



US Department
of Transportation
Federal Aviation
Administration

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

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

Electronic Tracking Number

For FAA Use Only

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

1. Aircraft	Nationality and Registration Mark N9134V	Serial No. 690027	
	Make Mooney	Model M20E	Series
2. Owner	Name (As shown on registration certificate) Bret A Stewart	Address (As shown on registration certificate) Address 7707 Jefferson Cir	
		City Colleville	State TX
		Zip 76034-6848	Country USA

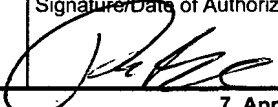
3. For FAA Use Only

4. Type		5. Unit Identification			
Repair	Alteration	Unit	Make	Model	Serial No.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	AIRFRAME	_____	(As described in Item 1 above)	_____
<input type="checkbox"/>	<input type="checkbox"/>	POWERPLANT			
<input type="checkbox"/>	<input type="checkbox"/>	PROPELLER			
<input type="checkbox"/>	<input type="checkbox"/>	APPLIANCE	Type		
			Manufacturer		

6. Conformity Statement

A. Agency's Name and Address		B. Kind of Agency	
Name Paul L Beck	Address 18 4th ST NW City Clara City State MN Zip 56222 Country USA	<input checked="" type="checkbox"/> U. S. Certified Mechanic	Manufacturer
		<input type="checkbox"/> Foreign Certified Mechanic	C. Certificate No.
		<input type="checkbox"/> Certified Repair Station	A&P477781355
		<input type="checkbox"/> Certified Maintenance Organization	

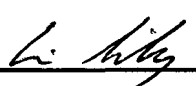
D. I certify that the repair and/or alteration made to the unit(s) identified in item 5 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and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

Extended range fuel per 14 CFR Part 43 App. B <input type="checkbox"/>	Signature/Date of Authorized Individual  10/28/2016
--	---

7. Approval for Return to Service

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

BY	FAA Fit. Standards Inspector	Manufacturer	Maintenance Organization	Persons Approved by Canadian Department of Transport
	FAA Designee	Repair Station	<input checked="" type="checkbox"/> Inspection Authorization	Other (Specify)

Certificate or Designation No. A&P2717510IA	Signature/Date of Authorized Individual  10/28/2016
---	---

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

N9134V

10/27/2016

Nationality and Registration Mark

Date

Installed Monroy Aerospace long range fuel tanks IAW instructions provided in STC SA1913SO. Weight and balance has been ammended.

----- END -----

[] Additional Sheets Are Attached



U.S. Department
of Transportation
Federal Aviation
Administration

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

JUL 09 2001

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification

FAA
AFW FSDO

AFW FSDO JEC

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 MOONEY	Model M20E
	Serial No. 690027	Nationality and Registration Mark N9134V
2. Owner	Name (As shown on registration certificate) ASHTON B. COLLINS III SCOTT W. MITCHELL	Address (As shown on registration certificate) 3020 COUNTY SQUARE #1162 CARROLLTON, TEXAS 75006

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.
DONALD D JOHNSON JR JOHNSON AIRCRAFT SERVICES 624 W UNIVERSITY DR #250 DENTON, TEXAS 76201	<input checked="" type="checkbox"/> U.S. Certificated Mechanic	488828719
	<input type="checkbox"/> Foreign Certificated Mechanic	
	<input type="checkbox"/> Certificated Repair Station	
	<input type="checkbox"/> 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 07/05/01	Signature of Authorized Individual DONALD D JOHNSON JR <i>Donald D Johnson Jr</i>
------------------	--

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 <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED					
BY	FAA Fit Standards Inspector	Manufacturer	<input checked="" type="checkbox"/>	Inspection Authorization	Other (Specify)
	FAA Designee	Repair Station	<input type="checkbox"/>	Person Approved by Transport Canada Airworthiness Group	
Date of Approval or Rejection 07/05/01		Certificate or Designation No. 488828719	Signature of Authorized Individual DONALD D JOHNSON JR <i>Donald D Johnson Jr</i>		

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 WHELEN ENGINEERING COMPANY, INC. AVIATION WHITE ANTI-COLLISION STROBE LIGHTS AND ASSOCIATED POWER SUPPLY IN ACCORDANCE WITH STC SA800EA.
WEIGHT AND BALANCE REVISED.

***** End Report *****

☐ Additional Sheets Are Attached

RECEIVED

NOV 12 1999

 MAJOR REPAIR AND ALTERATION (Airframe, Powerplant, Propeller, or Appliance)				Form Approved OMB No. 2120-0020 FAA-DALLAS For FAA Use Only Office Identification RDH SW05	
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 Mooney		Model M20E		
	Serial No. 690027		Nationality and Registration Mark N9134V		
2. Owner	Name (As shown on registration certificate) Stewart Cory D		Address (As shown on registration certificate) 2201 Sky Harbor DR Plano, Tx 75025-6076		
3. For FAA Use Only The alteration identified herein complied 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 <u>10-20-99</u> <u>Donnell Hughes</u> Date FAA Inspector, DAL-FSDO					
4. Unit Identification					5. Type
Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	(As described in item 1 above)			<input type="checkbox"/>	<input checked="" type="checkbox"/>
POWERPLANT				<input type="checkbox"/>	<input type="checkbox"/>
PROPELLER				<input type="checkbox"/>	<input type="checkbox"/>
APPLIANCE	Type			<input type="checkbox"/>	<input type="checkbox"/>
	Manufacturer			<input type="checkbox"/>	<input type="checkbox"/>
6. Conformity Statement					
A. Agency's Name and Address		B. Kind of Agency		C. Certificate No.	
Southwest Avionics LKBOX 14 Redbird Airport Dallas TX 75237		<input type="checkbox"/> U.S. Certified Mechanic <input type="checkbox"/> Foreign Certified Mechanic <input checked="" type="checkbox"/> Certified Repair Station <input type="checkbox"/> Manufacturer		D0FR289Y	
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 10-20-99		Signature of Authorized Individual <u>Donnell Hughes</u>			
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 <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED					
BY	<input type="checkbox"/> FAA Fit Standards Inspector	<input type="checkbox"/> Manufacturer	<input type="checkbox"/> Inspection Authorization	Other (Specify)	
	<input type="checkbox"/> FAA Designee	<input checked="" type="checkbox"/> Repair Station	<input type="checkbox"/> Person Approved by Transport Canada Airworthiness Group		
Date of Approval or Rejection 10-20-99		Certificate or Designation No. D0FR289Y		Signature of Authorized Individual <u>Donnell Hughes</u>	

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.

NOTICE

8. Description of Work Accomplished

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

Mooney M20E N9134V WO# 21062 Tach: 3257.80

Equipment removed:

1. Com/Nav Model MK-24 at F.S. 21
2. VOR Indicator Model VOA-9 at F.S. 21
3. G/S Receiver Model UGR-2 at F.S. 105.8

Installed Equipment:

1. DC to DC converter Model AK-550-6 at F.S. 105.8
2. GPS Antenna Model GA-56 at F.S. 59.5
3. Nav/Com/GPS/Moving Map Model GNS-430 at F.S. 21
4. VOR Indicator Model KNI-520 at F.S. 23.5

Installed the Garmin GNS-430 Nav/Com/GPS IAW Garmin Installation Drawings 190-00140-02 Rev. E Dated June 1999 and Southwest Avionics DWG# 99102001. Also in accordance with AC 43.13-1B, Chapter 11, Section 1 Para 11-1&2, 11-7&8, Section 3 Para. 11-30 thru 11-33, 11-36 & 37, Section 4 thru Section 15 all inclusive, Chapter 12 Section 1 Para. 12-1 thru 12-3, Section 2 Para. 12-8 & 9, 12-17, 18 & 27, Section 3 and 4 all inclusive. The GA-56 GPS antenna was installed in accordance with standard practices of AC 43.13-2A chapter 3 Paragraph 38 and 44.

Reference attached Instructions for Continued Airworthiness SWA Document # ICA99102001 for future system maintenance.

All affected systems were operationally checked with no discrepancies noted. System checks were completed IAW Manufacturers installation

Instructions.

