| 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 EAA Use Only |

| Fee | Transportatio deral Aviatio ministration | | (Airfra | me, P | owerplant, Pro | ope | elle | r, or App | iance) | | | | | | |
|------------|--|------------------------|------------------|--------------|--|-------------------|-------------------------------|-----------------------------|--------------------------------|---------------|--------------------|------------|--------------------------|-----------------|----|
| in | structions | | ition of th | is form. | ies. See Title 14 (. This report is req | | | | | | | | | | |
| | | Nationalit | y and Reg USA | istratio | n Mark | N | 16244 | 4P | Serial No. 24-1349 | | | | | | |
| 1. A | Ircraft | Make | | | PIPER | | | | Model | PA-24-2 | 250 | | Series | PA-24 | |
| | | Name (As | shown o | n regist | ration certificate) | Address (As shown | | | _ | gistration | certificate, |) | | | |
| 2. O | wner | | WMJ CORP. | | | | | | | 3 WIDEFIEL | | | | State COLORADO | |
| | | | | | | į | | | | | | ntry USA | | | |
| | | | | | | | 3. Fc | r FAA Use | Only | | | | | | _ |
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| | 4. Тур | 9 | | | | | 5. Ur | nit Identifica | ition | | | | | | |
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| | | | POWER | PLANT | • | | | | | | | | | | |
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| City | CASPER | | | | State WYOMING | - | i | | | N4NR | k506Y | | | | |
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| BY | | A Fit. Stand pector | lards | Man | anufacturer Ma | | | ntenahce Oi | ganization | | Depar | tment of 1 | ved by Cana Transport | dian | |
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| | ificate or gnation N | o. N4NR506 | SY | Signa | ature/Date of Author | orize | ed In | dividual | ر د | 1/2 | 2.6 | | | | |

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.

| | Accomplished |
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| | |

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

USA

N6244P

PIPER PA-24-250

S/N 24-1349

2/4/2020

(Radio Installation per AC43.13-2B Chapter 2)

<u>System:</u> The Installation of dual aircraft powered Bose Series X Headset jacks TSO C57a and C139. The headset jacks were installed in addition to the Pilot and Copilot positions. Instrument mounting per AC43.13-2B Chapter 2.

<u>Wiring</u>: The Pilot's and Copilot's Bose jacks were wired to the Avionics buss through a 1 AMP fuseholder labeled "BOSE" with 24 AWG Mil22759/16 wire. (Wire selected per AC43.13-1B, Chapter 11 sec 5-7 and AC43.13-1B Chapter 11 Sec 4 para 11-47 to 11-50 circuit protection). Load analysis was accomplished per AC43.13-1B Chapter 11 Sec 4 para 11-55 and was found to be acceptable. Wire routing, tying and clamping was accomplished per AC43.13-1B Chapter 11 Sec 9 paras 11-115 to 11-121 and Sec 10 to Sec 12.

<u>Operational Flight and Ground Checks</u>: The post Install checkout procedures for the Bose Headsets were satisfactorily completed. All systems operated in accordance with the manufacturers instructions and did not interfere with the normal operation of the other equipment installed in the aircraft.

☐ Additional Sheets are Attached

| (2) |
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| US Department |
| of Transportation |
| Federal Aviation |
| Administration |

MAJOR REPAIR AND ALTERATION

| Form Approved OMB No. 2120-0020 2/28/2011 | Electronic Tracking Number |
|---|----------------------------|
| | For FAA Use Only |

(Airframe, Powerplant, Propeller, or Appliance) 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)) Nationality and Registration Mark Serial No. ÚSA N6244P 24-1349 1. Aircraft Make Model Series **PIPER** PA-24-250 PA-24 Name (As shown on registration certificate) Address (As shown on registration certificate) Address 3 WIDEFIELD BLVD. WMJ CORP. 2. Owner City **COLORADO SPRINGS** State COLORADO Zip 80911-2126 Country USA 3. For FAA Use Only 5. Unit Identification 4. Type Repair Alteration Unit Make Model Serial No. (As described in Item 1 above) AIRFRAME POWERPLANT **PROPELLER** Type **APPLIANCE** Manufacturer 6. Conformity Statement B. Kind of Agency A. Agency's Name and Address U. S. Certificated Mechanic NATRONA AVIONICS LLC Manufacturer Address 7956C FULLER STREET Foreign Certificated Mechanic C. Certificate No. City CASPER State WYOMING Certificated Repair Station N4NR506Y Certificated Maintenance Organization Zip 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. Signature/Date Extended range fuel per 14 CFR Part 43 App. B 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 Fit. Standards Persons Approved by Canadian Maintenance Organization Manufacturer Department of Transport Inspector BY Other (Specify) **FAA Designee** Inspection Authorization Repair Station Signature/Date of Authorized Individual Certificate or Designation No. N4NR506Y

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

USA

N6244P

PIPER PA-24-250

S/N 24-1349

12/27/2019

(Radio Installation per AC43.13-2B Chapter 2)

<u>System:</u> The removal of a Garmin GTX-327 Transponder and the installation of a GARMIN GTX 345 Transponder ATCRBS/Mode S Transponder with ADS-B In/Out TSO C112e, C154c, C157a, C166b per STC SA01714WI dated 10/31/2016. The GTX 345 was mounted in the position of the removed GTX-327 (Sta. 48.50). GPS position and Velocity are provided by the GNS-530W. Instrument mounting per AC43.13-2B Chapter 2.

<u>Wiring</u>: The GTX 345 was wired to the Radio Master buss through a Klixon 7277-2-3 3 Amp circuit breaker labeled "XPNDR" with Mil22759/16 22 AWG wire. (Wire selected per AC43.13-1B, Chapter 11 sec 5-7 and AC43.13-1B Chapter 11 Sec 4 para 11-47 to 11-50 circuit protection). Load analysis was accomplished per AC43.13-1B Chapter 11 Sec 4, para 11-55 and was found to be acceptable. Wire routing, tying and clamping was accomplished per AC43.13-1B Chapter 11 Sec 9 paras 11-115 to 11-121 and Sec 10-12.

<u>Displayed Information</u>: The GTX-345 traffic and weather are displayed on the GNS-530W.

<u>Antennas:</u> The existing Transponder antenna was reused.

Operational Flight and Ground Checks The GARMIN checkout procedures for the GTX-345 systems were satisfactorily completed. All systems operated in accordance with the manufacturers instructions and did not interfere with the normal operation of the other equipment installed in the aircraft.

Unit Manual or Drawing Reference Circuit Protection Wire

GTX 345 190-00734-10 Rev.13 9/3/2019 3 Amp 22 AWG

Weight and Balance/Equipment List Updated _12/27/2019____(AC43.13-1B Chapter 10)

Instructions for continued airworthiness refer to GTX 345 Install manual, maintenance manual, and this 337. Inspect IAW FAR 43, Appendix D.

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

| U.S. Department |
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| of Transportation |
| Federal Aviation |

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

| Form Approved OMB No.2120-0020 2/28/2011 | Electronic Tracking Numbe |
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For FAA Use Only

| Federal Avi Administrat | ation | | A) | Airtrai | me, Powerplant, P | rop | eller, o | r Appliance) | | | |
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| | osition o | f this for | | | | | | | | | alty for each such violation |
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| | | Piper | | | | | | PA-24-250 | | | Comanchee |
| Name (As shown on registration | | | | | ration certificate) | | | Address (As sho | wn on registrat | tion cer | tificate) |
| 2. Ow | mor | WMJ C | | og.ou | ration detailed to | | | Address 3 Wic | iefield Blv | d | |
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| Name | | in M Kello | | | | _ X | U.S. Ce | tificated Mechanic | | | Manufacturer |
| Address | 4119 W | Commor | wealth Av | <u>e</u> | | | Foreign | Certificated Mechanic | | C. | Certificate No. |
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| Zip | 92833 | | Country | USA | | | Certifica | ed Maintenance Organiza | tion | | |
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| here | eto have | e been r | nade in a | accord | ance with the requirem | ents | of Part | 43 of the U.S. Federa | Aviation R | egulat | tions and that the |
| info | rmation | furnishe | ed hereir | is tru | e and correct to the be | st of | my kno | vledge. | | - 3 | |
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| | | | | | 7. Appro | val f | or Retu | rn To Service | | | |
| | | | | | persons specified below Aviation Administration | | | | nspected in | | manner prescribed by |
| BY | FAA | A Flt. Star pector | | | Manufacturer | | | nance Organization | Per | rsons A | ppoved by Canadian nt of Transport |
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| Certificat | | gnation N | | | Signature/Date of Auth | | | | | | |
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| AP/IA 26 | 98724 | | | | | | | Benjamin M Kellog | g 10-1-201 | 8 | |

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.

| B. Description of Work Accomplished (If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.) | | | | | | | | | |
|--|---|------------------------|--|--|--|--|--|--|--|
| | N6244P | 10-1-2018 | | | | | | | |
| | Nationality and Registration Mark | Date | | | | | | | |
| CW AD 2012-17-06 IAW Attached A | MOC. Installed billet stabilator horn asser | mbly IAW STC SA04016AT | | | | | | | |
| All work done in accordance with th | ne supplied instructions ADS 100517-1-14 | | | | | | | | |
| No change in the weight and balance. The rigging was checked, and all control travels and tensions are in spec IAW The Piper Service Manual. | | | | | | | | | |
| Attached is the ICA, STC and the STC | C Permission statement | | | | | | | | |
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| | X Additional Sheets Are Attached | | | | | | | | |



Small Airplane Directorate
Atlanta Aircraft Certification Office
1701 Columbia Ave.
College Park, Georgia 30337

JUL 3 0 2013

Alan Paul Kerr
The Aeronautical Design Service Pty Ltd
5 Gunnaroo Lane
Montville: Queensland 4560Australia

Mr. Kerr,

We received you proposal dated June 18, 2013 (and clarifications on June 19, 2013), requesting approval of Civil Aviation Safety Authority of Australia (CASA) Supplemental Type Certificate (STC) SVA 532 as an alternative method of compliance (AMOC) to FAA Airworthiness Directive (AD) 2012-17-06. You requested the AMOC apply globally to all PA-24, PA24-250, PA24-260 and PA-39 aircraft which have had the Piper stabilator horn part number (P/N) 20397-00 replaced with The Aeronautical Design Service Pty Ltd (ADS) stabilator horn P/N ADS1008020828 in accordance with the instructions provided in CASA STC SVA 532.

AD 2012-17-06 applies to Piper model PA-24, PA-24-250, and PA-24-260 airplanes with P/N 20397-00 stabilator horn installed and requires replacement of the stabilator horn assembly and/or repetitive inspections of the stabilator horn assembly for corrosion or cracks, as applicable. The AD paragraphs (f) and (g) require replacement of the horn assembly with the Piper part number. The proposal for AMOC is to paragraphs (f) and (g) of the AD, to serve as terminating action to the AD.

The basis for this approval is referenced in your letter and was assessed in the review and validation of the data supporting CASA STC SVA 532, leading to FAA STC SA04016AT.

We approve ADS stabilator horn P/N ADS1008020828 installed following the requirements of STC SA04016AT as an AMOC to paragraphs (f) and (g) of AD 2012-17-06. The approval applies to all Piper model PA-24, PA24-250, and PA24-260 aircraft and is considered terminating action to the AD. Note: AD 2012-17-06 does not apply to Piper model PA-39 aircraft, or other Piper model aircraft that the ADS horn may be applicable to. Therefore, we have not included those models in this approval.

In accordance with FAA Order 8110.103, the following conditions apply:

- All provisions of AD 2012-17-06 that are not specifically referenced above remain fully applicable and must be complied with accordingly.
- This approval is transferable with airplane(s) to other operators.
- Before using this AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.
- When complying or verifying compliance with AD 2012-17-06 using this AMOC, a copy of this letter shall be inserted into the maintenance records of the airplane.



If you have any questions or need additional information, please contact Gregory K. (Keith) Noles at (404) 474-5551, (404) 474-5606, or electronic mail at gregory.noles@faa.gov.

Sincerely,

Atlanta Aircraft Certification Office

cc: ACE-100

ACE-113 (Showers / Wessley) ACE-MKC-AEG-11 (Alquist)



The Aeronautical Design Service P/L

5 Gunnaroo Lane: Montville, QLD, 4560

ABN: 28 110 924 989 Mob 0408 767 135

STC Permission Statement FAA STC's SA 04016AT and SA04019AT

To whom it may concern,

Please use this letter as an indication of my authority for use ST SA04016AT (or STC SA04019AT) to modify the aircraft listed below

Signed by

Alan Kerr Managing Director The Aeronautical Design Service

Dated .

08-29-2018

Form #10-01

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

Supplemental Type Certificate

(Continuation Sheet)

IMPORT

Number SA04016AT

Description of Type Design Change: (Continued)

Required type design data:

- Installation per ADS 100517-1-MDL (Rev 7) dated 10 July 2013, or later FAA approved revision
- Maintenance per ADS 100517-1-15-FAA Instructions for Continuing' Airworthiness Service Manual Supplement, Revision 6, dated 11 July 2013, or later FAA approved revision

Limitations and Conditions: (Continued)

- 2. FAA Airworthiness Directive (AD) 2012-17-06 applies to the stabilator horn. This STC has been assessed as an alternative method of compliance to the AD. Contact the design approval holder, ADS, for further information.
- 3. Approval of this change in type design applies to the above model aircraft only. This approval should not be extended to other aircraft of this model on which other previously approved modifications are incorporated, unless it is determine by the installer that the interrelationship between this change and any other previously approved modifications, including changes in type design, will produce no adverse effect upon the airworthiness of that airplane.
- 4. 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.

| Cerlification Basis: | | | |
|----------------------|----|-------|--|
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| | | ra II | |

United States of America

Department of Transportation -- Federal Aviation Administration

Supplemental Type Certificate

TAPPRT

Number SA04016AT

This cortificate issued to

The Aeronautical Design Service Pty Ltd

5 Gunnaroo Lane

Montville: Queensland 4560 Australia

certifies that the change in the type design for the following product with the limitations and conditions therefore as specified horson meets the airworthiness requirements of Part 3 of the Civil Air Regulations.

