 US Department of Transportation Federal Aviation Administration		MAJOR REPAIR AND ALTERATION (Airframe, Powerplant, Propeller, or Appliance)		OMB No. 2120-0020 Exp: 5/31/2018	Electronic Tracking Number
		For FAA Use Only			

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

1. Aircraft	Nationality and Registration Mark N4804T	Serial No. 32-7240089		
	Make Piper	Model PA-32-300	Series	

2. Owner	Name (As shown on registration certificate) Chris Roberts	Address (As shown on registration certificate)		
		Address 3520 W LAKE DR		
		City Martinez State GA		
		Zip 30907-9530 Country USA		

3. For FAA Use Only

4. Type		5. Unit Identification			
Repair	Alteration	Unit	Make	Model	Serial No.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	AIRFRAME	<u>Piper</u>	(As described in Item 1 above)	<u>32-7240089</u>
<input type="checkbox"/>	<input type="checkbox"/>	POWERPLANT			
<input type="checkbox"/>	<input type="checkbox"/>	PROPELLER			
<input type="checkbox"/>	<input type="checkbox"/>	APPLIANCE	Type		
			Manufacturer		

6. Conformity Statement

A. Agency's Name and Address Name <u>BAY AVIONICS LTD</u> Address <u>5194 W MILITARY HWY</u> City <u>CHESAPEAKE</u> State <u>VA</u> Zip <u>23321</u> Country <u>USA</u>	B. Kind of Agency <table style="width:100%;"> <tr> <td><input type="checkbox"/> U. S. Certificated Mechanic</td> <td><input type="checkbox"/> Manufacturer</td> </tr> <tr> <td><input type="checkbox"/> Foreign Certificated Mechanic</td> <td>C. Certificate No.</td> </tr> <tr> <td><input checked="" type="checkbox"/> Certificated Repair Station</td> <td rowspan="2">HM1R197K RADIO CLASS 1 & 2</td> </tr> <tr> <td><input type="checkbox"/> Certificated Maintenance Organization</td> </tr> </table>	<input type="checkbox"/> U. S. Certificated Mechanic	<input type="checkbox"/> Manufacturer	<input type="checkbox"/> Foreign Certificated Mechanic	C. Certificate No.	<input checked="" type="checkbox"/> Certificated Repair Station	HM1R197K RADIO CLASS 1 & 2	<input type="checkbox"/> Certificated Maintenance Organization
<input type="checkbox"/> U. S. Certificated Mechanic	<input type="checkbox"/> Manufacturer							
<input type="checkbox"/> Foreign Certificated Mechanic	C. Certificate No.							
<input checked="" type="checkbox"/> Certificated Repair Station	HM1R197K RADIO CLASS 1 & 2							
<input type="checkbox"/> Certificated Maintenance Organization								

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

Extended range fuel per 14 CFR Part 43 App. B <input type="checkbox"/>	Signature/Date of Authorized Individual <div style="display: flex; justify-content: space-between;"> Mark E. Peters SEP 27 2021 </div>
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7. Approval for Return to Service
 Pursuant to the authority given persons specified below, the unit identified in item 5 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ Approved ☐ Rejected

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

Certificate or Designation No. HM1R197K	Signature/Date of Authorized Individual <div style="display: flex; justify-content: space-between;"> Mark E. Peters SEP 27 2021 </div>
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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 nationality and registration mark and date work completed.)

N480AT

9/27/2021

Nationality and Registration Mark

Date

Installed a G3X system with GFC 500 Autopilot. System includes the following components: GMU 11 (s/n 56J026163), GSU 25D (s/n 5Q3002460), GDU 460 (s/n 3380409909), GAD29B (s/n 5DL015905), GEA 24 unit (s/n 2J12005147), G5 (for backup attitude) (s/n 4JQ051371), GAD 27 (s/n 4A8002385), GMC 507 (s/n 5H1007664), GSA 28 (s/n 5G9017278) (Pitch), GSA 28 (s/n 5G9017214) (Pitch-trim), GSA 28 (s/n 5G9017295) (Yaw), GSA 28 (5G9017203) (Roll). The overall system is installed under STC SA SA01899WI using data found in the G3x installation manual, 190-02472-01, Rev 9. The G5 was installed under STC SA01818WI using data found both within the G5 manual (190-01112-11 Rev 24.) and the above referenced G3X manual. The GFC 500 system is installed under STC SA01866WI. All components are interdependent with the G3X system and share the same CAN-bus architecture. The CAN bus system was wired in the following order: GEA 24, G5, GSU 25D, GDU 460, GAD 29B, GMC 507, GSA 28 (roll) GMU 11, GSA 28 (pitch), GSA 28 (yaw), GSA 28 (pitch trim) as termination. Servos were installed in accordance with GFC 500 Install Manual Addendum, Piper Cherokee 6, 190-02291-46 Rev 3. The GMC 507 was installed in the center radio stack and the go-around switch was installed above and to the left of the throttle quadrant as shown in sheet 3/22 of 190-02291-46. The autopilot disconnect switch was installed on the yoke. The removal of the original pitch trim servo required the replacement of the forward trim cable with MC62701-041 trim cable which is shorter.

The autopilot configuration parameters were set in accordance with the data found in Section 1.2 of the GFC 500 Gain Addendum (Cherokee 6) 005-01470-46 Rev 3. The interface between the G3X system and the existing GTN 650 was wired in accordance with the data found in Fig B30 of 190-02472-01 Rev 9. The G3X system was interfaced with the existing GTN 650 using the parameters found on pg. C-3 of 190-02472-01, which includes both RS-232 and A-429 settings. Power is provided to the components from the bus as follows: G3X (7274-2-3), GAD 27 (7274-2-15), G5 (7274-2-5), USB power (7274-2-4.)

The GEA 24 engine monitoring system was installed as a primary system and replaces the original engine gauges with the exception of the fuel-tank quantity indicators. Engine RPM is measured using data from Fig B46 of 190-02472-01 and makes use of P-lead sensors with 400K Ohm resistors in the line. Pressure sensors are installed using data from Fig B-40 of 190-02472-00. Kavlico pressure sensors (P4055-5050-1, -4, -3) are used for manifold pressure, oil pressure, and fuel pressure, respectively. Oil temperature is measured using the existing K-Type thermocouple. Full CHT and EGT sensors were installed using the Alcor 86252, 86255 probes for CHT and EGT respectively. Thermocouple wire was used where specified in the data (Fig B-36 of 190-02472-00).

☒ Additional Sheets Are Attached

Instructions for continued airworthiness are found in 190-02472-02, and the appropriate portions of Appendix A detailing the installation were filled out and included in the maintenance records. AFMS 190-01754-01, Rev 4 was added to the POH. For the G5, Instructions for continued airworthiness are found in the AML STC Maintenance manual 190-01112-11. The appropriate appendices as referenced in Section 6.4.1 of 190-01112-10 were completed to detail this specific installation and were added to the maintenance records. AFMS 190-01112-13 Rev 6 was completed and added to the POH. Instructions for continued airworthiness for the GFC 500 system are found in 190-02291-01 and the appropriate parts of Appendix A were completed and inserted in the aircraft maintenance records. For the GFC 500, AFMS 190-02291-47, Rev 4 was added to the POH.

Installed GTX 345. Installed GTX 345 (s/n 3EG042021) under STC SA01714WI in accordance with data found within 190-00734-00, Rev 15. Data to support the ADS-B functionality is drawn from the existing GTN 650 in accordance with Fig B11 of 190-00734-00 and Fig B17 of 190-00734-00. The GSU 25D serves as the encoder for the system (see G3X installation) and the configuration module is also not needed for this installation. Power is provided from an existing 3A push pull breaker. The unit was tested and found to comply with the requirements of 15 CFR 91.227. Instructions for continued airworthiness are found within the Maintenance Manual 190-00734-11, Rev 8. Appendix A was filled out as required and added to the aircraft maintenance records. AFMS 190-00734-15, Rev 5 was added to the POH.

