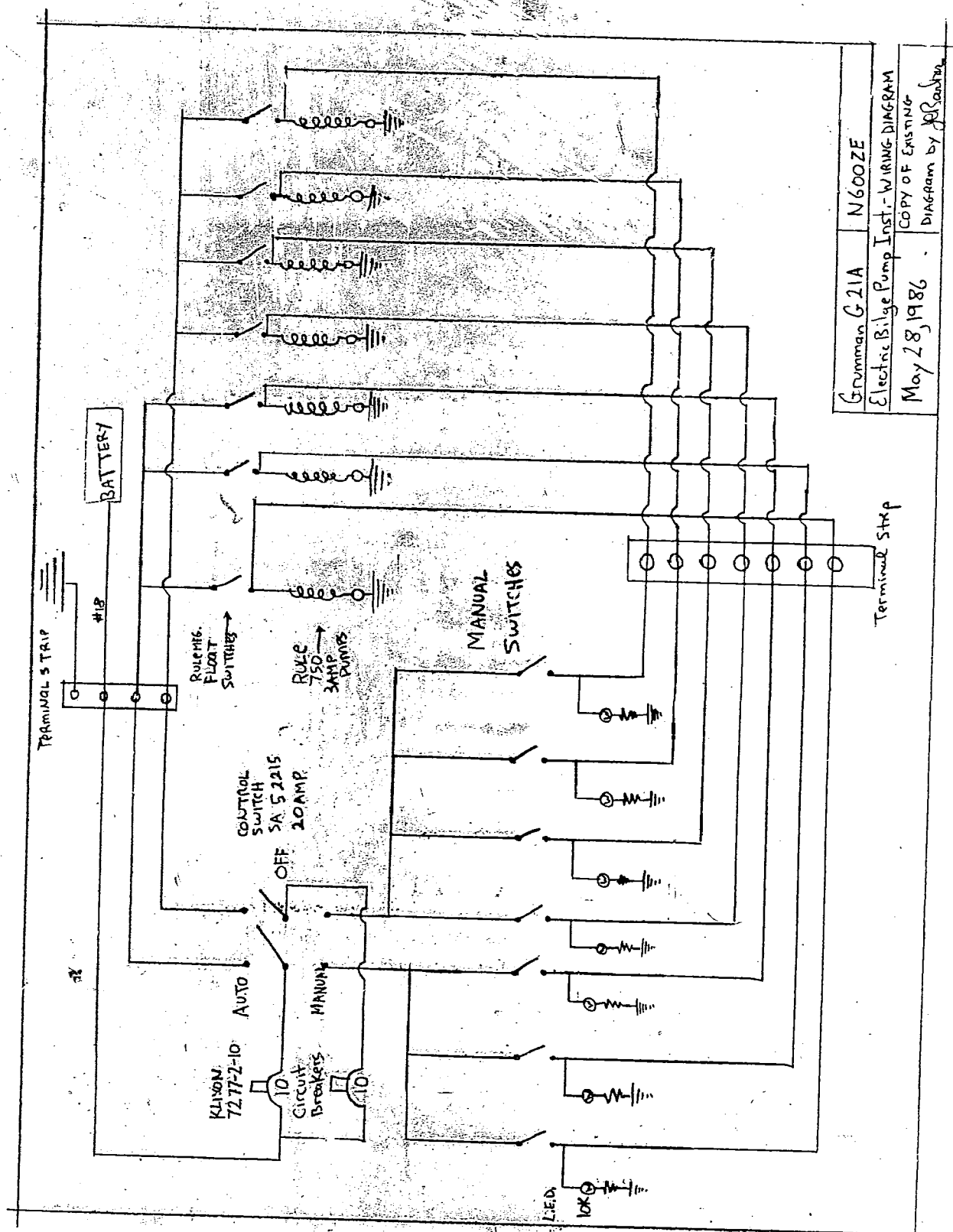
#1	1 each ... fwd of station 7
#2	1 each aft of station 7
#3	1 each on station 12
#4	1 each fwd of station 16
#5	1 each fwd of station 17
#6	1 each fwd of station 20
#7	1 each fwd of station 27

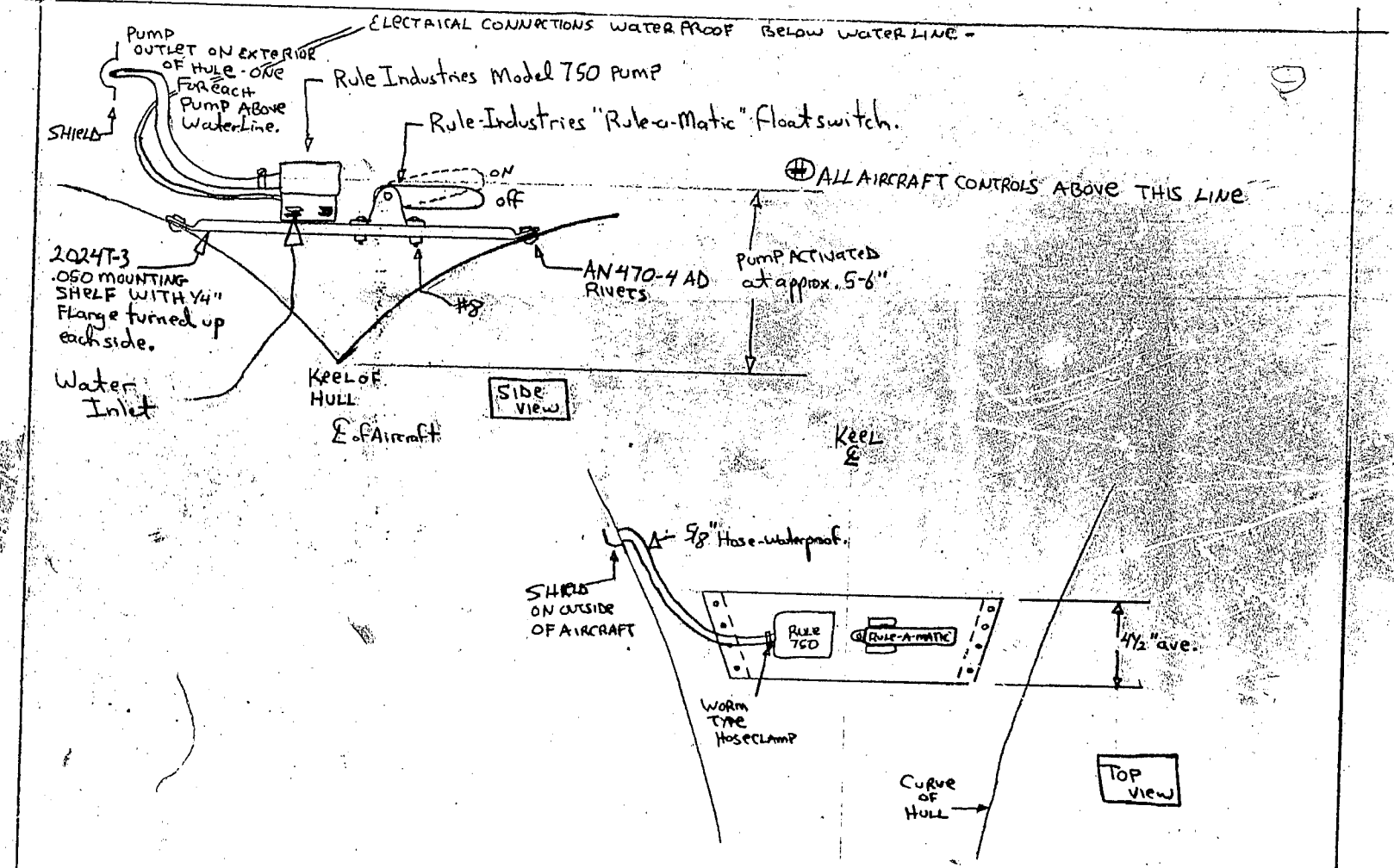
All are installed in a similair manner in accordance with the enclosed drawing and AC 43.13-1A, Chapter 2, section 3. Corrosion preventative measures taken as outlined in AC 43.13-1A, Chap. 6, par 251. All wiring and lacing appears to have been done in accordance with AC 43.13-1A, Chap 11, par 446.

Aircraft equipment list and weight and balance are revised to include the above installation.

☒ ADDITIONAL SHEETS ARE ATTACHED

☆U.S. GOVERNMENT PRINTING OFFICE: 1977—771-021/344





GRUMMAN G-21A	N600ZE
Electric Bilge Pump Installation-Typical	
Dated May 28, 1986	DRAWN BY: JC Barlow

FAA AIRCRAFT REGISTRY
CAMERA NO. 1 N DATE: 10-30-86

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

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

Form Approved
Budget Bureau No. 04-R060.1

FOR FAA USE ONLY
OFFICE IDENTIFICATION LAS FSDO 40-66

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE: Grumman	MODEL: G-21A
	SERIAL NO.: B-100	NATIONALITY AND REGISTRATION MARK: N 600ZE
2. OWNER	NAME (As shown on registration certificate): Collins Brothers Corp.	ADDRESS (As shown on registration certificate): P. O. Box 42427, Las Vegas, Nevada 89116

3. FOR FAA USE ONLY

4. UNIT IDENTIFICATION

UNIT	MAKE	MODEL	SERIAL NO.	5 TYPE: REPAIR	5 TYPE: ALTERATION
AIRFRAME	◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆ (As described in item 1 above) ◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆				X
POWERPLANT	Pratt & Whiting	R-985-AN3	204595 24009		X
PROPELLER					
APPLIANCE	TYPE:				
	MANUFACTURER:				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS	B. KIND OF AGENCY	C. CERTIFICATE NO.
James E. Helfrich 2905 E. St. Louis Avenue Las Vegas, Nevada 89104	X U.S. CERTIFICATED MECHANIC FOREIGN CERTIFICATED MECHANIC CERTIFICATED REPAIR STATION MANUFACTURER	1897630

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

DATE	SIGNATURE OF AUTHORIZED INDIVIDUAL
May 5, 1984	James E Helfrich

7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ APPROVED ☐ REJECTED

BY					OTHER (Specify)
	FAA FLT. STANDARDS INSPECTOR	MANUFACTURER	X	INSPECTION AUTHORIZATION	
	FAA DESIGNEE	REPAIR STATION		CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	

DATE OF APPROVAL OR REJECTION	CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL
May 5, 1984	1897630	James E Helfrich

FAA Form 337 (7-67) (8320)

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

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.)*

1. Aircraft and engines approved for use of automotive gasoline 87 minimum unleaded and/or 88 minimum leaded, under STC SA 1966 CE and SE 1860CE placards installed, no wt and balance change.

----------END----------

ADDITIONAL SHEETS ARE ATTACHED

U.S. G.P.O. 1972/720-694/545/1303

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

B

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

Form Approved
Budget Bureau No. 04-R060.1

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

FOR FAA USE ONLY
OFFICE IDENTIFICATION

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE Grumman	MODEL G-21A
	SERIAL NO B-100	NATIONALITY AND REGISTRATION MARK N 88U (6 00 ZE)
2. OWNER	NAME (As shown on registration certificate) Foreign & Domestic Enterprises Inc.	ADDRESS (As shown on registration certificate) 8201 Perimeter Rd. Boeing Field Seattle Wa 98108

3. FOR FAA USE ONLY

THE DATA/ALTERATION IDENTIFIED HEREIN COMPLIES WITH APPLICABLE AIRWORTHINESS REQUIREMENTS AND IS APPROVED ONLY FOR THE ABOVE DESCRIBED AIRCRAFT SUBJECT TO CONFORMITY INSPECTION BY A PERSON AUTHORIZED IN FAR 43.7.

INSTALLATION OF ELECTRIC FUEL PUMP

1-21-80 (Date) Adam Butterworth (FAA Inspector, NW-FSDO-61)

4. UNIT IDENTIFICATION

UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE REPAIR	5. TYPE ALTERATION
AIRFRAME	(As described in item 1 above)			X	X
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS	B. KIND OF AGENCY	C. CERTIFICATE NO.
Aero Support Facilities Paine Field Inc. Everett Wa. 98201	U.S. CERTIFICATED MECHANIC	415-12
	FOREIGN CERTIFICATED MECHANIC	
	X CERTIFICATED REPAIR STATION	
	MANUFACTURER	

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

DATE Jan. 18, 1980 — SIGNATURE OF AUTHORIZED INDIVIDUAL Floyd A Pekow

7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ APPROVED ☐ REJECTED

BY						
	FAA FLT. STANDARDS INSPECTOR		MANUFACTURER		INSPECTION AUTHORIZATION	OTHER (Specify)
	FAA DESIGNEE	X	REPAIR STATION		CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	

DATE OF APPROVAL OR REJECTION	CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL
Jan. 18, 80	415-12	Floyd A Pekow

FAA Form 337 (7-67) ☆ U.S. Government Printing Office 1977—772-646/141 (8320)

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11 22 85

NOTICE

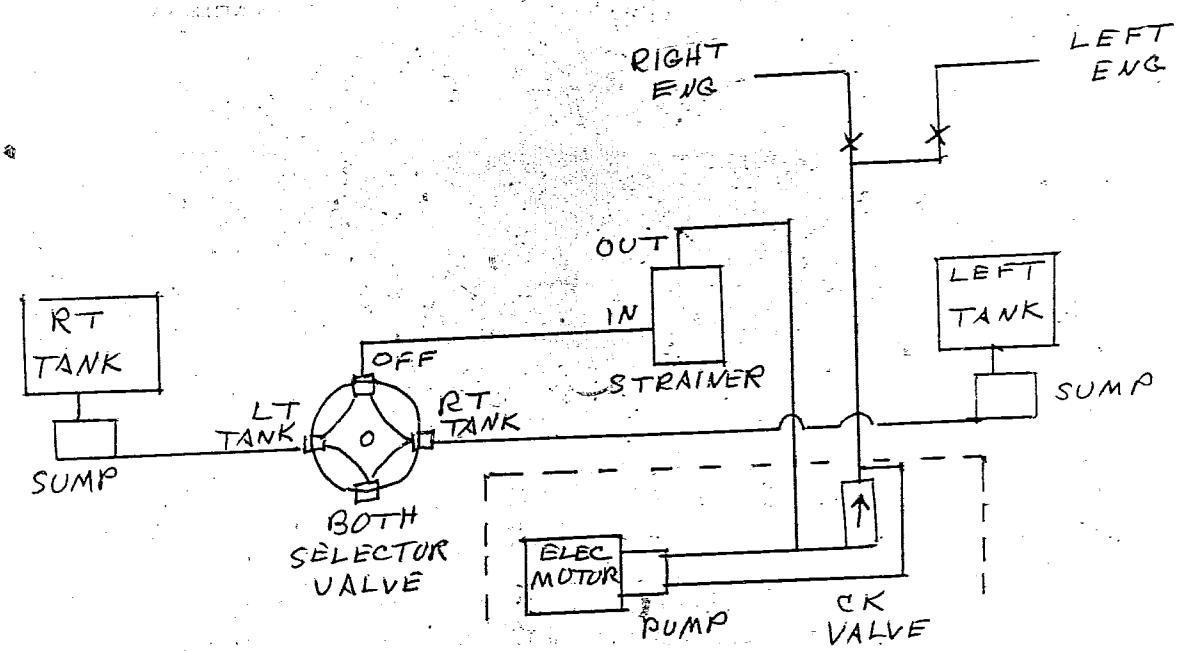
Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

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 G-21A N 88U S/N B-100 Jan. 18, 1980

1. Complete overhaul of airframe.
2. Repaired damaged nose Sta. 1-16.
3. Installed all new bottom skins chines and keels.
4. Replaced bottom plate of center wing sealed and slushed tanks.
5. Replaced four U channels between four main landing gear fittings.
6. Installed complete overhauled landing gear.
7. Recovered control surfaces with Ceconite 101.
8. Installed new interior including 4 FS100 seats per SA1969WE.
9. Installed new set Cleveland G-21A brakes conversion kit 199-65 per STC SA99GL.
10. Installed overhauled wings with McKinnon retract float modification STC SA4-1467.
11. Installed fire extinguisher CF2D.
12. Installed overhauled engines R985AN3.
13. Installed new Hartzell props HC-B3R30-2E Blade R10152-5.5.
14. Installed new cables, wiring and plumbing.
15. Replaced hand wobble pump with electric. (see schematic)
16. All repairs done on aircraft in conformance with Grumman manual and AC-43-13-1.
17. AD Notes checked for compliance-46-38-1,49-16-1,50-15-1, 53-21-2,53-24-1,63-27-2,67-6-4,71-12-3,73-12-6,79-2-3.
18. All overhauled accessories installed.
19. All overhauled, new , or checked instruments installed.