The manufacturer has certified the GNS-430 GPS to TSO C129A1 criteria. The Garmin GPS System has been shown capable of VFR/IFR En Route oceanic, En Route Domestic and terminal operation and Non Precision instrument approaches (GPS, Loran-C, VOR, VOR-DME, TACAN, NDB, NDB-DME and RNAV) within the U.S. National airspace system, North Atlantic Minimum Navigation Performance specification (MNPS) airspace and Latitudes bounded by 74 degrees North and 60 Degrees south using WGS-84 (NAD 83) Chart references in accordance with the criteria of AC 20-138, AC 91-49 and AC 120-33 as referenced in the Flight manual supplement.

This installation is approved for VFR/IFR En Route, Terminal operation and Non Precision instrument approaches within the U.S. National

Airspace System.

The GPS is installed coupled to the KNI-520 VOR Indicator.

Ground Checks and Flight checks were completed on 10-16-99 with all checks being satisfactory.

An Electrical Load Analysis was performed in accordance with AC 43.13-1B, Chapter 11, Paragraph 11-36.

FAA Approved Flight Manual Supplement dated ~~1999~~ **OCT 20 1999** was inserted into Aircraft Flight Manual and is required to be on board for

operation.

Weight and Balance Data and Equipment List was updated and entered into the Aircraft Flight Manual

END

☐ Additional Sheets Are Attached

Southwest Avionics
Lock Box 14, Red Bird Airport
Dallas, Texas 75237

Supplement to Mooney M20E
Garmin GNS-430 GPS/VOR/ILS
Navigation System

FAA APPROVED FLIGHT MANUAL SUPPLEMENT
GARMIN GNS 430 VHF COMMUNICATIONS TRANSCEIVER / VOR/ILS RECEIVER
/ GPS RECEIVER

AIRCRAFT MAKE: Mooney

AIRCRAFT MODEL: M20E

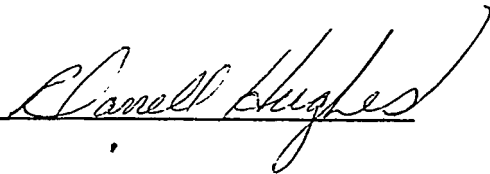
AIRCRAFT SERIAL NO.: 690027

This Supplement must be attached to the FAA approved Mooney M20E Airplane Flight Manual when the Garmin GNS-430 system has been installed in accordance with FAA Form 337 Dated OCT 20 1999

For aircraft with an FAA Approved Airplane Flight Manual, this document serves as the FAA Approved Flight Manual Supplement for the GARMIN GNS 430. For aircraft that do not have an approved flight manual, this document serves as the FAA Approved Supplemental Flight Manual for the GARMIN GNC 430.

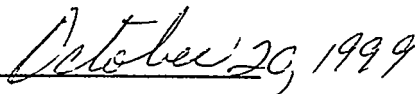
The Information contained herein supplements or supersedes the basic Airplane Flight Manual only in those areas listed herein. For limitations, procedures, and performance information not contained in this document, consult the basic Airplane Flight Manual.

APPROVED BY _____



Darrell Hughes
Principal Avionics Inspector
Dallas Flights Standards District
3300 Love Field Drive
Dallas, TX 75235

DATE OF APPROVAL _____



FAA Approved
Date: OCT 20 1999



Southwest Avionics
Lock Box 14, Red Bird Airport
Dallas, Texas 75237

Supplement to Mooney M20E
Garmin GNS-430 GPS/VOR/ILS
Navigation System

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FAA Approved
Date: OCT 20 1999

RDA

Southwest Avionics
Lock Box 14, Red Bird Airport
Dallas, Texas 75237

Supplement to Mooney M20E
Garmin GNS-430 GPS/VOR/ILS
Navigation System

SECTION I GENERAL

1. The GNS 430 System is a fully integrated, panel mounted instrument, which contains a VHF Communications Transceiver, a VOR/ILS receiver, and a Global Positioning System (GPS) Navigation computer. The system consists of a GPS antenna, GPS Receiver, VHF VOR/LOC/GS antenna, VOR/ILS receiver, VHF COMM antenna and a VHF Communications Transceiver. The primary function of the VHF Communication portion of the equipment is to facilitate communication with Air Traffic Control. The primary function of the VOR/ILS Receiver portion of the equipment is to receive and demodulate VOR, Localizer, and Glide Slope signals. The primary function of the GPS portion of the system is to acquire signals from the GPS system satellites, recover orbital data, make range and Doppler measurements, and process this information in real-time to obtain the user's position, velocity, and time.
2. Provided the GARMIN GNS 430's GPS receiver is receiving adequate usable signals, it has been demonstrated capable of and has been shown to meet the accuracy specifications for:
 - VFR/IFR enroute, terminal, and non-precision instrument approach (GPS, Loran-C, VOR, VOR-DME, TACAN, NDB, NDB-DME, RNAV) operation within the U.S. National Airspace System in accordance with AC 20-138.
 - North Atlantic Minimum Navigation Performance Specification (MNPS) Airspace in accordance with AC 91-49 and AC 120-33.

Navigation is accomplished using the WGS-84 (NAD-83) coordinate reference datum. Navigation data is based upon use of only the Global Positioning System (GPS) operated by the United States of America.

SECTION II LIMITATIONS

1. The GARMIN GNS 430 Pilot's Guide, P/N 190-00140-00, Rev. A, dated October, 1988, or later appropriate revision, must be immediately available to the flight crew whenever navigation is predicated on the use of the system.

FAA Approved
Date: OCT 20 1999 *RDH*

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Southwest Avionics
Lock Box 14, Red Bird Airport
Dallas, Texas 75237

Supplement to Mooney M20E
Garmin GNS-430 GPS/VOR/ILS
Navigation System

2. The GNS 430 must utilize the following or later FAA approved software versions:

Sub-System	Software Version
Main	2.00
GPS	2.00
COMM	1.22
VOR/LOC	1.25
G/S	2.00

The Main software version is displayed on the GNS 430 self test page immediately after turn-on for 5 seconds. The remaining system software versions can be verified on the AUX group sub-page 2, "SOFTWARE/DATABASE VER".

3. IFR enroute and terminal navigation predicated upon the GNS 430's GPS Receiver is prohibited unless the pilot verifies the currency of the data base or verifies each selected waypoint for accuracy by reference to current approved data.
4. Instrument approach navigation predicated upon the GNS 430's GPS Receiver must be accomplished in accordance with approved instrument approach procedures that are retrieved from the GPS equipment data base. The GPS equipment database must incorporate the current update cycle.
- (a) Instrument approaches utilizing the GPS receiver must be conducted in the approach mode and Receiver Autonomous Integrity Monitoring (RAIM) must be available at the Final Approach Fix
 - (b) Accomplishment of ILS, LOC, LOC-BC, LDA, SDF, MLS or any other type of approach not approved for GPS overlay with the GNS 430's GPS receiver is not authorized.
 - (c) Use of the GNS 430 VOR/ILS receiver to fly approaches not approved for GPS require VOR/ILS navigation data to be present on the external indicator.
 - (d) When an alternate airport is required by the applicable operating rules, it must be served by an approach based on other than GPS or Loran-C navigation, the aircraft must have the operational equipment capable of using that navigation aid, and the required navigation aid must be operational.

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Date: OCT 20 1999 *RDA*

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Southwest Avionics
Lock Box 14, Red Bird Airport
Dallas, Texas 75237

Supplement to Mooney M20E
Garmin GNS-430 GPS/VOR/ILS
Navigation System

- (e) VNAV information 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 normal position to land.
5. If not previously defined, the following default settings must be made in the "SETUP 1" menu of the GNS 430 prior to operation (refer to Pilot's Guide for procedure if necessary):
- (a) **dis, spd** $\frac{n}{m}$ $\frac{k}{t}$ (sets navigation units to "nautical miles" and "knots")
 - (b) **alt, vs** $\frac{ft}{fpm}$ (sets altitude units to "feet" and "feet per minute")
 - (c) **map datum** .. WGS 84 (sets map datum to WGS-84, see note below)
 - (d) **posn** deg-min (sets navigation grid units to decimal minutes)

NOTE: In some areas outside the United States, datums other than WGS-84 or NAD-83 may be used. If the GNS 430 is authorized for use by the appropriate Airworthiness authority, the required geodetic datum must be set in the GNS 430 prior to its use for navigation.