An electrical load analysis was performed and loading meets the requirements of AC 43.13-1B, Chapter 11, section 3 - 37, and AC.13-2A, paragraph 27d. All affected aircraft systems were tested in accordance with AC43.13-2A, paragraph 10 and 21.a.[6] and it was determined that there is no adverse interference to or from the newly installed equipment. Work involving metal repair or alteration complies AC 43.13-1B, Chapter 4, sections 1 & 4. Materials and practices comply with AC 43.13-2A, Chapter 1, paragraphs 4 through 12. Hardware and materials used conform to AC 43.13-1B, Chapter 7. Circuit breakers, switches, relays and other electrical hardware is of the type recommended by the aircraft manufacturer or is MIL SPEC approved for aircraft use and meets the requirements of AC 43.13-1B, Chapter 11, section 4. Electrical/Electronic wire type was selected and installed in accordance with AC 43.13-1B, Chapter 11, section 6, 7 & 8, and AC 43.13-2A, Chapter 2, paragraph 27. Wire routing, lacing and tying complies with AC 43.13-1B, Chapter 11, section 10 through 19. The electronic equipment installation complies with the aircraft and equipment manufacturer's instructions and AC 43.13-2A, Chapter 2, paragraph 21 through 26. Instrument installation complies with AC 43.13-2A, Chapter 11. The equipment list is amended and the new weight and balance is computed and entered in the aircraft records in accordance with AC 43.13-1B Chapter 10, section 2-16 & 19 And AC 43.13-2A Chapter 1, paragraph 9 and 12.

=====END=====

Mark E. Peters

SEP 27 2021



1200 East 151st Street
Olathe, KS 66062
P: 913-397-8200 F: 913-397-8282

July 22, 2020

Subject: Authorization for STC Use
AML STC SA01899WI for G3X Touch Electronic Flight Instrument System

Garmin authorized dealers are hereby granted permission to use Garmin AML STC SA01899WI data to modify aircraft.

Robert Murray
Director, Aircraft Certification
Garmin International, Inc.



United States of America
Department of Transportation
Federal Aviation Administration

Supplemental Type Certificate

Number: SA01899WI

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

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

Original Product – Type Certificate Number:

Multiple - AML STC

Make:

Model: See Approved Model List (AML) SA01899WI for approved aircraft models and applicable airworthiness regulations

Description of Type Design Change:

Installation of Garmin G3X Touch Electronic Flight Instrument System

Data Required:

- (1) Garmin Master Drawing List (MDL) 005-01320-00, Revision 1, dated March 15, 2019
- (2) Garmin G3X STC Maintenance Manual including ICA190-02472-02, Revision 1, dated March 15, 2019
- (3) Garmin G3X Airplane Flight Manual Supplement 190-01754-01, Revision 1, dated March 15, 2019

Later FAA-approved revisions to the data listed above are incorporated without amendment to this certificate

Limitations and Conditions:

- (1) Compatibility of this design change with previously approved modifications must be determined by the installer.
- (2) Installation of G3X in aircraft certified for IFR must have standby instruments for attitude, airspeed and altitude. Permitted standby instrument configurations and other limitations are defined in the data shown in the Master Drawing List (MDL) identified above.

(continued on Page 3)

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

Date of Application: May 15, 2018

Date Reissued:

Date of Issuance: March 15, 2019

Date Amended: December 20, 2019; February 12, 2020

By Direction of the Administrator

Signature

Title Paul Mast
ODASTC Unit Administrator
ODA-240087-CE

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both. This certificate may be transferred or made available to third persons by licensing agreements in accordance with 14 CFR 21.47. Possession of this Supplemental Type Certificate (STC) document by persons other than the STC holder does not constitute rights to the design data nor to alter an aircraft, aircraft engine, or propeller. The STC's supporting documentation (drawings, instructions, specifications, flight manual supplements, etc.) is the property of the STC holder. An STC holder who allows a person to use the STC to alter an aircraft, aircraft engine, or propeller must provide that person with written permission acceptable to the FAA. (Ref. 14 CFR 21.120).

FAA Approved Model List (AML) STC SA01899WI

Aircraft Make (TCDS Holder) [common name or previous make]	Aircraft Model (alias)	Type Certificate Number	TC Certification Basis*	MDL 005-01320-00 Rev.**	AML Date	Limitations
Mooney (Mooney Aircraft Corporation)	M22	A6SW	CAR 3	1	Mar 15, 2019	
Nardi (Nardi S.A.) [Siai Marchetti]	FN-333	7A5	CAR 3/10	1	Mar 15, 2019	
Navion (Sierra Hotel Aero, Inc.)	Navion (L-17A), Navion A (L-17B, L-17C), Navion B, Navion D, Navion E, Navion F, Navion G, Navion H	A-782	CAR 3	1	Mar 15, 2019	
Pacific Aerospace Limited. (Pacific Aerospace Ltd.) [Found Aircraft Canada, Inc]	FBA-2C, FBA-2C1 (Bush Hawk), FBA-2C2 (Bush Hawk XP)	A7EA	CAR 3 FAR 23	1	Mar 15, 2019	
Piper Aircraft, Inc. (Piper Aircraft, Inc.)	PA-16, PA-16S	1A1	CAR 3	1	Mar 15, 2019	
Piper Aircraft, Inc. (Piper Aircraft, Inc.)	PA-18, PA-18 "105", PA-18 "125" (Army L-21A), PA-18S, PA-18S "105", PA-18S "125", PA-18AS "125", PA-18 "135" (Army L-21B), PA-18A, PA-18A "135", PA-18S "135", PA-18AS "135", PA-18 "150", PA-18A "150", PA-18S "150", PA-18AS "150", PA-19 (Army L-18C), PA-19S	1A2	CAR 3	1	Mar 15, 2019	
Piper Aircraft, Inc. (Piper Aircraft, Inc.)	PA-20, PA-20S, PA-20 "115", PA-20S "115" PA-20 "135", PA-20S "135"	1A4	CAR 3	1	Mar 15, 2019	
Piper Aircraft, Inc. (Piper Aircraft, Inc.)	PA-22, PA-22-108, PA-22-135, PA-22S-135, PA-22-150, PA-22S-150, PA-22-160, PA-22S-160	1A6	CAR3	1	Mar 15, 2019	
Piper Aircraft, Inc. (Piper Aircraft, Inc.)	PA-24, PA-24-250, PA-24-260, PA-24-400	1A15	CAR 3	1	Mar 15, 2019	
Piper Aircraft, Inc. (Piper Aircraft, Inc.)	PA-28-140, PA-28-150, PA-28-151, PA-28-160, PA-28-161, PA-28-180, PA-28-235, PA-28S-160, PA-28R-180, PA-28S-180, PA-28-181, PA-28R-200, PA-28R-201, PA-28R-201T, PA-28RT-201, PA-28RT-201T, PA-28-201T, PA-28-236	2A13	CAR 3	1	Mar 15, 2019	(1)(2)
Piper Aircraft, Inc. (Piper Aircraft, Inc.)	PA-38-112	A18SO	FAR 23	1	Mar 15, 2019	
Piper Aircraft, Inc. (Piper Aircraft, Inc.)	PA-32-260, PA-32-300, PA-32S-300, PA-32R-300, PA-32RT-300, PA-32RT-300T, PA-32R-301(SP), PA-32R-301(HP), PA-32R-301T, PA-32-301, PA-32-301T, PA-32-301FT, PA32-301XTC	A3SO	CAR 3	1	Mar 15, 2019	(1)(2)
Polskie Zakłady Lotnicze Spolka zo.o (Polskie Zakłady Lotnicze Spolka zo.o) [PZL MIELEC]	PZL M26 01	A44CE	FAR 23	1	Mar 15, 2019	
Revo, Inc. (Revo, Incorporated) [Lake]	Colonial C-1, Colonial C-2, Lake Model 250	1A13	CAR 3	1	Mar 15, 2019	
	Lake LA-4, Lake LA-4A, Lake LA-4P, Lake LA-4-200			5	Dec 20, 2019	



Garmin International, Inc.
1200 East 151st Street
Olathe, Kansas 66062
P: 913-397-8200 F: 913-397-8282

September 27, 2021

**Subject: Permission to Use FAA STC SA01818WI or EASA STC 10060846 , or EASA STC 10064473
Installation of Garmin G5 Electronic Flight Instrument
See Approved Model List (AML) for Approved Aircraft Models**

Pursuant to 49 U.S.C. 44704, 14 CFR § 21.120, 14 CFR § 91.403(d), FAA Order 8110.48 and FAA Advisory Circular 21-40; Garmin International, Inc. hereby grants permission to Chris Roberts owner/operator of Piper PA-32-300 bearing manufacturer's serial number 32-7240089 to use FAA Supplemental Type Certificate SA01818WI and deliverable data associated with it, for the sole and express purpose of installation and approval of the installation of a Garmin G5 Electronic Flight Instrument into the above referenced aircraft. Installer must still verify airframe eligibility per STC SA01818WI and the associated Approved Model List (AML). Following modification per STC SA01818WI, a copy of this permission letter should be placed in the aircraft's permanent records. Alteration or reproduction of this letter is strictly prohibited.