ADDITIONAL SHEETS ARE ATTACHED

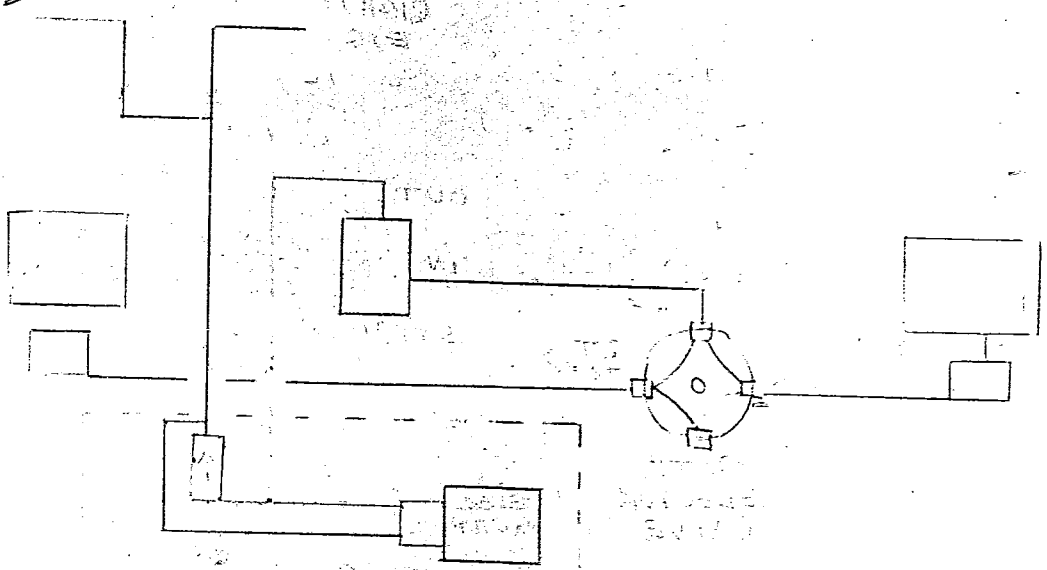


INSTALLATION OF ELEC PUMP REPLACING
WOBBLE PUMP G-21A
N88U S/N B-100

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

Foreign & Domestic Enterprises, Inc.

8201 PERIMETER ROAD, BOEING FIELD
SEATTLE, WASHINGTON 98108
(206) 763-1460



FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

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

Form Approved
Budget Bureau No. 04-R060.1

FOR FAA USE ONLY

OFFICE IDENTIFICATION LAS FSDO 4066

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE: GRUMMAN	MODEL: G-21A
	SERIAL NO.: B-100	NATIONALITY AND REGISTRATION MARK: ~~N~~ 60028 N600ZE
2. OWNER	NAME (As shown on registration certificate): Collins Brothers Corp.	ADDRESS (As shown on registration certificate): PO Box 42427 Las Vegas, Nevada 89104

3. FOR FAA USE ONLY

4. UNIT IDENTIFICATION

UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE REPAIR	5. TYPE ALTERATION
AIRFRAME	(As described in item 1 above)			X	
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS	B. KIND OF AGENCY	C. CERTIFICATE NO.
JAMES E. HELFRICH 2905 E. ST. Louis Ave. Las Vegas, Nevada 89104	X U.S. CERTIFICATED MECHANIC FOREIGN CERTIFICATED MECHANIC CERTIFICATED REPAIR STATION MANUFACTURER	1857630

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

DATE	SIGNATURE OF AUTHORIZED INDIVIDUAL
16 Jun 1982	James E Helfrich

7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ APPROVED ☐ REJECTED

BY					OTHER (Specify)
	FAA FLT. STANDARDS INSPECTOR	MANUFACTURER	X	INSPECTION AUTHORIZATION	
	FAA DESIGNEE	REPAIR STATION		CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	

DATE OF APPROVAL OR REJECTION	CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL
16 Jun 1982	1857630	James E Helfrich

FAA Form 337 (7-67)

(8320)

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

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.)*

1. Replaced Right Landing Gear, upper & lower Drag links with overhauled items Remanuf By Viking Air LTD, Sidney, B.C. AE 99.

2. Repaired RT wing tip By manuf stiffner section to match old item and repairing two damaged section.
Replaced skin on leading edge & Top of wing tip.

3. Repaired Rt. Fload inbd rear section with skin Doubler & flush fillers.
Sealed Float interior.

4. Repairs done iaw AC 43.13-1 Chapter 2 Section 3 & Grumman G-21 maintenance manual.

☐ ADDITIONAL SHEETS ARE ATTACHED

U.S. G.P.O. 1972/720-694/545/1303

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

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

Form Approved
Budget Bureau No. 04-R060.1

FOR FAA USE ONLY

OFFICE IDENTIFICATION
AL-ACDO-31

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE: GRUMMAN	MODEL: G-21
	SERIAL NO.: B-100	NATIONALITY AND REGISTRATION MARK: N-381J
2. OWNER	NAME (As shown on registration certificate): KODIAK WESTERN ALASKA AIRLINES, INC.	ADDRESS (As shown on registration certificate): P.O. BOX 2457 KODIAK, ALASKA 99615

3. FOR FAA USE ONLY

"The data identified herein complies with the applicable airworthiness requirements and is approved for the above described aircraft, subject to conformity inspection by a person authorized in FAR 43, Section 43.7."

DATE _____ Signature of FAA Inspector

4. UNIT IDENTIFICATION

UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE REPAIR	5. TYPE ALTERATION
AIRFRAME	(As described in item 1 above)				XX
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE / MANUFACTURER				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS	B. KIND OF AGENCY	C. CERTIFICATE NO.
HARRY L. ACOR BOX 2457 KODIAK, ALASKA 99615	XX U.S. CERTIFICATED MECHANIC	LA-1174905
	FOREIGN CERTIFICATED MECHANIC	
	CERTIFICATED REPAIR STATION	
	MANUFACTURER	

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

DATE	SIGNATURE OF AUTHORIZED INDIVIDUAL
JULY 30, 1975	Harry L. Acor HARRY L. ACOR

7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ APPROVED ☐ REJECTED

BY						
	FAA FLT. STANDARDS INSPECTOR		MANUFACTURER	X	INSPECTION AUTHORIZATION	OTHER (Specify)
	FAA DESIGNEE		REPAIR STATION		CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	

DATE OF APPROVAL OR REJECTION	CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL
JULY 30, 1975	LA-1174905	Harry L. Acor HARRY L. ACOR

FAA Form 337 (7-67) (8320)

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

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.)*

N-88U JULY 30, 1975

1. Removed streamline flying wires from inboard and outboard side of wing floats. Tensil strength - 4200 pounds.

2. Installed 3/16" stainless cables with a tensil strength of 4200 pounds on inboard and outboard sides of wing floats.

   a. End fittings are MS 21259 and adapt to the exsisting fittings on the wing.

   b. Center float streamline wires remain the same as factory original.

3. No change in weight and balance..

END

☐ ADDITIONAL SHEETS ARE ATTACHED

U.S. G.P.O. 1972/720-694/545/1303

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

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

Form Approved
Budget Bureau No. 04-R060.1

FOR FAA USE ONLY

OFFICE IDENTIFICATION
AL-ACDO-31

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE: GRUMMAN	MODEL: G-21
	SERIAL NO.: B-100	NATIONALITY AND REGISTRATION MARK: N-880
2. OWNER	NAME (As shown on registration certificate): KODIAK WESTERN ALASKA AIRLINES, INC.	ADDRESS (As shown on registration certificate): P.O. BOX 2457 KODIAK, ALASKA 99615

3. FOR FAA USE ONLY

"The data identified herein complies with the applicable airworthiness requirements and is approved for the above described aircraft, subject to conformity inspection by a person authorized in FAR 43, Section 43.7."

DATE 8-15-75 Signature of FAA Inspector

4. UNIT IDENTIFICATION / 5. TYPE

UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE: REPAIR	5. TYPE: ALTERATION
AIRFRAME	********** (As described in item 1 above) **********				XX
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE / MANUFACTURER				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS	B. KIND OF AGENCY	C. CERTIFICATE NO.
HARRY L. ACOR BOX 2457 KODIAK, ALASKA 99615	XX U.S. CERTIFICATED MECHANIC FOREIGN CERTIFICATED MECHANIC CERTIFICATED REPAIR STATION MANUFACTURER	LA-1174905

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

DATE	SIGNATURE OF AUTHORIZED INDIVIDUAL
JULY 30, 1975	Harry L. Acor HARRY L. ACOR

7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is X ☐ APPROVED ☐ REJECTED

BY						OTHER (Specify)
	☐ FAA FLT. STANDARDS INSPECTOR	☐ MANUFACTURER	X	INSPECTION AUTHORIZATION		
	☐ FAA DESIGNEE	☐ REPAIR STATION		☐ CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT		

DATE OF APPROVAL OR REJECTION	CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL
0, 1975	LA-1174905	Harry L. Acor HARRY L. ACOR

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11 22 85

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.)*

N-88U JULY 30, 1975

1. Removed streamline flying wires from inboard and outboard side of wing floats. Tensil strength - 4200 pounds.

2. Installed 3/16" stainless cables with a tensil strength of 4200 pounds on inboard and outboard sides of wing floats.

   a. End fittings are MS 21259 and adapt to the exsisting fittings on the wing.

   b. Center float streamline wires remain the same as factory original.

3. No change in weight and balance.

END

☐ ADDITIONAL SHEETS ARE ATTACHED

U.S. G.P.O. 1972/720-694/545/1303

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

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

Form Approved
Budget Bureau No. 04-R060.1

FOR FAA USE ONLY

OFFICE IDENTIFICATION
5-0-31

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE: GRUMMAN	MODEL: G-21A
	SERIAL NO.: B-100	NATIONALITY AND REGISTRATION MARK: N88U
2. OWNER	NAME (As shown on registration certificate): Kodiak Western Alaska Airlines, Inc.	ADDRESS (As shown on registration certificate): P.O. Box 2457, Kodiak, Alaska 99615

3. FOR FAA USE ONLY

4. UNIT IDENTIFICATION / 5. TYPE

UNIT	MAKE	MODEL	SERIAL NO.	REPAIR	ALTERATION
AIRFRAME	◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆ (As described in item 1 above) ◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆			XX	
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS	B. KIND OF AGENCY	C. CERTIFICATE NO.
Fred H. Ross P.O. Box 2312 Kodiak, Alaska 99615	[X] U.S. CERTIFICATED MECHANIC [ ] FOREIGN CERTIFICATED MECHANIC [ ] CERTIFICATED REPAIR STATION [ ] MANUFACTURER	1198023

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

DATE	SIGNATURE OF AUTHORIZED INDIVIDUAL
June 17, 1975	Fred H. Ross

7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is [X] APPROVED [ ] REJECTED

BY						OTHER (Specify)
	[ ]	FAA FLT. STANDARDS INSPECTOR	[ ]	MANUFACTURER	[X]	INSPECTION AUTHORIZATION
	[ ]	FAA DESIGNEE	[ ]	REPAIR STATION	[ ]	CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT

DATE OF APPROVAL OR REJECTION	CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL
June 17, 1975	1A1174905	Harry L. Acor Harry L. Acor

(8320)

FAA Form 337 (7-67)

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

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.)*

N-88U June 17, 1975

1. Aircraft Disassembled for inspection
   a. Wing Removed
   b. Center section and plates removed
   c. All controls removed
   d. Engines removed
   e. Firewalls removed
   f. Landing gear removed
   g. Flight control system removed

2. Airframe stripped and cleaned of cromate. Corrosion removed, repaired as required. All repairs done as per Grumman Structual Repair Handbook and AC-43-13-1 and good maintenance practice.

3. Aircraft reassembled
   a. Rebuilt wings installed
   b. New center section end plates installed, fuel tanks resealed
   c. Overhauled flight control surfaces installed.
   d. Control system overhauled, cables and tubes replaced, new bearings installed.
   e. Firewalls overhauled and reinstalled
   f. Engine mounts overhauled and reinstalled.
   g. Landing gear system overhauled and replaced as necessary.
   h. All electrical components overhauled, wiring replaced as necessary
   i. Engines reinstalled
   j. Aircraft primed and painted

4. Aircraft weighed this date.

END

☐ ADDITIONAL SHEETS ARE ATTACHED

U.S. G.P.O. 1972/720-694/545/1303

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

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

Form Approved
Budget Bureau No. 04-R060.1

FOR FAA USE ONLY

OFFICE IDENTIFICATION ANC.R.ODO-31
5-0-31

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE: GRUMMAN	MODEL: G-21A
	SERIAL NO.: B-100	NATIONALITY AND REGISTRATION MARK: N-88U
2. OWNER	NAME (As shown on registration certificate): Kodiak Western Alaska Airlines, Inc.	ADDRESS (As shown on registration certificate): P.O. Box 2457, Kodiak, Alaska 99615

3. FOR FAA USE ONLY

The data identified herein complies with the applicable airworthiness requirements and is approved for the above described aircraft, subject to conformity inspection by a person authorized in FAR 43, section 43.7.

JUN 20 1975
Date

J. C. Kuan
Signature of FAA Inspector

4. UNIT IDENTIFICATION

UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE REPAIR	5. TYPE ALTERATION
AIRFRAME	◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆ (As described in item 1 above) ◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆				XX
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS	B. KIND OF AGENCY	C. CERTIFICATE NO.
Fred H. Ross P.O. Box 2312 Kodiak, Alaska 99615	X U.S. CERTIFICATED MECHANIC FOREIGN CERTIFICATED MECHANIC CERTIFICATED REPAIR STATION MANUFACTURER	1198023

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

DATE	SIGNATURE OF AUTHORIZED INDIVIDUAL
June 17, 1975	Fred H. Ross

7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is [X] APPROVED [ ] REJECTED

BY						
	FAA FLT. STANDARDS INSPECTOR		MANUFACTURER	X	INSPECTION AUTHORIZATION	OTHER (Specify)
	FAA DESIGNEE		REPAIR STATION		CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	

DATE OF APPROVAL OR REJECTION	CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL
June 17, 1975	1A1174905	Harry K. Acor

FAA Form 337 (7-67) (8320)

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

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.)*

N-88U June 17, 1975

1. Installed cargo door on right side of aircraft.

   a. All work done as per STC SAI-439, and AC-43-13-1 and good maintenance practice.

   b. Installation checked by Bush Craft Mfg. and Repair during all major phases of construction.