Original Product Type Cortificate Number:

1A15

Piper

PA-24, PA-24-250, PA-24-260, PA-24-400

Description of Type Design Change. Installation of The Aeronautical Design Service (ADS) part number 1008020828 Stabilator Horn in accordance with drawing list ADS 100517-1-MDL revision 7 (section 2) dated 10 July 2013, or later FAA approved revision, as a replacement for the Piper component P/N 20397-00 (also identified as 20397-000).

See continuation sheet (page 3).

Limitations and Conditions.

Instructions for Continued Airworthiness, ADS 100517-1-15-FAA Rev 6, dated 11 July 2013, or later FAA approved revision, is a required part of this STC, and must be incorporated into the operator's maintenance program.

See continuation sheet (page 3).

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 Tederal Aviation Administration.

Date of application. December 13, 2010

Date raise September 12, 2013

Date of issuance July 23, 2013

Date amended:



Melvin D. Taylor

Manager, Atlanta Aircraft Certification Office

Instructions for Continuing Airworthiness Service Manual Supplement (FAA STC)

Replacement Comanche Stabilator Horn P/No ADS 1002080828

Revisions Notes

This report at its latest revision status superseded all previous revisions. Only a total reprint of the report promulgates revisions. All pages bear the same revisions/date status

| Rev | Revision | Signature | Details of Change |
|-----|--------------|-----------|---|
| No. | Date | | |
| 0 | | | Original Issue |
| 1 | 3 Nov 2010 | | Editorial |
| 2 | 18 Nov 2010 | | Minor Corrections in terminology added. |
| 3 | 24 Mar 2011 | | Bolt Orientations corrected in Drawings. Reference made to apply and Check "Torque Seal" |
| 4 | 11 Apr 2011 | | Removed PA40, updated references, updated temperature references, updated service manual section. |
| 5 | 5 July 2011 | | Updated service manual section. |
| 6 | 11 July 2013 | | Updated in Response to FAA email Dated 10 July 2013. |

1. Preamble

This Service Manual Supplement has been raised to specify the maintenance activities which are required to ensure that the Replacement Stabilator Horn P/No ADS 1008020828 will operate safely in service.

This supplement only contains information which is associated with the Replacement Horn and needs to be read in conjunction with the PIPER Comanche Service Manual which contains instructions for all other features of the aircraft.

This Supplement is to be inserted into the Piper Service Manual at the beginning of Section 5 when the replacement Stabilator horn is installed on the aircraft.

Where information in this manual is contradictory with information contained in the Piper Service Manual the Piper Service Manual will take precedence over all things except those which are explicitly stated for the stabilator horn. In those instances this supplement, should take precedence.

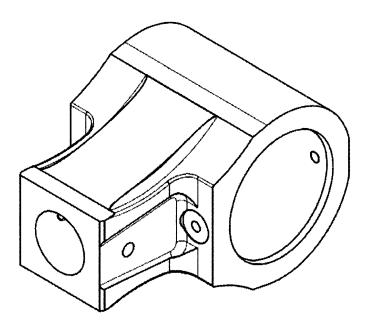
2. Description and Operation

The Aeronautical Designs Stabilator Horn has been designed as a replacement component for the Piper Stabilator horn P/No 20397-00 in the aircraft listed in Table #1. Added strength and manufacturing features have generated a distinctively different shape for this component. Even with this change in shape the AeroDesigns Component is a direct replacement for the Piper Component.

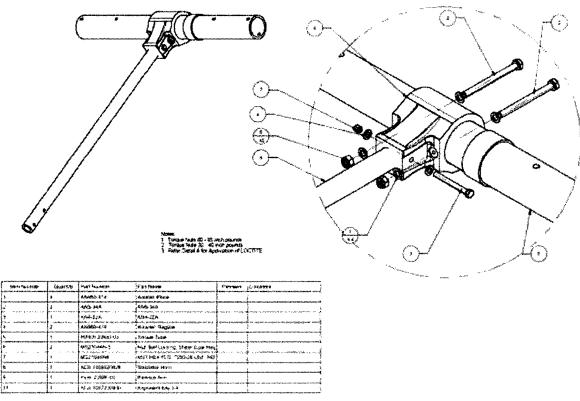
| Models Affected | Туре | Serial Numbers Affected |
|-----------------|---------------|-------------------------------------|
| PA-24 | Comanche | 24-1 through 24-3687 |
| PA 24-250 | Comanche | 24-1, 24-103 through 24-3687 |
| PA 24-260 | Comanche | 24-3642 and 24-4000 through 24-5034 |
| PA24-400 | Comanche | 26-2 through 26-148 |
| PA 30 | Twin Comanche | 30-1 through 30-2000 |
| PA 39 | Twin Comanche | 39-1 through 39-162 |
| | | |

The stabilator horn is a fixed component which has no operating features once it is installed. The next higher assembly in which the stabilator is a component is the Stabilator Torque tube assembly.

Figure #1 shows the Stabilator Horn as a separate component.



□ Figure 1
Figure #2 shows the Stabilator torque tube assembly and includes the Parts List. .



☐ Figure 2

AERONAUTICAL DESIGN SERVICE REPORT

REPORT NO ADS 100517-1-15-FAA

PROJECT: COMANCHE STABILATOR HORN APPROVAL

3. Airworthiness Limitations

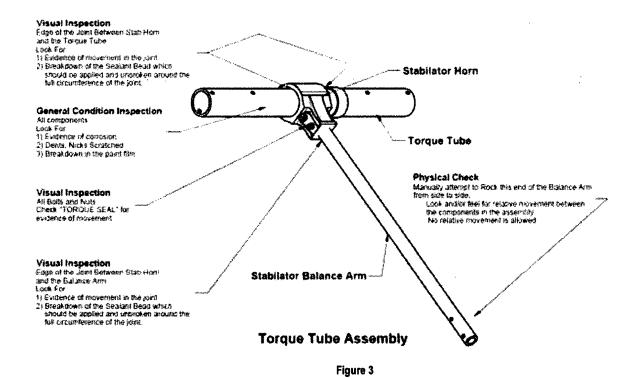
No additional airworthiness limitations are required for this modification.

This Airworthiness Limitations Section is FAA Approved and Specifies Maintenance required under Secs.. 43.16, and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved.

5. Servicing

Servicing procedures specified in the Piper Comanche Service Manual continue to apply when this Aeronautical Designs Stabilator horn is fitted however additional inspections are required to check features which are unique to this component. The additional instructions specified in Figure #3 are to be completed at each 100 hourly inspection of the aircraft.

This servicing is done with the stabilator installed on the aircraft. There is no need to remove the stabilator unless the inspection identifies defects which require further investigation.



When conducting these inspections it is important to understand the following acceptance criteria

- Any evidence of movement in the joints is unacceptable, and an engineering dispensation is required before further flight after the movement is detected
- Any evidence of corrosion nicks or scratches should be addressed.
 - Assessment and treatment of damage on the torque tube and balance arm is to be done in accordance with the instructions provided by Piper in the appropriate section of the Comanche Service Manuals
 - Classification and assessment of defects on the Replacement Stabilator Hom should be in accordance with the following
 - i. Scratches
 - 1. Surface Scratches and Sharp Edged Nicks are unacceptable
 - a. All scratches and Sharp Edged nicks are to be removed by blending.
 - Acceptable blends have a depth to surface length ration of 1:3 or greater
 - ii. Blend depths up to 0.5mm are allowable
 - iii. Blend depths exceeding 0.5mm must receive evaluation and Engineering Dispensation
 - ii. Dents
 - 1. Smooth dents with no visible cracking are acceptable up to 0.5mm

- Dents should be checked with Fluorescent Dye Penetrant NDI methods (Per SAE –AMS 2647 or ASTM E1417, or equivalent) to check for cracking
- b. Dents deeper than 0.5 mm will require Engineering Dispensation
- iii. Corrosion
 - 1. All corrosion damage must be addressed by
 - a. Abrading to remove all traces of corrosion
 - b. Blending to achieve a smooth 1:3 (or larger) blend profile
 - c. Etch prime and paint the reworked surface.
- iv. Cracks
 - It is unacceptable to have any evidence of cracking in the Replacement Stabilator Hom
 - 2. Any evidence of cracking is to be reported to Mr Alan Kerr (
 alan@aerodesignservice.com) for evaluation and if applicable repair instructions
- c. If it is evident that the sealant applied to the structure is deteriorated or has disbonded from the surface then it is necessary to remove all existing sealant and apply new sealant over all of the joints.

6. Installation and Removal Instructions for the Stabilator Horn

6.1. Initial Installation

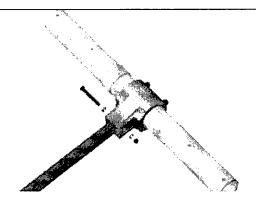
Initial installation of the Stabilator horn is to be done in accordance with the instructions provided in ADS Report 100517-1-14 which is included with the STC installation package that is supplied with each new Stabilator Horn.

6.2. Removal in Service

Removal of the stabilator halves and the stabilator torque tube assembly is done in accordance with instructions provided in the Piper Service Manual for the aircraft.

6.2.1. Removal of the Stabilator Horn from the torque tube

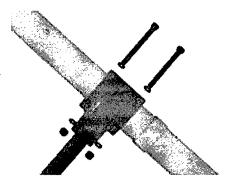
| 1. | Remove all paint and rust from the outer surface of the torque tube. Coat the torque tube with a light oil to aid the removal of the various components. |
|----|--|
| | Note: During the removal of components from the torque tube assembly, note the relative position of the components to help reassembling them correctly. |
| 2. | Remove the Both Bearing Blocks (Item H and L on diagram) |
| | Note the position of any shims, Record the thickness and location for later reinstallation |
| | The state of the s |
| | 8.620 M |
| 3. | Look Up inside the Torque Tube to visually inspect the exposed sections of the stabilator |
| | horn and collar attaching bolts for corrosion. Dress the bolts using emery paper, to remove the corrosion if present on the bolts. |
| 4. | Remove the AN4 Bolt attaching the Balance Arm to the Stabilator Horn. |



Note: LOCTITE is used as a retaining compound for this bolt, and the AN5 bolts. If the bolt cannot be driven out easily it may be necessary to apply heat (60-80 degrees Celsius) to the stabilator horn to soften the LOCTITE.

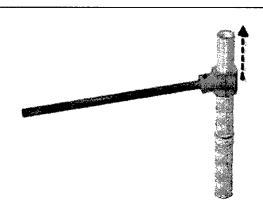
Apply heat to the stabilator horn using a hot air gun (not a propane or similar gas burner). Continue to apply the heat unto the horn is at 60 to 80 deg Celsius (Use an Infrared Thermometer to measure this temperature) Avoid heating the torque tube shaft as much as possible.

5. Remove the two bolts attaching the Stabilator Horn to the Torque tube.



6. Place the Torque Tube Assembly in a soft jaw vice with the torque tube axis vertical. Tighten the vice sufficiently to hold prevent the torque tube from rotating.

Note: Experience has shown that it is easy to permanently deform the torque tube, particularly the torque tube from single engine aircraft, when clamping in a vice. Use of the clamping Collar (ADS 1011031045) or similar fixture is recommended to reduce the risk of permanently deforming the torque tube.



Apply heat to the stabilator horn using a hot air gun (not a propane or similar gas burner). Continue to apply the heat unto the horn is at 60 to 80 deg Celsius (Use an Infrared Thermometer to measure this temperature) Avoid heating the torque tube shaft as much as possible.

Break the LOCTITE joint by attempting to rotate the stab horn on the torque tube. You can use the balance arm as a lever for this operation.

Once the LOCTITE Joint is broken, raise the stab hom up the torque tube by rotating the balance arm backwards and forwards whilst applying an upward pressure.

> Note: Use of a puller may be necessary if the LOCTITE joint cannot be relieved by the above method.