For Aircraft registered in an EASA state, EASA STC **10060846** (EASA Validation of US FAA STC SA01818WI) may be used in the same manner as STC SA01818WI, provided the aircraft is listed on the AML for STC SA01818WI and the aircraft also has a EASA Type Certificate.

For Aircraft registered in an EASA state but not on the FAA STC, EASA STC **10064473** may be used in the same manner as STC SA01818WI, provided the aircraft is listed on the EASA Approved AML 005-01112-46 for STC 10064473.

Robert G. Murray
Director, Aircraft Certification
Garmin International, Inc.



United States of America
Department of Transportation
Federal Aviation Administration
Supplemental Type Certificate

Number: SA01818WI

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

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

Original Product – Type Certificate Number:
Multiple - AML STC

Make:
Model: See Approved Model List (AML) SA01818WI for approved aircraft models and applicable airworthiness regulations

Description of Type Design Change:

Installation of Garmin G5 Electronic Flight Instrument

Data Required:

- (1) Garmin Master Drawing List (MDL) 005-01112-01, Revision 1, dated July 22, 2016
 - (2) Garmin G5 STC Maintenance Manual including ICA 190-01112-11, Revision 1, dated July 22, 2016
 - (3) Garmin G5 Airplane Flight Manual Supplement 190-01112-13, Revision 1, dated July 22, 2016
- Later FAA-approved revisions to the data listed above are incorporated without amendment to this certificate

Limitations and Conditions:

- (1) Compatibility of this design change with previously approved modifications must be determined by the installer.
 - (2) The installation of the G5 requires the retention of the mechanical airspeed indicator, altimeter, and vertical speed indicator. If the G5 is installed as the primary attitude, it requires retention of the existing rate of turn indicator. If installed in place of the rate of turn indicator, it requires retention of the existing primary attitude indicator.
- (continued on Page 3)

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

Date of Application: May 5, 2016

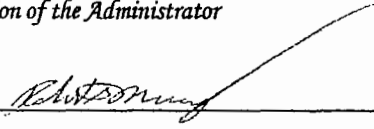
Date Reissued:

Date of Issuance: July 22, 2016

Date Amended: April 28, 2017

By Direction of the Administrator

Signature


Title Robert G. Murray
ODA STC Unit Administrator
ODA-240087-CE

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both. This certificate may be transferred or made available to third persons by licensing agreements in accordance with 14 CFR 21.47. Possession of this Supplemental Type Certificate (STC) document by persons other than the STC holder does not constitute rights to the design data nor to alter an aircraft, aircraft engine, or propeller. The STC's supporting documentation (drawings, instructions, specifications, flight manual supplements, etc.) is the property of the STC holder. An STC holder who allows a person to use the STC to alter an aircraft, aircraft engine, or propeller must provide that person with written permission acceptable to the FAA. (Ref. 14 CFR 21.120).

FAA Approved Model List (AML) STC SA01818WI

Aircraft Make (TCDS Holder) [common name or previous make]	Aircraft Model (alias)	Type Certificate Number	TC Cert. Basis*	MDL 005-01112-01 Rev.**	AML Rev. Date	Limitations
Mooney (Mooney International Corporation) [Mooney Aviation Company, Inc.; Mooney Airplane Co.; Mooney Aircraft Corporation; Aerostar Aircraft Corp]	M20, M20A, M20B, M20C, M20D, M20E, M20F, M20G, M20J, M20K, M20L, M20M, M20R, M20S	2A3	CAR 3	1	July 22, 2016	
Mooney (Mooney Aircraft Corporation)	M22	A6SW	CAR 3	1	July 22, 2016	
Moravan (Moravan National Corporation)	ZLIN 526L	A30EU	FAR 23	1	July 22, 2016	
Nardi (Nardi S.A.) [Siai Marchetti]	FN-333	7A5	CAR 3/10	1	July 22, 2016	
Navion (Sierra Hotel Aero, Inc.)	Navion (L-17A), Navion A (L-17B, L-17C), Navion B, Navion D, Navion E, Navion F, Navion G, Navion H	A-782	CAR 3	1	July 22, 2016	
Piaggio (Piaggio & C.)	P.136-L, P.136-L1	A-813	CAR 3/10	1	July 22, 2016	(3)
Piper Aircraft, Inc. (Piper Aircraft, Inc.)	PA-18 "125" (Army L-21A), PA-18S "125", PA-18AS "125", PA-18 "135" (Army L-21B), PA-18A "135", PA-18S "135", PA-18AS "135", PA-18 "150", PA-18A "150", PA-18S "150", PA-18AS "150", PA-19 (Army L-18C), PA-19S	1A2	CAR 3	1	July 22, 2016	
	PA-18, PA-18S, PA-18A			1	Aug 22, 2016	
	PA-18S "105"			5	April 28, 2017	
Piper Aircraft, Inc. (Piper Aircraft, Inc.)	PA-20, PA-20S, PA-20 "115", PA-20 "135", PA-20S "135"	1A4	CAR 3	1	Aug 22, 2016	
Piper Aircraft, Inc. (Piper Aircraft, Inc.)	PA-22, PA-22-108, PA-22-135, PA-22S-135, PA-22-150, PA-22S-150, PA-22-160, PA-22S-160	1A6	CAR 3	1	Aug 22, 2016	
Piper Aircraft, Inc. (Piper Aircraft, Inc.)	PA-23, PA-23-160, PA-23-235, PA-23-250, PA-E23-250	1A10	CAR 3	1	July 22, 2016	
Piper Aircraft, Inc. (Piper Aircraft, Inc.)	PA-24, PA-24-250, PA-24-260, PA-24-400	1A15	CAR 3	1	July 22, 2016	
Piper Aircraft, Inc. (Piper Aircraft, Inc.)	PA-28-140, PA-28-150, PA-28-151, PA-28-160, PA-28-161, PA-28-180, PA-28-235, PA-28S-160, PA-28R-180, PA-28S-180, PA-28-181, PA-28R-200, PA-28R-201, PA-28R-201T, PA-28RT-201, PA-28RT-201T, PA-28-201T, PA-28-236	2A13	CAR 3	1	July 22, 2016	
Piper Aircraft, Inc. (Piper Aircraft, Inc.)	PA-38-112	A18SO	FAR 23	1	July 22, 2016	
Piper Aircraft, Inc. (Piper Aircraft, Inc.)	PA-44-180, PA-44-180T	A19SO	FAR 23	1	July 22, 2016	(1)(2) (3)
Piper Aircraft, Inc. (Piper Aircraft, Inc.)	PA-30, PA-39, PA-40	A1EA	CAR 3	1	July 22, 2016	
Piper Aircraft, Inc. (Piper Aircraft, Inc.)	PA-32-260, PA-32-300, PA-32S-300, PA-32R-300, PA-32RT-300, PA-32RT-300T, PA-32R-301(SP), PA-32R-301(HP), PA-32R-301T, PA-32-301, PA-32-301T, PA-32-301FT, PA32-301XTC	A3SO	CAR 3	1	July 22, 2016	

Issued: July 22, 2016

Revised: April 28, 2017



1200 East 151st Street
Olathe, KS 66062
P: 913-397-8200 F: 913-397-8282

December 21, 2017

SUBJECT: Authorization for STC Use
AML STC SA01866WI

Garmin authorized dealers are hereby granted permission to use Garmin AML STC SA01866WI data to modify aircraft.