END

☐ ADDITIONAL SHEETS ARE ATTACHED

U.S. G.P.O. 1972/720-694/545/1303

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

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

Form Approved
Budget Bureau No. 04-R060.1

FOR FAA USE ONLY

OFFICE IDENTIFICATION
ANC ACDO-31

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE: GRUMMAN	MODEL: G-21
	SERIAL NO.: B-100	NATIONALITY AND REGISTRATION MARK: N-88U
2. OWNER	NAME (As shown on registration certificate): Kodiak Western Alaska Airlines, Inc.	ADDRESS (As shown on registration certificate): P.O. Box 2457, Kodiak, Alaska 99615

3. FOR FAA USE ONLY

The data identified herein complies with the applicable airworthiness requirements and is approved for the above described aircraft, subject to conformity inspection by a person authorized in FAR 43, section 43.7.

JUN 20 1975
Date

J. C. Kruse
Signature of FAA Inspector

4. UNIT IDENTIFICATION / 5. TYPE

UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE: REPAIR	5. TYPE: ALTERATION
AIRFRAME	◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆ (As described in item 1 above) ◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆				XX
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS	B. KIND OF AGENCY	C. CERTIFICATE NO.
Harry L. Acor P.O. Box 2457 Kodiak, Alaska 99615	X U.S. CERTIFICATED MECHANIC FOREIGN CERTIFICATED MECHANIC CERTIFICATED REPAIR STATION MANUFACTURER	1A1174905

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

DATE	SIGNATURE OF AUTHORIZED INDIVIDUAL
June 17, 1975	Harry L. Acor Harry L. Acor

7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ APPROVED ☐ REJECTED

BY						
	FAA FLT. STANDARDS INSPECTOR		MANUFACTURER		INSPECTION AUTHORIZATION	OTHER (Specify)
	FAA DESIGNEE		REPAIR STATION		CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	

DATE OF APPROVAL OR REJECTION	CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL
17, 1975	1A1174905	Harry L. Acor Harry L. Acor

FAA Form 337 (7-67) (8320)

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

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.)*

N-88U June 17, 1975

1. Removed generator elclipse MRA-2 and voltage regulator from left side of aircraft.
2. Installed a 50 amp. Jasco alternator on left engine generator mounting pad.
3. Installed a solid state regulator PN J-24M-20 with a voltage protector PN SVP-3. All parts supplied by Skytronics, Inc.
4. Cooling tube installed from slipstream to alternator.
5. Installation done as per skytronics STC 2015WE and AC-43-13-1.
6. Equipment list and Weight and Balance corrected this date.

END

☐ ADDITIONAL SHEETS ARE ATTACHED

U.S. G.P.O. 1972/720-694/545/1303

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

FEDERAL AVIATION AGENCY

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

Form Approved
Budget Bureau No. 04-R060.1

FOR FAA USE ONLY

OFFICE IDENTIFICATION
AL-ACDO-31

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE: GRUMMAN	MODEL: G-21A
	SERIAL NO.: B-100	NATIONALITY AND REGISTRATION MARK: N-88U
2. OWNER	NAME *(As shown on registration certificate)*: Robert L. Hall Helen C. Hall	ADDRESS *(As shown on registration certificate)*: Box 2457 Kodiak, Alaska 99615

3. FOR FAA USE ONLY

"The data identified herein complies with the applicable airworthiness requirements and is approved for the above described aircraft, subject to conformity inspection by a person authorized in FAR 43, section 43.7."

4/30/71 — Date

J. C. Knapp — Signature of FAA Inspector

4. UNIT IDENTIFICATION

UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE REPAIR	5. TYPE ALTERATION
AIRFRAME	◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆ *(As described in item 1 above)* ◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆				X
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS	B. KIND OF AGENCY	C. CERTIFICATE NO.
Harry L. Acor Box 2457 Kodiak, Alaska 99615	X U.S. CERTIFICATED MECHANIC FOREIGN CERTIFICATED MECHANIC CERTIFICATED REPAIR STATION MANUFACTURER	A&P 1174905

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

DATE	SIGNATURE OF AUTHORIZED INDIVIDUAL
4/7/71	Harry L. Acor Harry L. Acor

7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Agency and is [X] APPROVED [ ] REJECTED

BY						
	FAA FLT. STANDARDS INSPECTOR		MANUFACTURER	X	INSPECTION AUTHORIZATION	OTHER *(Specify)*
	FAA DESIGNEE		REPAIR STATION		CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	

DATE OF APPROVAL OR REJECTION	CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL
4/7/71	A&P-1A 34586-40	A.K. Dickow

FAA Form 337 (1-65) OBSOLETE PREVIOUS EDITION 0052-025-8000 (8320)

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

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.)*

N-88U 4/7/71

1. Installed seat kit as per STC-SA 1969 WE.
   a. all work done in accordance with SA 1969 WE blue prints using factor, supplied parts.
   b. A/C weighed using Martin Decker scales-New C-G 21.1

END

☐ ADDITIONAL SHEETS ARE ATTACHED

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

FED[illegible]AVIATION AGENCY

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

Form Approved
Budget Bureau No. 04-R060.1

FOR FAA USE ONLY

OFFICE IDENTIFICATION

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE: Grumman	MODEL: G-21A
	SERIAL NO.: B-100	NATIONALITY AND REGISTRATION MARK: N88U
2. OWNER	NAME (As shown on registration certificate): Hall, Robert L. Hall, Helen C.	ADDRESS (As shown on registration certificate): P.O. Box 2457 Kodiak, Alaska 99615

3. FOR FAA USE ONLY

The data identified herein complies with the applicable airworthiness requirements and is approved for the above described aircraft, subject to conformity inspection by a person authorized in FAR 43, section 43.7.

3/24/72
Date

J.C. Knapp
Signature of FAA Inspector

4. UNIT IDENTIFICATION

UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE: REPAIR	5. TYPE: ALTERATION
AIRFRAME	◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆ (As described in item 1 above) ◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆				X
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS	B. KIND OF AGENCY	C. CERTIFICATE NO.
A. K. Dickow P.O. Box 863 Kodiak, Alaska 99615	X U.S. CERTIFICATED MECHANIC FOREIGN CERTIFICATED MECHANIC CERTIFICATED REPAIR STATION MANUFACTURER	34586-40

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

DATE	SIGNATURE OF AUTHORIZED INDIVIDUAL
March 3, 1972	A. K. Dickow A. K. Dickow

7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Agency and is [X] APPROVED [ ] REJECTED

BY							OTHER (Specify)
		FAA FLT. STANDARDS INSPECTOR		MANUFACTURER	X	INSPECTION AUTHORIZATION	
		FAA DESIGNEE		REPAIR STATION		CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	

DATE OF APPROVAL OR REJECTION	CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL
3/3/72	IA34586-40	A. K. Dickow

FAA Form 337 (1-65) OBSOLETE PREVIOUS EDITION 0052-025-8000 (8320)

6 MAR 1972

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

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.)*

1. Installed electric gear retraction motor and mechanism in aircraft in accordance with installations in our G-21's N1583V, N69263, N87U and copy of 337 with appropriate drawings dated March 3, 1955. This 337 was part of installation kit as supplied by Griffco Aviation, Boeing Field, Seattle, Wash. Electric load computed and found to not exceed 80% of total rated generator output.

2. Weight and balance computed and entered in log.

3. Installation made in accordance with FAR Part 43 and technical data previously approved on the same type, make and model aircraft. A copy of the approved data used, a form 337, and all instructions and drawings are attached to this form.

END

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record.

☒ ADDITIONAL SHEETS ARE ATTACHED

U.S. GOVERNMENT PRINTING OFFICE : 1965 O—761-744

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

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

Form Approved
Budget Bureau No. 04-R060.1

FOR FAA USE ONLY

OFFICE IDENTIFICATION

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE: Grumman	MODEL: G21A
	SERIAL NO.: B-100	NATIONALITY AND REGISTRATION MARK: N88U
2. OWNER	NAME (As shown on registration certificate): Kodiak Airways, Inc.	ADDRESS (As shown on registration certificate): P. O. Box 2457, Kodiak, Alaska 99615

3. FOR FAA USE ONLY

WE-GADO-10
PORTLAND, OREGON
RECEIVED
MAY 6 1970
AM 7 8 9 10 11 12 1 2 3 4 5 6 PM

4. UNIT IDENTIFICATION / 5. TYPE

UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE: REPAIR	5. TYPE: ALTERATION
AIRFRAME	(As described in item 1 above)				X
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE / MANUFACTURER				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS	B. KIND OF AGENCY	C. CERTIFICATE NO.
WESTERN Skyways, Inc. PORTLAND-TROUTDALE AIRPORT TROUTDALE, OREGON	U.S. CERTIFICATED MECHANIC FOREIGN CERTIFICATED MECHANIC X CERTIFICATED REPAIR STATION MANUFACTURER	Airframe - Class 1, Class 3 Powerplant - Class 1 Propeller - Class 1 & Limited Radio - Class 1 & Class 2 Limited Accessory Limited Instrument

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

DATE	SIGNATURE OF AUTHORIZED INDIVIDUAL
5-1-70	James A. Scadden

7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is X APPROVED ☐ REJECTED

BY						OTHER (Specify)
		FAA FLT. STANDARDS INSPECTOR		MANUFACTURER		INSPECTION AUTHORIZATION
		FAA DESIGNEE	X	REPAIR STATION		CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT

DATE OF APPROVAL OR REJECTION	CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL
5-4-70	R. S. 4110	R. S. Hartman CHIEF INSPECTOR

FAA Form 337 (7-67) (8320)

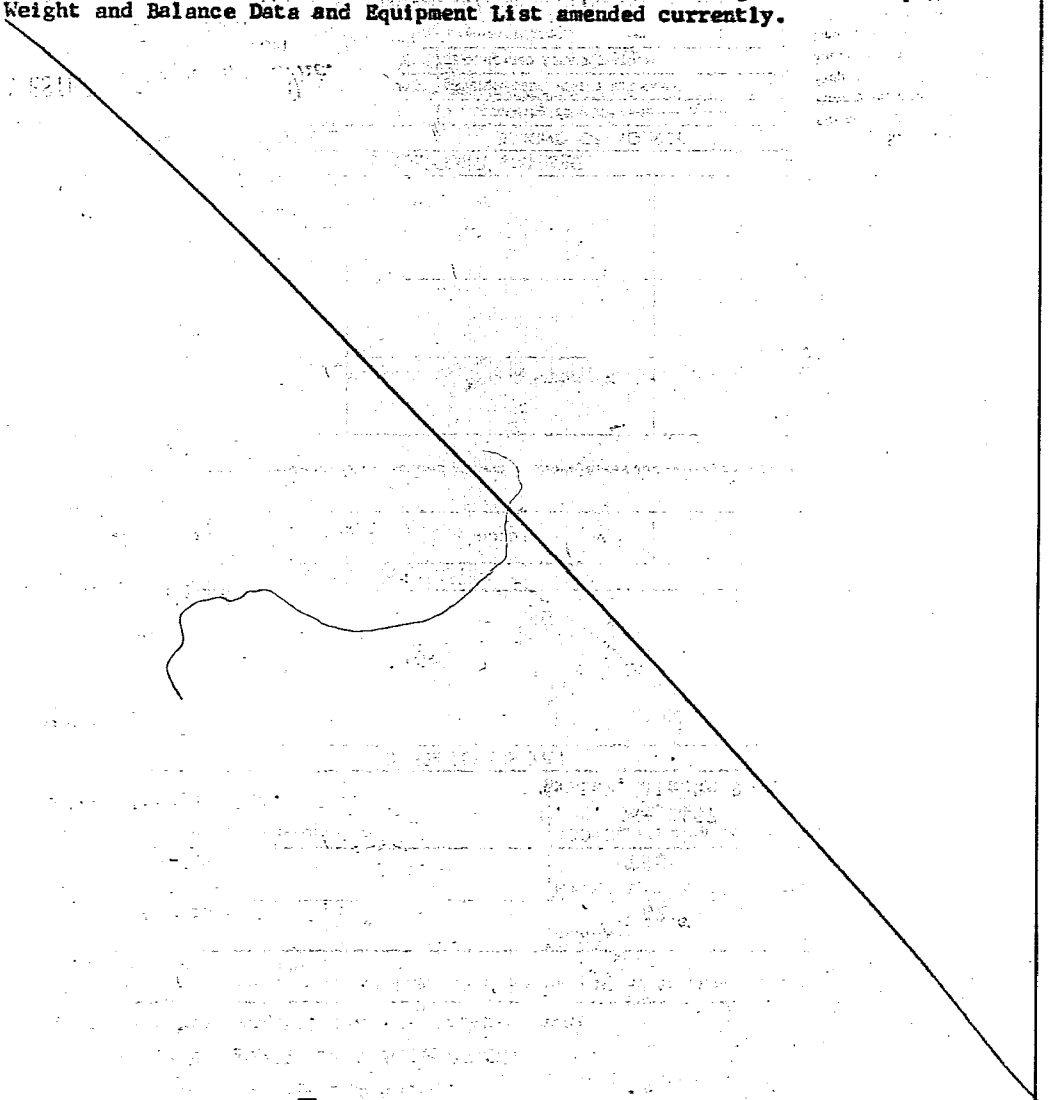
FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

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.)*

Remove Mark 12 Transceiver, ARC Omni Bearing Selector Indicator and I.D. 48 Indicator.
Installed King KX-170 Transceiver, KI201 Indicator, KR-85 A.D.F., KA-25 Isolation Amplifier, KA-38 Voltage Regulator and Brelonix H.F. R1050B Transceiver in accordance with manufacturer's instructions and drawings.
Continuous electrical load does not exceed 100% of rated generator output.
Weight and Balance Data and Equipment List amended currently.



☐ ADDITIONAL SHEETS ARE ATTACHED

U.S. GOVERNMENT PRINTING OFFICE : 1967 OF—272-085

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

1310-0606 37 Nov 21 '67

FEDERAL AVIATION AGENCY

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

Form Approved
Budget Bureau No. 04-R060.1

FOR FAA USE ONLY

OFFICE IDENTIFICATION
MIA GA50
7-3-05

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE: ~~Grumman~~	MODEL: G-21-A
	SERIAL NO.: B-100	NATIONALITY AND REGISTRATION MARK: N-88U
2. OWNER	NAME (As shown on registration certificate): Dean H. Franklin	ADDRESS (As shown on registration certificate): 3923 N.W. 24th. St. Miami, Floride.

