



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, D.C. 20594

October 15, 2021

AIRWORTHINESS

Group Chairman's Factual Report

ERA21LA065

**Appendix A – N282ST Maintenance Records
(13 pages)**

AIRCRAFT DESCRIPTION

Registration No. N282ST

Model: PA-46-600TP

Popular Name: M600

Serial No.: 4698111

Type Certificate No.: A2550

Colors: 499588 818093 PLATINUM / ARC BLUE & MATTERHORN WHITE

Engine Manufacturer: PRATT & WHITNEY

Serial Numbers: Single PCE-RM0865

Original Engine Model: PT6A-42A

Left

Right

Propeller Manufacturer: HARTZELL

Hub or Serial Number: Single SF198

Original Propeller Model: 5D3-N338A1

Left

Right

Blade Numbers

Left

Right

C2509

C2389

C2556

C2388

C2412

2020 MODEL

COMPLIANCE WITH FAA AIRWORTHINESS DIRECTIVES

A. D. No. and Date	Method of Compliance (See Log for Details)	Time on Aircraft	Date of Compliance	Signature and Certificate No.
All applicable Federal Aviation Administration Airworthiness Directives, through Bi-Weekly <u>2019-24</u>, have been complied with at the time of manufacture. Signed: [REDACTED] PIPER AIRCRAFT, INC.		4.3	DEC 07 2019	

A. D. No.
and Date

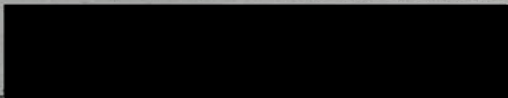
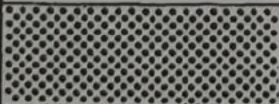
AIRCRAFT LOG

Date	Aircraft Time		Recorder Reading	Maintenance	
	This Date	Total			
DEC 07 2019	Brought Forward →	4.3	The Altimeter and Static System Test required by FAR 91.411 have been performed. The altimeter(s) have been tested: On (Pri) <u>8/23/19</u> at <u>55,000 ft</u> (Sec) <u>8/23/19</u> at <u>55,000 ft</u> The ELT is installed per FAR 91.207. Battery Replacement date: <u>OCT 2025</u> The ATC Transponder Tests and Inspections required by FAR 91.413 were performed this date and found to comply with FAR 43, Appendix F. 1. Make <u>Garmin</u> Model <u>GTX33SR</u> S/N <u>3EF022239</u> 2. Make <u>Garmin</u> Model <u>GTX345R</u> S/N <u>3EH025499</u> Details of this inspections are on File at this facility under: AFT S/N <u>4698111</u> Date <u>10/16/19</u> The Automatic Pressure Altitude Reporting Equipment Test required by FAR Part 91.217 have been performed this date: <u>10/16/19</u> The standby altimeter and static system test required by FAR Part 91.411 have been performed. The standby altimeter has been tested to <u>40,000 ft</u> on <u>6/25/19</u> I find that the aircraft meets the requirements for the certification requested and have issued a Standard Airworthiness Certificate. Signature:  DEC 07 2019 M. D. G		
Total To Carry Forward		4.3			

Registration No. N 282 ST

[illegible]

AIRCRAFT LOG

Date	Aircraft Time		Recorder Reading	Maintenance
	This Date	Total		
	Brought Forward →			
MAKE: Piper MODEL: PA46-600TP S/N: 4698111 REG. NO: N282ST WORK ORDER: 3669-01-2020 Piper Aircraft, Inc. 2926 Piper Drive Vero Beach, FL 32960 Phone: 772-567-4361 DATE: 1/17/2020 A/C TSN: 5 Landings: HOBBS: 5				
Airframe Entries Removed steering horn Piper p/n 85154-012. Planed steering block surface per Piper drawing number 85154. Re-installed and adjusted steering horn per Piper M/M 767-617, chapter 32-50-00.				
Maintenance Release The aircraft and/or component(s) on N282ST was repaired and inspected in accordance with current rules of the Federal Aviation Regulations and was found Airworthy for return to service. Pertinent details of the repair are on file at this Repair Station, ZPAR410X, under Work Order No. 3669-01-2020, Dated 1/17/2020				
DATE: 1/17/2020		SIGNED: 		Work Order: 3669-01-2020
Printed by EBis 3 (datcomedia.com)				
Total To Carry Forward				