SECTION III EMERGENCY PROCEDURES

ABNORMAL PROCEDURES

1. If GARMIN GNS 430 navigation information is not available or invalid, utilize remaining operational navigation equipment as required.
2. If "RAIM POSITION WARNING" message is displayed the system will flag and no longer provide GPS based navigational guidance. The crew should revert to the GNS 430 VOR/ILS receiver or an alternate means of navigation other than the GNS 430's GPS Receiver.
3. If "RAIM IS NOT AVAILABLE" message is displayed in the enroute, terminal, or initial approach phase of flight, continue to navigate using the GPS equipment or revert to an alternate means of navigation other than the GNS 430's GPS receiver appropriate to the route and phase of flight. When continuing to use GPS navigation, position must be verified every 15 minutes using the GNS 430's VOR/ILS receiver or another IFR-approved navigation system.
4. If "RAIM IS NOT AVAILABLE" message is displayed while on the final approach segment, GPS based navigation will continue for up to 5 minutes with approach CDI sensitivity (0.3 nautical mile). After 5 minutes the system will flag and no longer provide course guidance with approach sensitivity. Missed approach course guidance may still be available with 1 nautical mile CDI sensitivity by executing the missed approach.

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Date: OCT 20 1999 *RDH*

Southwest Avionics
Lock Box 14, Red Bird Airport
Dallas, Texas 75237

Supplement to Mooney M20E
Garmin GNS-430 GPS/VOR/ILS
Navigation System

5. In an in-flight emergency, depressing and holding the Comm transfer button for 2 seconds will select the emergency frequency of 121.500 MHz into the "Active" frequency window.

SECTION IV NORMAL PROCEDURES

1. DETAILED OPERATING PROCEDURES

Normal operating procedures are described in the GARMIN GNS 430 Pilot's Guide, P/N 190-00140-00, Rev. A, dated October 1998, or later appropriate revision.

2. PILOT'S DISPLAY

The GNS 430 System data will appear on the KNI-520 #1 VOR Indicator. The source of data is either GPS or VLOC as annunciated on the display above the CDI key.

3. AUTOPILOT / FLIGHT DIRECTOR OPERATION

This system is not coupled to an Autopilot as installed.

4. POWER

Power for the GNS-430 System is obtained from the Avionics Buss as follows:

GPS via a 5 Amp Circuit Breaker Labeled "GPS" mounted on the Co-Pilot's circuit breaker panel.

Comm via a 15 Amp Circuit Breaker Labeled "Comm 1" mounted on the Co-Pilot's circuit breaker panel

NOTE: Com power is 28 volts supplied through an AK-550-6 14 VDC to 28 VDC voltage converter. This unit is tied to the 15 Amp Circuit Breaker labeled "Comm 1".

FAA Approved
Date: OCT 20 1999

RDA

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Southwest Avionics
Lock Box 14, Red Bird Airport
Dallas, Texas 75237

Supplement to Mooney M20E
Garmin GNS-430 GPS/VOR/ILS
Navigation System

**SECTION V
PERFORMANCE**

No change.

**SECTION VI
WEIGHT AND BALANCE**

See current weight and balance data.

**SECTION VII
AIRPLANE & SYSTEM DESCRIPTIONS**

See GNS 430 Pilot's Guide for a complete description of the GNS 430 system.

FAA Approved

Date: OCT 20 1999 *RDA*

Page 7 of 7

Southwest Avionics, Inc.
Lock Box 14, Red Bird Airport
Dallas, Texas 75237

Continuation of Block 8 of FAA Form 337 as attached

Instructions for Continued Airworthiness
for Garmin GNS-430

Garmin GNS-430 GPS/ILS/VOR/Comm System

Instructions for Continued Airworthiness

For

N9134V Mooney M20E S/N 690027

Dated 10-20-99

Rev. Original

Southwest Avionics, Inc.
Lock Box 14, Red Bird Airport
Dallas, Texas 75237

Continuation of Block 8 of FAA Form 337 as attached

Instructions for Continued Airworthiness
for Garmin GNS-430

Log of Revisions

<u>Rev. #</u>	<u>Dated</u>	<u>Pages Affected</u>	<u>Approved by</u>
Original		All	

NOTE: All changes are indicated by a black line along the right margin.

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Southwest Avionics, Inc.
Lock Box 14, Red Bird Airport
Dallas, Texas 75237

Continuation of Block 8 of FAA Form 337 as attached

Instructions for Continued Airworthiness
for Garmin GNS-430

Section 1: Introduction

Introduction

The purpose of this Document is to provide follow-on Instructions for Continued Airworthiness for the Major Alteration made to this airframe of the equipment identified on the cover.

These are the Instructions for Continued Airworthiness for the Alterations performed by Southwest Avionics to the following aircraft:

Manufacturer: Mooney
Model No: M20E
Serial No: 690027

Applicable Documents

The manuals listed below are required for compliance with these ICA's. Southwest Avionics has received the manufacturer's permission to reference any manuals listed that contain proprietary information.

Federal Aviation Administration Advisory Circular 43.13-1B

Federal Aviation Administration Advisory Circular 43.13-2A

Garmin GNS-430 Installation Manual P/N 190-00140-02 Rev. E dated June 1999 (or later)

Garmin GNS-430 Operators Guide P/N 190-00140-00 Rev. A dated Dec. 1998 (or later)

Southwest Avionics Drawing # 99102099

The Owner/Operator is responsible for ensuring that all reference materials utilized while completing this ICA is at a current revision status. Federal Aviation Administration approved Repair Stations are required to maintain current publications for each unit on which it performs maintenance.

Section 2: Alteration Description

A Garmin GNS-430 GPS/VOR/ILS/Comm/Moving Map unit was installed coupled to a KNI-520 VOR Indicator. GPS Navigation data and VOR/ILS data is displayed on the KNI-520 VOR Indicator. HSI navigation source selection is annunciated on the GNS-430 as an integral operation of the GPS Receiver. For further system operation instructions reference Flight Manual Supplement identified with this approval.

Reference Southwest Avionics Drawing # 99102099 for systems interconnect data

Section 3: Operation and Control

Refer to Garmin GNS-430 Operators Guide P/N 190-00140-00 Rev. A dated Dec. 1998 (or later)

Refer to FAA Approved Flight Manual Supplement identified on this certification for system interface operation instructions.

Section 4: Servicing Information

The Garmin GNS-430 unit shall be maintained IAW Manufacturers Maintenance data

Refer to the FAA Approved Flight Manual Supplement identified on this certification

Refer to Garmin GNS-430 Installation Manual P/N 190-00140-02 Rev. E dated June 1999 (or later).

Reference Southwest Avionics Drawing # 99102099

Southwest Avionics, Inc.
Lock Box 14, Red Bird Airport
Dallas, Texas 75237

Continuation of Block 8 of FAA Form 337 as attached

Instructions for Continued Airworthiness
for Garmin GNS-430

Section 5: Maintenance and Inspections

Refer to Garmin GNS-430 Installation Manual P/N 190-00140-02 Rev. E dated June 1999 (or later) for Removal and Reinstallation instructions. At present no field repair facilities have been identified for unit repair.

Section 6: Troubleshooting information

Refer to Garmin GNS-430 Installation Manual P/N 190-00140-02 Rev. E dated June 1999 (or later) for troubleshooting assistance.

Reference Southwest Avionics Drawing # 99102099

Section 7: Removal and Replacement Information

Refer to Garmin GNS-430 Installation Manual P/N 190-00140-02 Rev. E dated June 1999 (or later) for Removal and Replacement data.

Section 8: Diagrams

Refer to Garmin GNS-430 Installation Manual P/N 190-00140-02 Rev. E dated June 1999 (or later) for generic installation diagrams.

Refer to Southwest Avionics Drawing # 99102099 for specific installation diagrams.