7. Clean off all LOCTITE from the joint.

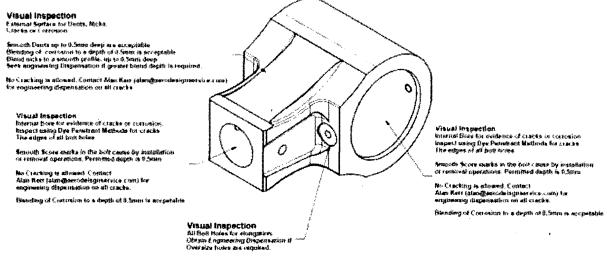
6.2.2. Removal of the Balance Arm from the Stabilator Hom

8. Remove the 1/4inch bolt attaching the balance arm to the horn.

| 9. | Withdraw the balance arm from the stabilator horn. |
|-----|--|
| | Note: The joint between the balance arm and the stabilator horn is an interference fit and it is secured with LOCTITE Retaining Compound. Use of heat (60-80 degrees Celsius) and a puller will be necessary to withdraw the arm from the horn. Take care not to damage the horn or the balance arm in this process as both items will be reused on assembly |
| | Apply heat to the stabilator horn using a hot air gun (not a propane or similar gas burner). Continue to apply the heat unto the horn is at 60 to 80 deg Celsius (Use an Infrared Thermometer to measure this temperature) Avoid heating the torque tube shaft as much as possible. |
| 10. | Visually inspect the balance arm internal and external surfaces looking for corrosion, evidence of cracking, or other damage Warning: Replace the balance arm, or seeking further engineering appraisal of there is evidence of cracking. Caution: Remove light surface corrosion, using 3M Abrasive Impregnated Nylon Wheel (ROLOC) Fine Grade. Material removal up to 0.5mm (0.0.020") is acceptable. Seek further engineering evaluation depth of material removed exceeds this amount at any location on the shaft. |
| 11. | Dress the end of the balance arm where it is inserted into the stabilator horn, to remove any debris, or material which is adhered the surface of the tube either because of the interference fit or LOCTITE from a previous installation. Note: Use Fine Grade 3M Impregnated nylon wheel, or 600 grit abrasive papers. On completion ensure that the surface is "smooth", uniform, and free from any obtrusions. |
| 12. | Wipe the surface of the balance arm with light machine oil if reassembly will not occur within 60 minutes. |

6.3. Inspection of the Stabilator Horn

Clean and inspect the Stabilator Horn. Acceptable defect, and rework criteria are provided in Figure #4



☐Figure 4

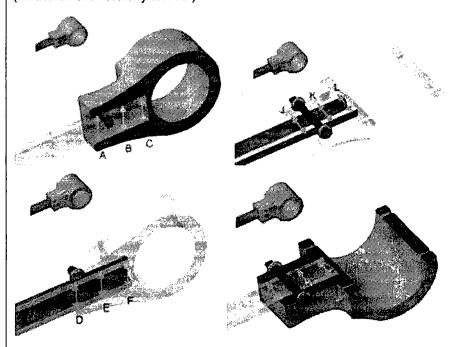
6.4. Reassembly in Service

6.4.1. Installation of the Balance Arm into the Stabilator Horn

| 13. | |
|-----|---|
| | warning: Assembling the joint between the balance arm and the stabilator horn, is a process which requires speed and experience. If the process is not done correctly or if any unforeseen problems occur during the assembly then it is likely that the joint will lock before the balance arm is fully inserted into the horn. If this does occur you will need to apply heat (60-80 degrees Celsius) to the horn and use the puller to withdrawn |
| | the balance arm from the horn and start the process again. Suggestion: If this is the first time that you are attempting to assemble the joint in this way. Then it is suggested that you |
| | have at least one DRY practice run, using the original horn. Do Not apply the LOCTITE for the practice run. |
| 14. | Identify the value of the bore diameter which is written on the release sheet for the stabilator hom and write this in the Measurement Table included at the end of these instructions. |

Use a 25 to 50mm (1 to 2 inch) micrometer to measure the outside diameter of the balance arm at the six locations "D", "E", "F", "J", "K", and "L" shown in the diagram opposite.

Record the readings in the Measurement Table at the end of these instructions. (Measurement Accuracy 0.0005")



Note: Dimensions "A", "B". "C" and "G", "H", and "I" are measurements of the "BORE" sizes, while "D", "E" and "F" and "J", "K", and "L" are measurements of the shaft diameter.

16. Calculate the level of interference at each of the six locations using the following relationship

 $Interference = Shaft\ Diameter - Bore\ Diameter$

17. The allowable level of interference is within the range 0.000" to 0.002" (0.00mm to 0.05mm).

Note: This level of interference is applied to each of the individual measurement and not as an average value.

- If Interference is in range 0.000" to 0.002" (0.00mm to 0.05mm).
 - o Interference is acceptable, proceed to next step in assembly sequence
- If interference is less than 0.000". (i.e. a negative number).
 - o Replace balance arm, or
 - Seek Engineering Dispensation. Contact Alan Kerr support@aerodesignservice.com
- if interference is higher than 0.002" (0.05mm)
 - o Hone the bore in the stabilator to enlarge the diameter
 - Use TF6806 hone
 - Check the diameter regularly at the 6 locations "A", "B", "C", "G", "H", "I"
 - Diameter variation is not to exceed 0.001

Warning: Be careful when honing to ensure that the diameter along the length of the bore is uniform and not tapering. A tapered bore will make it more difficult to insert the balance arm

| into the horn. Make the measurements regularly and adjust the honing technique to achieve this. | |
|--|------|
| | |
| Warning: Be careful not to allow the hone to bottom out in the bore as this may cause scoring on the end face. If uncorrected | |
| this scoring could lead to a premature failure of the Stabilator horn. | |
| 18. If there has been a need to hone the bore then measure record the final dimensions the bore at the 6 locations "A", "B", "C", "G", "H", and "I" in the measurement table, a confirm that the level of interference is acceptable. | |
| 19. Verify that the 0.25" Guide pin from the installation kit is a running fit in the stabilator and will traverse through both sides of the horn with only mild resistance. Ream the hole if required to achieve a running fit. | horn |
| | |
| WARNING : Assembling the joint between the balance arm | |
| and the stabilator horn is a process which requires speed and | |
| experience. If the process is not done correctly or if any | |
| unforeseen problems occur during the assembly then it is likely | ĺ |
| that the joint will lock before the balance arm is fully inserted | |
| into the horn. If this occurs you will need to use a heat gun to apply heat (60 – 80 degrees Celsius) to the horn and use the | |
| puller to withdrawn the balance arm from the horn and start the | |
| process again. | |
| Suggestion: If this is the first time that you are attempting | |
| this assembly, then it is suggested that you have at least one | |
| DRY practice run, using the original horn. Do Not apply the | |
| LOCTITE for the practice run. | |
| Suggestion: It is suggested that assembling the balance arm | |
| into the stabilator horn be done using two people; one person to | |
| remove the horn from the oven and insert it over the balance | |
| arm, and one person to direct the alignment of the horn with the | İ |
| balance arm, and insert the pin. | |
| 20. Clean the 28mm bore by wiping with a clean lint free cloth moistened with LOCTITE | - |
| Cleaner Degreaser | • |
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Apply LOCTITE Primer (Product 7649 to the surface of the bore, and allow to dry) 21. 22. Clean the mating surface of the balance arm using a clean lint free cloth moistened with LOCTITE Cleaner De Greaser. 23. Apply LOCTITE primer 7649 to the mating surface of the balance arm and allow to dry. 24. Preheat the oven to 200degC +/- 10degC. (400degF +/- 20degF), then place the stabilator hom in the oven and allow to heat soak for 20 minutes. Stand the Balance arm in a vertical orientation and secure using a soft jawed vice. 25. Orientate the balance arm so that axis of the 1/4" hole is pointing outward from the vice. 26. Coat the mating surface of the balance arm with LOCTITE 668 Retaining Compound o 100% coverage up to 50mm (2inches) from the end of the tube 27. Remove the horn from the oven. 28. Hold the horn above the end of the balance arm and rotate the horn to obtain a correct alignment of the ¼ inch hole in the horn with the ¼ inch hole in the balance arm.

| 29. | Quickly lower the hom onto the balance arm until it bottoms on the arm. |
|-----|--|
| | No. 6 and a second seco |
| | Note: you may need to rotate the horn backwards and forwards to assist the sliding motion when inserting the horn. Don't forget |
| | to work quickly! |
| 30. | Rotate the horn to obtain the correct alignment and insert the alignment pin. |
| | Note: you may need to raise the horn slightly (about 3mm |
| | (0.125inches)) to insert the alignment pin. The tapered end of |
| | the alignment pin will assist with this movement. |
| 31. | Allow the assembly to cool to room temperature |
| 32. | Remove excess LOCTITE from around the joint. |
| 33. | Allow the joint to stand for at least 30 minutes for the LOCTITE to cure before moving the |
| | assembly. |
| 34. | Remove the ¼ inch alignment pin. |

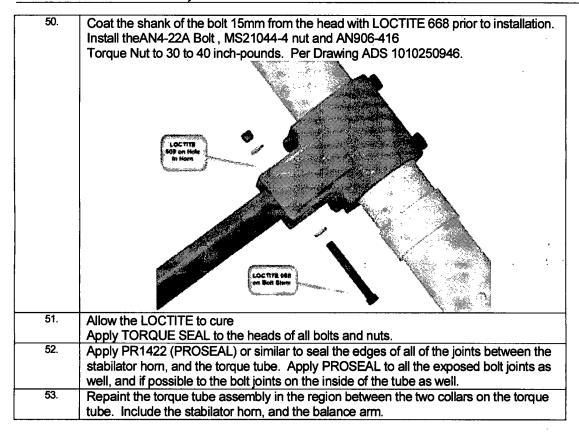
6.4.2. Assembly of the Stabilator Horn onto the Torque Tube

| 35. | Torque Tube: |
|-----|---|
| | Examine external Surface of torque tube for any surface defect which will prevent the new stabilator horn from being fitted. Corrosion, burrs, and bruising of the ends are examples of such defects. |
| | Note: Any assessment of the serviceability of the Torque Tube is to be made in accordance with the maintenance instructions provided in the PIPER Maintenance Manuals for the aircraft. |
| | Blend any defects which are found to ensure a smooth surface. a. These blending operations will remove the plating which is applied to the torque tube for corrosion resistance. Blended areas will need to be treated before final assembly. |
| | Note: All blending and treating operations are to be done in accordance with the Piper Maintenance Manual |
| 36. | Stabilator Horn |
| | Examine the inside surface of the bore in the stabilator horn that will mate with the torque tube. |
| | 2. Verify that the bore is clean, free from any paint, or primer |
| | 3. Verify that there are no burrs on any of the edges or scratches in the bore. |
| 37. | Examine the holes in the hom. |

| | Check that the hole has been correctly reamed to full depth |
|-----|--|
| 20 | 2. Clear the holes with the reamer if necessary |
| 38. | Slide the Horn onto the torque tube and align it correctly with the attachment holes. |
| 39. | Use a permanent spirit marker to mark where the edges of the hom are located on the |
| 40 | torque tube |
| 40. | Slide the horn off the torque tube. |
| 41. | Solvent Wipe the external surface of the torque tube using a clean lint free rag |
| | moistened with LOCTITE Cleaner Degreaser. Do not remove the marker lines. |
| | |
| | Note: Clean the area where the horn will be bolted and the |
| | section of the torque tube over which the horn will pass. |
| | |
| 42. | Clean the internal bore of the stabilator horn, in accordance with a clean lint free cloth |
| 45 | moistened with LOCTITE Cleaner degreaser. |
| 43. | Apply LOCTITE 668 to the surface of the torque between the marker lines. 100% |
| 14 | coverage is required. |
| 44. | Slide the stabilator hom onto the tube until the leading edge is close to the marker |
| | lines. |
| | |
| | Note; Do Not slide past this point at this time. |
| | Monitor the orientation such that the holes in the horn and the |
| | tube will align when the two items are finally positioned. |
| 45. | Use a rotating motion to push the horn onto the tube, until the holes are correctly |
| 1 | aligned. |
| | (Use a short machining bush with the tapered end inwards as a guide for correct |
| | alignment if necesary.) |
| 46. | Apply LOCTITE 668 as a 15mm wide band below the heads of the AN5-34A bolts. |
| 47. | Apply LOCTITE 609 onto the surfaces of the 5/16 hole in the Stab-Horn and Torque |
| | tube, on rear side of the stab horn. (i.e. the side away from the balance arm). |
| 48. | Install AN5-34A bolts from the front of the horn until fully seated on the horn. |
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| | LOCTITE BES |
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| | |
| 49. | Fit MC24092N 5 muto and ANOCOL F4C weeks |
| 49. | Fit MS21083N-5 nuts and AN960L-516 washer. |
| | Torque nuts to 60 to 85 inch pounds. (ADS Dwg 1010250946 Refers). |

AERONAUTICAL DESIGN SERVICE REPORT

PROJECT: COMANCHE STABILATOR HORN APPROVAL



6.4.3. Installation of the Torque Tube Assembly into the Aircraft

| 54. | Note: The LOCTITE will require 24 hours at Room Temperature to cure before attempting to reinstall the torque tube assembly into the aircraft. |
|-----|---|
| 55. | Reinstall the torque tube assembly on the aircraft in the reverse order of the removal process. Torque the bearing block bolts per the fine thread series of the torque table in the "Handling and Servicing Section of the Service Manual. |

6.4.4. Installation of the LH and RH Stabilator halves

| 56. | |
|-----|--|
| | Note : Stabilator attachment bolts require one thin washer under each bolt head, one thick washer under the inboard attach fitting nut, and two thick washers under the outboard attach fitting nut. |
| 57. | Ensure that the attach fittings in the stabilator halves are lubricated and free of corrosion. If Necessary lubricate the torque tube to facilitate installation of the stabilator halves. |
| 58. | Slide the left hand stabilator half onto the torque tube assembly. Position the stabilator attachment fitting holes so that they are in line with the torque tube holes. Install new bolts to secure the stabilator half. |
| 59. | Slide the right hand stabilator half onto the torque tube assembly. Position the stabilator attachment fitting holes so that they are in line with the torque tube holes. Install new bolts to secure the stabilator half. |
| 60. | Install a new bolt in the stabilator rear spar. |

AERONAUTICAL DESIGN SERVICE REPORT

REPORT NO ADS 100517-1-15-FAA

PROJECT: COMANCHE STABILATOR HORN APPROVAL

| 61. | Install a new bolt in the stabilator trim tab horn. Torque the bolt per the fine thread series in the "Handling and Servicing" Section of the service manual |
|-----|--|
| 62. | Reinstall the stabilator balance weight. |
| 63. | Balance the Stabilator in accordance with the Balancing procedures specified the applicable Piper Comanche Service Manual. |
| | Note: Having the stabilator correctly balanced cannot be overemphasized. Installation of the replacement horn has the potential to change the balance. It is important therefore to check that the stabilator is correctly balanced. |
| 64. | Reconnect the stabilator control cables with new bolts. |
| 65. | Check the stabilator, and stabilator trim rigging in accordance with the rigging requirements that are stated in the applicable service manual. Adjust as required. Torque bolts per fine thread series torque tables in the "Handling and Servicing" Section of the service manual. |
| | Note: Installation of the replacement stabilator horn has the potential to alter the rigging. DO Not omit this step from the installation procedures |

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| Federal Aviation |
| Administration |

3230538IA

FAA Form 337 (10-06)

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

| Form Approved OMB No. 2120-0020 2/28/2011 | Electronic Tracking Number |
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05-04-2012

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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 nation | nality and registration mark and date | work completed.) |
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| | N6244P | 05-04-2012 |
| | Nationality and Registration Mark | Date |
| 1. INSTALLED LO PRESTI SPEED SLIPPER + SPEED SPATS INSTRUCTIONS LSM-100-001 004 REV B 07/12/06 REV | | O INSTALLATION |
| 2. AIRCRAFT LANDING GEAR SWING AND OPS SATISFACT | ORY. FLIGHT TEST SATISF | FACTORY |
| 3. WEIGHT AND BALANCE UPDATED TO REFLECT CHANGE | ES | |
| INSTRUCTIONS FOR CONTIN | NUED AIRWORTINESS | |
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| Additional Sheets | s Are Attached | |

United States of America

Department of Transportation — Jederal Aviation Administration

Supplemental Type Certificate

Number SA3077SO

This cortificate, issued to

LoPresti Speed Merchants 260 Seagull Avenue Vero Beach, FL 32960

cortifies 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 3 of the Civil Aviation

Regulations

Original Product - Type Cortificato Number: 1A15

Make: Piper

Midel: PA-24, -250, -260, and -400

Description of Typo Design Change:

Installation of "speed spats" main landing gear fairings and/or installation of "Comanche speed slipper" nose gear fairing in accordance with LoPresti Speed Merchants MDL Report No. 1, Revision "B", dated October 25, 1991 and MDL Report No. 2, dated October 25, 1991, respectively, or later FAA approved revision.