A handwritten signature in cursive script, appearing to read "Robert Murray", written over a horizontal line.

Robert Murray
Director, Aircraft Certification
Garmin International, Inc.



United States of America
Department of Transportation
Federal Aviation Administration

Supplemental Type Certificate

Number: SA01866WI

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

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

Original Product – Type Certificate Number:
Multiple - AMLSTC

Make:
Model: See FAA Approved Model List (AML) SA01866WI for approved aircraft models and applicable airworthiness regulations

Description of Type Design Change:

Installation of Garmin GFC 500 Autopilot with Electronic Stability and Protection
Data Required:

- (1) Garmin Master Drawing List (MDL) 005-01264-00, Revision 1, dated December 21, 2017
- (2) Garmin GFC 500 Automatic Flight Control System Part 23 AML STC Maintenance Manual (includes Instructions for Continued Airworthiness) 190-02291-01, Revision 1, dated December 21, 2017

Later FAA-approved revisions to the data listed above are incorporated without amendment to this certificate

Limitations and Conditions:

- (1) Compatibility of this design change with previously approved modifications must be determined by the installer.
 - (2) Aircraft modified by this STC must be operated in accordance with the Airplane Flight Manual Supplement (AFMS) identified on the Approved Model List.
 - (3) Aircraft modified by this STC must be maintained in accordance with the Instructions for Continued Airworthiness (ICA) identified above.
- (continued on Page 3)

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

Date of Application: August 24, 2017

Date Reissued:

Date of Issuance: December 21, 2017

Date Amended: March 15, 2019; May 4, 2020; September 10, 2020, October 15, 2020; November 13, 2020

By Direction of the Administrator

Signature Erik Frisk

Title Erik Frisk
ODA STC Unit Administrator
ODA-240087-CE

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both. This certificate may be transferred or made available to third persons by licensing agreements in accordance with 14 CFR 21.47. Possession of this Supplemental Type Certificate (STC) document by persons other than the STC holder does not constitute rights to the design data nor to alter an aircraft, aircraft engine, or propeller. The STC's supporting documentation (drawings, instructions, specifications, flight manual supplements, etc.) is the property of the STC holder. An STC holder who allows a person to use the STC to alter an aircraft, aircraft engine, or propeller must provide that person with written permission acceptable to the FAA. (Ref. 14 CFR 21.430).

FAA Approved Model List (AML) STC SA01866WI

Aircraft Make (TCDS Holder) [common name or previous make]	Aircraft Model	Type Certificate Number	TC Certification Basis*	MDL 005-01264-00 Rev.**	AML Amended Date	AFMS Part Number	AFMS Rev. **
Aviat Aircraft, Inc. (Aviat Aircraft, Inc.) [Aviat]	A-1, A-1A, A-1B, A-1C-180, A-1C-200	A22NM	FAR 23	30	5/4/20	190-02291-39	1
Cirrus Design Corporation (Cirrus Design Corporation) [Cirrus]	SR22 (S/N 22-0002 thru 22-4434) (except those with G1000)	A00009CH	FAR 23	42	11/13/20	190-02291-55	1
Mooney (Mooney International Corporation) [Mooney]	M20M, M20R, M20S (except those with G1000)	2A3	CAR 3 FAR 23	11	1/18/19	190-02291-18	1
	M20J, M20K			14	3/14/19	190-02291-20	1
	M20F, M20G		CAR 3	40	10/15/20	190-02291-64	1
	M20C (S/N 2742, 2807 and later) M20D (S/N 252-260) M20E (S/N 400, 470 and later)			44	12/01/20	190-02291-70	1
Piper Aircraft, Inc. (Piper Aircraft, Inc.) [Piper]	PA-28-150, PA-28-160, PA-28-180, PA-28-151, PA-28-161, PA-28-181 (except those with G1000)	2A13	CAR 3 FAR 23	4	3/16/18	190-02291-07	1
	PA-28-140			8	8/29/18	190-02291-07	3
	PA-28R-180, PA-28R-200, PA-28R-201, PA-28R-201T			20	7/30/19	190-02291-29	1
	PA-28-201T			22	10/15/19	190-02291-48	1
	PA-28-236					190-02291-34	1
	PA-28-235			24	12/19/19	190-02291-53	1
	PA-28RT-201			26	02/28/20	190-02291-60	1
	PA-28RT-201T			26	02/28/20	190-02291-50	1
	PA-32R-300, PA-32R-301(SP), PA-32R- 301(HP), PA-32R-301T	A3SO	CAR 3 FAR 23	21	7/30/19	190-02291-27	1
	PA-32-260, PA-32-300			22	10/15/19	190-02291-47	1
	PA-32-301, PA-32-301T, PA-32-301FT, PA-32-301XTC (except those with G1000)			24	12/19/19	190-02291-27	2
	PA-32RT-300			31	5/13/20	190-02291-65	1
	PA-32RT-300T			31	5/13/20	190-02291-52	1
SOCATA	TB20, TB21 (S/N 275 thru 2184, 2191, 2192, 2194, 2195, 2196, and 2203)	A51EU	FAR 23	50	3/3/21	190-02291-73	1
	172E	3A12	CAR 3	5	5/11/18	190-02291-02	2

Issued: 12/21/17

Amended: 3/03/21



1200 East 151st Street
Olathe, KS 66062
P: 913-397-8200 F: 913-397-8282

July 11, 2018

Subject: Authorization for STC Use
AML STC SA01714WI

Garmin authorized dealers are hereby granted permission to use Garmin AML STC SA01714WI data to modify aircraft.

A handwritten signature in black ink, appearing to read "Emmett Griffith", followed by a long horizontal line.

Emmett Griffith
Director of Engineering
Garmin International, Inc.

United States of America
Department of Transportation -- Federal Aviation Administration
Supplemental Type Certificate

Number SA01714WI

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

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

Original Product--Type Certificate

Number: * See attached Approved Model List (AML) No.
Make: SA01714WI dated May 1, 2013 or later FAA-
Model: approved revision for list of approved aircraft models
and applicable airworthiness regulations.

Description of Type Design Change:

Installation of Garmin transponders: (a) GTX 330/330D/33/33D or GTX 335/335R/335D/335DR with ADS-B Out functionality; (b) GTX 345/345R/345D/345DR with ADS-B Out and In functionality; (c) GTX 335R/335DR with ADS-B Out functionality in select airplanes installed with G950/G1000 systems; or (d) GTX 345R/345DR with ADS-B Out and In functionality in select airplanes installed with G950/G1000 systems.

Data Required:

- (1) Garmin Master Drawing List (MDL) 005-00734-04, Revision 1, dated May 1, 2013 or later FAA-approved revision.
- (2) Garmin Airplane Flight Manual Supplement or Supplemental Airplane Flight Manual (AFMS), 190-00734-15, Revision 1, dated May 1, 2013 or later FAA-approved revision.

Limitations and Conditions:

- (1) Compatibility of this design change with previously approved modifications must be determined by the installer.
- (2) Aircraft installations involving the Garmin transponder models without an internal GPS require the previous installation of an approved ADS-B position source. Refer to the design data specified in the Master Drawing List (MDL) listed above for specific hardware and software requirements.

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

Date of application: August 7, 2012

Date reissued:

Date of issuance: May 1, 2013

Date amended: April 29, 2014; March 8, 2016;
September 9, 2019



By direction of the Administrator


JR Brownell
(Signature)

JR Brownell
ODA STC Unit Administrator
ODA-240087-CE
Garmin International, Inc.