Section 9: Special Inspection requirements

N/A

Section 10: Protective Treatments

N/A

Section 11: Structural Fastener Data:

Reference Federal Aviation Administration Advisory Circular 43.13-1B and Federal Aviation Administration Advisory Circular 43.13-2A for common practices.

Section 12: Special Tools ,

N/A

Section 13: Miscellaneous data

N/A

Section 14: Recommended Overhaul Periods

N/A

Section 15: Airworthiness Limitations

N/A

Section 16: Procedure for Revision

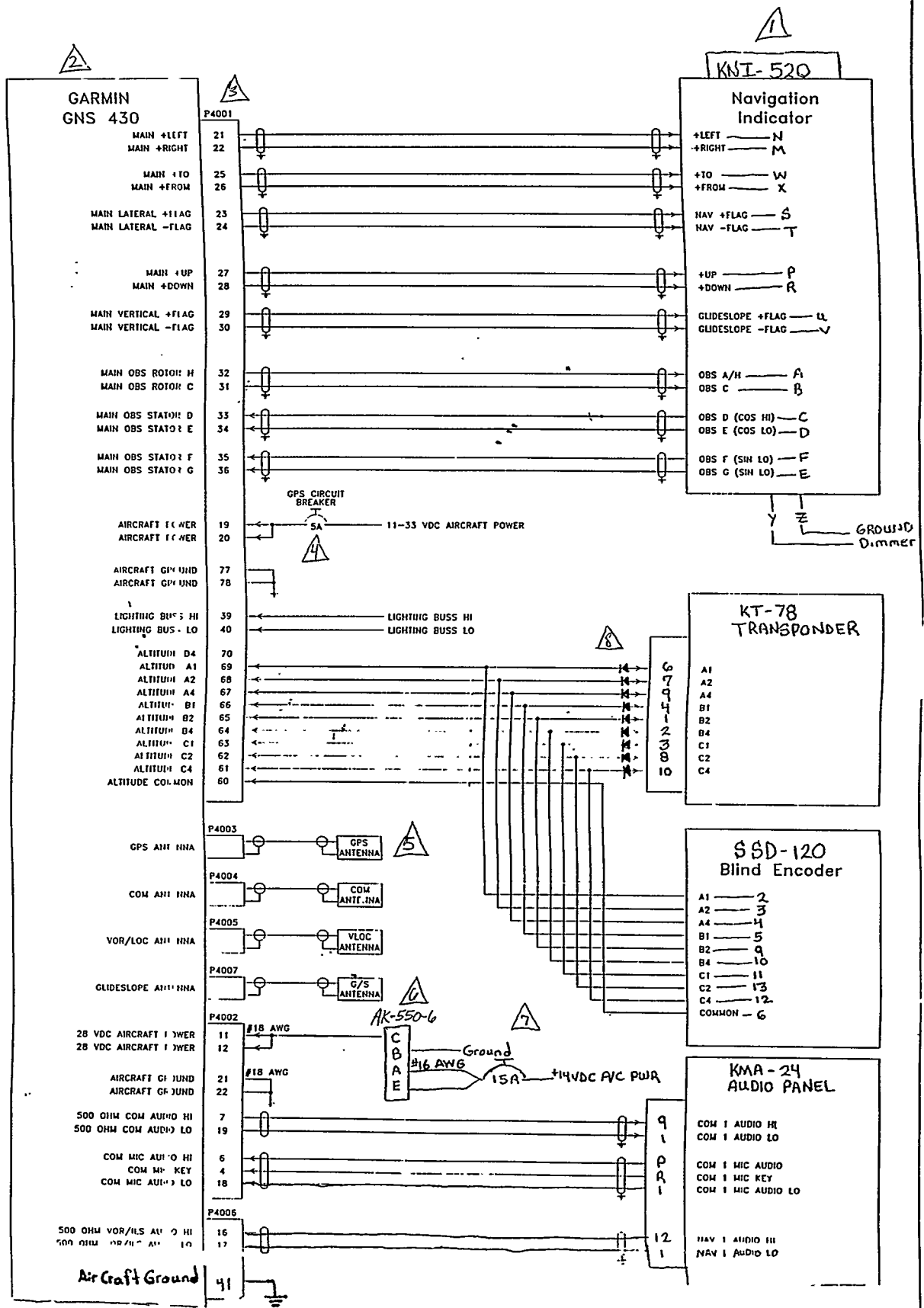
The following procedure shall be complied with when revising this ICA.


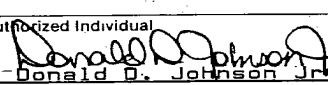
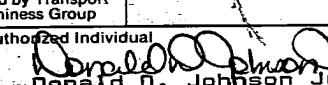
Continuation of Block 8 of FAA Form 337 as attached
Southwest Avionics, Inc.
Lock Box 14, Red Bird Airport
Dallas, Texas 75237

Instructions for Continued Airworthiness
for Garmin GNS-430

A letter will be submitted to the local FSDO with a copy of the revised FAA Form 337 and revised ICA. The FAA Inspector accepts the change by signing Block 3 and including the following statement:

"The attached revised/new Instructions for Continued Airworthiness (date _____) for the above aircraft or component major alteration have been accepted by the FAA, superceding the Instructions for Continued Airworthiness (date _____)." Once the revision has been accepted, a maintenance record entry will be made, identifying the revision, its location, date of the Form 337.



 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 TEB FTW 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 Mooney		Model M20E																													
	Serial No. 690027		Nationality and Registration Mark N9134V																													
2. Owner	Name (As shown on registration certificate) William A. Kidd		Address (As shown on registration certificate) 5727 Harvest Hill #1042 Dallas, Texas 75230																													
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																															
<table border="1" style="width: 100%;"> <tr> <td>A1A</td> <td>MGB</td> <td>B1A</td> </tr> <tr> <td>A2</td> <td>APPM</td> <td>B2</td> </tr> <tr> <td>A3</td> <td>RECEIVED</td> <td>B3</td> </tr> <tr> <td>A4</td> <td></td> <td>B4</td> </tr> <tr> <td>A5</td> <td>SEP 13 1994</td> <td>B5</td> </tr> <tr> <td>A6</td> <td>FAA</td> <td>B6</td> </tr> <tr> <td>A7</td> <td>FTW FSDO</td> <td>B7</td> </tr> <tr> <td></td> <td>AC</td> <td></td> </tr> <tr> <td></td> <td>CS</td> <td></td> </tr> </table>						A1A	MGB	B1A	A2	APPM	B2	A3	RECEIVED	B3	A4		B4	A5	SEP 13 1994	B5	A6	FAA	B6	A7	FTW FSDO	B7		AC			CS	
A1A	MGB	B1A																														
A2	APPM	B2																														
A3	RECEIVED	B3																														
A4		B4																														
A5	SEP 13 1994	B5																														
A6	FAA	B6																														
A7	FTW FSDO	B7																														
	AC																															
	CS																															
6. Conformity Statement																																
A. Agency's Name and Address		B. Kind of Agency		C. Certificate No.																												
Donald D. Johnson Jr. PO Box 488 Collinsville, Texas 76233		<input checked="" type="checkbox"/> U.S. Certificated Mechanic <input type="checkbox"/> Foreign Certificated Mechanic <input type="checkbox"/> Certificated Repair Station <input type="checkbox"/> Manufacturer		488828719IA																												
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																														
09/10/94		 Donald D. Johnson Jr.																														
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 <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED																																
BY	FAA Fit Standards Inspector	Manufacturer	<input checked="" type="checkbox"/>	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																													
09/10/94		488828719IA	 Donald D. Johnson Jr.																													

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 Brackett Aircraft Co. BA-6310 Filter assembly in accordance with installation instructions no. BA-6304 per stc SA716L.

.....END.....

