US Department of Transportation
Federal Aviation Administration

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

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

For FAA Use Only

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

1. Aircraft

Nationality and Registration Mark	Serial No.
N289ND	2844039
Make	**Model** / **Series**
PIPER	PA-28R-201

2. Owner

Name *(As shown on registration certificate)*	Address *(As shown on registration certificate)*
DERRICK WASHINGTON	Address 9610 MOORFIELD CIRCLE City Louisville State KY Zip 40241-3019 Country UNITED STATES

3. For FAA Use Only

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

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency		
Name Aaron Hardin	✓ U. S. Certificated Mechanic	☐ Manufacturer	
Address 2051 Clear Creek Drive	☐ Foreign Certificated Mechanic	C. Certificate No.	
City Boston State KY	☐ Certificated Repair Station		
Zip 40004 Country United States	☐ Certificated Maintenance Organization	3416474 A&P	

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

Extended range fuel per 14 CFR Part 43 App. B ☐

Signature/Date of Authorized Individual 7/1/15

7. Approval for Return to Service

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

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

Certificate or Designation No. 2588731 IA

Signature/Date of Authorized Individual William Gabay 7/1/15

FAA Form 337 (10-06)

NOTICE

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

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

N289ND	07/01/2015
Nationality and Registration Mark	Date

1. Installed on existing shelf aft of baggage compartment Garmin GDL-69ASXM p/n 010-01294-11 s/n 3NZ000392 IAW Garmin Installation Manual p/n 190-00355-07 dated February 2015 Revision E and interfaced with existing GTN-750 per Garmin Installation Manual P/N 190-01007-A3 Rev. 7 Dec 2013, GDL-69A is protected by 5amp in line fuse located under Copilot circuit breaker panel.

7. Weight and balance and equipment list were revised.

☑ Additional Sheets Are Attached

US Department of Transportation
Federal Aviation Administration

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(Airframe, Powerplant, Propeller, or Appliance)

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1. Aircraft	Nationality and Registration Mark: N289ND	Serial No.: 2844039	
	Make: PIPER	Model: PA-28R-201	Series:
2. Owner	Name *(As shown on registration certificate)*: DERRICK WASHINGTON	Address *(As shown on registration certificate)*: Address 9610 MOOREFIELD CIRCLE; City Louisville; State KY; Zip 40241-3019; Country UNITED STATES	

3. For FAA Use Only

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

6. Conformity Statement

A. Agency's Name and Address
Name: Aaron Hardin
Address: 2061 Clear Creek Drive
City: Boston State: KY
Zip: 40004 Country: United States

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

C. Certificate No.: 3416474 A&P

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

Extended range fuel per 14 CFR Part 43 App. B ☐

Signature/Date of Authorized Individual: [signature] 4/14/15

7. Approval for Return to Service

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

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

Certificate or Designation No.: 2588731 IA

Signature/Date of Authorized Individual: William Gabay [signature] 4/14/15

FAA Form 337 (10-06)

NOTICE

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

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

N289ND	04/10/2015
Nationality and Registration Mark	Date

1. Removed from the existing space, PS engineering PMA-8000BT Audio Panel,KX-155A NAV/COMM, KI-209 Indicator, GMX-200 MFD, JPI EGT-701-4C, TACH PS50048-15-1.

2. Installed in existing space at top of right radio rack a Garmin GMA-340 Audio Panel P/N 010-00152-11 S/N 96295879. Installation OF GMA-340 was done IAW Garmin Installation Manual P/N 190-00149-01 Rev L dated June 2003 and with reference to STC # SA00710WI and A.C. 43-13-1B Chapter 11, Paragraphs 11-32,11-36,11-47 thru 51, A.C. 43-13-2B Chapter 2 Paragraphs 202,203a,203b,203c,203e. GMA-340 is protected by a 5amp circuit breaker located in copilot's circuit breaker panel.

3. Installed in existing space provided by the aircraft manufacturer; Garmin GTN-750 P/N 010-00820-50 S/N 1ZA0155225 and GA35 GPS antenna IAW STC SA02019SE-D per Garmin Installation Manual P/N 190-01007-A3 Rev. 7 Dec 2013, A.C. 43-13-1B Chapter 11, Paragraphs 11-32,11-36,11-47 thru 51, A.C. 43-13-2B Chapter 2 Paragraphs 202,203a,203b,203c,203e and AC 20-138B. The Garmin GNS-750 is certified to the airworthiness criteria in A.C. 20-138B for IFR use enroute,terminal, and approach phases of flight. GPS portion is certified under TSO C146a. Com transceiver is certified under TSO C37d. VOR is certified under TSO C40c. LOC is certified under TSO C36e. Glideslope is certfied under C34e. The GTN-750 is protected by a 5 amp breaker for GPS and a 5 amp breaker for the Comm portion. The GTN-750 was interfaced with the following units: GNS-430W, GMA-340, EDM-830 and the GTX-330ES per Garmin Installation Manual P/N 190-01007-A3 Rev. 7 Dated Dec 2013. The GTN-750 receives altitude via RS-232 data bus lines from the GTX-330ES. The GTN-750 controls the KN-64 DME using King Serial Data.