Registration No. _____

and Remarks	Signature	Certificate No.
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MAKE: Piper
MODEL: PA46-600TP
S/N: 4698111
REG. NO: N282ST
WORK ORDER:
3693-01-2020

Piper Aircraft, Inc.

2926 Piper Drive
Vero Beach, FL 32960
Phone: 772-567-4361

DATE: 1/31/2020

A/C TSN: 5

Landings:

HOBBS: 5

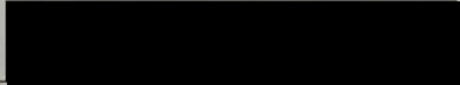
Airframe Entries

Aspen 1000 shows 'cross check attitude' message when starter engaged. Removed Remote Sensor Module Piper p/n 602-467, s/n 500613. Installed new RSM s/n 500928. Removed Aspen EFD 1000 Piper p/n 602-464, s/n 27681. Installed new EFD1000, s/n 28195, per Piper M/M 761-892, chapter 34-24-00.

Maintenance Release

The aircraft and/or component(s) on N282ST was repaired and inspected in accordance with current rules of the Federal Aviation Regulations and was found Airworthy for return to service. Pertinent details of the repair are on file at this Repair Station, ZPAR410X, under Work Order No. 3693-01-2020, Dated 1/31/2020.

DATE: 1/31/2020

SIGNED: 

Work Order: 3693-01-2020

Printed by EBis 3 (datcomedia.com)

AIRCRAFT LOG

MAKE: Piper
MODEL: PA46-600TP
S/N: 4698111
REG NO: N282ST
WORK ORDER:
3693-01-2020

Piper Aircraft, Inc.

2926 Piper Drive
Vero Beach, FL 32960
Phone: 772-567-4361

DATE: 1/31/2020
A/C TSN: 5
Landings:
HOBBS: 5

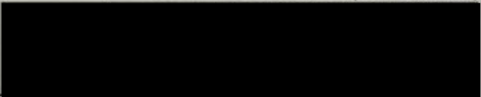
Airframe Entries

Aspen 1000 shows faint black line horizontally across screen. Removed Aspen EFD 1000 Piper p/n 602-464, s/n 28195. Installed new EFD1000, s/n 27695. Removed Remote Sensor Module. Installed new RSM s/n 500911, per Piper M/M 761-892, chapter 34-24-00.

Maintenance Release

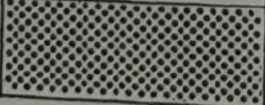
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DATE: 1/31/2020

SIGNED: 

Work Order: 3693-01-2020

Printed by EBis 3 (datcomedia.com)

Total To Carry Forward				

Registration No. _____



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200 Airport Drive, Westminster, Maryland 21157

Phone: (410) 574-4144 / Fax: (410) 848-6451

Aircraft Log Entry		N282ST	W/O: DMW-273	Date: May 20, 2020	
Aircraft:	PA-46-600TP	S/N: 4698111	ACTT: 25.0	HOBBS: 25.0	ACSN:
Engine:	PT6A-42A	S/N: PCE-RM0865	ETSN: 25.0	ETSO: -----	ECSN:
Propeller:	5D3-N338A1	S/N: SF198	PTSN: 25.0	PTSO: -----	

Piper Warrantable 1st 50 hour :

- C/W Piper M600 first 50 hour inspection IAW Piper Aircraft Inc. PA-46-600TP Warrantable 1st 50 Hour Inspection Report p/n 765-044.