☐ Additional Sheets Are Attached

 MAJOR REPAIR AND ALTERATION (Airframe, Powerplant, Propeller, or Appliance)		Form Approved OMB No. 2120-0020		
		For FAA Use Only		
		Office Identification GLW		
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 Mooney	Model M20E		
	Serial No. 690027	Nationality and Registration Mark N9134V		
2. Owner	Name (As shown on registration certificate) Ray Kouns		Address (As shown on registration certificate) 2239 Dunzweiler Drive Zanesville, OH 43701	
	3. For FAA Use Only			
4. Unit Identification				
Unit	Make	Model	Serial No.	5. Type
AIRFRAME	(As described in Item 1 above) X			Repair
POWERPLANT				Alteration
PROPELLER				
APPLIANCE	Type			
	Manufacturer			
6. Conformity Statement				
A. Agency's Name and Address		B. Kind of Agency		C. Certificate No.
Ohio State University 2160 West Case Road Columbus, OH 43235		U.S. Certificated Mechanic		IKBR028F
		Foreign Certificated Mechanic		
		<input checked="" type="checkbox"/> 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 6/1/92		Signature of Authorized Individual Rick Januszewski <i>Rick Januszewski</i>		
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 <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED				
BY	FAA FTL Standards Inspector	Manufacturer	Inspection Authorization	Other (Specify)
	FAA Designee	<input checked="" type="checkbox"/> Repair Station	Person Approved by Transport Canada Airworthiness Group	
Date of Approval or Rejection 6/1/92		Certificate or Designation No. IKBR028F	Signature of Authorized Individual Rick Januszewski <i>Rick Januszewski</i>	

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 Micrologic Loran System.

Installed Apollo Flybuddy 800 plus System in the existing radio rack in accordance with II Morrow installation manual P/N #560-0071B Rev. 2

Installed Narco DME-890 in the existing radio rack in accordance with Narco's installation manual P/N #03314-0600

All of the above installed in accordance with AC 43.13.1A Chapter 11, AC 43.13.2A Chapter 1 and 2

All circuit breakers, switches, wires and methods of installation are in accordance with AC 43.13.1 Chapter 11, Sections 1 and 2.

Existing DME antenna was used and checked in accordance with AC 43.13.1, Chapter 3

Installed A-16 Loran antenna on top of fuselage in accordance with AC 43.13-2 Chapter 3

Instrument panel placarded "Loran-C VFR only" as outlined in AC 20-121



Electrical load checked completed in accordance with AC 43.13-2 para. 27 and is within limits

Weight/Balance along with equipment list changed and entered in logbook

O-1	M-1	S-1	APS	C-1		A-1
O-2						A-2
O-3						A-3
O-4						A-4
O-5						A-5
O-6						A-6
O-7	O-8	C-2	C-3	C-4	C-5	A-7
O-8						A-8

RECEIVED
JUN 05 1992
FSDO
COLUMBUS, OH

☐ Additional Sheets Are Attached

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION				Form Approved Budget Bureau No. 04-R06C.1	
MAJOR REPAIR AND ALTERATION (Airframe, Powerplant, Propeller, or Appliance)				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.				OFFICE IDENTIFICATION	
1. AIRCRAFT	MAKE	Mooney	MODEL	M-20E	
	SERIAL NO.	690027	NATIONALITY AND REGISTRATION MARK	N9134V	
2. OWNER	NAME (As shown on registration certificate)		ADDRESS (As shown on registration certificate)		
	Ray Kouns		2239 Dunweiler Zanesville, OH 43701		
3. FOR FAA USE ONLY					
4. UNIT IDENTIFICATION					
UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE	
AIRFRAME	***** (As described in item 1 above) *****			REPAIR	ALTERATION
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				
6. CONFORMITY STATEMENT					
A. AGENCY'S NAME AND ADDRESS			B. KIND OF AGENCY		C. CERTIFICATE NO.
Ohio State University Airport 2160 West Case Rd. Columbus, OH 43220-1946			<input type="checkbox"/> U.S. CERTIFICATED MECHANIC <input type="checkbox"/> FOREIGN CERTIFICATED MECHANIC <input checked="" type="checkbox"/> CERTIFICATED REPAIR STATION <input type="checkbox"/> MANUFACTURER		1038
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 27, 1987			 Rick Januszewski		
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 <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED					
BY	FAA FLT. STANDARDS INSPECTOR	MANUFACTURER	INSPECTION AUTHORIZATION		OTHER (Specify)
	FAA DESIGNEE	<input checked="" type="checkbox"/> REPAIR STATION	CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT		
DATE OF APPROVAL OR REJECTION		CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL		
Oct. 27, 1987		1038	 Rick Januszewski		

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 Micrologics Loran in the center radio rack where Narco DME-840 was removed. All work was done in reference to manufacturer's installation manual and AC 43.12.1A Chapter 11, AC 43.13.2A and Chapters 1 and 2.

Installed A-16 antenna on top of fuselage in accordance with AC 43.13.2 Chapter 3.

Instrument panel placarded VFR ONLY.

All circuit breakers, switches, wires and methods of installation are in accordance with AC 43.13-1 Chapter 11 sections 2 and 3.

Electrical load checked completed in accordance with AC 43.13-2 Chapter 2 para. 27 and is within limits.

Weight/balance along with equipment list changed and entered in logbook.

----- END -----

G-1	SUPR	NG2	M-1
G-2	RECEIVED		M-2
G-3	NOV 02 1987		M-3
G-4	FAA/GI-PSDD		M-4
G-5	COMM BRANCH		A-1
G-6	C-1	C-2	C-3
			PS

☐ ADDITIONAL SHEETS ARE ATTACHED

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION				Form Approved Budget Bureau No. 04-R060.1 FOR FAA USE ONLY	
MAJOR REPAIR AND ALTERATION (Airframe, Powerplant, Propeller, or Appliance)				19 JUN 1981 <i>W. Reed</i>	
INSTRUCTIONS: Print or type all entries. See FAR 43. FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.					
1. AIRCRAFT	MAKE MOONEY	MODEL M20E		NATIONALITY AND REGISTRATION MARK- USA N9134V	
	SERIAL NO. 690027				
2. OWNER	NAME (As shown on registration certificate) ALFRED GERVAISE		ADDRESS (As shown on registration certificate) 2637 LAGUNDA DRIVE ENDICOTT, N.Y. 13760		
3. FOR FAA USE ONLY					
4. UNIT IDENTIFICATION					5. TYPE
UNIT	MAKE	MODEL	SERIAL NO.	REPAIR	ALTER- ATION
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.
MILLER AVIATION, INC. P.O. BOX 564 ENDICOTT, NY. 13760			U.S. CERTIFICATED MECHANIC		163-32
			FOREIGN CERTIFICATED MECHANIC		
			<input checked="" type="checkbox"/> 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 06-16-81			SIGNATURE OF AUTHORIZED INDIVIDUAL RICHARD GARRETSON <i>Richard Garrettson</i>		
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 <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED					
BY	FAA FLT. STANDARDS INSPECTOR	MANUFACTURER	INSPECTION AUTHORIZATION		OTHER (Specify)
	FAA DESIGNEE	<input checked="" type="checkbox"/> REPAIR STATION	CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT		
DATE OF APPROVAL OR REJECTION 06-16-81		CERTIFICATE OR DESIGNATION NO. 163-32		SIGNATURE OF AUTHORIZED INDIVIDUAL RICHARD GARRETSON <i>Richard Garrettson</i>	

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 NARCO DME 890 IN RIGHT SIDE OF INSTRUMENT PANEL IN ACCORDANCE WITH MANUFACTURERS INSTALLATION MANUALS.
2. CONNECTED PRIMARY POWER TO CIRCUIT BREAKERS AND LABELED ACCORDINGLY.
3. ELECTRICAL LOAD DOES NOT EXCEED 65% OF THE AIRCRAFT ALTERNATOR CAPACITY.
4. EQUIPMENT INSTALLED AND COMPASS CALIBRATION CHECKED PER FAR 23, 1301, 1327 AND 1431, AND AC 43:13-2, PARA. 927-929.
5. COMPUTED NEW WEIGHT AND BALANCE, UPDATED EQUIPMENT LIST, AND ENTERED IN AIRCRAFT PAPERS.
6. THIS INSTALLATION MADE IN ACCORDANCE WITH AC 43:13-1A PARA. 227, 228, 230, 231, 406, 410, 424, 426, 428, 429, 442, 443, 445, 447-451, 464, 514-519, 656, 657, 659, 662, 750, 840, 842, 27, 929; AND AC 43:13-2 PARA. 1-12, 21-27, AND 42.
7. INSTALLATION MEETS FAR 23.561 REQUIREMENTS.
8. ALL SYSTEMS GROUND AND FLIGHT TESTED AND MEET FAR 23-1301 REQUIREMENTS. NO ADVERSE EFFECTS ON OTHER SYSTEMS.