3. FOR FAA USE ONLY

4. UNIT IDENTIFICATION

UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE REPAIR	5. TYPE ALTERATION
AIRFRAME	(As described in item 1 above)			XX	
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE / MANUFACTURER				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS	B. KIND OF AGENCY	C. CERTIFICATE NO.
Dean H. Franklin 3923 N.W. 24th. St. Miami, Florida.	XX U.S. CERTIFICATED MECHANIC FOREIGN CERTIFICATED MECHANIC CERTIFICATED REPAIR STATION MANUFACTURER	AE17456

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

DATE	SIGNATURE OF AUTHORIZED INDIVIDUAL
October 26, 1967	X Dean H Franklin

7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Agency and is ☒ APPROVED ☐ REJECTED

BY						
	FAA FLT. STANDARDS INSPECTOR		MANUFACTURER	X	INSPECTION AUTHORIZATION	OTHER (Specify): Verified by Operator #38
	FAA DESIGNEE		REPAIR STATION		CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	

DATE OF APPROVAL OR REJECTION	CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL
Nov. 7-67	IA 1313890	G.J. Sandra

FAA Form 337 (1-65) OBSOLETE PREVIOUS EDITION 0052-025-8000 · (8320)

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

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.)*

The following repairs were made on this aircraft.
Replace worn keel from station 7 to 16.
Repairs made in accordance with Grumman Structural Repair Manual,
Page 120, Fig. 67.

---------- E N D ----------

RECEIVED
FAA
NOV 7 1967
SO-GADO-5
MIAMI, FLORIDA

OKLAHOMA CITY, OKLA.
NOV 16 12 09 PM '67

☐ ADDITIONAL SHEETS ARE ATTACHED

CONVEYANCE FILED WITH FAA AIRCRAFT REGISTRY

U.S. GOVERNMENT PRINTING OFFICE : 1965 OF—761-748

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

1304-1678 37 Nov 8'67

FEDERAL AVIATION AGENCY

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

Form Approved
Budget Bureau No. 04-R060.1

FOR FAA USE ONLY

OFFICE IDENTIFICATION MIA GADO 7-3-05

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE: Grumman	MODEL: G-21A
	SERIAL NO.: B-100	NATIONALITY AND REGISTRATION MARK: N-88U
2. OWNER	NAME (As shown on registration certificate): Dean H. Franklin	ADDRESS (As shown on registration certificate): 3923 N.W. 24th. St. Miami, Florida.

3. FOR FAA USE ONLY

4. UNIT IDENTIFICATION / 5. TYPE

UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE: REPAIR	5. TYPE: ALTERATION
AIRFRAME	◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆ (As described in item 1 above) ◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆			XX	
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE	------ S N D ------			
	MANUFACTURER				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS	B. KIND OF AGENCY	C. CERTIFICATE NO.
Dean H. Franklin 3923 N.W. 24th. St. Miami, Florida.	X U.S. CERTIFICATED MECHANIC FOREIGN CERTIFICATED MECHANIC CERTIFICATED REPAIR STATION MANUFACTURER	AE 17456

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

DATE	SIGNATURE OF AUTHORIZED INDIVIDUAL
9/29/67.	Dean H. Franklin AE-17466

7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Agency and is [X] APPROVED [ ] REJECTED

BY						OTHER (Specify)
	FAA FLT. STANDARDS INSPECTOR		MANUFACTURER	XX	INSPECTION AUTHORIZATION	Verified by Operator #104
	FAA DESIGNEE		REPAIR STATION		CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	

DATE OF APPROVAL OR REJECTION	CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL
Oct. 16-67	IA 1313890	Frank J. Lombe

FAA Form 337 (1-65) OBSOLETE PREVIOUS EDITION

0052-025-8000 (8320)

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

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.)*

The following Major repairs were made on this aircraft in accordance with Grumman structural repair manual and AC 43.13-1 Chapter 2, section 3, Figure 2.22.
Replaced by spliceing aft 4" of skin to spar cap of lower right fuel tank.
Replaced by spliceing aft 7" of skin from spar cap on lower R. center section outboard of fusilage.
Removed corroded skin and replaced with 18" square patch at station 29 to 31 above Grumman hull ref. line.
Removed corroded skin and replaced patch 7" high from hull line between station 15 to 19.
Removed skin and replaced with new skin and factory ribs at forward keel vent at station 15 and 16.
Removed aft bottom hull skin at station 28 to 29. Replaced hull ribs at these stations with factory manufactured ribs.
---------- E N D ----------

RECEIVED
FAA
OCT 23 1967
SO-GADO-5
MIAMI, FLORIDA

NOV 7 4 05 PM '67
OKLAHOMA CITY, OKLA.

CONVEYANCE FILED WITH
FAA AIRCRAFT REGISTRY

☐ ADDITIONAL SHEETS ARE ATTACHED

U.S. GOVERNMENT PRINTING OFFICE : 1965 OF—761-748

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

1300 645 37 OCT 3 1967

FEDERAL AVIATION AGENCY

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

Form Approved
Budget Bureau No. 04-R060.1

FOR FAA USE ONLY

OFFICE IDENTIFICATION
7-3-05

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE: Grumman	MODEL: G-21-A
	SERIAL NO.: B-100	NATIONALITY AND REGISTRATION MARK: N88U
2. OWNER	NAME (As shown on registration certificate): Dean H. Franklin	ADDRESS (As shown on registration certificate): 3923 N.W. 24th. St. Miami, Florida

3. FOR FAA USE ONLY

4. UNIT IDENTIFICATION				5. TYPE	
UNIT	MAKE	MODEL	SERIAL NO.	REPAIR	ALTERATION
AIRFRAME	••••••••••••••••••••• (As described in item 1 above) •••••••••••••••••••••			XX	
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS	B. KIND OF AGENCY	C. CERTIFICATE NO.
Dean H. Franklin 3923 N.W. 24th. St. Miami, Florida.	X U.S. CERTIFICATED MECHANIC	AE 17456
	FOREIGN CERTIFICATED MECHANIC	
	CERTIFICATED REPAIR STATION	
	MANUFACTURER	

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

DATE	SIGNATURE OF AUTHORIZED INDIVIDUAL
9/28/67.	Dean H. Franklin AE-17456

7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Agency and is X APPROVED ☐ REJECTED

BY						
	☐ FAA FLT. STANDARDS INSPECTOR	☐ MANUFACTURER	X	INSPECTION AUTHORIZATION	OTHER (Specify)
	☐ FAA DESIGNEE	☐ REPAIR STATION	☐	CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	

DATE OF APPROVAL OR REJECTION	CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL
10/1/67.	IA 1313890	G.F. LANDRE

FAA Form 337 (1-65) OBSOLETE PREVIOUS EDITION 0052-025-8000 (8320)

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

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.)*

The following repairs were made on this aircraft in accordance with Grumman repair manual, Page 36, Nav. Aer. 01-85u-3 Capstrip repair. Capstrip was spliced inside of cabin on right hand side in accordance with the above approved method of repair.

---------- E N D ----------

☐ ADDITIONAL SHEETS ARE ATTACHED

* U.S. GOVERNMENT PRINTING OFFICE 1965 O—761-748

CONVEYANCE FILED WITH
FAA AIRCRAFT REGISTRY

OCT 26 1 25 PM '67

OKLAHOMA C[illegible]Y, OKLA.

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

1300 876

37 OCT 12 1967

FEDERAL AVIATION AGENCY

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

Form Approved
Budget Bureau No. 04-R060.1

FOR FAA USE ONLY

OFFICE IDENTIFICATION MIA GADO
7-3-05

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE: Grumman	MODEL: G-21-A
	SERIAL NO.: B-100	NATIONALITY AND REGISTRATION MARK: N88U
2. OWNER	NAME (As shown on registration certificate): Dean H. Franklin	ADDRESS (As shown on registration certificate): 3923 N.W. 24th. St. Miami, Florida

3. FOR FAA USE ONLY

4. UNIT IDENTIFICATION

UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE REPAIR	5. TYPE ALTERATION
AIRFRAME	••••••••••••••••••••• (As described in item 1 above) •••••••••••••••••••••			XX	
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS	B. KIND OF AGENCY	C. CERTIFICATE NO.
Dean H. Franklin 3923 N.W. 24th. St. Miami, Florida.	X U.S. CERTIFICATED MECHANIC	AE 17456
	FOREIGN CERTIFICATED MECHANIC	
	CERTIFICATED REPAIR STATION	
	MANUFACTURER	

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

DATE	SIGNATURE OF AUTHORIZED INDIVIDUAL
9/28/67.	Dean H. Franklin AE-17456

7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Agency and is X ☒ APPROVED ☐ REJECTED

VERIFIED BY NO. 2

BY						
		FAA FLT. STANDARDS INSPECTOR		MANUFACTURER X	INSPECTION AUTHORIZATION	OTHER (Specify)
		FAA DESIGNEE		REPAIR STATION	CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	

DATE OF APPROVAL OR REJECTION	CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL
10/1/67.	IA 1313890	F.N. Tonkin

FAA Form 337 (1-65) OBSOLETE PREVIOUS EDITION

0052-025-8000 (8320)

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

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.)*

The following repairs were made on this aircraft in accordance with Grumman repAir manual, Page 36, Nav. Aer. cl-85u-3 Capstrip repair. Capstrip was splicedinside of cabin on right hand side in accordance with the above approved method of repair.

---------- E N D ----------

OKLAHOMA CITY, OKLA.
OCT 5 3 27 PM '87

CONVEYANCE FILED WITH REGISTRY

ADDITIONAL SHEETS ARE ATTACHED

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

1179 0052 27 JAN 1967

FEDERAL AVIATION AGENCY

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

Verified by Operator

Form Approved
Budget Bureau No. 04-R060.1

FOR FAA USE ONLY
OFFICE IDENTIFICATION
7-3-05

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE: GRUMMAN	MODEL: G21A
	SERIAL NO.: B-100	NATIONALITY AND REGISTRATION MARK: N88K 88U
2. OWNER	NAME (As shown on registration certificate): DEAN H. FRANKLIN	ADDRESS (As shown on registration certificate): 3923 NW 24 ST. MIAMI, FLA

3. FOR FAA USE ONLY

4. UNIT IDENTIFICATION				5. TYPE	
UNIT	MAKE	MODEL	SERIAL NO.	REPAIR	ALTERATION
AIRFRAME	◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆ (As described in item 1 above) ◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆			X	
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS	B. KIND OF AGENCY	C. CERTIFICATE NO.
J.E. MOLLER 18 N.E. 69 ST MIAMI, FLA	X U.S. CERTIFICATED MECHANIC FOREIGN CERTIFICATED MECHANIC CERTIFICATED REPAIR STATION MANUFACTURER	AP1517942

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

DATE	SIGNATURE OF AUTHORIZED INDIVIDUAL
JANUARY 2, 1967.	J E Moller

7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Agency and is ☒ APPROVED ☐ REJECTED

BY						OTHER (Specify)
	☐ FAA FLT. STANDARDS INSPECTOR	☐	MANUFACTURER	X	INSPECTION AUTHORIZATION	
	☐ FAA DESIGNEE	☐	REPAIR STATION	☐	CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	

DATE OF APPROVAL OR REJECTION	CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL
1-2-67	IA1313890	F.J. Sander

FAA Form 337 (1-65) OBSOLETE PREVIOUS EDITION

0052-025-8000 (8320)

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

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.)*

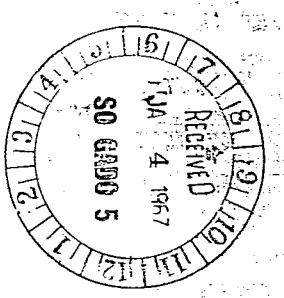
Item 1- Repaired right front lower box beam cap strip on center section extending 10" inboard and 16" outboard of center section and fusalage attach bracket. Repair done in accordance to Fig. 14 Page 36 of Grumman G21A structual repair manual 01-85VA-9.

Item 2- Removed cabin air hoses through forward center section web. Holes plugged in accordance to FAR 43.13-1 Page 49 Par.1,Ref. fig. 2.22.

Item 3 Repaired center stringer at station 27. Repair done in accordance to FAR.43.13-1 page 50 Par.G.

Item 4 Repaired Left flap by flush patches on skin between station "0" and station 7 11/16 and between station 7 11/16 and 17 11/16 located 6 3/4" aft of leading edge and 2" and 15 1/2" respectfully extending outboard from station "0". Replace both angle stiffners between ~~outboard~~ station "0" & 7 11/16. Replace forward stiffners between station 7 11/16 and station 17 11/16. Replace aft stiffners between station 101 11/16 and 113 3/16. All work done in accordance to FAR 43.13-1, page 49, Par. 1 .

- E N D - - - - - - - - - - - - - - - - - -



☐ ADDITIONAL SHEETS ARE ATTACHED

U.S. GOVERNMENT PRINTING OFFICE : 1965 OF—761-748

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

1054-0272-37 APR 11

FEDERAL AVIATION AGENCY

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

Form Approved
Budget Bureau No. 04-R060.1

FOR FAA USE ONLY

OFFICE IDENTIFICATION
SO GADO 5

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE: Grumman	MODEL: G 21A
	SERIAL NO.: B 100	NATIONALITY AND REGISTRATION MARK: N 88 U
2. OWNER	NAME (*As shown on registration certificate*): Dean H. Franklin	ADDRESS (*As shown on registration certificate*): 3923 NW 24 St. Miami, Florida

3. FOR FAA USE ONLY

Inspected by Operator 16

4. UNIT IDENTIFICATION

UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE: REPAIR	5. TYPE: ALTERATION
AIRFRAME	◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆ (*As described in item 1 above*) ◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆				X
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE / MANUFACTURER				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS	B. KIND OF AGENCY	C. CERTIFICATE NO.
R.L. Mallernee 6220 SW 39 Ct. Ft. Lauderdale, Florida	X U.S. CERTIFICATED MECHANIC FOREIGN CERTIFICATED MECHANIC CERTIFICATED REPAIR STATION MANUFACTURER	IA 175516

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

DATE	SIGNATURE OF AUTHORIZED INDIVIDUAL
March 16, 1966	R.L. Mallernee

7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Agency and is ☒ APPROVED ☐ REJECTED

BY						OTHER (*Specify*)
	☐ FAA FLT. STANDARDS INSPECTOR	☐	☐ MANUFACTURER	X	☒ INSPECTION AUTHORIZATION	R
	☐ FAA DESIGNEE	☐	☐ REPAIR STATION	☐	☐ CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	

DATE OF APPROVAL OR REJECTION	CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL
March 16, 1966	IA 175516	R.L. Mallernee

FAA Form 337 (1-65) OBSOLETE PREVIOUS EDITION

0052-025-8000 (8320)

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

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.)*

Folding Seat installed in accordance with drawings #1 and #2 of STC #SA-4-1137.