Limitations and Conditions

This approval should not be extended to other aircraft of this model on which other previously approved modifications are incorporated unless it is determined by the installer that the interrelationship between this change and any of those other previously approved modifications will produce no adverse effect upon the airworthiness of that airplane.

This cortificate and the supporting date which is the basis for approval shall remain in effect until surrendered, suspended, rovoked, or a termination date is uthorwise established by the Administrator of the Fedoral Aviation Administration.

September 16, 1991

Soule reserved :

Galo of issuance:

December 6, 1991

January 8, 1992

John Tigue

Manager, Atlanta Aircraft

Certification Office

Any alteration of this certificate is punishable by a fine of not exceeding \$1,00%, or imprisonment not exceeding 3 years, or both.

Thy Certificate may be transferred in accordance with FAR 21.47.

FAA FOOM 8110-2 (10-68)

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

| orm Approved MB No. 2120-0020 | Electronic Tracking Number |
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For FAA Use Only

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| | | | | | PIPER | | | | Model | PA2 | 24-250 | | Series PA24 | |
| | - | Name (As | show | n on re | egistration certificate) | | | , | | | | gistration | certificate) | |
| 2. Ow | ner | | | W | VMJ CORPORATION | | | | Address | 3 WIDEFIEL | | | State COLORADO | - |
| | | | | | • | | | | Zip | 80911-2126 | | | antry USA | - |
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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.

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

USA

N6244P

PIPER PA24-250

S/N 24-1349

10/22/2011

(Radio Installation per AC43.13-2B Chapter 2.)

<u>System:</u> The Installation of a GARMIN GDL-69 XM WX Data link Transceiver per STC SA01487SE for the GDL-69 dated 12/20/04 for the first time airworthiness approval. The GDL-69 was mounted on the aft Avionics Shelf (Sta.150.00). Instrument mounting per AC43.13-2B Chapter 2.

<u>Wiring</u>: The GDL-69 was wired to the Battery Master through a 5 AMP W58-5 circuit breaker with Mil 22759/16 18 AWG wire, (Wire selected per AC43.13-1B, Chapter 11 sec 5-7 and AC43.13-1B Chapter 11 Sec 4 para 11-47 to 11-50 circuit protection). Load analysis was accomplished per AC43.13-1B Chapter 11 Sec 4, para11-55 and was found to be acceptable. Wire routing, tying and clamping was accomplished per AC43.13-1B Chapter 11 Sec 9 paras 11-115 to 11-121 and Sec 10-12.

Displayed Information: All information is displayed on the GNS-530W.

Antennas: A Garmin GA-55 Antenna was mounted on the aft fuselage left of centerline (Sta. 176.00). The Antenna was installed per AC43-13.2B Chapter 3.

Operational Flight and Ground Checks The Garmin checkout procedures for the GNS-530W and GDL-69 were satisfactorily completed. All systems operated in accordance with the manufacturers instructions and did not interfere with the normal operation of the other equipment installed in the aircraft.

Unit

Manual or Drawing Reference

Circuit Protection

Wire

GDL-69 Install

190-00355-02 Rev. K 4/1/2011

5 Amp

18 AWG

| Weight and Balance/Equipment List Updated10/22/2010(AC43.13-1B Chapter 10) |
|---|
| Instructions for continued airworthiness refer to Garmin Document 190-00355-00 Rev. A, GNS-530W, and GDL-69 Install manual, maintenance manual, and this 337. Inspect IAW FAR 43, Appendix D. |
| ENDEND |

| US Department |
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| of Transportation |
| Federal Aviation |
| Administration |

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

| | Electronic Tracking Number |
|-------------------|----------------------------|
| OMB No. 2120-0020 | |
| 2/28/2011 | |
| | or FAA Use Onty |

| | Part 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for |
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| instructions and disposition of this form. This report is required by la such violation. (49 U.S.C. §46301(a)) | w (49 U.S.C. §44701). Failure to report can result in a civil penalty for each |
| Nationality and Registration Mark USA N6244P | Serial No. 24-1349 |

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| | | | Nationality and Registration Mark USA N | | | | | Serial No. 24-1349 | | | | | |
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| | | Name (As | s shown | on regist | ration certificate) | | | Addres | s (As show | vn on re | aistratio | on certificate) | |
| | | | | _ | • | | | | 3 WIDEFIEL | , | , | | |
| 2. 0 | wner | | | WMJ | CORPORATION | | | City | COLORADO | SPRINGS | | State | COLORADO |
| | | | | | | | | Zip | 80911-2126 | 3 | c | ountry USA | |
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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.

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| R | Description | an of Work | Accomplis | ched |

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

USA

N6244P

PIPER PA24-250

S/N 24-1349

10/22/2011

(Radio Installation per AC43.13-2B Chapter 2.)

<u>System:</u> The installation of a JPI EGT-701 Temperature Monitoring system TSO C43b for EGT, CHT, and fuel flow per STC SA2586NM Dated June 17, 1999 and STC SA00432SE dated 12/18/2000 amended.

Operational Flight and Ground Checks: The post Install checkout procedures for the JPI EDM-730 were satisfactorily completed. All systems operated in accordance with the manufacturers instructions and did not interfere with the normal operation of the other equipment installed in the aircraft.

| <u>Unit</u> | Manual or Drawing Reference | Circuit Protection | Wire |
|-----------------------|--|-------------------------------|------------------|
| EDM-730 Install Manu | al #103 Rev. E 1/20/2009 | 2 AMP | 22 AWG |
| Fuel Flow Install man | ual #503 Rev. B 3/14/97 | | |
| EDM-730 Pilot's Guid | e Rev. C 6/1/2010 | | |
| Weight and Balance/E | quipment List Updated10/22/2011_ | (AC43.13-1B Ch | apter 10) |
| FAA Approved Flight I | Manual Supplement Dated 11/12/92 | | |
| | ed airworthiness refer to EDM-730 and AW FAR 43,Appendix D. | d fuel flow Install manual, m | aintenance manua |
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| US Department |
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| 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))

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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 N6244P

PIPER PA24-250

S/N 24-1349

10/22/2011

IFR APPROVAL

<u>System:</u> This is a follow-on installation of a Garmin GNS-530W GPS/VOR/LOC/GS/WAAS/Terrain Receiver with an internal 760 channel VHF Communications Transceiver per STC SA01933LA, dated 12/21/2006 for the first time air worthiness approval criteria.

<u>Unit:</u> The Garmin GNS-530W Unit, Software version 3.30, was installed per manuals listed below. The GNS-530W was mounted in the left Radio Stack (Sta.62.00) previously occupied by the #1 VHF-251 and DME-190. Instrument panel mounting per AC43.13-2B Chapter 2.

Antenna: A Garmin GA-35 GPS/WAAS Antenna was mounted on the top aft fuselage right of centerline (Sta. 176.00). The existing Comm, Nav and GS antennas were used. Antennas were mounted per AC43.13-2B Chapter 3.

Wiring: The Garmin GNS-530W system was wired to the Battery Master electrical buss through a 10 amp Klixon 7277-2-10 circuit breaker with a 18 AWG Mil22759/16 and a 5 amp W58-5 circuit breaker with 22 AWG Mil22759/16 wires. (Wire selected per AC43.13-1B, Chapter 11, Sec 5-7 and AC43.13-1B Chapter 11, Sec 4, para 11-47 to 11-50 circuit protection). Load analysis accomplished per AC43.13-1B, Chapter 11, Sec 4 para 11-55 and was found to be acceptable. Wire routing, tying and clamping were accomplished per AC43.13-1B Chapter 11, Sec 9 paras 11-115 to 11-121 and Sec 10-12

<u>Switching and Annunciation:</u> Provided by the GNS 530W unit. Display is on a Garmin GI-106A Course Indicator. No external switching/annunciation is required.

Operational Flight and ground Checks: The GARMIN post install checkout procedures for the GNS 530W Section 5 were satisfactorily completed. (VHF TX harmonic test per para 10, Note 2 FSAW 94-32A (amended) dated 10/18/95. The system operated in accordance with manufacturer's specifications and did not interfere with the other equipment installed in the aircraft. The following paragraphs from AC20-138A provide the basis for IFR approval. 8c(1)(ii) found the GNS 530W system to meet all the requirements for installation in this aircraft. 8c(3) A flight data evaluation was conducted and the installation was found to be acceptable. All functions of the GPS system interface, controls, and system operation were checked and found to be correct.

Documents Provided:

GNS 530W Pilot's guide GNS-530W Quick reference guide Garmin Optional displays Pilot's Guide Addendum

190-00357-00 Rev. G 4/10 190-00357-01 Rev. F 1/10 190-00356-30 Rev H 7/10

FAA Approved Flight Manual Supplement Dated 7/2009 Revision B.

<u>Unit</u> GNS-530W <u>Manual or Drawing</u> 190-00357-08 Rev. E Sep 1, 2011 Circuit Protector 10/5 Amp <u>Wire</u> 18/22 AWG

Weight and Balance/Equipment List Updated 10/22/2011 (AC43.13-1B Chapter 10)

Instructions for continued airworthiness refer to GNS-530W Install, maintenance manual, ICA P/N 190-00357-65, and this 337. Inspect IAW FAR 43,Appendix D.

☐ Additional Sheets are Attached

| U.S Department of Transportation |
|-------------------------------------|
| Federal Aviation |

MAJOR REPAIR AND ALTERATION

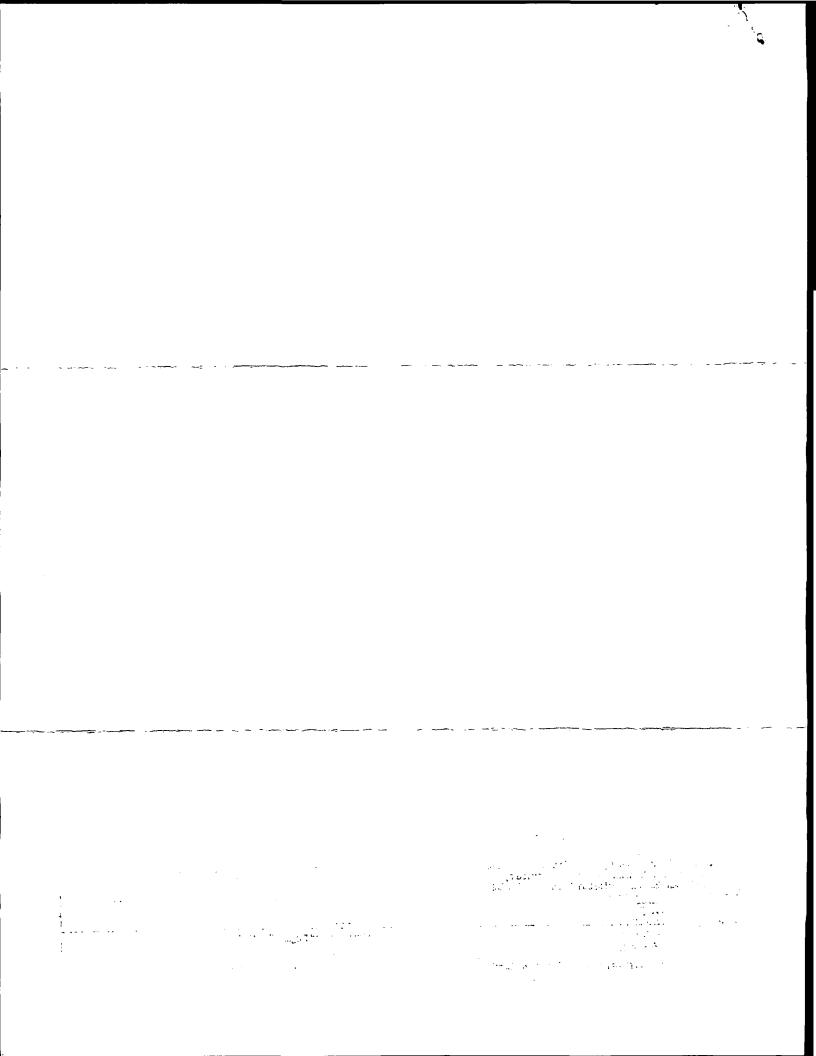
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| Federal Aviation Administration | | | • • | | NMVg | ffice Identification | n | | | | | |
| | DNS: Print or type all en on of this form. This rep n violation (Section 901 I | oon is required b | ov Iaw (49 | บรเ | Appendix B, and AC 43.9 C. 1421). Failure to report | 1 (or subsequent re can result in a civil | evision I penal | thereof) for in | nstructions ed \$1,000 | | | |
| 1. Aircraft | ^{Make} Piper | | | | Mode PA2 | 4-250 | | | | | | |
| 1. AIFCFAIL | Serial No. 24-1349 | | | | Nationality and Registration Mark N6244P | | | | | | | |
| 2. Owner | Name (As shown on r Underwood Avia | registration certistion Service | ficate) s, LLC | | Address (As shown on registration certificate) 2815 N. Chelton Coloraod Springs, CO 80909 | | | | | | | |
| | | | | | 3. For FAA Use Only | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | 4. Unit Identification | | | | 5. Type | | | |
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| A. Agency's Name | | | | + | Kind of Agency | | C. | Certificate No | 0. | | | |
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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.