END

☐ ADDITIONAL SHEETS ARE ATTACHED

UNITED STATES OF AMERICA — FEDERAL AVIATION AGENCY
STANDARD AIRWORTHINESS CERTIFICATE

1. NATIONALITY AND REGISTRATION MARKS N9134V	2. MANUFACTURER AND MODEL Mooney M20E	3. AIRCRAFT SERIAL NUMBER 4690027	4. CATEGORY Normal
---	---	--	------------------------------

5. AUTHORITY AND BASIS FOR ISSUANCE
This airworthiness certificate is issued pursuant to the Federal Aviation Act of 1958 and certifies that, as of the date of issuance, the aircraft to which issued has been inspected and found to conform to the type certificate therefor, to be in condition for safe operation, and has been shown to meet the requirements of the applicable comprehensive and detailed airworthiness code as provided by Annex 8 to the Convention on International Civil Aviation, except as noted herein.
Exceptions:
None.

6. TERMS AND CONDITIONS
Unless sooner surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator, this airworthiness certificate is effective as long as the maintenance, preventive maintenance, and alterations are performed in accordance with Parts 23, 25, and 31 of the Federal Aviation Regulations, as appropriate, and the aircraft is registered in the United States.

DATE OF ISSUANCE 2-17-69	FAA REPRESENTATIVE By: <i>[Signature]</i> MOONEY CORPORATION SW-1	DESIGNATION NUMBER Delegation Option PC 201
------------------------------------	---	---

Any alteration, reproduction, or misuse of this certificate may be punishable by a fine not exceeding \$1,000, or imprisonment not exceeding 3 years, or both. THIS CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT IN ACCORDANCE WITH APPLICABLE FEDERAL AVIATION REGULATIONS.

FAA Form 1362 (7-65)

0052-040-8000 (8100)

FAA AIRCRAFT REGISTRY

CAMERA NO. 4N/DATE: 5-7-82

MICRO

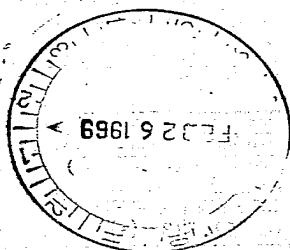
Form Approved
Budget Bureau No. 04-R058.2

FEDERAL AVIATION AGENCY APPLICATION FOR AIRWORTHINESS CERTIFICATE (FAR 21)				INSTRUCTIONS: Print or type. Do not write in shaded areas; these are for FAA use only. Submit original only to an authorized FAA Representative. If additional space is required, use reverse side.										
I. AIRCRAFT DESCRIPTION	1. REGISTRATION MARK N9134V	2. AIRCRAFT MAKE Mooney	3. AIRCRAFT MODEL DESIGNATION M20E	FAA CODING 5870212										
	4. AIRCRAFT SERIAL NO. 690027	5. ENGINE MAKE Lycoming	6. ENGINE MODEL DESIGNATION IO-360-A1A	41515										
	7. NO. OF ENGINES One	8. PROPELLER MAKE Hartzell	9. PROPELLER MODEL DESIGNATION HC-C2YK-1B/7666A-2	10. YR. ARC. MANUFACTURE 1969										
II. CERTIFICATION REQUESTED	A. APPLICATION IS HEREBY MADE FOR:													
	<input checked="" type="checkbox"/> ORIGINAL CERTIFICATE—AIRCRAFT IS <input checked="" type="checkbox"/> NEW <input type="checkbox"/> USED <input type="checkbox"/> IMPORT													
	<input type="checkbox"/> AMENDMENT OR MODIFICATION OF CURRENT CERTIFICATE													
	<input type="checkbox"/> OTHER (Specify)													
	B. AIRWORTHINESS CLASSIFICATION (For multiple certification, check appropriate items)													
	<input checked="" type="checkbox"/> STANDARD (Indicate category) <input checked="" type="checkbox"/> NORMAL <input type="checkbox"/> UTILITY <input type="checkbox"/> ACROBATIC <input type="checkbox"/> TRANSPORT													
	<input type="checkbox"/> LIMITED													
	3. RESTRICTED (Indicate operation(s) to be conducted) <table border="1"> <tr> <td>1. AGRICULTURE & PEST CONTROL</td> <td>2. AERIAL SURVEYING</td> <td>3. AERIAL ADVERTISING</td> </tr> <tr> <td>4. FOREST (Wild life conservation)</td> <td>5. PATROLLING</td> <td>6. WEATHER CONTROL</td> </tr> <tr> <td colspan="3">0. OTHER (Specify)</td> </tr> </table>					1. AGRICULTURE & PEST CONTROL	2. AERIAL SURVEYING	3. AERIAL ADVERTISING	4. FOREST (Wild life conservation)	5. PATROLLING	6. WEATHER CONTROL	0. OTHER (Specify)		
	1. AGRICULTURE & PEST CONTROL	2. AERIAL SURVEYING	3. AERIAL ADVERTISING											
	4. FOREST (Wild life conservation)	5. PATROLLING	6. WEATHER CONTROL											
0. OTHER (Specify)														
4. EXPERIMENTAL (Indicate operation(s) to be conducted) <table border="1"> <tr> <td>1. RESEARCH AND DEVELOPMENT</td> <td>2. AMATEUR BUILT</td> <td>3. EXHIBITION</td> </tr> <tr> <td>4. RACING</td> <td colspan="2">0. TO SHOW COMPLIANCE WITH FAR</td> </tr> </table>					1. RESEARCH AND DEVELOPMENT	2. AMATEUR BUILT	3. EXHIBITION	4. RACING	0. TO SHOW COMPLIANCE WITH FAR					
1. RESEARCH AND DEVELOPMENT	2. AMATEUR BUILT	3. EXHIBITION												
4. RACING	0. TO SHOW COMPLIANCE WITH FAR													
5. PROVISIONAL (Indicate class) <table border="1"> <tr> <td>1. CLASS I</td> <td>2. CLASS II</td> <td>FAA CODING</td> </tr> </table>					1. CLASS I	2. CLASS II	FAA CODING							
1. CLASS I	2. CLASS II	FAA CODING												
III. OWNER'S CERTIFICATION	A. REGISTERED OWNER (As shown on Certificate of Aircraft Registration)													
	NAME Mooney Corporation		ADDRESS (Number, street, city, State and ZIP code) Box 72; Kerrville, Texas 78028											
	B. AIRCRAFT CERTIFICATION BASIS													
	<input checked="" type="checkbox"/> AIRCRAFT SPECIFICATION OR TYPE CERTIFICATION DATA SHEET (Give No. and Rev. No.) 2A3 Rev. 18 (Prop.)		<input checked="" type="checkbox"/> AIRWORTHINESS DIRECTIVE SUMMARY (Give year and last card No.) 1968 69-2											
	AIRCRAFT LISTING (Give page No(s.))		SUPPLEMENTAL TYPE CERTIFICATE (Give No(s.))											
	C. AIRCRAFT OPERATION AND MAINTENANCE RECORDS													
	<input checked="" type="checkbox"/> AIRCRAFT NEW—NO PREVIOUS HISTORY		TOTAL AIRFRAME HOURS RECORDED 1.82		FAA CODING									
	I hereby certify that I am the registered owner (or his agent) of the aircraft described above; that the aircraft is registered with the Federal Aviation Agency in accordance with section 501 of the Federal Aviation Act of 1958, and applicable Federal Aviation Regulations; and that the aircraft has been inspected and is airworthy and eligible for the classification(s) requested.													
	DATE OF APPLICATION 2-17-69		NAME AND TITLE (Print or type) Lee O. Higdon (Sec.-Treas.)		SIGNATURE <i>Lee O. Higdon</i>									
	IV. INSPECTION AGENCY VERIFICATION	IN ACCORDANCE WITH FAR 21.183, THE AIRCRAFT DESCRIBED ABOVE HAS BEEN INSPECTED AND FOUND AIRWORTHY BY:												
2. CERTIFICATED AIR CARRIER (Give Certificate No.)		3. CERTIFICATED MECHANIC (IA) (Give Certificate No.)		6. CERTIFICATED DOMESTIC REPAIR STATION (Give Certificate No.)										
5. AIRCRAFT MANUFACTURER (Give name of firm)														
FAA CODING														
DATE TITLE SIGNATURE														
V. AIRWORTHINESS DOCUMENTATION	<input checked="" type="checkbox"/> A. CURRENT OPERATING LIMITATIONS AVAILABLE IN AIRCRAFT		<input checked="" type="checkbox"/> G. THIS INSPECTION RECORDED IN AIRCRAFT RECORDS											
	B. CURRENT OPERATING LIMITATIONS ATTACHED		H. STATEMENT OF CONFORMITY, FAA FORM 317 (Attach when required)											
	C. CURRENT APPROVED FLIGHT MANUAL AVAILABLE IN AIRCRAFT		I. PREVIOUS AIRWORTHINESS CERTIFICATE ISSUED IN ACCORDANCE WITH FAR CAR (Orig. attached)											
	D. DATA, DRAWINGS, PHOTOGRAPHS, ETC. (Attach when required)		J. AIRWORTHINESS CERTIFICATE ISSUED IN ACCORDANCE WITH FAR 21.183 (a) (Copy attached)											
	<input checked="" type="checkbox"/> E. CURRENT WEIGHT & BALANCE INFORMATION AVAILABLE IN AIRCRAFT													
	<input checked="" type="checkbox"/> F. MAJOR REPAIR AND ALTERATION, FAA FORM 337 (Attach when req.)													
VI. FAA REPRESENTATIVE CERTIFICATION	<input checked="" type="checkbox"/> A. I have inspected the aircraft described above, find it conforms to its type certificate, and is in condition for safe operation.													
	<input type="checkbox"/> B. I have inspected the aircraft described above, find it is in condition for safe experimental operation.													
	<input type="checkbox"/> C. Current Airworthiness Certificate amended.													
DATE 2-17-69		DESIGNATION NO. Delegation Option PC 201		OFFICE NO. SAT EMDO 2-0-43										
				SIGNATURE Mooney Corporation By: <i>Jim A. Hunter</i> POA SW-1										