Complied with the following Special Inspections per Chapter 05-30-00:

- Performed 30 day check of the portable fire extinguisher condition and charge.
- Performed 90 day visual inspection of oxygen cylinder for leakage, corrosion, bulges, distortion and security of mounting.
- Performed 90 day fluid level check of the hydraulic pump reservoir.
- Performed 90 day fluid level check of brake reservoir.
- Performed 90 day installed ELT operational test IAW Piper PA-46-500/600TP AMM 25-60-00.
- Performed 50 hour Propeller Heat inspection IAW Piper PA-46-600TP AMM 30-60-00.
- Performed 50 hour check of oleo struts for proper extension IAW Piper PA-46-600TP AMM 12-10-00.

Complied with the following Service Bulletins (SB's):

- C/W Piper SL 1238A Aileron Seal Removal and Aileron Replacement dated February 13, 2020 by removing aileron seals and retaining hardware from both LH and RH ailerons; installed new screws (22 ea. side) p/n MS35206-243; primed and painted new hardware IAW SL Instructions Part I and Part II. Balanced ailerons and reinstalled IAW Piper PA-46-600TP AMM chapters 57-50-00 and 27-10-00.
- C/W Piper SA 46-31 Brake Master Cylinder Label Removal Piper Halo Autoland System IAW Piper SA 46-31.
- C/W Piper Mandatory Service Bulletin 1352 - Garmin G3000NG Software Version 2975.15 by updating the Garmin G3000NG system to the software version in the kit - Service SW 2975.15 - PA-46-600TP G3000NG, Piper P/N: 88678-001. Updated Garmin

AIRCRAFT LOG



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G3000 Pilots Guide and Cockpit Reference Guide IAW SB kit instructions. Effective date of this SB is April 10, 2020. **Return to Service Flight Checks must be completed IAW Section 3 of the kit instructions.**

- C/W Piper SL 1230 G3000 and G3000 NG Electronic Checklist by loading checklist for G3000 NG software version 2975.01 and later IAW SL instructions 1-2. Effective date of SB is January 7, 2020.

Completed the following additional items:

- Adjusted aileron cable tension IAW Piper PA-46-600TP AMM chapter 27-10-00.
- Adjusted rudder and yaw servo cable tensions IAW Piper PA-46-600TP AMM chapter 27-20-00 and 22-10-00.
- Adjusted elevator cable tension IAW Piper PA-46-600TP AMM chapter 27-30-00. 3.3
- Applied anti-chaft tape to LH and RH flaps IAW Piper PA-46-600TP MM chapter 20-00-00.
- Serviced oxygen system IAW Piper PA-46-600TP MM chapter 35-10-00. 3.6
- Serviced MLG and/or NLG oleo struts IAW Piper PA-46-350P/500TP/600TP MM chapter 12.
- Installed new RH landing light lens p/n 68-3971486A30 IAW Piper PA-46-600TP MM chapter 33-40-00.
- Re-sealed RH wing OB de-ice boot IB edge IAW Piper PA-46-600TP MM chapter 31-10-00.
- Installed Enhanced Flight Airframe Interface Kit for BatteryMINDER Maintenance Charger model BM-AIK2 IAW Installation Instructions p/n 752-647B Rev 20161229 and Piper PA-46-600TP MM chapter 20-00-00. Installation determined to be a minor alteration with affect to weight and balance being negligible.
- Installed cockpit beverage cup holder p/n 565-735 on forward side of main wing spar cover IAW AC43.13-1B, Chapter 4.
- Removed #2 GIA-64 s/n 5RT005129, and installed repaired GIA-64 p/n 011-03711-01 s/n 5RT005084 (repaired by Garmin International CRS# G6XR582Y see FAA form 8130-3 Work Order # SO# 15100689 dated 10 march 2020). Work performed IAW Piper PA-46-600TP AMM chapter 34-25-02.