(Title)

FAA Approved Model List (AML) STC SA01714WI

Airplane Make (TCDS Holder) [common name or previous make]	Airplane Model Designation	Type Certificate Number	TC Certification Basis ⁽¹⁾	Master Drawing List Revision (005-00734-04)	AML Amendment/Date
Piper Aircraft, Inc. (Piper Aircraft, Inc.) [The New Piper Aircraft, Inc]	PA-24, PA-24-250, PA-24-260, PA-24-400	1A15	CAR 3	1	Original 5/1/2013
	PA-28-140, PA-28-150, PA-28-151, PA-28-160, PA-28-180, PA-28-201T, PA-28-235, PA-28-236, PA-28S-160, PA-28S-180, PA-28R-180, PA-28R-200, PA-28R-201T, PA-28RT-201, PA-28RT-201T	2A13	CAR 3 FAR 23	1	Original 5/1/2013
	PA-28-161, PA-28R-201, PA-28-181	2A13	CAR 3 FAR 23	1	Original 5/1/2013
	PA-32-260, PA-32-300, PA-32-301, PA-32-301T, PA-32S-300, PA-32R-300, PA-32RT-300, PA-32RT-300T,	A3SO	CAR 3	1	Original 5/1/2013
	PA-32R-301(HP), PA-32R-301(SP), PA-32-301XTC, PA-32R-301T, PA-32-301FT	A3SO	CAR 3	1	Original 5/1/2013
	PA-34-200, PA-34-200T, PA-34-220T	A7SO	FAR 23	1	Original 5/1/2013
	PA-38-112	A18SO	FAR 23	1	Original 5/1/2013
	PA-44-180T	A19SO	FAR 23	1	Original 5/1/2013
	PA-44-180	A19SO	FAR 23	1	Original 5/1/2013
	PA-31 (PA-31-310), PA-31-300, PA-31-325, PA-31-350	A20SO	CAR 3 FAR 23	1	Original 5/1/2013
	PA-42, PA-42-720, PA-42-1000	A23SO	FAR 23	1	Original 5/1/2013

 U.S. Department of Transportation Federal Aviation Administration		MAJOR REPAIR AND ALTERATION (Airframe, Powerplant, Propeller, or Appliance)		Form Approved OMB No. 2120-0020 For FAA Use Only Office Identification CE03 R24	
INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act of 1958).					
1. Aircraft	Make PIPER		Model PA32-300		
	Serial No. 32-7240089		Nationality and Registration Mark N4804T		
2. Owner	Name (As shown on registration certificate) Heller Terry R. Heller Randall L Jr.		Address (As shown on registration certificate) 299 Parkland Ave. Glendale, Mo. 63122		
	3. For FAA Use Only				
4. Unit Identification					
Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	----- (As described in Item 1 above) -----				XX
POWERPLANT					
PROPELLER					
APPLIANCE	Type				
	Manufacturer				
5. Type					
6. Conformity Statement					
A. Agency's Name and Address		B. Kind of Agency		C. Certificate No.	
THEODORE MATTHES W.P.M.C/O Weiss Airport 430 Rudder Road Fenton, Mo. 63026		<input checked="" type="checkbox"/> U.S. Certificated Mechanic <input type="checkbox"/> Foreign Certificated Mechanic <input type="checkbox"/> Certificated Repair Station <input type="checkbox"/> Manufacturer		A&P 2085571	
D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.					
Date 3/18/94		Signature of Authorized Individual THEODORE MATTHES <i>Theodore Matthes</i>			
7. Approval for Return To Service					
Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED					
BY	FAA Fit. Standards Inspector	Manufacturer	<input checked="" type="checkbox"/> Inspection Authorization	Other (Specify)	
	FAA Designee	Repair Station	Person Approved by Transport Canada Airworthiness Group		
Date of Approval or Rejection 3/18/94		Certificate or Designation No. IA2085571	Signature of Authorized Individual THEODORE MATTHES <i>Theodore Matthes</i>		

NOTICE

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


8. Description of Work Accomplished

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

Installed new Brackett air filter assembly model no. BA115.
The air filter assembly is approved under STC.SA693CE. Installed
air filter assembly in accordance with STC.SA693CE List no. 1
and Faa-PMA supplement No. 1 Rev. 8-23-88.

*****THE END*****

☐ Additional Sheets Are Attached

 US Department of Transportation Federal Aviation Administration		MAJOR REPAIR AND ALTERATION (Airframe, Powerplant, Propeller, or Appliance)		Form Approved OMB No. 2120-0020 For FAA Use Only	
INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act of 1958).					
1. Aircraft	Make PIPER		Model PA32-300		
	Serial No. 32-7240089		Nationality and Registration Mark N4804T		
2. Owner	Name (As shown on registration certificate) Heller Terry R. Heller Randall L. Jr.		Address (As shown on registration certificate) 299 Parkland Ave. Glendale, Mo. 63122		
	3. For FAA Use Only				
4. Unit Identification					
Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	~~~~~ (As described in Item 1 above) ~~~~~				XX
POWERPLANT					
PROPELLER					
APPLIANCE	Type				
	Manufacturer				
5. Type					
6. Conformity Statement					
A. Agency's Name and Address		B. Kind of Agency		C. Certificate No.	
THEODORE MATTHES W.P.M.C/O Weiss Airport 430 Rudder Road Fenton, Mo. 63026		<input checked="" type="checkbox"/> U.S. Certificated Mechanic <input type="checkbox"/> Foreign Certificated Mechanic <input type="checkbox"/> Certificated Repair Station <input type="checkbox"/> Manufacturer		A&P2085571	
D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.					
Date 3/18/94		Signature of Authorized Individual THEODORE MATTHES <i>Theodore Matthes</i>			
7. Approval for Return To Service					
Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED					
BY	FAA Flt. Standards Inspector	Manufacturer	<input checked="" type="checkbox"/> Inspection Authorization	Other (Specify)	
	FAA Designee	Repair Station	Person Approved by Transport Canada Airworthiness Group		
Date of Approval or Rejection 3/18/94		Certificate or Designation No. IA2085571	Signature of Authorized Individual THEODORE MATTHES <i>Theodore Matthes</i>		

NOTICE

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


8. Description of Work Accomplished

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

Installed new Bob Feilds inflateable door seal part no. 3920-32. The door seal is approved under STC. SA4288WE. The installation was done in accordance with Bob Feilds report BFA.310 installation instructions rev. 2 Rev. date Feb, 26, 1993 and drawing No. 3920 and Piper Maintenance manual no. 753 690.

*****THE END*****

☐ Additional Sheets Are Attached

 U.S. Department of Transportation Federal Aviation Administration		MAJOR REPAIR AND ALTERATION (Airframe, Powerplant, Propeller, or Appliance)		Form Approved OMB No. 2120-0020	
				For FAA Use Only	
				Office Identification STL-FSDO	
INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act of 1958).					
1. Aircraft	Make PIPER	Model PA 32-300			
	Serial No. 32-7240089	Nationality and Registration Mark N 4804T			
2. Owner	Name (As shown on registration certificate) Terry R. Heller & Randall L. Heller Jr.		Address (As shown on registration certificate) 299 Parkland Ave. Glendale, Mo. 63122		
	3. For FAA Use Only				
4. Unit Identification					
Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	~~~~~ (As described in item 1 above) ~~~~~				X
POWERPLANT					
PROPELLER					
APPLIANCE	Type				
	Manufacturer				
5. Type					
6. Conformity Statement					
A. Agency's Name and Address		B. Kind of Agency		C. Certificate No.	
Oliver R. Nelson 11 Cooper Lane St. Peters, Mo. 63376		<input checked="" type="checkbox"/> U.S. Certified Mechanic		A&P 499355	
		<input type="checkbox"/> Foreign Certified Mechanic			
		<input type="checkbox"/> Certified Repair Station			
		<input type="checkbox"/> Manufacturer			
D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.					
Date Nov. 14, 1991		Signature of Authorized Individual Oliver R. Nelson <i>Oliver R. Nelson</i>			
7. Approval for Return To Service					
Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED					
BY	FAA Fit. Standards Inspector	Manufacturer	<input checked="" type="checkbox"/>	Inspection Authorization	Other (Specify)
	FAA Designee	Repair Station		Person Approved by Transport Canada Airworthiness Group	
Date of Approval or Rejection 11/14/91		Certificate or Designation No. FA 2085571	Signature of Authorized Individual <i>Theodore Matthes</i> Theodore Matthes		

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.)

Install Walker Engineering Company Air Oil Separator in accordance with
STC # SA3839WE, installation instructions and drawing # KW3001-1 dated
7/27/73.