DATE: 5-7-82


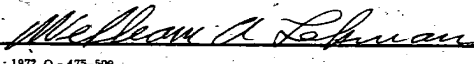
MICRO

Verified by Operator #48



FEB 27 12:09 PM '69
OKLAHOMA CITY, OKLA

CONVEYANCE LED WITH
FAA AIRCRAFT REGISTRY

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 AGL-FSDO #65	
INSTRUCTIONS: Print or type in ink. 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	Mconey		MODEL	M20E
	SERIAL NO.	690027		NATIONALITY AND REGISTRATION MARK	N9134V
2. OWNER	NAME (As shown on registration certificate)			ADDRESS (As shown on registration certificate)	
	Thomas V. Polatty Carl C. McMunn			339 Liberty St. Clarion Pa. 16214	
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.
General Aviation Inc. Lost Nation Airport Willoughby Ohio 44094			U.S. CERTIFICATED MECHANIC		RS 1035 Airframe Class I II
			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			SIGNATURE OF AUTHORIZED INDIVIDUAL		
APR 17 1975					
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 <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> 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	
APR 17 1975		1035			

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.

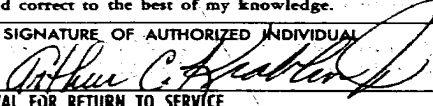

8. DESCRIPTION OF WORK ACCOMPLISHED (If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

Installed Alcom EA 35-4 EGT analyzer conversion kit to EGT gauge per Alcor installation manual, AC 43.13-1A and STC 262SW. Equipment list changed to reflect the above installation.

XXXXXXXXXXXXXXXXX END XXXXXXXXXXXXXXX

☐ ADDITIONAL SHEETS ARE ATTACHED

FAA

<small>DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION</small> MAJOR REPAIR AND ALTERATION (Airframe, Powerplant, Propeller, or Appliance)				<small>Form Approved Budget Bureau No. 04-R060.1</small> FOR FAA USE ONLY OFFICE IDENTIFICATION	
<small>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.</small>					
1. AIRCRAFT	MAKE	Mooney		MODEL	M-20E
	SERIAL NO.	690027		NATIONALITY AND REGISTRATION MARK	N 9134V
2. OWNER	NAME (As shown on registration certificate)			ADDRESS (As shown on registration certificate)	
	BSL, Inc.			604 Devon Sherwood, Arkansas 72116	
3. FOR FAA USE ONLY					
4. UNIT IDENTIFICATION					
UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE	
AIRFRAME	<small>***** (As described in item 1 above) *****</small>			REPAIR	ALTERATION
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				
6. CONFORMITY STATEMENT					
A. AGENCY'S NAME AND ADDRESS			B. KIND OF AGENCY		C. CERTIFICATE NO.
Hiegel Aviation, Inc. P. O. Box 1149 Little Rock, Ark. 72203			U.S. CERTIFICATED MECHANIC		Limited Radio and Instrument 2218
			FOREIGN CERTIFICATED MECHANIC		
			<input checked="" type="checkbox"/> CERTIFICATED REPAIR STATION		
			MANUFACTURER		
<small>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.</small>					
DATE			SIGNATURE OF AUTHORIZED INDIVIDUAL		
8/10/72					
7. APPROVAL FOR RETURN TO SERVICE					
<small>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 <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED</small>					
BY	FAA FLT. STANDARDS INSPECTOR	MANUFACTURER	INSPECTION AUTHORIZATION		OTHER (Specify)
	FAA DESIGNEE	<input checked="" type="checkbox"/> REPAIR STATION	CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT		
DATE OF APPROVAL OR REJECTION		CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL		
8/10/72		2218			

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.

1. Remove Narco MK 12A/VOA 40 and Genave Alpha 200.

A. Narco MK 24 VHF transceiver with VOA-9 omni converter/indicator.

8. Narco MK24 VHF transceiver with VOA-8 omni converter/indicator.

C. Narco UGR-2 Glide slope receiver.

D. Bendix T-12C ADF

E. Geneva Delta 300 Marker receiver

F. Genave TAU-81 audio amplifier

4. Aircraft electrical loading in accordance with FAA AC 43.13-1, Chapter 11, Section 2, par. 239. Maximum probable continuous load does not exceed 80% of alternator output. Aircraft is equipped with a 60 amp alternator.

5. Functional tested per FAR 23.1431 and 23.1301.

6. Magnetic compass calibration checked per FAA AC 43.13-1, Chapter 16, Section 5, par. 513.

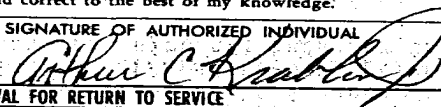
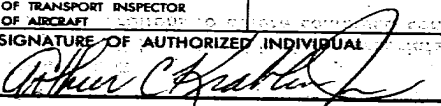
7. New weight and balance computed.

RECEIVED

AUG 14 1972

FEDERAL AVIATION ADMINISTRATION
LITTLE ROCK, ARKANSAS 72202

ADDITIONAL SHEETS ARE ATTACHED

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	Mooney		MODEL	M-20E
	SERIAL NO.	690027		NATIONALITY AND REGISTRATION MARK	N 9134V
2. OWNER	NAME (As shown on registration certificate)			ADDRESS (As shown on registration certificate)	
	BSL, Inc.			604 Devon Sherwood, Arkansas 72116	
3. FOR FAA USE ONLY					
4. UNIT IDENTIFICATION					
UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE	
AIRFRAME	***** (As described in item 1 above) *****			REPAIR	ALTERATION
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				
6. CONFORMITY STATEMENT					
A. AGENCY'S NAME AND ADDRESS			B. KIND OF AGENCY		C. CERTIFICATE NO.
Arthur C. Krablin P. O. Box 1149 Little Rock, Ark. 72203			<input checked="" type="checkbox"/> U.S. CERTIFICATED MECHANIC		A&P 1418211
			<input type="checkbox"/> FOREIGN CERTIFICATED MECHANIC		
			<input type="checkbox"/> CERTIFICATED REPAIR STATION		
			<input type="checkbox"/> 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			
8/10/72					
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 <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> 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	
8/10/72		1418211			

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.