Alpha Systems AOA Installation :

- To facilitate installing an Alpha Systems Angle of Attack System p/n DSTR-AOA-9600PK-PA46(ADH), the following work was performed (weight and balance negligible):

Installed the following components:

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Registration No. _____



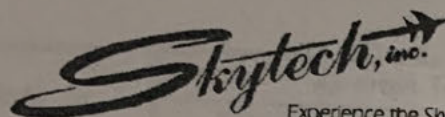
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No. _____

- AOA Probe p/n DSTR-AOA-7001K-24V, AOA Sensor I/F Module p/n DSTR-AOA-1975 s/n AOA17811-05, Display I/F Module p/n DSTR-AOA-1960PE s/n AOA17811-05, and Flap Expansion kit p/n DSTR-AOA-1980-PA46. Installed as follows:
- Removed an existing inspection panel on the right wing 15 " inboard of the wingtip at WS 227.0. Modified the existing inspection panel using Alpha Systems Installation Manual p/n IOM-Eagle, Rev BA, page 1.12 and 1.12, and installed AOA Probe p/n DSTR-AOA-7001K-24V to panel. Reinstalled panel.
- Installed AOA Sensor I/F Module p/n DSTR-AOA-1975 s/n AOA17811-05 inside wing, adjacent to inspection panel at WS 227.0. Mounted with Click Bond CB3001CRA-3-6-750 studs to outboard false spar. Connected sense lines between AOA probe and AOA Sensor I/F Module IAW AC43.13-1B, Chapter 12, Section 4, Para (a) and (b).
- Installed Display I/F Module p/n DSTR-AOA-1960PE, s/n AOA17811-05 behind copilot PFD using manufactured bracket. Installed AOA indicator s/n AOA17811-05 on pilot's glareshield. Performed installation IAW AC43.13-1B Chapter 4 and Chapter 11, and AC43.13-2B, Chapter 1 and 2, para (a) - (c). Unit does not obstruct pilot's view.
- Installed Flaps Expansion kit p/n DSTR-AOA-1980-PA46 relay under cabin floor at FS 158.3 IAW AC43.13-1B Chapter 4 and 11.
Connected wiring as follows:
- Installed a 10 A circuit breaker p/n 7277-2-10 for AOA Probe Heat Power and a 1 A in line fuse for AOA Heat relay power. AOA Heat relay ground controlled by aircraft Pitot Heat switch when turned to the ON position. Relay power supplied by LH Pitot Heat CB 447. AOA Heat Power is routed thru RH wing root connector P221.
- Flap Expansion kit relay power supplied thru Alpha Systems relay from 3 amp Flap Warning CB 222.
- Performed a static test of AOA system IAW AC43.13-1B Chapter 12, Section 4. Performed initial system power up, zero pressure (on the ground) set-point calibration and (on the ground) brightness calibration IAW Alpha Systems Eagle Operations manual P#AOA-9610. Placed placard on pilot's instrument panel stating " Not for use as a primary instrument for flight".
- All work described above was done in accordance with the Alpha Systems Installation Manual #IOM-Eagle Rev BA dated



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3/8/17 and in accordance with 14CFR FAR 21.93(a) and 43.13(b). This airframe alteration is considered a MINOR alteration and is at least equal to its original condition.

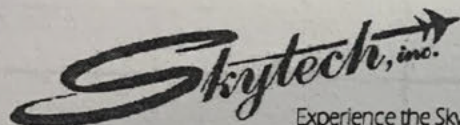
- This aircraft is released for the "in flight" calibration procedures which need to be performed in accordance with the Alpha Systems Operations Manual P#AOA-9610. The satisfactory results shall be recorded in the permanent aircraft records.

MAINTENANCE RELEASE

The aircraft and/or component identified above was repaired and inspected in accordance with current Federal Aviation Regulations and was found airworthy for return to service with respect to the work performed. Pertinent details of the repair are on file at this agency under Work Order [REDACTED]

Signed [REDACTED] for Skytech, Inc., 200 Airport Dr., Westminster, MD 21157.