*****THE END*****

☐ Additional Sheets Are Attached

 MAJOR REPAIR AND ALTERATION (Airframe, Powerplant, Propeller, or Appliance)				Form Approved OMB No. 2120-0020 For FAA Use Only Office Identification STL-FSDO	
INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act of 1958).					
1. Aircraft	Make PIPER		Model PA32-300		
	Serial No. 32-7240089		Nationality and Registration Mark N4804T		
2. Owner	Name (As shown on registration certificate) Heller, Terry R. & Randall Jr.		Address (As shown on registration certificate) 299 Park Lane Ave. Glendale, Mo. 63122		
	3. For FAA Use Only				
4. Unit Identification					
Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	As described in Item 1 above				X
POWERPLANT					
PROPELLER					
APPLIANCE	Type				
	Manufacturer				
5. Type					
6. Conformity Statement					
A. Agency's Name and Address		B. Kind of Agency		C. Certificate No.	
Theodore Matthes W.P.M. C/O Weiss Airport 430 Rudder Rd. Fenton, Missouri 63026		<input checked="" type="checkbox"/> U.S. Certified Mechanic		A&P 2085571	
		Foreign Certified Mechanic			
		Certificated Repair Station			
		Manufacturer			
D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.					
Date Jan. 24, 1991		Signature of Authorized Individual <i>Theodore Matthes</i>			
7. Approval for Return To Service					
Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED					
BY	FAA FTL Standards Inspector	Manufacturer	<input checked="" type="checkbox"/>	Inspection Authorization	Other (Specify)
	FAA Designee	Repair Station		Person Approved by Transport Canada Airworthiness Group	
Date of Approval or Rejection Jan 24, 1991		Certificate or Designation No. 2085571 I.A.		Signature of Authorized Individual <i>Theodore Matthes</i>	

NOTICE

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

8. Description of Work Accomplished

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

Install Appalachian brake rotors part number 75-23. Parts installed under
STC SA2337S0. All work done in accordance with Appalachian Accessories
installation instructions dated Oct. 1, 1987, FAA revised Oct. 12, 1989,
and Piper service manual 753-690 section VI.

*****THE END*****

☐ Additional Sheets Are Attached

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION				Form Approved Budget Bureau No. 04-R060.1	
MAJOR REPAIR AND ALTERATION (Airframe, Powerplant, Propeller, or Appliance)				FOR FAA USE ONLY	
				OFFICE IDENTIFICATION STL FSDG 3-0-62	
INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.					
1. AIRCRAFT	MAKE PIPER		MODEL PA-32-300		
	SERIAL NO. 32-7240089		NATIONALITY AND REGISTRATION MARK U.S.A. N4804T		
2. OWNER	NAME (As shown on registration certificate) Terry R. and Randall Jr. Heller		ADDRESS (As shown on registration certificate) 299 Parkland Ave. Glendale, MO. 63122		
3. FOR FAA USE ONLY					
4. UNIT IDENTIFICATION					
UNIT	MAKE	MODEL	SERIAL NO.	REPAIR	ALTERATION
AIRFRAME	***** (As described in item 1 above) *****				X
POWERPLANT	LYCOMING	IO-540-K1A5	L-9732-48		X
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				
6. CONFORMITY STATEMENT					
A. AGENCY'S NAME AND ADDRESS		B. KIND OF AGENCY		C. CERTIFICATE NO.	
William F. Pobanz R.T. 2 Box 210 St. James, MO 65559		<input checked="" type="checkbox"/> U.S. CERTIFICATED MECHANIC		357444133 IA	
		FOREIGN CERTIFICATED MECHANIC			
		CERTIFICATED REPAIR STATION			
		MANUFACTURER			
D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.					
DATE July 9, 1986		SIGNATURE OF AUTHORIZED INDIVIDUAL W.B. Pobanz			
7. APPROVAL FOR RETURN TO SERVICE					
Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED					
BY	FAA P.T. STANDARDS INSPECTOR	MANUFACTURER	<input checked="" type="checkbox"/>	INSPECTION AUTHORIZATION	
	FAA DESIGNEE	REPAIR STATION	<input type="checkbox"/>	CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	
DATE OF APPROVAL OR REJECTION 7-9-86		CERTIFICATE OR DESIGNATION NO. 357444133IA		SIGNATURE OF AUTHORIZED INDIVIDUAL W.B. Pobanz	

NOTICE

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

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

"Installed Precise Flight, Inc. Standby Vacuum System in accordance with airframe STC# SA2167NM and (Lycoming) STC# 5E1779NM."

-END-

☐ ADDITIONAL SHEETS ARE ATTACHED

The information normally furnished in Section VIII is on file as part of the historical inspection record at Piper Aircraft Corporation.
Current Airworthiness Certificate issued I/A/W FAR 21.183(a) PER 21.273. Budget Bureau No. 04-R0058

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION APPLICATION FOR AIRWORTHINESS CERTIFICATE				INSTRUCTIONS—Print or type. Do not write in shaded areas; these are for FAA use only. Submit original only to an authorized FAA Representative. If additional space is required, use an attachment. For special flight permits complete Sections II and VI or VII as applicable.			
I. AIRCRAFT DESCRIPTION	1. REGISTRATION MARK N4804T	2. AIRCRAFT BUILDER'S NAME (make) Piper	3. AIRCRAFT MODEL DESIGNATION PA 32-300	4. YR. MFG. 1972	FAA CODING 7103212 41533		
	5. AIRCRAFT SERIAL NO. 32-7240089	6. ENGINE BUILDER'S NAME (make) Lycoming	7. ENGINE MODEL DESIGNATION IO-540-K1A5				
	8. NUMBER OF ENGINES one	9. PROPELLER BUILDER'S NAME (make) Hartzel	10. PROPELLER MODEL DESIGNATION HC-C2YK-1	11. AIRCRAFT IS <input checked="" type="checkbox"/> NEW <input type="checkbox"/> USED <input type="checkbox"/> IMPORT			
II. CERTIFICATION REQUESTED	APPLICATION IS HEREBY MADE FOR: (Check applicable items)						
	A. <input checked="" type="checkbox"/> STANDARD AIRWORTHINESS CERT (Indicate category) <input type="checkbox"/> NORMAL <input type="checkbox"/> UTILITY <input type="checkbox"/> ACROBATIC <input type="checkbox"/> TRANSPORT <input type="checkbox"/> GLIDER <input type="checkbox"/> BALLOON						
	B. <input checked="" type="checkbox"/> SPECIAL AIRWORTHINESS CERTIFICATE (Check appropriate items)						
	2. LIMITED						
	5. PROVISIONAL (Indicate class) 1. CLASS I 2. CLASS II						
	3. RESTRICTED (Indicate operation(s) to be conducted) 1. AGRICULTURE & PEST CONTROL 2. AERIAL SURVEYING 3. AERIAL ADVERTISING 4. FOREST (Wild life conservation) 5. PATROLLING 6. WEATHER CONTROL 0. OTHER (Specify)						
	4. EXPERIMENTAL (Indicate operation(s) to be conducted) 1. RESEARCH AND DEVELOPMENT 2. AMATEUR BUILT 3. EXHIBITION 4. RACING 5. CREW TRAINING 6. MKT. SURVEY 0. TO SHOW COMPLIANCE WITH FAR						
	8. SPECIAL FLIGHT PERMIT (Indicate operation to be conducted then complete Section VI or VII as applicable on reverse side) 1. FERRY FLIGHT FOR REPAIRS, ALTERATIONS, MAINTENANCE OR STORAGE 2. EVACUATE FROM AREA OF IMPENDING DANGER 3. OPERATION IN EXCESS OF MAX. CERTIFICATED TAKE OFF WEIGHT 4. DELIVERING OR EXPORT 5. PRODUCTION FLIGHT TESTING						
	C. <input checked="" type="checkbox"/> MULTIPLE AIRWORTHINESS CERTIFICATE (Check appropriate Restricted Operation and Standard or Limited as applicable above)						
	III. OWNER'S CERTIFICATION	A. REGISTERED OWNER (As shown on Certificate of Aircraft Registration) IF DEALER, CHECK HERE <input checked="" type="checkbox"/>					
NAME Piper Aircraft Corporation			ADDRESS P.O. Box 1328 Vero Beach, Florida 32960				
B. AIRCRAFT CERTIFICATION BASIS (Check applicable blocks and complete items as indicated)							
AIRCRAFT SPECIFICATION OR TYPE CERTIFICATION DATA SHEET (Give No. and Revision No.) A380 REV 15			AIRWORTHINESS DIRECTIVES (Check if all applicable AD's complied with and give latest AD No.) 72-5-1				
AIRCRAFT LISTING (Give page No(s).)			SUPPLEMENTAL TYPE CERTIFICATE (List number of each STC incorporated)				
IV. INSPECTION AGENCY VERIFICATION	C. AIRCRAFT OPERATION AND MAINTENANCE RECORDS						
	CHECK IF RECORDS IN COMPLIANCE WITH FAR 91.173 <input checked="" type="checkbox"/>		TOTAL AIRFRAME HOURS—Enter for a/c—aircraft only		3. EXPERIMENTAL ONLY—Enter hours flown since last certificate issued or renewed		
	D. CERTIFICATION—I hereby certify that I am the owner (or his agent) of the aircraft described above, that the aircraft is registered with the Federal Aviation Administration in accordance with Section 301 of the Federal Aviation Act of 1938, and applicable Federal Aviation Regulations; and that the aircraft has been inspected and is airworthy and eligible for the airworthiness certificate requested.						
	DATE OF APPLICATION 3-11-72		NAME AND TITLE (Print or type) V. J. Montuoro Agent			SIGNATURE V. J. Montuoro	
	A. THE AIRCRAFT DESCRIBED ABOVE HAS BEEN INSPECTED AND FOUND AIRWORTHY BY: (Complete this section only if FAR 21.183 (d) applies)						
V. FAA REPRESENTATIVE CERTIFICATION	2. FAR PART 121 OR 127 CERTIFICATE HOLDER (Give Certificate No.)		3. CERTIFICATED MECHANIC (Give Certificate No.)		6. CERTIFICATED REPAIR STATION (Give Certificate No.)		
	5. AIRCRAFT MANUFACTURER (Give Name of Firm)						
	DATE		TITLE		SIGNATURE		
	I have inspected the aircraft described in Item I or VII and find it meets the requirements for:						
	X. A. STANDARD AIRWORTHINESS CERTIFICATE B. SPECIAL AIRWORTHINESS CERTIFICATE						
4. C. AMENDMENT OR MODIFICATION OF ITS CURRENT AIRWORTHINESS CERTIFICATE							
DATE 3-11-72		DISTRICT OFFICE MIA-EMDO 7-0-43		DESIGNER'S SIGNATURE AND NO. JUDD M. CARRITHERS DOA SO-1		FAA INSPECTOR'S SIGNATURE	