4. Installed JPI EDM-830 engine monitor IAW STC# SA2586NM with reference to J.P. Instruments Installation Manual dated 1/20/09 Rev E and J.P. Instruments Fuel Flow Installation Manual dated 03/14/07 Rev B. EDM-830 was installed in existing hole on far right side of Pilot's Instrument panel using flush mount kit. Fuel Flow / EGT/ All switch is located at top left of the instrument. EDM is protected with a 5 AMP circuit breaker wired to Avionics Buss. EDM is interfaced with the GTN-750 via RS-232 data lines.

5. Installed Electronics Instruments R-1-4 Tachometer S/N 166780 IAW STC SA5924NM and OI 0517911 Rev C Dated 09/24/97. R-1-4 Tach is located on right side of pilot's panel and protected by a 1 amp fuse located in fuse holder on Copilot's circuit breaker panel.

6.Instructions for Continued Airworthiness for the GMA-340,EDM-830, R-1-4 are on condition only. The GTN750 ICA was provided to the aircraft owner.

7. Weight and balance and equipment list were revised.

☑ 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 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. 1421). 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: N289ND	Serial No.: 2844039	
	Make: Piper	Model: PA-28R-201	Series:
2. Owner	Name *(As shown on registration certificate)*: Roscoe Jerry P	Address *(As shown on registration certificate)*: Address 6909 Bonheim Ct; City McLean; State VA; Zip 22101-5100; Country USA	

3. For FAA Use Only

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

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency		C. Certificate No.
Name Landmark Aviation	☐ U.S. Certificated Mechanic	☐ Manufacturer	
Address 1005 Sycolin Road	☐ Foreign Certificated Mechanic		
City Leesburg State VA	☒ Certificated Repair Station		Certified Repair Station YBJR768L
Zip 20175 Country USA	☐ Certificated Maintenance Organization		

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

Extended range fuel per 14 CFR Part 43 App. B	Signature/Date of Authorized Individual
☐	Mark Jernigan 7-18-2012

7. Approval for Return to Service

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

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

Certificate or Designation No.	Signature/Date of Authorized Individual
YBJR768L	Mark Jernigan 7-18-2012

FAA Form 337 (10-06)

NOTICE

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

8. Description of Work Accomplished

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

N289ND	07-18-2012
Nationality and Registration Mark	Date

Installed Door Steward door assist gas spring modification in accordance with STC# SA01120SE, instructions MVA-B40C10M&O, on cabin door. Weight change negligible.

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

There are NO MANDATORY replacement items, structural inspection intervals or related structural inspection procedures.

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 11/30/2007 | Electronic Tracking Number

For FAA Use Only

INSTRUCTIONS: Print or type all entries. See Title 14 CFR FAR 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: **N289ND**	Serial No.: **2844039**	
	Make: **Piper**	Model: **PA-28R-201**	Series:
2. Owner	Name *(As shown on registration certificate)*: **Roscoe, Jerry P**	Address *(As shown on registration certificate)*: **6909 Bonheim Ct, Mclean, VA 22101-5100**	

3. For FAA Use Only

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

APPROVING INSPECTOR [signature]

DATE DEC 05 2011

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

6. Conformity Statement

A. Agency's Name and Address: **Landmark Aviation, 1005 Sycolin Rd, Leesburg, VA 20175 USA**

B. Kind of Agency

	U.S. Certificated Mechanic		Manufacturer
	Foreign Certificated Mechanic	C. Certificate No.	
X	Certificated Repair Station	**YBJR768L**	
	Certificated Maintenance Organization		

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

Extended range fuel Per 14 CFR Part 43 App. B ☐

Signature/Date of Authorized Individual: **James Forgues 11/30/2011** [signature]

7. Approval for Return to Service

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

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

Certificate or Designation No.: **CRS YBJR768L**

Signature/Date of Authorized Individual: **Bill Hertz 11/30/2011** [signature]

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 accomplished.)

N289ND	11/30/2011
Nationality and Registration Mark	Date

Hobbs: 9355.4 **Tach: 7003.3**

1. Introduction:
The Artex ME406 ELT is a small lightweight ELT, transmitting on 121.5 and 406.025 MHz. The ELT is designed to meet or exceed the requirements of TSO C91a and TSO C126. The ELT automatically activates during a crash and transmits the standard swept tone on 121.5 MHz. Every 50 seconds for 520 milliseconds (long message protocol) the 406.025 MHz transmitter turns on. The ME406 incorporates cockpit remote switch design.