CRS# LF1R294K



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Aircraft Log Entry

N282ST

W/O: DMW-273

Date: May 20, 2020

Aircraft: PA-46-600TP

S/N: 4698111

ACTT:

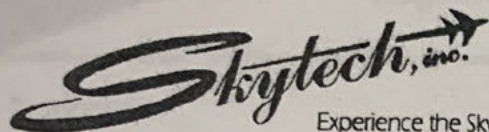
HOBBS: 26.3

ACSN:

- C/W Piper Service Bulletin 1352 "Garmin 3000NG Software Version 2975.15 Section 3 Return to Service Checks (Flight) IAW SB Instructions 3.1-4
- Performed In Flight calibration procedures IAW with the Alpha Systems Operations Manual P#AOA-9610.

Signed [REDACTED] Pilot # [REDACTED] for Skytech, Inc., 200 Airport Dr., Westminster, MD 21157.

To
Carry Forward



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Aircraft Log Entry

N282ST

W/O: DMW-310

Date: June 29, 2020

Aircraft: PA-46-600TP

S/N: 4698111

ACTT: 45.20

HOBBS: 45.20

- CW Piper Service Letter 1281 by installation of software kit # 88680-001 IAW Steps 1 - 2 and Dwg # 88680. Verified incorporation of POH Report VB-2793 Revision 4. Aircraft requires a Return to Service check flight prior to aircraft release. Effective date of SL is June 8, 2020.
- Aircraft is released for a Return to Service Flight Check per Step 3.

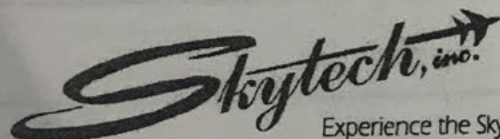
MAINTENANCE RELEASE

The aircraft and/or component identified above was repaired and inspected in accordance with current Federal Aviation Regulations and was found airworthy in respect to the work performed. Pertinent details of the repair are on file at this agency under

Work Order #

Signed _____ for Skytech, Inc., 200 Airport Dr., Westminster, MD 21157.

CRS# LF1R294K



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Aircraft Log Entry

N282ST

W/O: DMW-310

Date: June 29, 2020

Aircraft: PA-46-600TP

S/N: 4698111

ACTT: 45.4

HOBBS: 45.4

ACSN:

- Performed a Return to Service check flight IAW Piper Service Letter 1281, Section 3. All operations are satisfactory at this time.

Pertinent details of the repair are on file at this agency under

Work Order #

Signed _____ for Skytech, Inc., 200 Airport Dr., Westminster, MD 21157. License _____

AIRCRAFT LOG

Date	Aircraft Time		Recorder Reading	Maintenance
	This Date	Total		
	Brought Forward →			



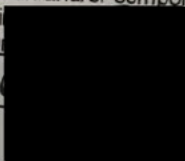
200 Airport Drive, Westminster, Maryland 21157
Phone: (410) 574-4144 / Fax: (410) 848-6451

Aircraft Log Entry	N282ST	W/O: DMW-385	Date: August 7, 2020
Aircraft: PA-46-600TP	S/N: 4698111	ACTT: 52.1	HOBBS: 52.1

- Removed GEA-71B configuration module assy. p/n 011-00979-03 and installed a new configuration module assy. p/n 011-00979-03 IAW Piper PA-46-600TP AMM chapter 34-25-02.

MAINTENANCE RELEASE

The aircraft and/or component identified above was repaired and inspected in accordance with current Federal Aviation Regulations and was found airworthy to service with respect to the work performed. Pertinent details of the repair are on file at this agency under Work Order 15

Signed  for Skytech, Inc., 200 Airport Dr., Westminster, MD 21157.

CRS# LF1R294K

Total To Carry Forward				