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| FORM ACA-2417 U-S. DEPARTMENT OF COMMERCE (7.56) CINU AERONAUTICS ADMINISTRATION | Porm Approved, Budget Bureau No. 41-21823 |
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| FEDERAL AVIATION AGENCY | INSTRUCTIONS - Submit in triplicate to lo- |
| SUPPLEMENTAL TYPE CERTIFICATE | cal GAA Aviation Safety Agent. Copy will |
| | be returned to applicant upon issuance. |
| 1. NAME AND ADDRESS OF APPLICANT 2. SUF | PPLEMENTAL TYPE CERTIFICATE APPLIED FOR: |
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| specific airplanes of this model on which other are incorporated, unless it is determined that | |
| change and any of those other previously appro | |
| adverse effect upon the airworthiness of that | |
| OPERATING LIMITATIONS: This modification app | round for installation on PA. Oly sortion |
| aircraft S/N PA-24-1 and PA-24-103 and subsequent | |
| , , | |
| 44. WILL DATA BE AVAILABLE FOR SALE OR RELEASE TO OTHER PE | ERSONS? YES Y NO |
| b. WILL PARTS BE MANUFACTURED FOR SALE (Rof. CAR 1.55)? | X YES NO |
| 5. SIGNATURE AND TITLE OF APPLICANT | |
| | |
| | SIGNATURE |
| March 25, 1960 | owner |
| DATE OF APPLICATION | TITLE |
| 6. TO BE COMPLETED BY C | AA- FAA |
| Forms ACA-1600 and 337, photographs, sealed co | |
| List No. 9000 and Installation Instructions de | |
| Aircraft Engineering Division, Region IV, Los | Angeles 45, Calliornia. |
| Certification Masis: CAR 3 | |
| Symons Engineering Airplane Flight Manual Supp | olement (dated March 30, 1960) |
| to Piper FAA approved Flight Manual is require | ed as part of this installation. |
| | |
| ORIGINAL TYPE CERTIFICATE NO. CAA APPROVAL | |
| 1A35 FAA | Chal Clark |
| SUPPLEMENTAL TYPE CERTIFICATE NO. | W. A. Klikoff |
| S A lı-971 | SIGNATURE |
| DATE OF APPROVAL | |
| | Aircraft Engineering Division |
| November 9, 1959(Revised 3-25-60) | , TITLE |



US Department of Transportation

Federal Aviation

Administration

Form 337

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

Form Approval ONB No. 2120-0020

For FAA Use Only

Office Identification

AU4 - FS00-03 JSC

| INSTRUCTIONS: Print or type all entries. | See FAR 43.9, FAR 43 Appen | dix B, and AC 43.9-1 (or su | bsequent revision thereof) for instructions |
|--|--------------------------------|--|--|
| and disposition of this form. This report is | required by law (49 U.S.C. 142 | Failure to report can re | esult in a civil penalty not to exceed \$1,000 |
| for each such violation (Section 901 Feder | ral Aviation Act of 1958). | | |

| | | Make | | | | | Model | | | | |
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| ŀ | | Pi | per | | | | PA-24-250 | | | | |
| 1. Airc | raft | Serial N |). | | | | Nationality and | Registration Mark | | | |
| | | | 2 | 4-1349 | | | USA No | 6244P | | | |
| | | Name (A | s show | n on registration certific | ate) | | Address (As sh | own on registration cert | ificate) | | |
| Ì | | | | Aviation Service | | .c | - | Chelton Rd | , | | |
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| | | | | 4. L | Jnit Id | entification | | | | 5. Type | |
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| AIRFR | AME | | ~ | | ~ (As | described in item 1 a | above) ~~~~ | | | ļ | Х |
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| Ī | | odlake Rd | | | į. | | tificated Mechani | C | | • | Ì |
| Elbert | CO | 80106 | | | - | | Repair Station | | | | |
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| hereto | hav | y mat me repar ve been made | in ac | cordance with the | requir | ements of Part | 43 of the U.S. | . Federal Aviation i | regulation | ons and | that the |
| | | | | rue and correct to the | | | | | | | |
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| Date | | | | | | Signature of Author | rized Individual | | | | |
| | 02 | /25/2004 | | • | | James A. Schwab | | | | • | |
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| 1 | | Inspector | \bot | | | | . * * ; . | | | | ì |
| BY | | FAA Designee | | Repair Station | Pei Ca | rson Approved by T nada Airworthiness | ransport Group | | | | |
| Date of | Appr | oval or Rejection | | Certificate or | Sig | nature of Authorized | Individual | | | | |
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compatible with previous alterations to assure continued conformity with the applicable airworthiness requirements. Weight and balance or operating limitation changes shall be entered in the appropriate sircraft record. An atteration must be

Date: February 25, 2004 8/N 54-1346 **N6244P** PA-24-250 Piper (If more space is required, attach additional sheets. Identify aircraft nationality and registration mark and date work completed.) 8. Description of Work Accomplished

Removed:

STS 120MC Loran-C Receiver from Sta. 62 Narco AT-150 Transponder from Sta. Loc. 62

MS20365-1032A nuts and AN960-10 washers. Removed existing transponder antenna NPN and replaced with Comant CI-105 Transponder antenna mounted using Garmin GTX-327 Transponder at Sta. Loc.62 IAW Garmin Installation Manual P/N 190-00187-02 Rev. J Dated May 2003.

and AC43.13-2A Chapter 3 Figure 3.2 and Figure 3.6. All work accomplished in accordance with AC 43.12-1B, Chapter 11 Sections 7,9,12,15,16,17,19, Chapter 12 Section 2,

Weight and balance has been revised.

Log book entry has been made.

function test IAW FAA FAR 43 Appendix E as required by FAA FAR 91.413. inspection program. Continued airworthiness for the Garmin GTX-327 Transponder is contingent upon an inspection and Continued airworthiness is contingent upon compliance with manufacturer's recommendations or FAA approved

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| 1. AIRCRAFT | SERIAL NO. | iper | | | | NATIONALIT | | | N MARK | |
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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.)

Repaired lower bulkhead assemblies at fuselage stations 105 and 136. Repaired lower left side of fuselage firewall. Repaired engine mount. Replaced left and right side bottom rear fuselage side skins, bottom center rear fuselage skin and bottom rear fuselage skin. Repaired right flap assembly. Repairs were accomplished in accordance with F.A.A. A.C. 43.13-1A, Chapter 2, Section 3. There was no change in weight and balance.

ADDITIONAL SHEETS ARE ATTACKED

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

MAJOR REPAIR AND ALTERATION

FOR FAA USE ONLY

| | (Airfram | e, Po | owerplant, Pr | opell | er, (| or Applian | ice) | ~~ | SW-FSDO | -61 | |
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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 STS 120MC, Loran-C receiver, s/n 90200140, in accordance with the manufacturer's installation manual and AC 43.13-2A, chapter 2, paragraph 21 & 40. Aircraft placard'd "Loran-C approved for VFR only" as per manufacturer's instructions. Reference weight & balance data this date for W&B change.

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ADDITIONAL SHEETS ARE ATTACHED

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FAA Form 337 (7-67)

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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.

- B. DESCRIPTION OF WORK ACCOMPLISHED (If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)
 - PA 24-250 S/N 24-1349 WAS ALTERED ON 27 MAY '87 AS FOLLOWS:

REMOVED ITEMS:

- INNOVED THESE:

 1 ea. LEAR CONTROL 23026 (from pilot radio stack)

 1 ea. LEAR INDICATOR 2330A (from instr. panel, center)

 1 ea. LEAR HECISVER 55150 (from aft fuselage avionic shelf)

 1 ae. LEAR FIXED LOOP ANT (from aft fuse. bottom, beneath baggage comp. deck)

- INSTALLED ITEMS:

- 1 sa. NARCO DME -190 (pilots radio stack)
 1 sa. BENDIX ADF T-120 (co-pilo) radio stack)
 1 sa. BENDIX ADF IND. (instr. panel)
- (bottom fuse, beneath rear seat) I ea. BENDIX LOOP AMT.
- 1 ea. NARCO NGR-2 G/S RXR (aft fuse. avionic shelf)
 1 ea. AERO -MECH BLIND ENCODER (behind co-pilot instr. panel)
- 1 ea. DAVTRON SOLE CLOCK (pilot panel above radio stack)

A/C SKIN PATCHED WHERE OLD ADF ANT. REMOVED I.A.W. FAR AC 43.13-1A, CHAP.2, SECT.2, PAPR. 100. GLIDESLOPE INSTALLATION UTILIZED EXISTING WIRING AND CONNECTORS (from old G/S). INSTALLED AD-9 NAV/G/S SIGNAL SPLITTER. INSTALLED IT! IN STATIC SYSTEM LINE BEHIND AIRSPEED INDICATOR (for blind encoder). TESTED A/C STATIC SISTEM IAW FAR 91.171, AND PART 43, APPX. E. AS WELL AS FAR 91.36.
WIRED BLIND ENCODER TO NARCO AT-50A TRANSPONDERFER AC 43.13-1A, CHAP.11, SECT.
3 and7, AND APPLICABLE MANUFACTURERS INSTRUCTIONS. ALL AVIONICS EQUIPMENT
MOUNTED IN SPACES PROVIDED FOR THAT PURPOSE BY THE AIRFRAME MAN. WITH AN SCREWS AND LOCKING NUTS I.A.W. AC 43.13-1A, CHAP.5, SECT.1, PARA. 228 and 230.
ALL EQUIPMENT PROTECTED BY CIRCUIT BREAKERS MOUNTED IN SPACES PROVIDED BY THE AIRFRANE MIG. A/C MORMAL RUNNING ELECTRICAL LOAD DOES NOT EXCEED THE ALTERNATOR MAXIMUM OUTPUT AS DETERMINED BY AC 43.13-1A, CHAP. 11, SEGT. 2 PAPA. 128. A/C MAGNETIC COMPASS SYUNG AND CORRECTED ACCORDINGLY. A/C WEIGHT AND BALANCE DATA AND AQUIPMENT LIST UPDATED ACCORDINGIAS: W

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| | EL PASC |), TX. | 7,9925 - | * | MANUFACTUR | REPAIR STATION | • | #261 | r-7:0 | |
| | | | <u> </u> | | | | | 1 | - 1 | |
| | | | d/or alteration men made in according its according is according its according is according its acco | | | | | Federal Avia | ition Regi | alations |
| DATE | • | | | | SIGNATURE OF | | | | | |
| | 7 MAY 19 | 98. 7 : | - | | 10 P | | • | | | |
| | | | 7 | 120001 | AV FOR RETURN | TO SERVICE | | | | |
| | | | | | | | 'and inspected | in the ment | er present | bed by |
| the Admi | to the auth | the Feder | n persons specified al Aviation Admin | istration | and is AP | PROVED | REJECTED | | | |
| 1 1: | FAA FLT STANI | DAROS | MANUFACTURER | X | INSPECTION AUTHO | RIZATION | OTHER (Specify) | - | | |
| BY | FAA DESIGNE | E | REPAIR STATION | | CANADIAN DEPART OF TRANSPORT IN OF AIRCRAFT | MENT SPECTOR |] | | | |
| DATE OF | APPROVAL | OR | CERTIFICATE OR | | SIGNATURE OF | AUTHORIZE | D INDIVIDUAL | | | |
| REJECTION | | | DESIGNATION 1 | | 10 | P | _ | | | |
| 27 M | AY 198 | 7 | 465721975 | IΑ | 10 | · laren | | | | |
| AAF | 227 17 | | | _ | 11 | | | | | (8320) |

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.)

PA-24-250 WAS ALTERED ON 27 MAY 1987 AS FOLLOWS:

REMOVED ITEMS:

ý.