☐ ADDITIONAL SHEETS ARE ATTACHED

U.S. GOVERNMENT PRINTING OFFICE : 1965 OF—761-748

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

Verified by Operator #7 1050 0733-37 APR 4 '66

FEDERAL AVIATION AGENCY

Form Approved
Budget Bureau No. 04-R060.1

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

Punched by Operator #100

FOR FAA USE ONLY

OFFICE IDENTIFICATION: SO GADO 5

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE: Grumman	MODEL: G 21 A.
	SERIAL NO.: B 100	NATIONALITY AND REGISTRATION MARK: N 88 U
2. OWNER	NAME (As shown on registration certificate): Dean H. Franklin	ADDRESS (As shown on registration certificate): 3923 NW 24 St. Miami, Florida

3. FOR FAA USE ONLY

4. UNIT IDENTIFICATION

UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE: REPAIR	5. TYPE: ALTERATION
AIRFRAME	◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆ (As described in item 1 above) ◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆				X
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS	B. KIND OF AGENCY	C. CERTIFICATE NO.
R.L. Mallernee 6220 SW 39 Ct. Ft. Lauderdale, Florida	X U.S. CERTIFICATED MECHANIC FOREIGN CERTIFICATED MECHANIC CERTIFICATED REPAIR STATION MANUFACTURER	IA 175516

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

DATE	SIGNATURE OF AUTHORIZED INDIVIDUAL
March 1, 1966	R. L. Mallernee

7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Agency and is ☒ APPROVED ☐ REJECTED

BY						
	FAA FLT. STANDARDS INSPECTOR		MANUFACTURER	X	INSPECTION AUTHORIZATION	OTHER (Specify)
	FAA DESIGNEE		REPAIR STATION		CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	

DATE OF APPROVAL OR REJECTION	CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL
March 1, 1966	IA 175516	R. L. Mallernee

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

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.)*

Removed 22D30 Hamilton Props.
Installed Hartzell Props HC-93-W30 as per STC SA1-52

Recovered Wings in accordance with Dean Franklin Aviation Enterprises Drawing #12302-S Titled: Method of using metal covering on Grumman G-21, N3945C Serial #B-49 Dated Sept. 1, 1955.
C.A.A. Engineering approval dated 9-2-1955

Couch Installation in accordance with Dean Franklin Aviation Ent., Inc.
Drawing #A1205-1 Titled: Divan Installation Grumman G-21A (N333F)
C.A.A. Engineering Approval 12/28/55

END

☐ ADDITIONAL SHEETS ARE ATTACHED

U.S. GOVERNMENT PRINTING OFFICE : 1965 OF—761-748

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

DUPLICATE - For FAA 535 1472

Verified by Operator #24

Form approved.
Budget Bureau No. 04-R060.

FEDERAL AVIATION AGENCY

MAJOR REPAIR AND ALTERATION FORM (AIRFRAME, POWERPLANT, PROPELLER OR APPLIANCE)

1. AIRCRAFT	MAKE: Grumman	MODEL: G-21A	SERIAL NO.: B-100	NATIONALITY AND REGISTRATION MARK: N 88U
2. OWNER	NAME (First, middle, last): Windjammer Air Taxi, Inc.	ADDRESS (Street and number, city, zone and State): 203 Wilson Bldg. 220 71 St. Miami Beach 41. Florida		008826

3. COMPLETE ONLY FOR UNIT REPAIRED AND/OR ALTERED. DESCRIBE WORK ACCOMPLISHED ON REVERSE IN ACCORDANCE WITH CIVIL AERONAUTICS MANUAL 18.

UNIT	MAKE	MODEL	SERIAL NO.	NATURE OF WORK (Check) MAJOR REPAIR	MAJOR ALTERATION
a. AIRFRAME	••••••••••••••••••••• (As described in item 1 above) •••••••••••••••••••••				XX
b. POWERPLANT			The repair/alteration identified herein complies with the applicable airworthiness requirements and is approved for the above described aircraft, subject to satisfactory inspection by a person authorized in CAR Part 18, section 18.11 (b).		
c. PROPELLER					
d. APPLIANCE	TYPE AND MANUFACTURER		1/3/64 Date — C Hardy McCarty Signature of FAA Inspector		

4. AIRCRAFT WEIGHT AND BALANCE DATA
*AFTER the repairs and/or alterations described below were made.

This item must be completed by repair or alteration agency. However, in the case of a spare component, it will not be completed until such component is installed in an aircraft. At this time, it will be completed by the installing agency, if applicable.

CATEGORY	EMPTY WEIGHT (Pounds)*	EMPTY CENTER OF GRAVITY (Inches from datum)*	USEFUL LOAD (Pounds)*
Normal	6145	✓ 22.1	1855

5. CONFORMITY STATEMENT (Complete and check)

a. AGENCY'S NAME AND ADDRESS	b. KIND OF AGENCY	c. CERTIFICATE NO.
William N. Kilborn 40 Lilac Lan e Dania, Florida - 33004	☐ U. S. Certificated Mechanic. XX Foreign Certificated Mechanic. ☐ Certificated Repair Station. ☐ Manufacturer. ☐ (Check if repair or alteration was made under delegation option procedures.)	A & P 1402309

d. I certify that the repair and/or alteration made to the unit(s) identified under item 3 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 18 of the U. S. Civil Air Regulations and that the information furnished herein is true and correct to the best of my knowledge.

1/2/64 (Date repair and/or alteration completed) — Wm. N. Kilborn (Signature of authorized individual)

6. APPROVAL FOR RETURN TO SERVICE (Check and complete appropriate items)

Pursuant to the authority specified below the unit identified in item 3 was inspected in the manner prescribed by the Administrator of the Federal Aviation Agency and is

3 ☒ APPROVED ☐ REJECTED BY { ☐ FAA Designee ☐ FAA Flight Standards Inspector ☐ Manufacturer ☐ Repair Station ☐ Canadian Department of Transport Inspector of Aircraft ☒ Other (Specify) Inspection Authorization

1/3/64 (Date of approval or rejection) — Wm. N. Kilborn 1402309 (Signature of authorized individual; title or identification number) RECORDED

7. TO BE COMPLETED ONLY BY FAA PERSONNEL

a. ☐ Forwarded for engineering comment ☐ See attached memorandum

b. ☒ Accepted 1/6/64 (Date) ☐ Reinspected (Date) ☐ Spot Checked JAN 20 1964 (Date) RECORDED

SO GADO 5 (FAA designation number) 7-5 — C Hardy McCarty (Signature Flight Standards Inspector) SO GADO 5

Form FAA-337 (4-52)

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

MICRO

INSTRUCTIONS

This form must be completed in duplicate each time a major repair and/or alteration is made of an aircraft, airframe, powerplant, propeller or appliance. After the repair and/or alteration has been inspected and item 6 completed, the original copy of this form will be made available to the aircraft owner for retention as part of the aircraft records. The duplicate copy is retained by the FAA for administrative purposes.

See CAM 18 for detailed instructions concerning the information to be furnished with this form and instructions concerning its preparation.

8. DESCRIPTION OF WORK ACCOMPLISHED.*

Removed all existing radio equipment, modified instrument panel, and installed radios as follows:

Two ARC T-11B transmitters install ed forward of pilots rudder pedals at arm -46. Transmitter control box mounted under pilot's instru ment panel at arm -21. Transmitting anten na is located just ahead of windshield. Model 888 VOR indicator and Kollsman model 1859 course selector installed in panel at arm -27. ARC 022A control unit installed in panel at arm -26. ARC R-13B reciever and B-10A convertor installed at arm -62, and E-13B rack installed at arm -61 forward of bulkhead 7 on right side. ARC F-10A filter amplifier installed at arm -61. Exi sting recieving antenna was used.

Removed all existi ng seats, replaced floorboards, and installed seats as follows:

Installed 5 seats in cabin at locations shown on attached loading charts. Seats attached to structure same as Grumman original. 3 pl ace lou nge (STC SA2-760) installed on right side of cabin to original Grumman seat attach points, location shown on attached loading charts. Seat bel ts for lou nge attached to original Grumman seat attach points with 1/8" aircraft cable and AN 43 eye bolts.

All work done according to the ap plicable parts of CAM-18.

Weight and balance report and loading charts are attached.

An electrical load analysis was accomplished in accordance with CAM-18.30-12(i). The ammeter reading with all continous loads on was 15 amps. Adding 10% this comes to 16.5 amps. This is within 80% of the cap acity of bo th generators or one alone since this airplane is equipped with two 50 amp generators.

----------END----------

*If additional space is needed attach additional sheets bearing aircraft nationality and registration mark and date work completed.

Check block if additional sheets are attached. ☒

☆ U.S. GOVERNMENT PRINTING OFFICE: 1961 O - 587360

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

Duplicate for FAA

Form approved.
Budget Bureau No 04-R060.

FEDERAL AVIATION AGENCY

MAJOR REPAIR AND ALTERATION FORM (AIRFRAME, POWERPLANT, PROPELLER OR APPLIANCE)

1. AIRCRAFT	MAKE: Grumman	MODEL: G-21A	SERIAL NO.: B-100	NATIONALITY AND REGISTRATION MARK: N 88U
2. OWNER	NAME (*First, middle, last*): Warner H. Kimball	ADDRESS (*Street and number, city, zone and State*): 1420 NE 60 St. Ft. Lauderdale, Florida		

3. COMPLETE ONLY FOR UNIT REPAIRED AND/OR ALTERED. DESCRIBE WORK ACCOMPLISHED ON REVERSE IN ACCORDANCE WITH CIVIL AERONAUTICS MANUAL 18.

UNIT	MAKE	MODEL	SERIAL NO.	NATURE OF WORK (*Check*) MAJOR REPAIR	MAJOR ALTERATION
a. AIRFRAME	(As described in item 1 above)				XX
b. POWERPLANT					
c. PROPELLER					
d. APPLIANCE	TYPE AND MANUFACTURER				

RECEIVED NOV 29 1962 MIAMI, FLA.

The alteration identified herein complies with the applicable airworthiness requirements and is approved only for the above described aircraft subject to conformity inspection by a person authorized in CAR 18.11 (d).

11-26-62 (Date) Walter L Pughe (FAA Inspector)

4. AIRCRAFT WEIGHT AND BALANCE DATA (**AFTER the repairs and/or alterations described below were made.*)

This item must be completed by repair or alteration agency. However, in the case of a spare component, it will not be completed until such component is installed in an aircraft. At this time, it will be completed by the installing agency, if applicable.

CATEGORY	EMPTY WEIGHT (*Pounds*)*	EMPTY CENTER OF GRAVITY (*Inches from datum*)*	USEFUL LOAD (*Pounds*)*
Normal	6645.0	23.0	1355.0

5. CONFORMITY STATEMENT (*Complete and check*)

a. AGENCY'S NAME AND ADDRESS	b. KIND OF AGENCY	c. CERTIFICATE NO.
William N. Kilborn 40 Lilac Lane Dania, Florida	☒ U. S. Certificated Mechanic. ☐ Foreign Certificated Mechanic. ☐ Certificated Repair Station. ☐ Manufacturer. ☐ (Check if repair or alteration was made under delegation option procedures.)	A & P 1402309

d. I certify that the repair and/or alteration made to the unit(s) identified under item 3 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 18 of the U. S. Civil Air Regulations and that the information furnished herein is true and correct to the best of my knowledge.

11/26/62 (Date repair and/or alteration completed)

Wm. N. Kilborn (Signature of authorized individual)

6. APPROVAL FOR RETURN TO SERVICE (*Check and complete appropriate items*)

Pursuant to the authority specified below the unit identified in item 3 was inspected in the manner prescribed by the Administrator of the Federal Aviation Agency and is

☒ APPROVED ☐ REJECTED BY ☐ FAA Designee ☐ FAA Flight Standards Inspector ☐ Manufacturer ☐ Repair Station ☐ Canadian Department of Transport Inspector of Aircraft ☒ Other (*Specify*) Inspection Authorization

11/27/62 (Date of approval or rejection)

Wm. N. Kilborn 1402309 (Signature of authorized individual: title or identification number)

7. TO BE COMPLETED ONLY BY FAA PERSONNEL

a. ☐ Forwarded for engineering comment ☐ See attached memorandum

b. ☒ Accepted 11-26-62 (Date) ☐ Reinspected _____ (Date) ☐ Spot Checked DEC 18 1962 (Date)

SO GADO 5 (FAA designation number)

Walter L Pughe (Signature Flight Standards Inspector)

SO GADO 5

Form FAA-337 (4-52)

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

INSTRUCTIONS

This form must be completed in duplicate each time a major repair and/or alteration is made of an aircraft, airframe, powerplant, propeller or appliance. After the repair and/or alteration has been inspected and item 6 completed, the original copy of this form will be made available to the aircraft owner for retention as part of the aircraft records. The duplicate copy is retained by the FAA for administrative purposes.

See CAM 18 for detailed instructions concerning the information to be furnished with this form and instructions concerning its preparation.

8. DESCRIPTION OF WORK ACCOMPLISHED.*

Installed fire bottle and first aid kit as required for issuance of air taxi certificate as follows:

Fyr-Fyter model 23-3 fire bottle was installed on rear of left rear seat at station 115. Bracket was bolted directly to seat structure.

Aero-Doc first aid and survival kit was installed in rear baggage compartment on right side center at station 169. Compartment door was placarded as to location of kit.

WEIGHT AND BALANCE

Aircraft Empty	6636.5	@	22.6	=	151560.2
Fire Bottle	+ 4.5	@	115.0	=	517.5
First Aid Kit	+ 4.0	@	169.0	=	670.0
	6645.0				152747.7

152747.0/6645.0 = 23.0 New empty weight center of gravity

New empty weight - 6645.0 lbs.
New useful load - 1355.0 lbs. at 8000 lbs. gross weight.
All work done according to CAM-18.30

----------END----------

*If additional space is needed attach additional sheets bearing aircraft nationality and registration mark and date work completed.

Check block if additional sheets are attached. ☐

U.S. GOVERNMENT PRINTING OFFICE: 1961-O-587360

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

U. S. DEPARTMENT OF COMMERCE
CIVIL AERONAUTICS ADMINISTRATION

Form approved.
Budget Bureau No. 41-R052.4.

MAJOR REPAIR AND ALTERATION FORM (AIRFRAME, POWERPLANT, PROPELLER OR APPLIANCE)

1. AIRCRAFT	MAKE: GRUMMAN	MODEL: G21A	SERIAL NO.: B-100	NATIONALITY AND REGISTRATION MARK: N88U
2. OWNER	NAME (*First, middle, last*): Beldex Corp.	ADDRESS (*Street and number, city, zone and State*): Lambert Field, St. Louis 21, Missouri		

3. COMPLETE ONLY FOR UNIT REPAIRED AND/OR ALTERED. DESCRIBE WORK ACCOMPLISHED ON REVERSE IN ACCORDANCE WITH CIVIL AERONAUTICS MANUAL 18:

UNIT	MAKE	MODEL	SERIAL NO.	NATURE OF WORK (*Check*) MAJOR REPAIR	MAJOR ALTERATION
a. AIRFRAME	(*As described in item 1 above*)				
b. POWERPLANT					
PROPELLER					
d. APPLIANCE	TYPE AND MANUFACTURER				

4. AIRCRAFT WEIGHT AND BALANCE DATA **AFTER the repairs and/or alterations described below were made.*

This item must be completed by repair or alteration agency. However, in the case of a spare component, it will not be completed until such component is installed in an aircraft. At this time, it will be completed by the installing agency, if applicable.

CATEGORY	EMPTY WEIGHT (*Pounds*)*	EMPTY CENTER OF GRAVITY (*Inches from datum*)*	USEFUL LOAD (*Pounds*)*
Standard	6682.5	23.1	1518

5. CONFORMITY STATEMENT (*Complete and check*)

a. AGENCY'S NAME AND ADDRESS	b. KIND OF AGENCY	c. CERTIFICATE NO.
Churchill Hungerford III 809 N.E. 11 Ave. Fort Lauderdale Fla.	☒ U. S. Certificated Mechanic. ☐ Foreign Certificated Mechanic. ☐ Certificated Repair Station. ☐ Manufacturer. ☐ (Check if repair or alteration was made under delegation option procedures.)	A&P 1361224

d. I certify that the repair and/or alteration made to the unit(s) identified under item 3 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 18 of the U. S. Civil Air Regulations and that the information furnished herein is true and correct to the best of my knowledge.