• Install Hoskins P/N 67-2014 Single Strobe Light in accordance with Hosking installation instructions and FAA AC 20-30A and AC 43.13-2 Chapter 2 and 4. Power is taken from aircraft buss bar thru a 5 amp circuit breaker switch.

2. Weight and balance corrected.

[illegible]

U.S. GOVERNMENT PRINTING OFFICE : 1987 O2-372-06

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 LOU GADD 7-0-13	
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	Pockay		MODEL	H 208
	SERIAL NO.	690027		NATIONALITY AND REGISTRATION MARK	H 91347
2. OWNER	NAME (As shown on registration certificate)			ADDRESS (As shown on registration certificate)	
	Charles E. Allen Co.			4510 Illinois Avenue Louisville, Ky.	
3. FOR FAA USE ONLY					
4. UNIT IDENTIFICATION					5. TYPE
UNIT	MAKE	MODEL	SERIAL NO.	REPAIR	ALTERATION
AIRFRAME	As described in item 1 above				2
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				
6. CONFORMITY STATEMENT					
A. AGENCY'S NAME AND ADDRESS			B. KIND OF AGENCY		C. CERTIFICATE NO.
R. C. Malley Bowman Field Louisville, Ky. 40205			<input checked="" type="checkbox"/> U.S. CERTIFICATED MECHANIC		ABE 1365013
			<input type="checkbox"/> FOREIGN CERTIFICATED MECHANIC		
			<input type="checkbox"/> CERTIFICATED REPAIR STATION		
			<input type="checkbox"/> 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		
5-18-71			R. C. Malley		
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 <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> 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	
5-18-71		1454664 IA		Kenneth C. Cuba	

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 Beta 4096 and removed Harco UD14. All work done in accordance with AC 43.13-2.

The equipment is installed in such a manner that it can withstand the required loads. The wiring is installed in such a manner as to minimize the possibility of fire and smoke hazard. All necessary functional tests have been performed. Interconnection wires and cables are supported to avoid chaffing. The equipment is located where it will obtain sufficient cooling and where it will not be a smoke hazard or ignite readily the flammable parts of the airplane.

Aircraft	Weight	Arm	Moment
ADD:	1610.5		73049
Beta 4096	4.4	22.3	98
REMOVED:			
Harco UD14	8.5	22.3	190
	<u>1606.4</u>		<u>72957</u>

72957 + 1606.4 = 45.4 C. G.

The continuous electrical load is within the allowable limits of the 60 amp. alternator.

NO ENTRIES BELOW THIS LINE

☐ ADDITIONAL SHEETS ARE ATTACHED

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 1-4-D	
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 Mooney SERIAL NO. 690027		MODEL M 202 NATIONALITY AND REGISTRATION MARK N 9134V	
2. OWNER		NAME (As shown on registration certificate) Charles R. Allen Co.		ADDRESS (As shown on registration certificate) 4516 Illinois Avenue Louisville, Ky.	
3. FOR FAA USE ONLY					
The data identified herein complies with the applicable FAA requirements and is hereby certified for the above described aircraft to conform to the requirements of a person authorized in FAR 43.11.					
APPROVING INSPECTOR <i>[Signature]</i> DATE 2-3-70					
4. UNIT IDENTIFICATION					
UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE	
AIRFRAME	(As described in item 1 above)			REPAIR	ALTERATION
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				
6. CONFORMITY STATEMENT					
A. AGENCY'S NAME AND ADDRESS			B. KIND OF AGENCY		C. CERTIFICATE NO.
R. C. Malley Bowman Field Louisville, Ky. 40205			<input checked="" type="checkbox"/> U.S. CERTIFICATED MECHANIC		1365013
			<input type="checkbox"/> FOREIGN CERTIFICATED MECHANIC		
			<input type="checkbox"/> CERTIFICATED REPAIR STATION		
			<input type="checkbox"/> 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 1-26-70			SIGNATURE OF AUTHORIZED INDIVIDUAL <i>[Signature]</i>		
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 <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> 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 1-26-70		CERTIFICATE OR DESIGNATION NO. 1454664, 1A		SIGNATURE OF AUTHORIZED INDIVIDUAL <i>[Signature]</i>	

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 Harco UD14. All work done in accordance with AC 43.13-2.

The radio is installed in such a manner that it can withstand the required loads. The wiring is installed in such a manner as to minimize the possibility of fire and smoke hazard. All necessary functional tests have been performed. Interconnection wires and cables are supported to avoid chaffing. The equipment is located where it will get a sufficient cooling and where it will not be a smoke hazard or ignite readily the flammable parts of the airplane.

Aircraft	Weight	Arm	Moment
ADD:	1601		72823
Harco UD14	6.5	22.3	190
Harco UD14 antenna	1.0	36.0	36
	1610.5		73049

$$73049 \div 1610.5 = 45.3 \text{ G. O.}$$

The continuous electrical load is within the allowable limits of the 60 amp. alternator.

NO ENTRIES BELOW THIS LINE

☐ ADDITIONAL SHEETS ARE ATTACHED

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 1-4-12	
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 Mooney		MODEL M20E		
	SERIAL NO. 690027		NATIONALITY AND REGISTRATION MARK N 9134V		
2. OWNER	NAME (As shown on registration certificate) Mooney Corporation		ADDRESS (As shown on registration certificate) Box 72 Kerrville, Texas		
3. FOR FAA USE ONLY					
<small>the data identified herein complied with applicable FAR, AD, Airframe requirements and is approved only for the above described aircraft subject to continuing inspection by a person authorized to inspect.</small> APPROVING INSPECTOR <i>J.R. Shuley</i> DATE 3-26-69					
4. UNIT IDENTIFICATION					
UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE	
AIRFRAME	***** (As described in item 1 above) *****			REPAIR	ALTERATION
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				
6. CONFORMITY STATEMENT					
A. AGENCY'S NAME AND ADDRESS			B. KIND OF AGENCY		C. CERTIFICATE NO.
R. C. Mulloy Bowman Field Louisville, Ky.			<input checked="" type="checkbox"/> U.S. CERTIFICATED MECHANIC		AE-1365013
			<input type="checkbox"/> FOREIGN CERTIFICATED MECHANIC		
			<input type="checkbox"/> CERTIFICATED REPAIR STATION		
			<input type="checkbox"/> 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 March 20, 1969			SIGNATURE OF AUTHORIZED INDIVIDUAL <i>R.C. Mulloy</i>		
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: <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED					
BY	FAA FLT. STANDARDS INSPECTOR	MANUFACTURER	<input checked="" type="checkbox"/>	OTHER (Specify)	
	FAA DESIGNEE	REPAIR STATION	<input type="checkbox"/>		
DATE OF APPROVAL OR REJECTION March 20, 1969		CERTIFICATE OR DESIGNATION NO. 1454664 IA		SIGNATURE OF AUTHORIZED INDIVIDUAL <i>[Signature]</i>	

NOTICE

Weight and balance or operating limitations 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 type work completed.)
Installed Marco Mark XII with VOA4 and Alpha 200. All work done in accordance with AC 43.13-2.

The radios are installed in such a manner that they can withstand the required loads. The wiring is installed in such a manner as to minimize the possibility of fire and smoke hazard. All necessary function tests have been performed. Interconnection wires and cables are supported to avoid chaffing. The equipment is located where it will obtain sufficient cooling and where it will not be a smoke hazard or ignite readily the flammable parts of the airplane.

Aircraft	Weight	Arm	Moment
ADD:	1584		72170
Alpha 200	5.3	22.3	67
Marco Mark XII - panel unit	7.8	22.3	174
- power supply	3.9	105.8	412
	1601		72823

72823 + 1601 = 45.6 C. G.

An electrical load analysis was performed and the continuous load is within the allowable limits of the 60 amp. alternator.

NO ENTRIES BELOW THIS LINE

☐ ADDITIONAL SHEETS ARE ATTACHED