- 1 ea. LEAR CONTROL 23026 (from pilots radio stack)
- 1 ea. LEAR INDICATOR 2330A (instrument panel)
 1 ea. LEAR RECEIVER 5515G (aft fuselage avionics shelf)
- 1 ea. LEAR FIXED LOOP ANTENNA (aft fuselage, beneath baggage comp. deck) INSTALLED ITEMS:

 - l ea. NARCO DME-190 (pilots radio stack)
 l ea. BENDIX ADF T-12C (co-pilots radio stack)
 l ea. BENDIX ADF INDICATOR (instrument panel)

Think which become and the police between the second of th

Nation i posse serbi elektristik

- l ea. BENDIX LOOP ANTENNA (bottom fuselage beneath rear seat)
 l ea. NARCO UCR-2 G/S RECEIVER (aft fuselage avionics shelf)
 l ea. AERO-MECH AM250-C20 BLIND ENCODER (INST. PANEL CO-PILOTS SIDE)
- 1 ea. DAVTRON 8013 CLOCK (pilots panel above radio stack)

A/C SKIN PATCHED WHERE OLD A.D.F. ANTENNA WAS REMOVED I.A.W. F.A.R. A/C 43.13-14 CHAPTER 2, SECTION 3, PAR. 100. CLIDESLOPE INSTALLATION UTILIZED EXISTING WIRING AND CONNECTORS. INSTALLED ANTENNA DEVELOPEMENT AD-9 NAV ANTENNA TPI-PLEXER. INSTALLED "T" IN STATIC SYSTEM LINE BEHIND AIRSPEED INDICATOR. TESTED A/C STATIC SYSTEM I.A.W. F.A.R. 91.171 AND 91.36 AFTER INSTALLING TESTED A/C STATIC SISTEM I.A.W. F.A.M. 91.1/1 AND 91.36 AFTER INSTALLING BLIND ENCODER AND WIRING IT TO NARCO AT-50A TRANSPONDER PER F.A.R. AC 43.13 -1A, CHAPTER 11, SECTIONS ",3 AND 7. ALL RADIO RACKS MOUNTED IN SPACES FROVIDED BY THE AIRFRAME MYG. WITH AN SCREWS AN LOCKING NUTS I.A.W. A/C 43.13-1A, CHAPTER 5, SECTION 1, PAR. 228 and 230. ALL EQUIPMENT PROTECTED WITH CIRCUIT EREAKERS MOUNTED IN SPACES PROVIDED BY AIRFRAME MYG. A/C NORMAL RUNNING ELECTRICAL LOAD DOES NOT EXCEED ALTERNATOR MAXIMUM CUTPUT, AS DETERMINED BY A/C 1.2.1A. CHAPTER 11. SECTION 2. PAR. 128. AS DETERMINED SY A/C &3.13-1A, CHAPTER 11, SECTION 2, PAR. &28. A/C; MAGNETIC COMFASS SWUNG AND CORRECTED ACCORDINGLY. A/C WEIGHT AND BALANCE INFORMATION AND EQUIPMENT LIST REVISED ACCORDINGLY.

EW.FSD06:

ADDITIONAL SHEETS ARE ATTACHED

| U. S. DEPARTMENT OF COMMERCE | | Form Approved. Budget Bureau No. 41-R041.5. |
|--|-------------------|--|
| CIVIL AERONAUTICS ADMINISTRATION | _ | INSTRUCTIONS |
| APPLICATION FOR AIRWORTHINESS CERTI AND/OR ANNUAL INSPECTION OF AN AIRC | FICATE CRAFT | Please print or type. Submit this form to Civil Aeronautics Administration Aviation Saf Field Representative. |
| 1. TYPE OF APPLICATION (Check which) | | |
| CRIGINAL ISSUANCE OF CERTIFICATE | d. T RECER | RTIFICATION UNDER THE PROVISIONS OF CAR & |
| b. ANNUAL INSPECTION FOR RENEWAL OF CERTIFICATE | | IPLE CERTIFICATE UNDER THE PROVISIONS OF CAR 8 |
| c. AMENDMENT OR MODIFICATION OF CURRENT CERTIFICATE | f. 🗌 | |
| AIRWORTHINESS CLASSIFICATION (Out appropriate item); It is requested that the Certificate of Airworthiness be issworthiness classification(s): |)) wed to pern | nit operation of the aircraft in the following air- |
| A STANDARD (NORMAL, UNIX AND AND AND CATEGO | ORIES | |
| b. LIMITED (SEE CAR 9) | | |
| E. TRESTRICTED (SEE CAR 8) | | |
| (Check the restricted special purpose operation(s) to be conducted) | | |
| AGRICULTURAL AND PEST CONTROL | ☐ PATROL | LLING |
| AERIAL ADVERTISING | ☐ FOREST | F AND WILDLIFE CONSERVATION |
| ☐ AERIAL SURVEYING | | ER CONTROL |
| GLIDER TOWING | OTHER | |
| d. C EXPERIMENTAL | | |
| (Check the type of experimental operation(s) to be conducted) | | |
| RESEARCH AND DEVELOPMENT | ☐ RACING | • |
| ☐ AMATEUR-BUILT | ☐ EXHIBIT | |
| ☐ DEMONSTRATION | OTHER | |
| | | |
| 3. AIRCRAFT IDENTIFICATION (Complete all items) | | |
| a. AIRCRAFT MAKE b. AIRCRAFT MODEL | | c. AIRCRAFT SERIAL NO. |
| Piper PA-2 | 4 "250" | " 24 – 1349 |
| d. ENGINE MAKE | a ENGINE MO | DEL |
| Lycoming | | 0-540-AIC5 |
| 4. AIRCRAFT REGISTRATION INFORMATION (Complete all ite | ma) | |
| a. REGISTERED OWNER'S FULL NAME | b. PERMANENT | MAILING ADDRESS C. AIRCRAFT NATIONALITY AND REGISTRATION MARK |
| | • | |
| PIPER AIRCRAFT CORPORATION | TOCK H | AVEN, PENNA. N-6244P |
| | | |
| 5. AIRCRAFT OWNER'S CERTIFICATION (Check and complete app | rapriate item) | |
| I hereby certify that I am the registered owner (or his registered with the Civil Aeronautics Administration as recor 502 and when operated displays the following evidence of | registration | the aircraft identified in Item 3 above which is the Regulations of the Administrator, Part 501 |
| a. LI CERTIFICATE OF REGISTRATION, FORM ACA-500 (PART A). DATE | OF ISSUE | |
| b. APPLICATION FOR REGISTRATION, FORM ACA-500 (PART B). FORM | 4 ACA-500, PAR | T A. FORWARDED TO CAA AIRCRAFT RECORDS ERANCH |
| W-300 ON | | The second of th |
| | Decembe | er 8, 1959 |
| 1 (15) of the Civil Acronauties Act of 1338, as amended. | I hered | by certify that the above ents are true. |
| TTACHMENTS (CACA MÁRA) | | 2/ |
| ACA-313 WEIGHT AND BALANCE REPORT | un | afringeville |
| ACA-337 DATA, DRAWINGS, ETC. | | OF REGISTERED OWNER OR ASTHORIZED AGENT) |
| ACA-317 UNAPPROVED DEVIATION DATA Algus | t 26, 1 | L959 Supv. Grder & Del. Dept |
| | | |
| 16-50637-1 | | Form ACA-305 (ii-5i) |

mc

| | PARTMENT OF COMM PRONAUTICS ADMINISTR | | |
|--|--|--|------------------------|
| ATRCRAT | T INSPECTION R | PRODT | |
| (To be completed by a CA | AA representative or a | pproved repair stati | |
| The aircraft described in Item 3 on the reverse of (Check and complete applicable items) | this form has been insp | ected and found to cor | form to the following: |
| 1. AIRCRAFT AND ENGINE CERTIFICATION BA | sis | - | |
| ■ AIRCRAFT SPECIFICATION NO. 1A15 b. AIRCRAFT LISTING PAGE NO. 1A15 | THROUGH SHEET REVISION | NO | - |
| c. A AIRWORTHINESS DIRECTIVE SUMMARY 19 | 59 THROUGH CARD N | o 59 -1 6 | |
| d CIVIL AIR REGULATION PART 8 (MODIFIED TYPE CE | | 0 | |
| e y | | | |
| 2. AIRCRAFT AND ENGINE OPERATING RECOR | | | |
| ■ ☑ AIRCRAFT NEW-NO PREVIOUS OPERATION OR MAIN | | | |
| b. Z COMPLIANCE WITH APPLICABLE AIRWORTHINESS DIR | | | 3 No. 10 Per 1997 |
| e. AIRCRAFT RECORDS INDICATE THE AIRFRAME HAS E | | FIO | URS |
| d. ENGINE RECORDS INDICATE THE FOLLOWING OPERA SERIAL NO. | - ', ' | | |
| SERIAL NO. | | | |
| SERIAL NO. | TOTAL HOURS | | |
| SERIAL NO. | TOTAL HOURS | | |
| | | | |
| 3. PREVIOUS INSPECTION RECORD (INSPECTIO | ON RECORDED ON FO | RM ACA-319) | |
| LAST AIRWORTHINESS INSPECTION CONDUCTED | | | |
| BY AIRCRAFT MANUFACTURER - | (DATE) | · · · | |
| BY APPROVED REPAIR STATION, CERTIFICATE | NO | | |
| BY MECHANIC, CERTIFICATE NO. | | | |
| L. PERIODIC AIRCRAFT INSPECTION REPORT, FORM ACA | 4-319. WAS RETURNED TO OV | YNER | |
| | | | |
| 4. AIRWORTHINESS DOCUMENTS ISSUED OR R | | | |
| a. OPERATION LIMITATIONS, FORM ACA-329, WAS ISSUE | | | |
| b. CURRENT OPERATION LIMITATIONS, FORM ACA-309, I | | | |
| CURRENT APPROVED AIRPLANE FLIGHT MANUAL IS A | | | |
| d. CURRENT WEIGHT AND BALANCE INFORMATION IS AN | | | |
| e. THIS INSPECTION HAS BEEN RECORDED IN THE AIRCI | | | |
| f. CERTIFICATE OF AIRWORTHINESS, FORM ACA-1362, IS | SUED TOURSEINK Augu | st 26, 1959 | |
| #. TREVIOUS FORM ACA-1262 WAS ISSUED TO EXPIRE | (DATE) | | |
| (NAME OF ISSUING REPRESENTATIVE) | (DESIG | NATION NO.) | |
| 5. CAA APPROVED REPAIR STATION CERTIFICA | TION | | |
| | | | |
| The aircraft described on the reverse has been No by CAR 52 and was found | inspected under the at | uthority accorded cert | incated repair station |
| AIRWORTHY | to be: | | • |
| ☐ UNAIRWORTHY | | | |
| | (REPAIR STATION AUTHORIZED S | IGNATURE) | (DATE) |
| 6. CAA REPRESENTATIVE CERTIFICATION | | - 1 V | |
| I HAVE INSPECTED THE AIRCRAFT DESCRIBED ON THE REVI | | IRWORTHY UNAIRWO | RTHY |
| DECIDITE CICUATION | | | |
| DESIGNEE'S SIGNATURE J. W. MCHERY | DESIGNATION NO. | DATE | |
| Asst.Ch.Engr., Piper Apft. Corp. | DMCR 1-1 CAA DESIGNATION NO. | 8/26/59 | <u> </u> |
| ACIATION CAPELL AGENT S SIGNATURE | LAA DESIGNATION NO. | DATE | ACCEPTED . |
| | | | REINSPECTED . |
| | <u> </u> | I see a see a see a see a see a see a see a see a see a see a see a see a see a see a see a see a see a see a | SPOT CHECKED |
| ☐ ATTACHMENT | | | |
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E. S. SOVERHMEN! PRINTING OFFICE 16-606

Form ACA-305a (11-5)

| FAACAX | |
|------------|--|
| 11111 0111 | |

EPARTMENT OF TRANSPORTATION
EDERAL AVIATION ADMINISTRATION

| | MA. (Airframe, | OR REPAIR AI Powerplant, P | ND rope | ALTERATION ller, or Applian | ice) | C | FOR FAA | CATIONY | |
|---|--|--|----------------|--|---|--|--|--------------|----------|
| INSTRUCT | FIONS: Print or | type all entries. Sertion of this form. | FAR | 43.9, FAR 43 Appe | ndix B, and | d AC 43.9-1 | (or subsequent | revision | thereof) |
| 1. AIRCRAFT | MAKE Piper SERIAL NO. | • | | | MODEL HATIONAL | PA-24-250 | | | |
| 2. OWNER | | n on registration certif I Inc. | icate) | | ADDRESS (| 16244P As shown on .008 Vill T. Worth | registration certi | | • |
| | | | | 3. FOR FAA USE ON | Y F | C. WOLCH | , rexas | 6103 | |
| | | | | | | | | | |
| | | 4. UI | IIT ID | ENTIFICATION | | | | - | |
| UNIT | | MAKE . | | MODEL | | SER | IAL NO. | | TYPE |
| AIRFRAME | | | Ľ | - | | I | | REPAIR | ATION |
| AIRFRAME | ***** | *************************************** | As de | scribed in item 1 abo | ve) ****** | *************************************** | **** | xxx | |
| POWERPLANT | | | .i | * * * * * * * * * * * * * * * * * * * | | | , i | | |
| PROPELLER | · · · · · · · · · · · · · · · · · · · | | | | | | | | |
| APPLIANCE | MANUFACTURER | | | | | 1 | | | |
| | | | 6. | CONFORMITY STATEM | NT . | | | | <u> </u> |
| | GENCY'S NAME . Williams | AND ADDRESS | | | OF AGE | | C. CER | TIFICATE | NO. |
| 4000 Del | Laware Trail | | | X U.S. CERTIFICATE FOREIGN CERTIFICATED REF MANUFACTURER | CATED MECHA | | A & P 1 | 985330: | I.A |
| D. I certify t attachmen and that t | hat the repair a ts hereto have b he information f | nd/or alteration ma een made in accorda urnished herein is t | de to nce v | the unit(s) identifi | ied in item s of Part 4 st of my kr | 4 above and 3 of the U.S. nowledge. | d described on Federal Aviati | the reve | rse or |
| 11-17-77 | | | د | SIGNATURE OF A | | | 11/- | | - |
| | · · · | 7.1 | PPDO | VAL FOR RETURN TO | SEDVICE | me | anis | | |
| Pursuant to the Administra | he authority give ator of the Feder | n persons specified la Aviation Administ | elow ration | the unit identified | in item 4 v | vas inspected | in the manner | prescribe | ed by |
| FAA FI INSPEC | LT. STANDARDS | MANUFACTURER | X | INSPECTION AUTHORIZA | TION | OTHER (Specify) | <u>. </u> | | |
| FAA I | DESIGNEE | REPAIR STATION | | CANADIAN DEPARTMEN OF TRANSPORT INSPEC OF AIRCRAFT | T TOR | 1 | | | |
| EJECTION | OVAL OR | CERTIFICATE OR DESIGNATION NO | | | THORIZED | INDIVIDUAL | | | |
| 11-17-77 | | A & P 1985330 | IA | unulle | 1/80 | Mell | lano | | |
| AA Form 3: | 37 (7-67) | · | | | | | | (8) | 320) |

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.)
 - A. Pertains to Repair of PA24-250, N6244P completed 11-17-77
 - Repair accomplished to belly of aircraft from station 68.0 to station 117.0
 to pick up stringers and channels 22.0 Inches each side of fueslage center
 line on Belly. Replaced all skin panels within this area. Manufactured
 skins from 2024T3 .032 aluminum.
 - 2. Replaced Bulkhead P/N 20971-06 at Sta #68. Installed new skins using original Rivet Pattern and spacing. Used MS20470AD-4- or MS20426AD-4- of appropriate length for installation. All skin lap joints are as factory installed. All manufactured lap joints are of 2 inches minimum.
 - Repair accomplished in accordance with Piper Service Manual Section 4 2nd AC 43.13-IA Paragraph 100.
 - 4. All surfaces on skins corrosion protected Prior to assembly. Primed and painted after assembly.
 - 5. No weight and balance change as a result of this repair.