3/4/57 (Date repair and/or alteration completed)

Churchill Hungerford III (Signature of authorized individual)

6. APPROVAL FOR RETURN TO SERVICE (*Check and complete appropriate items*)

Pursuant to the authority specified below the unit identified in item 3 was inspected in the manner prescribed by the Administrator and is

☒ APPROVED ☐ REJECTED BY ☐ CAA Designee ☐ CAA Aviation Safety Agent ☐ Manufacturer ☐ Repair Station ☐ Canadian Department of Transport Inspector of Aircraft ☐ Other (*Specify*)

3/7/57 (Date of approval or rejection)

(Signature of authorized individual; title or identification number)

7. TO BE COMPLETED ONLY BY CAA PERSONNEL

a. ☐ Forwarded for engineering comment ☐ See attached memorandum

b. ☐ Accepted _____ (Date) ☐ Reinspected _____ (Date) ☐ Spot Checked _____ (Date)

_____ (CAA designation number)

_____ (Signature Aviation Safety Agent)

16—54010-4

Form ACA-337 (4-52)

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

INSTRUCTIONS

This form must be completed in duplicate each time a major repair and/or alteration is made of an aircraft, airframe, powerplant, propeller or appliance. After the repair and/or alteration has been inspected and item 8 completed, the original copy of this form will be made available to the aircraft owner for retention as part of the aircraft records. The duplicate copy is retained by the CAA for administrative purposes.

See CAM 18 for detailed instructions concerning the information to be furnished with this form and instructions concerning its preparation.

8. DESCRIPTION OF WORK ACCOMPLISHED.*

Aircraft weighed with full gas and full oil

Left Wheel	3860 lbs.
Right Wheel	3695 lbs.
Tail Jack Point	460 lbs

The above readings were taken by Red Aircraft Service, Inc. on 2/27/57.
Computations on attached sheets. Churchill Davenport III A&P 1361222
********** Nothing Follows **********

*If additional space is needed attach additional sheets bearing aircraft nationality and registration mark and date work completed.

Check block if additional sheets are attached. ☐

U. S. GOVERNMENT PRINTING OFFICE 16—54010-4

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

Form approved.
Budget Bureau No. 41-R052.4.

FEDERAL AVIATION AGENCY

MAJOR REPAIR AND ALTERATION FORM (AIRFRAME, POWERPLANT, PROPELLER OR APPLIANCE)

	MAKE	MODEL	SERIAL NO.	NATIONALITY AND REGISTRATION MARK
1. AIRCRAFT	Grumman	G-21 A	B -100	N88U

	NAME (First, middle, last)	ADDRESS (Street and number, city, zone and State)
2. OWNER	MANUFACTURORS NATIONAL BANK of DETRIOT	DETRIOT , MICH.

3. COMPLETE ONLY FOR UNIT REPAIRED AND/OR ALTERED. DESCRIBE WORK ACCOMPLISHED ON REVERSE IN ACCORDANCE WITH CIVIL AERONAUTICS MANUAL 18.

UNIT	MAKE	MODEL	SERIAL NO.	NATURE OF WORK (Check) MAJOR REPAIR	MAJOR ALTERATION
a. AIRFRAME	********** (As described in item 1 above) **********			X	
b. POWERPLANT					
c. PROPELLER					
d. APPLIANCE	TYPE AND MANUFACTURER				

RECEIVED SEP 14 1961 GSDO-2-21

RECEIVED OCT 2 1961 FAA REG 2 Maintenance Branch FLIGHT STANDARDS DIVISION

4. AIRCRAFT WEIGHT AND BALANCE DATA
*AFTER the repairs and/or alterations described below were made.

This item must be completed by repair or alteration agency. However, in the case of a spare component, it will not be completed until such component is installed in an aircraft. At this time, it will be completed by the installing agency, if applicable.

CATEGORY	EMPTY WEIGHT (Pounds)*	EMPTY CENTER OF GRAVITY (Inches from datum)*	USEFUL LOAD (Pounds)*
NORMAL	6636.5	22.6"	1363.5

5. CONFORMITY STATEMENT (Complete and check)

a. AGENCY'S NAME AND ADDRESS	b. KIND OF AGENCY	c. CERTIFICATE NO.
EDW. T. THELEN 1718 No. 9th Ave. Lake Worth , Fla.	X U. S. Certificated Mechanic. ☐ Foreign Certificated Mechanic. ☐ Certificated Repair Station. ☐ Manufacturer. ☐ (Check if repair or alteration was made under delegation option procedures.)	1066725 A&E

d. I certify that the repair and/or alteration made to the unit(s) identified under item 3 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 18 of the U. S. Civil Air Regulations and that the information furnished herein is true and correct to the best of my knowledge.

9-8-61 (Date repair and/or alteration completed)

Edward T. Thelen (Signature of authorized individual)

6. APPROVAL FOR RETURN TO SERVICE (Check and complete appropriate items)

Pursuant to the authority specified below the unit identified in item 3 was inspected in the manner prescribed by the Administrator of the Federal Aviation Agency and is

☒ APPROVED ☐ REJECTED } BY { ☐ FAA Designee ☐ Manufacturer ☐ Canadian Department of Transport Inspector of Aircraft ☐ FAA Flight Standards Inspector ☐ Repair Station ☒ Other (Specify) Delegation Authorization

9/10/1961 (Date of approval or rejection) Vincent Fette (Signature of authorized individual) MI7264 (title or identification number)

7. TO BE COMPLETED ONLY BY FAA PERSONNEL

a. ☐ Forwarded for engineering comment ☐ See attached memorandum

b. ☒ Accepted 9-14-61 (Date) ☐ Reinspected _____ (Date) ☐ Spot Checked _____ (Date)

Reg. 2 FW
ASDO 21 (FAA designation number)

Sherman L. Linkous (Signature Flight Standards Inspector)

A.C.U. OCT 17 1961 E.D.

SW-2

16—54010-5 Form FAA-337 (4-52)

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

INSTRUCTIONS

This form must be completed in duplicate each time a major repair and/or alteration is made of an aircraft, airframe, powerplant, propeller or appliance. After the repair and/or alteration has been inspected and item 6 completed, the original copy of this form will be made available to the aircraft owner for retention as part of the aircraft records. The duplicate copy is retained by the FAA for administrative purposes.

See CAM 18 for detailed instructions concerning the information to be furnished with this form and instructions concerning its preparation.

8. DESCRIPTION OF WORK ACCOMPLISHED.*

Recovered : Right Aileron
Left Aileron
Right Elevator
Left Elevator
Rudder

TSO-C15

Grade "A" Fabric and finishing tape, & Nitrate Dope used on this repair
The above repair and procedurenwas accomplished in accordance with
CAM#18, 5 coats clear dope, 4 coats aluminum pigmented dope.

Edward T. Heller
AE # 1066725

OKLAHOMA CITY, OKLA.
OCT 9 2 02 PM '85

*If additional space is needed attach additional sheets bearing aircraft nationality and registration mark and date work completed.
Check block if additional sheets are attached. ☐

U.S. GOVERNMENT PRINTING OFFICE 16—64010-5

Form FAA-337 (4-52)

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

U. S. DEPARTMENT OF COMMERCE
CIVIL AERONAUTICS ADMINISTRATION

Form approved.
Budget Bureau No. 41-R052.4.

DEC 1 - 19

MAJOR REPAIR AND ALTERATION FORM (AIRFRAME, POWERPLANT, PROPELLER OR APPLIANCE)

	MAKE	MODEL	SERIAL NO.	NATIONALITY AND REGISTRATION MARK
1. AIRCRAFT	Grumman	G-21A	B-100	N88U

	NAME (First, middle, last)	ADDRESS (Street and number, city, zone and State)
2. OWNER	Joe Speidel III	RFD #4 Wheeling West Virginia

3. COMPLETE ONLY FOR UNIT REPAIRED AND/OR ALTERED. DESCRIBE WORK ACCOMPLISHED ON REVERSE IN ACCORDANCE WITH CIVIL AERONAUTICS MANUAL 18.

UNIT	MAKE	MODEL	SERIAL NO.	NATURE OF WORK (Check) MAJOR REPAIR	MAJOR ALTERATION
a. AIRFRAME	(As described in item 1 above)				XXX
b. POWERPLANT					
PROPELLER					
d. APPLIANCE	TYPE AND MANUFACTURER				

The data identified herein complied with applicable airworthiness requirements and is approved only for the [illegible] subject to conformity inspection by a person authorized [illegible] 18.11 (b).

12/3/58
Date

CAA Inspector

4. AIRCRAFT WEIGHT AND BALANCE DATA
*AFTER the repairs and/or alterations described below were made.

This item must be completed by repair or alteration agency. However, in the case of a spare component, it will not be completed until such component is installed in an aircraft. At this time, it will be completed by the installing agency, if applicable.

CATEGORY	EMPTY WEIGHT (Pounds)*	EMPTY CENTER OF GRAVITY (Inches from datum)*	USEFUL LOAD (Pounds)*
Normal	6636.5	22.6"	1363.5

5. CONFORMITY STATEMENT (Complete and check)

a. AGENCY'S NAME AND ADDRESS	b. KIND OF AGENCY	c. CERTIFICATE NO.
F. C. Jackson Red Aircraft Serv. Inc. 300 S.W. 34th Street Fort Lauderdale, Florida	☒ U. S. Certificated Mechanic. ☐ Foreign Certificated Mechanic. ☐ Certificated Repair Station. ☐ Manufacturer. ☐ (Check if repair or alteration was made under delegation option procedures.)	1212874

d. I certify that the repair and/or alteration made to the unit(s) identified under item 3 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 18 of the U. S. Civil Air Regulations and that the information furnished herein is true and correct to the best of my knowledge.

11/29/58
(Date repair and/or alteration completed)

Frederick C Jackson
(Signature of authorized individual)

6. APPROVAL FOR RETURN TO SERVICE (Check and complete appropriate items)

Pursuant to the authority specified below the unit identified in item 3 was inspected in the manner prescribed by the Administrator and is

☒ APPROVED ☐ REJECTED } BY { ☐ CAA Designee ☐ CAA Aviation Safety Agent ☐ Manufacturer ☐ Repair Station ☐ Canadian Department of Transport Inspector of Aircraft ☒ Other (Specify) Insp. Auth.

[redacted] DEC 5 1958
(Date of approval or rejection)

Frederick C Jackson 1212874
(Signature of authorized individual; title or identification number)

7. TO BE COMPLETED ONLY BY CAA PERSONNEL

a. ☐ Forwarded for engineering comment ☐ See attached memorandum

b. ☐ Accepted _____ (Date) ☐ Reinspected _____ (Date) ☒ Spot Checked 12/5/58 (Date)

Reg. 2 FW (Data)
ASDO 13
(CAA designation number)

(Signature Aviation Safety Agent)

USCOMM-DC 32277 DEE ACO FEB 2 1959 Form ACA-337 (4-52)

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

INSTRUCTIONS

This form must be completed in duplicate each time a major repair and/or alteration is made of an aircraft, airframe, powerplant, propeller or appliance. After the repair and/or alteration has been inspected and item 6 completed, the original copy of this form will be made available to the aircraft owner for retention as part of the aircraft records. The duplicate copy is retained by the CAA for administrative purposes.

See CAM 18 for detailed instructions concerning the information to be furnished with this form and instructions concerning its preparation.

8. DESCRIPTION OF WORK ACCOMPLISHED.*

1. Removed - 1. Item 221 (engine work shelf) 9# @ 189"
2. Item 205 (b) (2 writing tables) 20# @ 79"
3. 17E-2 Collins Transmitter 57# @ 35

2. Removed fabric from wings and installed .025 24ST anadized alclad in accordance with drawing #RAS 104 and code and procedure sheet #RAS 104A approved by CAA on 4-27-55, weight change + 40# at + 60".

	Weight	Arm	Moment
Old EWCG	6682.5	23.9	154436.20
Remove Item 221	- 9	189	- 1701.0
Remove Item 205 (b)	- 20	79	- 1580.0
Remove 17E-2	- 57	35	- 1995.0
Add metal wings	+ 40	60	+ 2400.
	6636.5		151560.2

New empty wt. - 6636.5
New empty cg - 22.6"
New useful load - 1363.5

RECEIVED
CAA REG II

*If additional space is needed attach additional sheets bearing aircraft nationality and registration mark and date work completed.

Check block if additional sheets are attached. ☐

USCOMM-DC 32277

Form ACA-337 (4-52)

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

U. S. DEPARTMENT OF COMMERCE
CIVIL AERONAUTICS ADMINISTRATION

Form approved.
Budget Bureau No. 41-R052.4.

MAJOR REPAIR AND ALTERATION FORM (AIRFRAME, POWERPLANT, PROPELLER OR APPLIANCE)

1. AIRCRAFT	MAKE: GRUMMAN	MODEL: JRF-6	SERIAL NO.: B-100	NATIONALITY AND REGISTRATION MARK: N 88U
2. OWNER	NAME (*First, middle, last*): BELDEX CORPORATION	ADDRESS (*Street and number, city, zone and State*): LAMBERT FIELD ST. LOUIS 21,MO.		

3. COMPLETE ONLY FOR UNIT REPAIRED AND/OR ALTERED. DESCRIBE WORK ACCOMPLISHED ON REVERSE IN ACCORDANCE WITH CIVIL AERONAUTICS MANUAL 18.

UNIT	MAKE	MODEL	SERIAL NO.	NATURE OF WORK (*Check*) MAJOR REPAIR	MAJOR ALTERATION
a. AIRFRAME	(*As described in item 1 above*)			XXXX	
b. POWERPLANT					
c. PROPELLER					
d. APPLIANCE	TYPE AND MANUFACTURER				

4. AIRCRAFT WEIGHT AND BALANCE DATA
**AFTER the repairs and/or alterations described below were made.*

This item must be completed by repair or alteration agency. However, in the case of a spare component, it will not be completed until such component is installed in an aircraft. At this time, it will be completed by the installing agency, if applicable.

CATEGORY	EMPTY WEIGHT (*Pounds*)*	EMPTY CENTER OF GRAVITY (*Inches from datum*)*	USEFUL LOAD (*Pounds*)*
STANDARD	6682.5 lbs.	∮ 23.1 "	1318 lbs.

5. CONFORMITY STATEMENT (*Complete and check*)

a. AGENCY'S NAME AND ADDRESS	b. KIND OF AGENCY	c. CERTIFICATE NO.
LIND R. BENGE POMPANO BEACH AIRPORT POMPANO BEACH,FLORIDA	☒ U. S. Certificated Mechanic. ☐ Foreign Certificated Mechanic. ☐ Certificated Repair Station. ☐ Manufacturer. ☐ (Check if repair or alteration was made under delegation option procedures.)	A&E 681789

I certify that the repair and/or alteration made to the unit(s) identified under item 3 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 18 of the U. S. Civil Air Regulations and that the information furnished herein is true and correct to the best of my knowledge.

12-12-57
(Date repair and/or alteration completed)

Lind R. Benge
(Signature of authorized individual)

6. APPROVAL FOR RETURN TO SERVICE (*Check and complete appropriate items*)

Pursuant to the authority specified below the unit identified in item 3 was inspected in the manner prescribed by the Administrator and is

XX APPROVED ☐ REJECTED } BY { ☐ CAA Designee ☐ CAA Aviation Safety Agent ☐ Manufacturer ☐ Repair Station ☐ Canadian Department of Transport Inspector of Aircraft XX Other (*Specify*) Insp. Autho.