2. Description:

- Removed the following equipment:
  1. Artex 121.5 ELT Transmitter P/N 453-0150 S/N 73383
  2. ELT Remote Control Panel P/N 345-6196
  3. ELT Antenna P/N 110-324
  4. ELT Ant. Coax Cable P/N 611-6013
- Installed the following equipment:
  1. Artex 406 ELT Transmitter P/N 453-6603 S/N 197-08851
  2. Artex ELT Antenna P/N 110-773
  3. ELT Ant. Coax Cable P/N 611-6013-04
  4. Artex Remote Switch P/N 345-6196-04
  5. Artex Audio Alerter P/N 452-6505

The Artex ELT Transmitter was installed in space vacated by removed ELT in the aft fuselage at F.S. 238.0. Attached ELT mount to existing aircraft structure. Installed the Artex ME406 ELT System (TSO C126) according to the Artex Installation Manual, P/N 570-1600, Rev. J, dated 04/06/10. ELT Antenna mounted in space vacated by old ELT antenna using same mounting system. Installed Remote ELT Control Panel in the RH pilots instrument panel at F.S. 62.0. Installed the Audio Alerter next to ELT transmitter at F.S. 230.0. Wiring and coaxial cabling meets requirements of Artex Installation Manual P/N 570-1600; AC 43.13-1B Ch. 11 and Ch. 12; AC 43.13-2B Ch. 2 and Ch.3. Wires/harnesses were secured to ensure no interference/binding with flight and engine controls I.A.W. AC 43.13-1B Sect. 9; AC 43.13-2B Ch.3. An electrical load analysis was performed, the new equipment uses the same and/or less power as the removed equipment. A complete operational test was performed according to instructions in the Artex ME406 Installation Manual. The equipment performed satisfactory and did not adversely affect existing components or systems in the aircraft as required by FAR 23.1309. No EMI was observed during testing. Weight & Balance and Equipment List revised. Appropriate logbook entries made. ELT battery expires Dec. 2017.

3. Control, operation information:
The ELT System is stand alone and requires no user interaction to operate. Periodic operational checks are at the owner's discretion, however, a monthly functional check is recommended to verify operational status of ELT. Reference Artex ELT Description, Operation, Installation and Maintenance Manual P/N 570-1600 placed in aircraft.

4. Servicing information:
The ELT Transmitter and Antenna are accessible by removing the aft right fuselage access panel.

5. Maintenance instructions:
Visual equipment inspection of the ELT system is required at least once every year, unless required more frequently by FARs (e.g. 100 hour inspections). FAR Parts 91.207, 91.409 and 43 Appendix D make detailed ELT inspections mandatory.

6. Troubleshooting information:
Troubleshooting should be performed by an authorized aircraft service center I.A.W. manufacturer publications.

CONTINUED

☒ Additional Sheets Are Attached

NOTICE

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8. Description of Work Accomplished
(If more space is required, attach additional sheets, identify with aircraft nationality and registration mark and date work accomplished.)

N289ND	11/30/2011
Nationality and Registration Mark	Date

7. Removal and replacement information:
The ELT System components are removable using standard shop tools. A functional check of the equipment should be performed in accordance with the Artex ELT Manual P/N 570-1600 and FAR Part 91.207.

8. Diagrams:
None applicable.

9. Special inspection requirements:
The ELT Battery (p/n 452-6499) is required to be replaced: a) after use in an emergency, b) after an inadvertent activation of unknown duration, c) when total of all known transmissions exceeds one hour, or d) on or before battery expiration date. Reference Artex ME-406 ELT Installation Manual P/N 570-1600.

10. Application of protective treatments:
None applicable

11. Data:
None applicable.

12. List of special tools:
None applicable.

13. For Commuter Category Aircraft:
Not applicable.

14. Recommended overhaul periods:
No additional overhaul time limitations.

15. Airworthiness Limitation Section:
Placard stating "FOR AVIATION EMERGENCY USE ONLY – UNAUTHORIZED OPERATION PROHIBITED" must be applied as close to switch as practical.

16. Revision:
No revisions at this time.
To revise this ICA, a letter must be submitted to the local FSDO with a copy of the revised FAA form 337, and revised ICA.