FAA AIRCRAFT REGISTRY
CAMERA NO. /N DATE: 2/19/85

AA II 5-1

RECEIVED

MAR 27 13 30-72

ENGINEERING AND
MANUFACTURING BRANCH

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION—FEDERAL AVIATION ADMINISTRATION
STANDARD AIRWORTHINESS CERTIFICATE

1. NATIONALITY AND REGISTRATION MARKS N4804T	2. MANUFACTURER AND MODEL Piper PA 32-300	3. AIRCRAFT SERIAL NUMBER 32-7240089	4. CATEGORY Normal
5. AUTHORITY AND BASIS FOR ISSUANCE This airworthiness certificate is issued pursuant to the Federal Aviation Act of 1938 and certifies that, as of the date of issuance, the aircraft to which issued has been inspected and found to conform to the type certificate therefor, to be in condition for safe operation, and has been shown to meet the requirements of the applicable comprehensive and detailed airworthiness code as provided by Annex 8 to the Convention on International Civil Aviation, except as noted herein. Exceptions: None			
6. TERMS AND CONDITIONS Unless sooner surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator, this airworthiness certificate is effective as long as the maintenance, preventive maintenance, and alterations are performed in accordance with Parts 21, 43, and 91 of the Federal Aviation Regulations, as appropriate, and the aircraft is registered in the United States.			
DATE OF ISSUANCE MAR 11 1972	FAA REPRESENTATIVE JUDD M. CARPENTERS		DESIGNATION NUMBER DOA 50-1

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

FAA AIRCRAFT REGISTRY
CAMERA NO. 1N DATE: 2/19/85

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION MAJOR REPAIR AND ALTERATION (Airframe, Powerplant, Propeller, or Appliance)				Form Approved Budget Bureau No. 04-R060.1 FOR FAA USE ONLY OFFICE IDENTIFICATION RNO GADCO 4-0-11	
INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.					
1. AIRCRAFT	MAKE Piper		MODEL PA-32-300		
	SERIAL NO. 32 7240089		NATIONALITY AND REGISTRATION MARK N4804T		
2. OWNER	NAME (As shown on registration certificate) El Aero Services, Inc.		ADDRESS (As shown on registration certificate) P.O. Box 149 Elko, Nevada 89801		
	3. FOR FAA USE ONLY				
4. UNIT IDENTIFICATION					
UNIT	MAKE	MODEL	SERIAL NO.	REPAIR	ALTERATION
AIRFRAME	***** (As described in item 1 above) *****			X	
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				
6. CONFORMITY STATEMENT					
A. AGENCY'S NAME AND ADDRESS			B. KIND OF AGENCY		C. CERTIFICATE NO.
Ted R. McBride P.O. Box 149 Elko, Nevada 89801			<input checked="" type="checkbox"/> U.S. CERTIFICATED MECHANIC <input type="checkbox"/> FOREIGN CERTIFICATED MECHANIC <input type="checkbox"/> CERTIFICATED REPAIR STATION <input type="checkbox"/> MANUFACTURER		1347248
D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.					
DATE 5-29-73			SIGNATURE OF AUTHORIZED INDIVIDUAL <i>Ted R. McBride</i>		
7. APPROVAL FOR RETURN TO SERVICE					
Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED					
BY	FAA P.T. STANDARDS INSPECTOR	MANUFACTURER	<input checked="" type="checkbox"/>	INSPECTION AUTHORIZATION	OTHER (Specify)
	FAA DESIGNEE	REPAIR STATION		CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	
DATE OF APPROVAL OR REJECTION 5-29-73		CERTIFICATE OR DESIGNATION NO. 1347248		SIGNATURE OF AUTHORIZED INDIVIDUAL <i>Ted R. McBride</i>	