12-12-57
(Date of approval or rejection)

Lind R. Benge 681789
(Signature of authorized individual; title or identification number)

7. TO BE COMPLETED ONLY BY CAA PERSONNEL

a. ☐ Forwarded for engineering comment ☐ See attached memorandum

b. ☑ Accepted 12/19/57 (Date) ☐ Reinspected (Date) ☐ Spot Checked (Date)

Reg. 2 FW
ASDO 12
(CAA designation number)

(Signature, Aviation Safety Agent)

166

Form ACA-337 (4-52)

16—54010-4

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

INSTRUCTIONS

This form must be completed in duplicate each time a major repair and/or alteration is made of an aircraft, airframe, powerplant, propeller or appliance. After the repair and/or alteration has been inspected and item 6 completed, the original copy of this form will be made available to the aircraft owner for retention as part of the aircraft records. The duplicate copy is retained by the CAA for administrative purposes.

See CAM 18 for detailed instructions concerning the information to be furnished with this form and instructions concerning its preparation.

8. DESCRIPTION OF WORK ACCOMPLISHED:*

Recovered right wing top from Sta. 196 to 226. Left wing top from Sta. 86 5/16 to Sta. 123. Grade "A" fabric and finishing tape and cellulose acetate buyrate dope was used in this repair. The above repair and procedure was accomplished in accordance with 18.30-3-(c)-(4) and 18.30-3-(d)-(5) of CAM 18.

-------End--------

*If additional space is needed attach additional sheets bearing aircraft nationality and registration mark and date work completed.

Check block if additional sheets are attached. ☐

U. S. GOVERNMENT PRINTING OFFICE 16—54010-4

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

U. S. DEPARTMENT OF COMMERCE
CIVIL AERONAUTICS ADMINISTRATION

Form approved.
Budget Bureau No. 41-R052.4.

MAJOR REPAIR AND ALTERATION FORM (AIRFRAME, POWERPLANT, PROPELLER OR APPLIANCE)

1. AIRCRAFT	MAKE: Grumman Goose	MODEL: JRF-6	SERIAL NO.: B-100	NATIONALITY AND REGISTRATION MARK: N 88U
2. OWNER	NAME (*First, middle, last*): Beldex Corporation	ADDRESS (*Street and number, city, zone and State*): Lambert Field St. Louis, Missouri		

3. COMPLETE ONLY FOR UNIT REPAIRED AND/OR ALTERED. DESCRIBE WORK ACCOMPLISHED ON REVERSE IN ACCORDANCE WITH CIVIL AERONAUTICS MANUAL 18.

UNIT	MAKE	MODEL	SERIAL NO.	NATURE OF WORK (*Check*) MAJOR REPAIR	MAJOR ALTERATION
a. AIRFRAME	(As described in item 1 above)				
b. POWERPLANT	Pratt & Whitney	R985-14B	19387	XXXXX	
PROPELLER					
d. APPLIANCE	TYPE AND MANUFACTURER				

4. AIRCRAFT WEIGHT AND BALANCE DATA
**AFTER the repairs and/or alterations described below were made.*

This item must be completed by repair or alteration agency. However, in the case of a spare component, it will not be completed until such component is installed in an aircraft. At this time, it will be completed by the installing agency, if applicable.

CATEGORY	EMPTY WEIGHT (*Pounds*)*	EMPTY CENTER OF GRAVITY (*Inches from datum*)*	USEFUL LOAD (*Pounds*)*
Std	6682.5	23.1	1318

5. CONFORMITY STATEMENT (*Complete and check*)

a. AGENCY'S NAME AND ADDRESS	b. KIND OF AGENCY	c. CERTIFICATE NO.
Engine Works, Incorporated Lambert Field St. Louis 21, Missouri	☐ U. S. Certificated Mechanic ☐ Foreign Certificated Mechanic. XX Certificated Repair Station. ☐ Manufacturer. ☐ (Check if repair or alteration was made under delegation option procedures.)	3933

d. I certify that the repair and/or alteration made to the unit(s) identified under item 3 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 18 of the U. S. Civil Air Regulations and that the information furnished herein is true and correct to the best of my knowledge.

February 25, 1956 (Date repair and/or alteration completed)

Jesse F. Napier (Signature of authorized individual) E341467

6. APPROVAL FOR RETURN TO SERVICE (*Check and complete appropriate items*)

Pursuant to the authority specified below the unit identified in item 3 was inspected in the manner prescribed by the Administrator and is

☒ APPROVED ☐ REJECTED } BY { ☐ CAA Designee ☐ CAA Aviation Safety Agent ☐ Manufacturer XX ☒ Repair Station ☐ Canadian Department of Transport Inspector of Aircraft ☐ Other (*Specify*) acc

February 25, 1956 (Date of approval or rejection)

Ernest John Hemfeld (Signature of authorized individual; Canadian inspector)
Ernest

7. TO BE COMPLETED ONLY BY CAA PERSONNEL

a. ☐ Forwarded for engineering comment ☐ See attached memorandum

b. ☑ Accepted 3/4/57 (Date) ☐ Reinspected _____ (Date) ☐ Spot Checked _____ (Date)

_____ (CAA designation number)

J. E. Lang Reg. 2 FW (Signature Aviation Safety Agent)

Form ACA-337 (4-52)

16—54010-4

INSTRUCTIONS

This form must be completed in duplicate each time a major repair and/or alteration is made of an aircraft, airframe, powerplant, propeller or appliance. After the repair and/or alteration has been inspected and item 6 completed, the original copy of this form will be made available to the aircraft owner for retention as part of the aircraft records. The duplicate copy is retained by the CAA for administrative purposes.

See CAM 18 for detailed instructions concerning the information to be furnished with this form and instructions concerning its preparation.

8. DESCRIPTION OF WORK ACCOMPLISHED.*

Engine, magnetos, carburetor, ignition harness given major overhaul. All steel parts magnetic inspected. Inspected all aluminum alloy parts. Incorporated Pratt and Whitney service bulletin #1488 on crankshaft thrust nut threads. Engine run on test stand three and one-half hours. Engine preserved for long time storage.

12-21-56
Removed crankshaft from engine. Reworked crankshaft thrust bearing nut threads on crankshaft to 14F-56 as per Pratt & Whitney service bulletin #1488, revision B, or Ad note 56-23-2.

Reassemble engine and run on test stand 1 3/4 hours.
Crankshaft number 100341.

*If additional space is needed attach additional sheets bearing aircraft nationality and registration mark and date work completed.

Check block if additional sheets are attached. ☐

U. S. GOVERNMENT PRINTING OFFICE 16—54010-4

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

U. S. DEPARTMENT OF COMMERCE
CIVIL AERONAUTICS ADMINISTRATION

Form approved.
Budget Bureau No. 41-R052.4.

MAJOR REPAIR AND ALTERATION FORM (AIRFRAME, POWERPLANT, PROPELLER OR APPLIANCE)

	MAKE	MODEL	SERIAL NO.	NATIONALITY AND REGISTRATION MARK
1. AIRCRAFT	Grumman Goose	JRF-6		

	NAME (First, middle, last)	ADDRESS (Street and No., city, zone and State)
2. OWNER	Beldex Corporation	Lambert Field St. Louis, Mo. 88 U

3. COMPLETE ONLY FOR UNIT REPAIRED AND/OR ALTERED. DESCRIBE WORK ACCOMPLISHED ON REVERSE IN ACCORDANCE WITH CIVIL AERONAUTICS MANUAL 18.

UNIT	MAKE	MODEL	SERIAL NO.	NATURE OF WORK (Check) MAJOR REPAIR	MAJOR ALTERATION
a. AIRFRAME	(As described in item 1 above)				
b. POWERPLANT	Pratt & Whitney	R985AN14B	JP 210202	XXXXX	
c. PROPELLER					
d. APPLIANCE	TYPE AND MANUFACTURER				

4. AIRCRAFT WEIGHT AND BALANCE DATA
*AFTER the repairs and/or alterations described below were made.

This item must be completed by repair or alteration agency. However, in the case of a spare component, it will not be completed until such component is installed in an aircraft. At this time, it will be completed by the installing agency, if applicable.

CATEGORY	EMPTY WEIGHT (Pounds)*	EMPTY CENTER OF GRAVITY (Inches from datum)*	USEFUL LOAD (Pounds)*
Std.	6682.5	93.1	1318

5. CONFORMITY STATEMENT (Complete and check)

a. AGENCY'S NAME AND ADDRESS	b. KIND OF AGENCY	c. CERTIFICATE NO.
Engine Works, Incorporated Lambert Field St. Louis 21, Missouri	☐ U. S. Certificated Mechanic. ☐ Foreign Certificated Mechanic. ☒ Certificated Repair Station. ☐ Manufacturer. ☐ (Check if repair or alteration was made under delegation option procedures.)	3933

d. I certify that the repair and/or alteration made to the unit(s) identified under item 3 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 18 of the U. S. Civil Air Regulations and that the information furnished herein is true and correct to the best of my knowledge.

May 3, 1953 (Date repair and/or alteration completed)

Jesse F. Napier (Signature of authorized individual) E341467

6. APPROVAL FOR RETURN TO SERVICE (Check and complete appropriate items)

Pursuant to the authority specified below the unit identified in item 3 was inspected in the manner prescribed by the Administrator and is

☒ APPROVED ☐ REJECTED } BY { ☐ CAA Designee ☐ Manufacturer ☐ Canadian Department of Transport Inspector of Aircraft ☐ CAA Aviation Safety Agent ☒ Repair Station ☐ Other (Specify)

May 3, 1953 (Date of approval or rejection)

Emmet John Hornfeld (Signature of authorized individual) Chief Inspector

7. TO BE COMPLETED ONLY BY CAA PERSONNEL

a. ☐ Forwarded for engineering comment ☐ See attached memorandum

b. ☑ Accepted 3/4/53 (Date) ☐ Reinspected _____ (Date) ☐ Spot Checked _____ (Date)

Reg. 2 FW
ASDO 13 (CAA designation number)

M. E. Long (Signature Aviation Safety Agent) Reg. 2 FW ASDO 13

16—54010-4

Form ACA-337 (4-52)

INSTRUCTIONS

This form must be completed in duplicate each time a major repair and/or alteration is made of an aircraft, airframe, powerplant, propeller or appliance. After the repair and/or alteration has been inspected and item 6 completed, the original copy of this form will be made available to the aircraft owner for retention as part of the aircraft records. The duplicate copy is retained by the CAA for adininistrative purposes.

See CAM 18 for detailed instructions concerning the information to be furnished with this form and instructions concerning its preparation.

6. DESCRIPTION OF WORK ACCOMPLISHED.*

Tjis is to certify that Pratt & Whitney R985-AN14B engine, s/n JP 210202, was completely major overhauled. All steel parts in same were magnetic inspected. All parts replaced in engine were factory approved parts.

New piston rings
New supercharger bearings pins, and locks.
New master rod bearing
New piston pin bushings and knuckle pin bushings
New piston pins
New cam reduction gear
New oil seal rings
New front main bearing
New rear main bearing
New vertical drive gear bearings
New 7MM ignition wire
Replaced #3, 7 and 9 pistons
Bosch magnetos overhauled and beach tested.
Engine preserved for long time storage.

12-21-56
Removed crankshaft from engine. Reworked crankshaft thrust bearing nut threads on crankshaft to 14F-56, as per Pratt & Whitney service bulletin #1488, revision B, or Ad note 56-23-2.
Reassemble engine and run on test stand 1 3/4 hours.
Crankshaft number C1672.

*If additional space is needed attach additional sheets bearing aircraft nationality and registration mark and date work completed.

Check block if additional sheets are attached. ☐

U. S. GOVERNMENT PRINTING OFFICE : 16—54010-4

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

994-1302

DEPARTMENT OF COMMERCE
CIVIL AERONAUTICS ADMINISTRATION

FORM APPROVED
BUDGET BUREAU NO 41-R967.3.

APPLICATION AND AUTHORIZATION FOR FERRY PERMIT

1. APPLICATION

INSTRUCTIONS: Submit in duplicate to authorized Civil Aeronautics Administration representative or designated manufacturing inspection representative.

DESCRIPTION OF AIRCRAFT

REGISTERED IN NAME OF	ADDRESS
Dean H. Franklin	3923 NW 24th Street, Miami, Fla.
MAKE	**MODEL**
Grumman	G21A
MANUFACTURER'S SERIAL NO.	**IDENTIFICATION MARK**
B100	N88U

DESCRIPTION OF FLIGHT

FROM	TO
Miami, Florida	Sebring, Florida
VIA	**DATE** / **DURATION**
Direct	10-8-65 / [redacted] hrs. 3 days

PURPOSE

Engine change at Eighth Air Depot, Sebring, Florida.

I HEREBY request authority to ferry the above-described aircraft for the flight specified.

Robert J. Paquette (SIGNATURE OF APPLICANT) — General Manager (TITLE) — 10/8/65 (DATE)

2. AUTHORIZATION

INSTRUCTIONS: Retain this authorization in aircraft for duration of flight. This is your authority to conduct the flight requested above. This permit is valid until landing is effected at the destination indicated in your request, provided the aircraft is flown by a properly certified crew, is operated in accordance with applicable Civil Air Regulations, and in accordance with the following special limitations:

1. The carriage of cargo or persons other than the crew necessary for the purpose of the flight is prohibited.
2. Flight to be conducted under Day Visual Flight Rules only.
3. The purpose of this flight is for moving the above identified aircraft from Miami to Sebring where engine change can more advantageously be accomplished.
4. Flight over congested areas is prohibited.
5. The aircraft will be inspected by a certificated mechanic or repair station and a notation made below or in the aircraft logbook that the aircraft is safe for the intended flight.
6. This authorization expires upon arrival at destination and is not valid after 10-11-65.

REMARKS:

I have inspected the above identified aircraft and found it safe for the flight intended.

Name Robert J. Paquette Cert. No. AE1175134 Date 10/8/65

DATE ISSUED	SIGNATURE OF CAA REPRESENTATIVE	~~EXAMINER~~ NO.
10-8-65	J B Beals	SO-EADO-5

USCOMM-DC 30874

Form ACA-1779 (3-47)

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

WEIGHT AND BALANCE REPORT

MAKE	MODEL	SERIAL NUMBER	REGISTRATION AND CLASSIFICATION	DATE OF REVISION
GRUMMAN	G_21A	B-100	N 88 U	3/2/57

DATUM USED :- WING LEADING EDGE AT FUSELAGE

LEVELING MEANS :- LUGS ON RIGHT SIDE AND AFT BULKHEAD OF PILOTS COMPARTM

WEIGHES USED ARE :- ACTUAL X YES COMPUTED YES STANDARD WEIGHT:.....