LAST ITEM

ADDITIONAL SHEETS ARE ATTACHED

U.S. GOYSBINGENT PRINTING OFFICE : 1967 OF-272-045

DEF ENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION FOR FAA USE ONLY MAJOR REPAIR AND ALTERATION OFFICE IDENTIFICATIONS.C (Airframe, Powerplant, Propeller, or Appliance) 2-0-09 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. MAKE MODEL Piper PA24-250 1. AIRCRAFT SERIAL NO. NATIONALITY AND REGISTRATION MARK 24-1349 N6244P NAME (As shown on registration certificate) ADDRESS (As shown on registration certificate) 2. OWNER 414 East California Nolan, William F. Gainesville, Texas 3. FOR FAA USE ONLY 4. UNIT IDENTIFICATION 5. TYPE UHIT MAKE SERIAL NO. ATION AIRFRAME X MAN POWERPLANT PROPELLER FA APPLIANCE MANUFACTURER 6. CONFORMITY STATEMENT A. AGENCY'S NAME AND ADDRESS B. KIND OF AGENCY C. CERTIFICATE NO. X U.S. CERTIFICATED MECHANIC V. E. Sichley FOREIGN CERTIFICATED MECHANIC P.O. Box 502 CERTIFICATED REPAIR STATION Ardmore, Okla. 73401 Λ&P 1551504 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. SIGNATURE OF AUTHORIZED INDIVIDUAL DATE . E. Sichley April 16, 1976 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 XX APPROVED REJECTED

INSPECTION AUTHORIZATION

OF TRANSPORT INSPECTOR
OF AIRCRAFT

SIGNATURE OF AUTHORIZED INDIVIDUAL

E. Sichley

Apr 16, 1976 FAA Form 337 (7-67)

DATE OF APPROVAL OR

FAA FLT, STANDARDS INSPECTOR

FAA' DESIGNEE

MANUFACTURER

REPAIR STATION

CERTIFICATE OR

DESIGNATION NO.
A&P 1551504

(8320)

OTHER (Specify)

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

S. DESCRIPTION OF WORK ACCOMPLISHED (if more space is required, attach additional sheets. craft-nationality and registration mark and date work completed.)

Emmoved the following radio equipment:

les Cenave 3 light Marker Bescon Receiver 2es 16:-12 Nev/Com Systems

Installed the following equipment:

2ea Bendix RT-241A VHF Communications Transceivers

les Esrco Nev-12 ILS Convertor Indicator
Les Nerco Nev-11 ILS Convertor Indicator

les Sing 1864 20 Isolation Amplifier and switch panel.

les Clide Clope interconnectira cable.

les Hospins Silver Star Strobe Light

The King 1894 20 switch panel and the Bendix RT-241A Transceivers were installed in the space provided by the removal of the Barco Pav/Com system in the lett hand radio rack instrument parel. The existing Lear ADF receiver was relocated and the PARCO Al-53 Transponder was moved from the right hand radio rack to grating less hand hand radio rack and was installed beneath the ADF receiver. To said power and antenna circuits were utilized.

The Hospins Silver Star Strobe light was installed on the belly of the signality 150" aft of the datum.

The Eav 12/Lav 11 VOR 115 indicators were installed in the space provided by the receival of the harco VOA 50 and VOA 4.

An electrical load analysis was computed and it was determined that the maximum probable continuous electrical load does not exceed 8/% of the generating capacity of this sircraft (1 50 sup generator).

All work was accomplished in accordance with PAR Part 23, Part 43; AC 3.13-1 Chapters 11 & 12, AC 43.13-2 Chapters 2 & 3, and the manufacturers fretallation instructions. A supplemental weight control and accipment list was accepted and added to the permanent aircraft file.

MOTHER POLICE

T ADDITIONAL SHEETS ARE ATTACHED

DATE

Pursuant to the authority given the Administrator of the Federal FAA FLT. STANDARDS INSPECTOR

FAA DESIGNEE

REPAIR STATION

CERTIFICATE OR

BERCHATION 40.

| • | | | | | | | |
|--|---|---|---|-------------------------|---|------------------------|-----------------|
| | FEDERAL JIATION A | INSPORTATION | ri t≢t yek | | Fly loom Approved udget Bureau : | | 60.1 |
| | MAJOR REPAIR AN (Airframe, Powerplant, Pr | ID ALTERATION opeller, or Applica | nce) | O | FOR FAA | USE ON | GADO |
| INSTRUCT | TIONS: Print or type all entries. See ions and disposition of this form. | | | | | | |
| I. AIRCRAFT | MAKE Piper SERIAL NO1347 | | | 124-250 TY AND REC | ISTRATION: M | | |
| 2. OWNER | NAME (As shown on registration certification of the William F. Nolen | c ofe) | ADDRESS (A | | SISTRATION M Egistration certi TRÍA | | |
| | | 3. FOR FAA USE ON | LY | | | | |
| | | | × 1 | | *. | ÷ | |
| | 4 UNI | IT ADENTIFICATION | · · · · · · · · | | ······································ | | |
| UNIT | MAKE | MODEL | | SERV | u no. | F | TYPE |
| IRFRAME | ••••••••••••••••••••••••••••••••••••••• | As described in Item 1 abo | ove) | | | REPAIR | ATION |
| OWERPLANT | | | | | سد | | <u> </u> |
| OPELLER | | | | | | | |
| PPLIANCE | MANUFACTURER | | | | | | |
| | | 6. CONFORMITY STATEM | ENT | | | | |
| c/c Mo Redbir | GENCY'S NAME AND ADDRESS MOTTISON GETT ACTO IDC. GAITPOTT , Texas 75232 | B. KINE U.S. CERTIFICATE FOREIGN CERTIFIC CERTIFICATED REI MANUFACTURER | CATED MECHAN | | C. CERT | 1123 | |
| D. I certify to attachmen and that t | that the repair and/or alteration mad its hereto have been made in accordan the information furnished herein is tru | e to the unit(s) identifice with the requirement are and correct to the be | ied in item is of Part 43 st of my kn | 4 above and of the U.S. | described on Federal Aviati | the rever on Regula | se or itions |
| TE 2-1: | 0-75 | SIGNATURE OF A | UTHORIZED | INDIVIDUAL. | · | | |
| | 7. AP | PROVAL FOR RETURN TO | SERVICE | | | | |
| ursuant to the Administr | he authority given persons specified be ator of the Federal Aviation Administra | elow, the unit identified ation and is APPRO | in item 4 w | as inspected i | n the manner | prescribed | d by |
| FAA FI | LT. STANDARDS | INSPECTION AUTHORIZA | 10 | THER (Specify) | | | |

CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT

SIGNATURE OF AUTHORIZED INDIVIDUAL

DATE OF APPROVAL OR REJECTION FAA Form 337 (7-67)

(8320)

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 aircraft has been repaired by replacing the following parts.

Fuselage Part Numbers

line *20603-1025kin spliced five inches from center/of aircraft outbd. to right side baggage door sill. *20600-17 Skin spliced 12 inches from center line of aircraft to right side of aircraft. #20600-19, *20600-13 spliced 12 inches from aircraft center line outbd to right side cabin door sill. All splices made at existing hat section, and

are in accordance with AC 41-13-1A Fig 2.18 A. 20554805 20554-23 20554-03 *20600-15 *20615-04 *20660-11 20600-21 22620-19 20600-67 20600-75 20600-59 20600-83 20615-03 20600-47 22870-05 22870-03 20600-62 20539-21

22607-31 *23056-02 ***25382-02 *2**5383-07

Right Wing Part Numbers

±203**60-0**9 20360-29 20377-19 20377-49 20377-45 20377-47 30304-43 20303-19 -20266-03 20252-04 30277-29

Left Wing Part Numbers

20377-20 *20360-04 *30277-28 **20**377-46

*These parts were job fabracated from equivalent or greater material. All repairs were made in accordance with applicable portions of AC 43.13-1A and Piper Service Manual.



FEB 15 1975

FAA-DALLAS GADO

ADDITIONAL SHEETS ARE ATTACHED

U.S. G.P.O. 1972/720-694/545/1303

| | | FEDERAL AVIATION A | DMINI | STRATION | | DV. | dgel Bureau | | |
|---------------|---|---|---------------|---------------------------------------|--------------|-----------------------------|---------------------------------------|-------------|--------------|
| | LAM | OR REPAIR AN | iD , | ALTERATION | | · L | FOR FAA | USE ON | LY |
| | | Powerplant, Pr | | | nce) | OF | ICE IDENTIFI | | |
| | | <u> </u> | <u> </u> | | <u> </u> | | | | 2-1-02 |
| for instructi | TIONS: Print or to ons and disposit | type all entries. See | FAR | 43.9, FAR 43 App | endix B, and | i AC 43.9~1 (c | r subsequent | revision t | peieol) |
| | MAKE | 2 2 - | | / | MODEL | .2 | 7.7. | / | |
| 1. AIRCRAFT | SERIAL NO. | FIFER | | | | PAS4 - | - 230 | | |
| | SERIAL NO. | -1216 | | | NATIONAL | ITY AND REGI | STRATION M | ARK | |
| | NAME (As about | -1349 on registration certif | 1 | · · · · · · · · · · · · · · · · · · · | ADDRESS (| N 624 | 4 P | | , |
| 2. OWNER | | | | | HILL | N 624 As shown on re E. CAI | gistration certi Ex.s. particular | ncate) | |
| | WILLIAM | F. NOLAN | • | | Can | usville | TONKS | 762 | 41 |
| | | | | 3. FOR FAA USE ON | LY | | | 7 | |
| | | | | , . | | | | - | |
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| | | 4. UN | IIT ID | ENTIFICATION | | | | | TYPE |
| UNIT | | MAKE | | WODEL | 1. | SERIA | | | ALTER- |
| | | | | MODEL | | JERIA | . NO. | REPAIR | ATION |
| AIRFRAME | | | | | | | | | \backslash |
| AIRFRAME | | ,,,,,,,,,,,,,,, (| As de | scribed in item 1 ab | ove) | ********* | ••• | | |
| | | · · · · · | | | | T | | | <u> </u> |
| POWERPLANT | | | | | | 1 | | 1 |] |
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| PROPELLER | | | | | | | | l | |
| | TYPE | | | | · · · · · · | | | | |
| | | | | | | | | l | |
| APPLIANCE | MANUFACTURER | | | | | | | | |
| | | ` | | | | | | | |
| | | | 6. | CONFORMITY STATEM | | | | | |
| | GENCY'S NAME | | | | D OF AGE | | C. CER | TIFICATE | NO. |
| DONAL | d M. Lou | der back | | U.S. CERTIFICAT | | | ┨ | - | |
| Rt, | BOX 1231 | Κ | | CERTIFICATED RE | | <u> </u> | A+P48 | 434 | 4 |
| Grines | ville Te | X15 76240 | | MANUFACTURER | | | 1 | | |
| D. I certify | that the repair a | nd/or alteration ma | de to | the unit(s) identi | fied in item | 4 above and | described or | sho sau | |
| | | een made in accorda furnished herein is t | | | | | Federal Aviat | ion Regu | ations |
| DATE | | | | SIGNATURE OF A | | | · · · · · · · · · · · · · · · · · · · | | |
| | | | | | | | | | - |
| uct 1 | 0, 1974 | - 2 | | Norcal | F M. | Louder | luck | | 1 |
| | · · · · · · · · · · · · · · · · · · · | 7. / | PPRO | VAL FOR RETURN TO | SERVICE | | | | |
| Pursuant to t | he authority give rator of the Feder | n persons specified ! ral Aviation Adminis | elow ratio | the unit identified | I in item 4 | was inspected i | in the manne | r prescrib | ed by |
| FAA I | FLT. STANDARDS | MANUFACTURER | V | INSPECTION AUTHORIZ | | OTHER (Specify) | 3 | | |
| BY | | | | CANADIAN DEPARTME | NT | • | | | |
| | DESIGNEE | REPAIR STATION | <u></u> | OF TRANSPORT INSPE | LIOR | <u> </u> | | | 1 |
| DATE OF APPE | ROVAL OR | CERTIFICATE OR | | SIGNATURE OF A | UTHORIZED | INDIVIDUAL | 1 | 1 | $\neg \neg$ |
| 1000 | 7711 | DESIGNATION NO | | Varia | | - W | "A | _ | l |
| AA E 3 | 27 17 17 | 114121861 | ·/ | Jun 6 | 71-57 | 0/1 | el les | <u> </u> | لـــــا |
| AA Form 3 | 3/ (/,-0/) | | | | • | | | (8 | 320) |
| | . 4 | | | | | | | | |

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 Rulder BATANCE Weight Kit 760705 in Accordance with Piper Kit Instructions and. Sketches. And in Confliance with AD 72-22-5