NOTICE

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

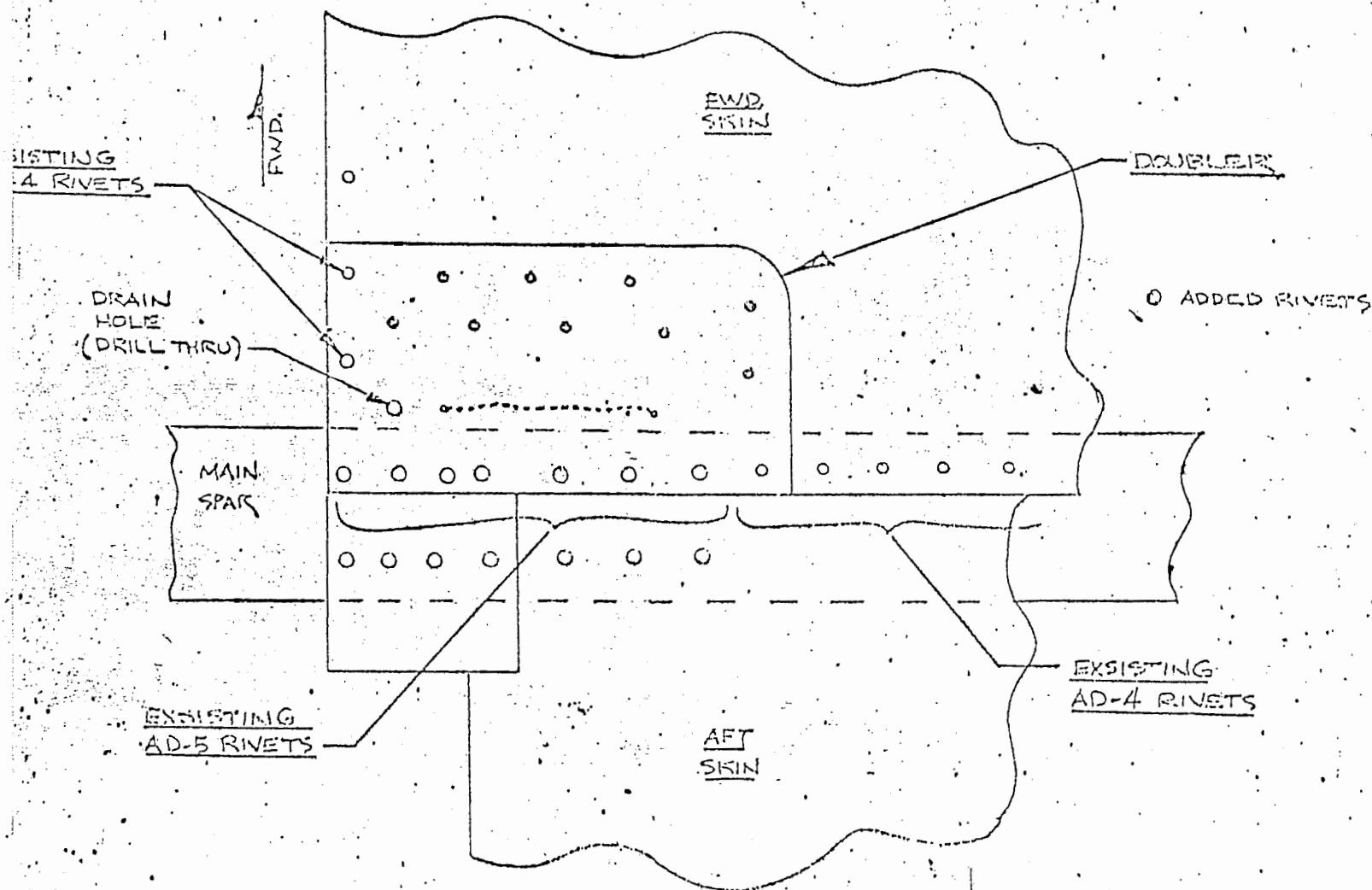
8. DESCRIPTION OF WORK ACCOMPLISHED (If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

Patched skin crack on right wing butt as per piper repair inst. See attached Piper drawing.

_____ No More Following _____

☒ ADDITIONAL SHEETS ARE ATTACHED

- NOTES:
1. Stop drill ends of crack.
 2. Install doubler, picking up (7) existing AD-5 rivets and at least (1) AD-4 rivet in main spar.
 3. Pick up (2) existing AD-4 rivets and add (9) AD-4 rivets; see sketch below.
 3. Doubler material: 2024-T3 Alum.; .032" thick.
 4. Maintain 4D rivet spacing between rivets. Maintain 2D rivet spacing edge distance.
 5. CR2163-4/CR2249-4 or CR163-5/CR2249-5 rivets may be substituted for AD rivets as required.



N 4/804 T
5-28-73

FAA AIRCRAFT REGISTRY
CAMERA NO. /N DATE:

2/19/85



US Department
of Transportation
**Federal Aviation
Administration**

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

Form Approved
OMB No. 2120-0020

For FAA Use Only

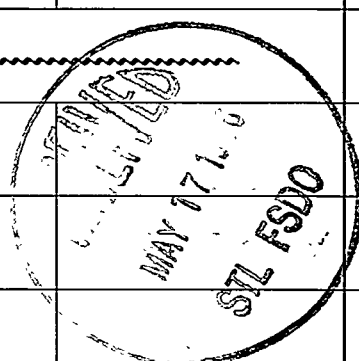
Office Identification
546-FSDO

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

1. Aircraft	Make PIPER	Model PA32-300
	Serial No. 32-7240089	Nationality and Registration Mark N4804T
2. Owner	Name (As shown on registration certificate) Heller, Terry Rd. Heller, Randall L. Jr.	Address (As shown on registration certificate) 299 Parkland Ave. Glendale, MO 63122

3. For FAA Use Only

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



6. Conformity Statement

A. Agency's Name and Address Theodore Matthes C/O Weiss Aviation Center 18445 Edison Ave. Chesterfield, MO 63005	B. Kind of Agency <input checked="" type="checkbox"/> U.S. Certificated Mechanic <input type="checkbox"/> Foreign Certificated Mechanic <input type="checkbox"/> Certificated Repair Station <input type="checkbox"/> Manufacturer	C. Certificate No. 2085571
--	--	--------------------------------------

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

Date May 16, 96	Signature of Authorized Individual Theodore Matthes <i>Theodore Matthes</i>
---------------------------	--

7. Approval for Return To Service

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

BY	FAA Fit. Standards Inspector	Manufacturer	<input checked="" type="checkbox"/>	Inspection Authorization	Other (Specify)
	FAA Designee	Repair Station		Person Approved by Transport Canada Airworthiness Group	
Date of Approval or Rejection May 16, 96		Certificate or Designation No. 2085571		Signature of Authorized Individual Theodore Matthes <i>Theodore Matthes</i>	

NOTICE

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

8. Description of Work Accomplished

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

Remove old rudder skin, install new rudder skin part number 63396-002.

Installed new skin in accordance with Piper Cherokee Six Service Manual part number 753-690 Rev. 7/12/87, per section 4, para 4-19 (structure repairs to be made in accordance with AC43-13-1A).

Part installed in accordance with AC 43-13-1A, section 3 para. 99 (a), (b), (c), using original rivet design, size and pattern.

Control surface static balanced per Piper Service Manual.

*****THE END*****

☐ Additional Sheets Are Attached



US Department
of Transportation
Federal Aviation
Administration

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

Form Approved **9510776**
OMB No. 2120-0020

For FAA Use Only

Office Identification

CE-03

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

1. Aircraft	Make PIPER	Model PA32-300
	Serial No. 32-7240089	Nationality and Registration Mark N4804T
2. Owner	Name (As shown on registration certificate) HELLER, TERRY R. HELLER, RANDALL L. JR.	Address (As shown on registration certificate) 299 PARKLAND AVE. GLENDALE, MISSOURI 63122

3. For FAA Use Only

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

6. Conformity Statement

A. Agency's Name and Address HOWARD WILLIAMS 550 SPIRIT OF ST. LOUIS BLVD. CHESTERFIELD, MISSOURI 63017	B. Kind of Agency <input checked="" type="checkbox"/> U.S. Certificated Mechanic <input type="checkbox"/> Foreign Certificated Mechanic <input type="checkbox"/> Certificated Repair Station <input type="checkbox"/> Manufacturer	C. Certificate No. A&P 499322094
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D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

Date 04-17-1995	Signature of Authorized Individual HOWARD WILLIAMS
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7. Approval for Return To Service

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

BY	FAA Fit. Standards Inspector	Manufacturer	<input checked="" type="checkbox"/> Inspection Authorization	Other (Specify)
	FAA Designee	Repair Station	Person Approved by Transport Canada Airworthiness Group	
Date of Approval or Rejection 04-17-1995		Certificate or Designation No. IA499322094	Signature of Authorized Individual HOWARD WILLIAMS	

NOTICE

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

8. Description of Work Accomplished

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

1. INSPECT PREVIOUS REPAIR BY PERSONS UNKNOWN AT 5 LOCATIONS (2 ON LEFT WING TOP SKIN AT STRINGER AND RIB JUNCTION, 3 IDENTICAL REPAIRS ON RIGHT WING)
2. REPAIR WAS I/A WITH PIPER PA32-300 SERVICE MANUAL AND ~~XX~~ A/C 43.13-1A
3. PA32-300 SERVICE MANUAL FICHE 1F6 FIG 4-3 FOR APPROVED MATERIALS (032 2024-T3)
4. A/C 43.13.1A PAGE 59, PAR.100 PATCH SIZE, DESIGN, RIVIT¹ SPACING, FIG.2.24
5. A/C 43.13.-A PAGE 60, PAR. 100 E, (2) (a) FOR RIVIT SIZE
6. CR9163-4-2 RIVITS USED

*****END*****