(A) EMPTY WEIGHT AND ECG. COMPUTATIONS

WEIGHT POINT	SCALE READING	TARE	NET WEIGHT
RIGHT	3695		3695
LEFT	3860		3860
~~NOSE~~ TAIL	460		460
TOTAL			8015

LIQUID CONTAINERS
~~HYDRAULIC-FULL - EMPTY~~
FUEL - FULL - ~~EMPTY~~
~~UNUSABLE~~
COOLANT - ~~RADIATOR~~
~~FULL EMPTY~~
OIL - ~~FULL EMPTY~~

ARM OF RIGHT WEIGHT POINT (MAIN WHEEL) 8 1/4

ARM OF LEFT WEIGHT POINT (MAIN WHEEL) 8 1/4

ARM OF NOSE OR TAIL WEIGHT POINT (NOSE OR TAIL WHEEL) 284 3/4

DISTANCE BETWEEN WEIGHT POINTS (WHEEL BASE) 276 1/2

NOSE OR TAIL WEIGHT X WHEEL BASE ÷ TOTAL NET WEIGHT = ECG. FROM MAIN WEIGHT POINTS

ECG. FROM MAIN WEIGHT POINTS = 4.83
ARM OF MAIN WEIGHT POINTS = 8.25
ECG. FROM DATUM LINE = 13.08 ECG. .....13.08.....

(B) COMPUTING NEW ECG. AND EMPTY WEIGHT FOR EQUIPMENT CHANGES

EQUIPMENT LIST	WEIGHT	ARM	MOMENT
1. AIRPLANE	8027.5	13.08	104836.20
2. REMOVING OIL	- 112.5	+8	10000
3. Remove Gas	1320	+30	39600
4.			
5.			
6.			
7.			
8.			
9.			
10.			
TOTAL	6682.5		154436.20

NEW EMPTY WEIGHT 6682.5 NEW ECG. 23.1

ECG. RANGE 20.5 TO 33.0

166'

ENT

GRUMMAN GOOSE G 1A B 100 N88U 3/[illegible]7

FORWARD C.G.

WEIGHT	6682.5	23.4	154436.2
PILOT	170	-5	-850
COPILOT	170	-5	-850
OIL	112.5	8	10000
FUEL(min)	450	30	13500
	7585.0		177956.20 23.4

REARWARD C.G.

WEIGHT	6682.5	23.4	154436.20
PILOT	170	5	850
OIL	112.5	8	10000
FUEL(min)	450	30	13500
PASSENGER	170	62	10540
PASSENGER	340	102	34680
BAGGAGE	75	169	12675
	8000		254851.20 29.5

C.G. LIMITS 20.5 TO 33.0
ALL LOADING WITH IN LIMITS
EMPTY WEIGHT 6682.5
USEFUL LOAD 1318
EMPTY C.G. 23.4

16

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

LOADING SCHEDULES

1 Note: APPROVED FORWARD EXTREME 20.5 NOTE APPROVED REARWARD EXTREME 33.0

ITEM	WEIGHT	ARM	MOMENT	
AIRCRAFT EMPTY	6682.5	23.1	154436.20	
PILOT	170	-5	850	
CREW	170	-5	850	
OIL	112.5	+8	10000	22.8
FUEL 100GAL	600	+30	18000	
BAGGAGE				
PASSENGER				
PASSENGER				
TOTAL	77350		184136.20	

LOADING SCHEDULES

2

ITEM	WEIGHT	ARM	MOMENT	
AIRCRAFT EMPTY	6682.5	23.1	154436.20	
PILOT	170	-5	850	
CREW	170	-5	850	
OIL	112.5	+8	10000	24.7
FUEL 100GAL	600	+30	18000	
BAGGAGE	50	+169	8450	
PASSENGER	170	+24	4080	
PASSENGER				
TOTAL	79550		196666.20	

LOADING SCHEDULES

3

ITEM	WEIGHT	ARM	MOMENT	
AIRCRAFT EMPTY	6682.5	23.1	154436.20	
PILOT	170	-5	850	
CREW	170	-5	850	26.5
OIL	112.5	+8	10000	
FUEL 120 GAL	720	+30	21600	
BAGGAGE	145	+169	24505	
PASSENGER				
PASSENGER				
TOTAL	8000		212241.20	16.3

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11 22 - 85

LOADING SCHEDULES

1 Note: APPROVED FORWARD EXT. 20.5 Note: APPROVED REARWARD EXT. 33.0

ITEM	WEIGHT	ARM	MOMENT
AIRCRAFT EMPTY	6682.5	23.1	154436.20
PILOT	170	-5	850
CREW			
OIL	112.5	+8	1000.0
FUEL 100GAL	600	+30	18000
BAGGAGE			
PASSENGER	170	+24	4080
PASSENGER	170	+62	10540
TOTAL	7905		197906.20

25.0

LOADING SCHEDULES

2

ITEM	WEIGHT	ARM	MOMENT
AIRCRAFT EMPTY	6682.5	23.1	154436.20
PILOT	170	-5	850
CREW			
OIL	112.5	+8	10000
FUEL 150GAL	900	+30	27000
BAGGAGE	135	+169	22815
PASSENGER			
PASSENGER			
TOTAL	8000		215101.20

26.8

LOADING SCHEDULES

3

ITEM	WEIGHT	ARM	MOMENT
AIRCRAFT EMPTY	6682.5	23.1	154436.20
PILOT	170	-5	850
CREW			
OIL	112.5	+8	10000
FUEL 172GAL	1032	+30	30960
BAGGAGE	3	+169	507
PASSENGER			
PASSENGER			
TOTAL	8000		196753.20

24.5

24.6

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

GRUMMAN GOOSE G-21A B-100 N 88U

ITEM		WEIGHT	ARM
302	Two controllable metal (Ham. Std.) Hubs ~~2930~~ Left T15940 Right N57865; Blades 6167A-12	308	-52
101	Two engine ring cowls	56	-36
102	Two oil radiators VAP No. U3160	26	0
103	Two starters E-80	77	-12
108	Press. fire ext. (Lux Type A-1)	21	-33
111	Two P&W Engines Model R985-14B		
106	Two main wheel brake assemblies 30 x 7, Type II with 32 x 8 10-ply rating tires (a) Bendix Type B (b) Goodrich (formerly Hayes) Model 3070A wheel assy. G-3-56A Brake assy. H-2-102		
110	Wing tip floats (Edo N-1760)	87	
229	Electrically or manually controlled landing gear retracting mechanism	43	- 5
305	12.50 in smooth contour tail wheel with Goodrich 6-ply special H.D. tire		
203	Generator 50 amp (Eclipse E-5)	17	-23
105	Battery, 38 amp hour	37-1/2	- 7
	One ARC Omni	9	+29
	One Range Receiver 274N	9	+23
	One ADF ARN-7	43	+31
	One 17E-2 Transmitter, Collins	57	+35
	Two T-11 Transmitter ARC	6-1/2	+40
215	Landing light, left wing	8	+60
205	Two chairs	60	+62
	(b) Writing table (2)	20	+79
	(c) Two chairs	60	+102
206	Toilet	10	+184
225	Cabin heater manifold	9	
217	Anchor 12 lbs. & 100 ft. manila 1-3/4 line.	19	-88
218	Portable fire extinguisher	8	+183
221	Engine work shelf	9	+189
	One ADF Inverter	21-3/4	+185

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

U. S. DEPARTMENT OF COMMERCE
CIVIL AERONAUTICS ADMINISTRATION

APPLICATION FOR AIRWORTHINESS CERTIFICATE AND/OR ANNUAL INSPECTION OF AN AIRCRAFT

Form Approved. Budget Bureau No. 41-R041.5.

INSTRUCTIONS
Please print or type. Submit this form to the Civil Aeronautics Administration Aviation Safety Field Representative.

1. TYPE OF APPLICATION (*Check which*)

a. ☑ ORIGINAL ISSUANCE OF CERTIFICATE
b. ☐ ANNUAL INSPECTION FOR RENEWAL OF CERTIFICATE
c. ☐ AMENDMENT OR MODIFICATION OF CURRENT CERTIFICATE
d. ☐ RECERTIFICATION UNDER THE PROVISIONS OF CAR 8
e. ☐ MULTIPLE CERTIFICATE UNDER THE PROVISIONS OF CAR 8
f. ☐

2. AIRWORTHINESS CLASSIFICATION (*Check appropriate item(s)*)
It is requested that the Certificate of Airworthiness be issued to permit operation of the aircraft in the following airworthiness classification(s):

a. ☑ STANDARD (NORMAL, UTILITY, ACROBATIC, TRANSPORT CATEGORIES)
b. ☐ LIMITED (SEE CAR 9)
c. ☐ RESTRICTED (SEE CAR 8)
(*Check the restricted special purpose operation(s) to be conducted*)
☐ AGRICULTURAL AND PEST CONTROL
☐ AERIAL ADVERTISING
☐ AERIAL SURVEYING
☐ GLIDER TOWING
☐ PATROLLING
☑ FOREST AND WILDLIFE CONSERVATION
☐ WEATHER CONTROL
☐ OTHER
d. ☐ EXPERIMENTAL
(*Check the type of experimental operation(s) to be conducted*)
☐ RESEARCH AND DEVELOPMENT
☐ AMATEUR-BUILT
☐ DEMONSTRATION
☐ RACING
☐ EXHIBITION
☐ OTHER

3. AIRCRAFT IDENTIFICATION (*Complete all items*)

a. AIRCRAFT MAKE	b. AIRCRAFT MODEL	c. AIRCRAFT SERIAL NO.
GROMMAN	G-21A	B-100

d. ENGINE MAKE	e. ENGINE MODEL
P & W	985-14B R-985-AN-14B also

4. AIRCRAFT REGISTRATION INFORMATION (*Complete all items*)

a. REGISTERED OWNER'S FULL NAME	b. PERMANENT MAILING ADDRESS	c. AIRCRAFT NATIONALITY AND REGISTRATION MARK
Beldex Corporation	Lambert Field St. Louis Mo.	N-884 BOOZE 15 SEP 5 1980

5. AIRCRAFT OWNER'S CERTIFICATION (*Check and complete appropriate item*)

I hereby certify that I am the registered owner (or his agent) of the aircraft identified in Item 3 above which is registered* with the Civil Aeronautics Administration as required by the Regulations of the Administrator, Part 501 or 502 and when operated displays the following evidence of registration:

a. ☑ CERTIFICATE OF REGISTRATION, FORM ACA-500 (PART A). DATE OF ISSUE Dec. 3, 1956
b. ☐ APPLICATION FOR REGISTRATION, FORM ACA-500 (PART B). FORM ACA-500, PART A, FORWARDED TO CAA AIRCRAFT RECORDS BRANCH,
• W-300 ON _____ (DATE)
c. ☐ DEALER'S REGISTRATION CERTIFICATE, FORM ACA-1707, DATED _____

*In order to be eligible for registration an aircraft must be owned by a citizen of the United States, as defined by Section 1 (13) of the Civil Aeronautics Act of 1938, as amended.

ATTACHMENTS (*Check which*)
☑ ACA-319
☑ ACA-337
☐ ACA-317
☑ WEIGHT AND BALANCE REPORT
☐ DATA, DRAWINGS, ETC.
☐ UNAPPROVED DEVIATION DATA

/ Churchill Hungerford III
(SIGNATURE OF REGISTERED OWNER OR AUTHORIZED AGENT)
3/4/57 (DATE) Agent (TITLE)

16—60837-2

Form ACA-305 (11-51)
Exp. 36 DEC 10 1965

FAA AIRCRAFT REGISTRY
CAMERA NO. 4 DATE: 11-22-85

U. S. DEPARTMENT OF COMMERCE
CIVIL AERONAUTICS ADMINISTRATION

AIRCRAFT INSPECTION REPORT

(To be completed by a CAA representative or approved repair station)

The aircraft described in Item 3 on the reverse of this form has been inspected and found to conform to the following:
(Check and complete applicable items)

1. AIRCRAFT AND ENGINE CERTIFICATION BASIS

a. ☐ AIRCRAFT SPECIFICATION NO. _____ THROUGH SHEET REVISION NO. _____
b. ☑ AIRCRAFT LISTING PAGE NO. 98
c. ☐ AIRWORTHINESS DIRECTIVE SUMMARY 1956 (YEAR) THROUGH CARD NO. 57-3
d. ☐ CIVIL AIR REGULATION PART 8 (MODIFIED TYPE CERTIFICATE)

2. AIRCRAFT AND ENGINE OPERATING RECORDS

a. ☐ AIRCRAFT NEW—NO PREVIOUS OPERATION OR MAINTENANCE HISTORY
b. ☑ COMPLIANCE WITH APPLICABLE AIRWORTHINESS DIRECTIVES RECORDED
c. ☑ AIRCRAFT RECORDS INDICATE THE AIRFRAME HAS BEEN OPERATED A TOTAL OF 2192 HOURS
d. ☑ ENGINE RECORDS INDICATE THE FOLLOWING OPERATION:
SERIAL NO. 19387 TOTAL HOURS 758.30 (Left eng.)
SERIAL NO. JP21020Y TOTAL HOURS 747.50 (Right eng.)
SERIAL NO. _____ TOTAL HOURS _____
SERIAL NO. _____ TOTAL HOURS _____

3. PREVIOUS INSPECTION RECORD (INSPECTION RECORDED ON FORM ACA-319)

a. LAST AIRWORTHINESS INSPECTION CONDUCTED 3/1/57 (DATE)
☐ BY AIRCRAFT MANUFACTURER
☐ BY APPROVED REPAIR STATION, CERTIFICATE NO. _____
☑ BY MECHANIC, CERTIFICATE NO. C. Hungerford III A&P 1361224
b. ☐ PERIODIC AIRCRAFT INSPECTION REPORT, FORM ACA-319, WAS RETURNED TO OWNER

4. AIRWORTHINESS DOCUMENTS ISSUED OR REVIEWED

a. ☐ OPERATION LIMITATIONS, FORM ACA-309, WAS ISSUED (COPY ATTACHED)
b. ☐ CURRENT OPERATION LIMITATIONS, FORM ACA-309, IS AVAILABLE IN AIRCRAFT
c. ☑ CURRENT APPROVED AIRPLANE FLIGHT MANUAL IS AVAILABLE IN AIRCRAFT
d. ☑ CURRENT WEIGHT AND BALANCE INFORMATION IS AVAILABLE IN AIRCRAFT
e. ☑ THIS INSPECTION HAS BEEN RECORDED IN THE AIRCRAFT RECORDS
f. ☑ CERTIFICATE OF AIRWORTHINESS, FORM ACA-1362, ~~ISSUED TO EXPIRE~~
g. ☐ PREVIOUS FORM ACA-1362 WAS ISSUED TO EXPIRE Original Certification (DATE)
BY _____ (NAME OF ISSUING REPRESENTATIVE) _____ (DESIGNATION NO.)

5. CAA APPROVED REPAIR STATION CERTIFICATION

The aircraft described on the reverse has been inspected under the authority accorded certificated repair station No. _____ by CAR 52 and was found to be:

☐ AIRWORTHY
☐ UNAIRWORTHY

_____ (REPAIR STATION AUTHORIZED SIGNATURE) _____ (DATE)

6. CAA REPRESENTATIVE CERTIFICATION

I HAVE INSPECTED THE AIRCRAFT DESCRIBED ON THE REVERSE AND FOUND IT ☑ AIRWORTHY ☐ UNAIRWORTHY (Check appropriate item)

DESIGNEE'S SIGNATURE	DESIGNATION NO.	DATE	
AVIATION SAFETY AGENT'S SIGNATURE Ira E. Ewing	CR DESIGNATION NO. Reg. 2-1 ASDO 1	DATE 3/4/57	☐ ACCEPTED ☐ REINSPECTED ☐ SPOT CHECKED

☑ ATTACHMENT

U. S. GOVERNMENT PRINTING OFFICE

Form ACA-305a (11-51)