End



© 1951VE — D 5651VE D NOV-41974

Pod-Daliae

ADDITIONAL SHEETS ARE ATTACHED

EAA-DALLAS GADO

U.S. G.P.O. 1972/720-694/545/1303

| | | FEDERAL AVIATIO | | and the second s | the first second | Fo Bi | rm Approved idget Bureau N | io. 04-Ro | 60.1 |
|---------------------------------|--|---|--------|--|------------------|-------------------|---|-----------------------|------------------|
| 1 | MAJ | OR REPAIR A | ND | ALTERATION | | | FOR FAA | | LYV |
| | (Airframe, | Powerplant, P | rope | ller, or Applian | ce) | Of | FICE IDENTED | EATERDO | , |
| INSTRU for instr | JCTIONS: Print or uctions and disposit | type all entries. See | FAR | R 43.9, FAR 43 Appe | ndix B, and | AC 43.9-1 (| or subsequent | z ± UZ revision t | hereof) |
| 1. AIRCRA | MAKE | Piper | | | MODEL | PA-24 | -250 | | |
| 1. AIRCRA | SERIAL NO. | 21:-1349 | | · | | TY AND REG | ISTRATION M | ARK | |
| 2. OWNER | 1 | H. CLAYTON | - | | 1102 | HILLSI | egistration certif DE DRIVE TRXAS - | | 0 |
| | | | | 3. FOR FAA USE ON | | 0 5 7 | 95 5 | | |
| | · · | *** | | | | 6 6 1 55 6 1 1 | ۇۋى . راما يى | _ | |
| | | | | | <u></u> | DALL | ÁS. | | |
| | | 4. U! | VIT ID | DENTIFICATION | | ·6(£)(1 | | 5. 1 | YPE |
| TINU | | MAKE | , | MODEL | | SERIA | AL HO. | REPAIR | ALTER- ATION |
| AIRFRAME | ***** | ••••••••••••••••••••••••••••••••••••••• | (Aş de | escribed in item 1 abo | ve) ****** | •••••• | • | | x |
| POWERPLA | м | | 7 | | | _ | | | - |
| PROPELLER | - | - | | - | | • | | | |
| APPLIANCE | MANUFACTURER | | - | | | | <i>→</i> | • | |
| | | | 6. | CONFORMITY STATEME | NT . | | | | |
| A | . AGENCY'S NAME | AND ADDRESS | | | OF AGEN | ICY. | C. CER | TIFICATÉ I | NO. |
| C&C Addi | Ad W. Cox Aircraft Se son Airport | | | # U.S. CERTIFICATE FOREIGN CERTIFIC CERTIFICATED REF | CATED MECHA | ик | A∷₽ | 3).147/44 | 9 |
| D. I certi | | | | the unit(s) identified the the requirement and correct to the be | | | described on Federal Aviati | the reyer on Regul | rse or ations |
| DATE | 18-68 | | | SIGNATURE OF AI | | INDIVIDUAL | · | ř. | |
| Pursuant t | to the authority give | | | v., the unit identified is APPROVED | | vas inspected | in the manne | r prescrib | ed by |
| F. | AA FLT. STANDARDS | MANUFACTURER | and X | is APPROVED | 7 | DTHER (Specify) | } | - | |
| BY | AA DESIGNEE | REPAIR STATION | | CANADIAN DEPARTMEN OF TRANSPORT INSPEC OF AIRCRAFT | · | | | | |
| DATE OF A REJECTION 5-18- | PPROVAL OR | CERTIFICATE OR DESIGNATION NO | | SIGNATURE OF AL | _ 1 | INDIVIDUAL | | | |
| <u> </u> | | 1-20- 324 147 | | - conc | | | | 11.5 | |

FAA Form 337 (1-65) OBSOLETE PREVIOUS EDITION

0052-025-8000 (8320)

FAR AIRCRAFT REGISTED

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.)

On inspection of airplane, found previously installed Narco Mark 12 with VOA-4 Omni indicator. The TR Unit was mounted in the left instrument panel with four No. 6 Machine screws and plate nuts. The VOA-4 was mounted in a standard instrument hole. The T-12MP-12 power supply was mounted aft of the baggage compartment on a factory shelf with four no. 8 machine screws and stop nuts. The wire is of Mil Spec W-5086 and routed as per AC 43.13-1, Chapter 11, Section 7. The "A" Plus wire is 16 gauge and a 10 Amp trip free braker was installed. The electrical load check was conducted as per AC 43.13-1, Chapter 11, Section 2 and found satisfactory. (50 Amp Generator).

The installation conforms to AC 43.13-2, Chapter 2, Section 21,22,23 and 25. Functional check as per CAR'S 3.652 sadd 3.721 found satisfactory.

SEE AIRCRAFT LOG BOOK FOR WEIGHT AND BALANCE CHANGE.

" ENDS

ADDITIONAL SHEETS ARE ATTACHED

1.5. GOVERNMENT PRINTING OFFICE : 1945 OF-761-742

| 1. AIRCRAFT M | Piper | 1 . | ODEL: | | SERIAL NO. 24-1348 1319 | 4 | OHALITY A | ND REGISTRATION MA |
|-------------------------|---|--------------------------|---|--|--|----------|------------|--|
| 2. OWNER | AME (First, middle, last) Elichner Oil Co. | | | 13 | (Stret and number, city, 20 14 B. Vickery borth, Texas | | | |
| 3. COMPLETE CORDANCE | ONLY FOR UNIT REPAIR! | ED AND OR | ALTERED. DE | SCRIBE | WORK ACCOMPLI | SHED | ON RE | VERSE IN AC |
| UNIT | MAKE | | MODEL | | SERIAL NO. | | NATURE OF | WORK (Check) |
| A AIRFRAME | *************************************** | • (As described | in item I above) # | ***** | (41 / 12 | | e . | XX |
| b. POWERPLANT | | | | | A.M. B. | · · | • | |
| c. PROPELLER | | | | 3, 3, | | | | |
| 4. APPLIANCE | TYPE AND MANUFACTURER | - | | | 200 V | | | - |
| 4. AIRCRAFT | WEIGHT AND BALANCE DA the repairs and or alterations ribed below were made. | case of s | a spare component n an aircraft. | ent, it 1 | by repair or alteration will not be completed time, it will be completed | luntil | such co | lowever, in the imponent is in- stalling agency, |
| CATEGORY ' | EMPTY WEIGHT (Pos | | | TER OF G | tavity (Inches from datum)* | <u> </u> | USEF | LL LOAD (Pounds)* |
| iornal | 1681.5 | | 4 | | | | | |
| | TY STATEMENT (Complete and a | rAeck) | B | 2.4 | · | | 1 | 118.5 |
| AGENCY'S NAME A | ND ADDRESS | | S. KIND OF AGEN | ΣΥ | | c. 0 | ERTIFICATI | E NO. |
| | arrier Electronics, Meachem Field . Worth, Texas | Inc. | Certification Manufac | Certificated Rep turer. Check in as mad | ted Mechanic. | 1 | 4337 | Radio |
| | the repair and/or alteration hereto have been made in acconfurnished herein is true an | | | | | VII Air | Regula | tions and that |
| | 5-65 und/or alteration completed) | | Lara | ed | Signature of authorized inc | ce | iey, c | Ter map |
| S. APPROVAL F | OR RETURN TO SERVICE he authority specified below Federal Aviation Agency and | the unit ident | de appropriate items) dified in item 3 | was îns | | | ribed by | the Adminis- |
| APPRO | .) BY (| _ | | Other | ian Department of Tr (Specify) leffley, Chief | | | |
| 3-25- (Date of a) | -65 | _ | (Sima | ed ture of au | J. Heffle thorized individual; title or | Lioniiia | ation num | burl |
| | LETED ONLY BY FAA PER | SONNEL | | - | | | 1519 | |
| | for engineering comment | ☐ See att Reinspected | ached memoran | đum | Spot Checke | | | |
| Accepted_ | (Dave) | | · //\-+-\ | 1 | | | | >=4+> |
| / // | (Dase) | | (Date) | 2/ | 2. / | | (1 | Date) |

Form FAA-337 (4-5

INSTRUCTIONS

This form must be completed in duplicate each time a major repair and/or alteration is made of an aircraft, airframe, power-plant, 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.* .

- 1. Installed new Marco W. 12 WHF transceiver, VOA-4 VOR/LOC converter-indicator, and ARC A-25A broad-band antenna.
- 2. The Mark 12 penel unit was installed in the standard factory cut-out in LH side of instrument panel, and the VOA-4 was installed in a standard instrument hole. The T12VP12 moddlator/power supply was mounted to an existing shelf aft of the baggage compartment. The A-25A VHF antenna was mounted atop the fusalage aft of the baggage compartment. An aluminum doubler plate was installed for extra strength.
- 3. All units were installed in accordance with the requirements of FAR part 3 (CAM material in CAR 18) and CAR part 3.
- 4. The magnetic compass was checked with engine running and all radios folia. No re-calibration was necessary.
- 5. An electrical load measurement was made, and it was determined that the maximum probable continues load was 25.3 amps, which does not exceed 80% of the generator output rated at 50 amps.

NEW WEIGHT AND BALANCE COMPLTED 3-25-65

| Old aircraft capty weight | WEIGHT 1667.1 | RM 82.29 | MOMENT 137185.66 |
|------------------------------------|------------------|-------------|---------------------|
| ADDED: Narco Mark 12 panel unit | 5.1 | 62,00 | 316.20 |
| Narco E T12MP12 per sup. | 3.9 | 187.00 | 729.30 . |
| Narco VOA-4 VOR/LOC converter | 2.9 | 64.00 | 185.60 |
| ARC /-25A antenna | •5. | 187.00 | 93.50 |
| Cables | 2.0 | 125.00 | 250.00 |
| New empty weight | 1681.5 | New CG 82.4 | 138760.26 |
| New Useful Load | 1118.5 | | |

U. S. GOVERNMENT PRINTING OFFICE: 1961-0-387360

Form FAA-337 (4-52)

^{*}H additional space is needed attach additional sheets bearing aircraft nationality and registration mark and date work completed,

Check block if additional sheets are attached.

| | REPAIR AND ALTERATION | TOWN (MINIMUME, PI | JULIU LANIE, I NOI | LLLK OK | HI I KINHUL) |
|--------------------|--|--|--|---|--|
| I. AIRCRAFT | P IPER | PA24-250 | SERIAL NO. 24-1349 | HATHOMALIT | Y AND REGISTRATION N |
| . OWNER | NAME (First, middle, last) MICHENER OIL COMPA | | DORESS (Street and number, city, 1314 East Vicke) | • | orth, Texas |
| COMPLET | E ONLY FOR UNIT REPAIRED E WITH CIVIL AERONAUTICS | AND OR ALTERED. DESC MANUAL 18. | RIBE WORK ACCOMP | LISHED ON | REVERSE IN A |
| UNIT | MAKE | MODEL | SERIAL NO. | MAJOR REPA | E OF WORK (Check) |
| . AIRFRAME | *************************************** | (As described in item 400 | muumm | | X |
| . POWERPLANT | | RECEIVE | A CONTRACTOR | | |
| PROPELLER | 1. | | 1401 | | |
| APPLIANCE | TYPE AND MANUFACTURER | ASD MEACHAM | Hun A | : | |
| . AIRCRAFT | WEIGHT AND BALANCE DATA R the repairs and/or alterations secribed below were made. | case of a spare commonen | eted by repair or altera tit will not be complet this time, it will be com | tion agency. ed until such epleted by the | However, in the component is installing agence |
| CATEGORY | EMPTY WEIGHT (Pound | | OF GRAVITY (Inches from dates | *)* U | SEFUL LOAD (Pounds) |
| NORIÇAL | 1667.1 | 8 | 2.29 | | 1132.9 |
| | ITY STATEMENT (Complete and the | <u>(i)</u> | | | |
| AGENCY'S NAME | E AND ADDRESS | b. KIND OF AGENCY | | c. CERTIFI | CATE NO. |
| i le sen | V. Barnum ax Field Corth, Texas | Foreign Ce Certificate Manufactu CO CO Was | ficated Mechanic. rtificated Mechanic. i Repair Station. rer. ceck if repair or alterat made under delegation procedures.) | ion | 2253 |
| 12- (Date repai | ir and/or alteration completed) | all though | i under item 3 above as of Part 18 of the U.S. wledge. Damun (Signature of authorized | HOTT V. | |
| Pursuant to | FOR RETURN TO SERVICE (Control the authority specified below the Effects of Aviation Agency and is | e unit identified in item 3 we | as inspected in the mann | ner prescribed | by the Adminis |
| ∏ REJ | ROVED BY FAA Designee ECTED FAA Flight Standards Inspector | | Canadian Department of Other (Specify) Inspec | | |
| | 8-61 | | · Paul Mo | | DES AP39398 |
| | approval or rejection) APLETED ONLY BY FAA PERSO | | re of authorized individual; title | or identification | number) |
| | d for engineering comment | See attached memorandu | m Spot Che | olcod/2 | C. U. |
| (FA | A designation number) | 1 Dall | (Signature Flight Standary | is Inspector) | |
| | | | (| | |

INSTRUCTIONS

This form must be completed in duplicate each time a major repair and/or alteration is made of an aircraft, airframe, power-plant, 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 Thelen Hodel TR ! Totating Beacon as per Piper Kit \$754188

Moment. ARM Feight 137862 82.8 1665 Old ER -Phonel Ectating 338.1 161 2.1 Beacon 135200.1 62.29 Hew EYCG 1667.1

Electrical Load Not Exceeded

OKLAHOMA CITY, OKLA. 19. Hd et 1 07 037

ied attach additional sheets bearing aircraft nationality and registration mark

U.S. GOVERNMENT PRINTING SPECCE 16-54010-5

Form FAA-887 (4-52)