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 2/28/2011

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1. Aircraft	Nationality and Registration Mark: N289ND	Serial No.: 2844039	
	Make: Piper	Model: PA-28R-201	Series:
2. Owner	Name *(As shown on registration certificate)*: Roscoe Jerry P	Address *(As shown on registration certificate)*: Address 6909 Bonheim Ct; City McLean; State VA; Zip 22101-5100; Country USA	

3. For FAA Use Only

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

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency			
Name Landmark Aviation	☐	U.S. Certificated Mechanic	☐	Manufacturer
Address 1005 Sycolin Road	☐	Foreign Certificated Mechanic	C. Certificate No.	
City Leesburg State VA	☒	Certificated Repair Station	Certified Repair Station YBJR768L	
Zip 20175 Country USA	☐	Certificated Maintenance Organization		

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

Extended range fuel per 14 CFR Part 43 App. B	Signature/Date of Authorized Individual
☐	Charles Schoenduby 09-26-2011

7. Approval for Return to Service

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

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

Certificate or Designation No.	Signature/Date of Authorized Individual
YBJR768L	William B Hertz 09-26-2011

FAA Form 337 (10-06)

NOTICE

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

8. Description of Work Accomplished

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

N289ND	09-26-2011
Nationality and Registration Mark	Date

INSTALLATION OF: LoPresti Speed Merchants Speed Spat Wheel Fairings

A. Installation:

1. Fit, drill and installed the following:
   A. L/H FWD fairing P/N LSM-200-005-1
   B. L/H AFT fairing P/N LSM-200-005-3
   C. R/H FWD fairing P/N LSM-200-005-2
   D. R/H AFT fairing P/N LSM-200-005-4
2. Sealed all fairings and touched up rivets to match.

B. Return to Service:

1. Installation of the LoPresti Speed Merchants Speed Spat fairings were installed in accordance with LoPresti Speed Merchants STC# SA3229SO dated 05/14/1992, LoPresti Speed Merchants Speed Spat installation instructions for PA28R document LSM-200-6 rev B dated 07/12/2006 and installation drawing LSM-200-006 Rev A dated 03/24/1992.
2. Performed post installation operational check of landing gear and flap system. No defects noted at this time. No EMI/RFI noted resulting from this installation.
3. Aircraft weight and balance information has been revised to reflect this installation.

C. Instructions for Continued Airworthiness:

1. Check Speed Spats for security of attachment to airplane.
2. Loose or missing fasteners must be replaced.
3. Raise and lower flaps to assure there is no interference between mating parts.
4. Cracked or broken pieces must be replaced.
5. Items #C1 through #C4 above must be accomplished at each scheduled inspection as required by title 14 CFR part 91.409.

END

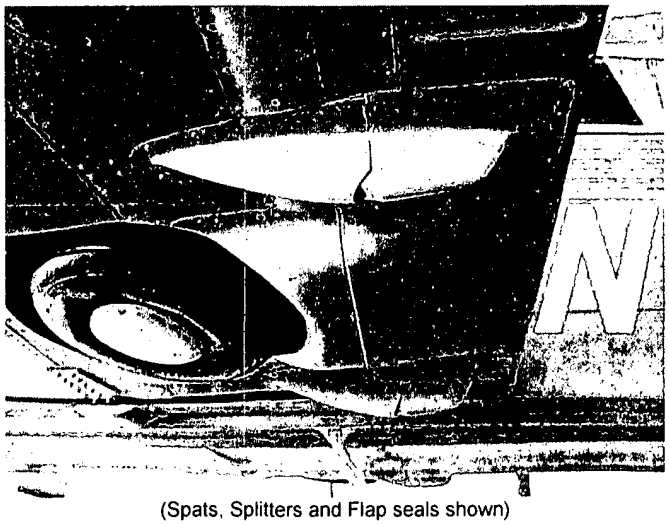
☒ Additional Sheets Are Attached

Life is Short ... Fly FAST!

LoPresti
SpeedMerchants

Speed Spats

Installation Instructions
(PA-28R, PA-32R, PA-34 & PA-44)



(Spats, Splitters and Flap seals shown)

LSM-200-006

REV B
07/12/06

LoPresti Speed Merchants
800-859-4757 / 772-562-4757 or fax 772-563-0446
http://www.SpeedMods.com
210 Airport Drive East, Sebastian, Florida, 32958, U.S.A.

REVISION DESCRIPTION

Rev	Date	Description
A	05/12/06	1. REVISED HARDWARE: "AD43BS" WAS "1691-0410"
B	07/12/06	1. REMOVED MDL & STC DOCUMENTS

LoPresti Speed Merchants
800-859-4757 / 772-562-4757 or fax 772-563-0446
http://www.SpeedMods.com
210 Airport Drive East, Sebastian, Florida, 32958, U.S.A.

SPEED SPATS KIT DESCRIPTION

Your SPEED SPATS kit consists of four molded fiberglass pieces that "fill in" the low-pressure area aft of the retracted main landing gear wheels. Each spat consists of two parts:

(1) A forward portion that attaches to the bottom of the wing. Both of these portions attach with blind fasteners.
(2) An aft portion that attaches to the flap.

Both of these portions attach with blind fasteners.

Your kit includes the following items:

(1) LSM-200-005-1 Left forward fairing
(1) LSM-200-005-2 Right forward fairing
(1) LSM-200-005-3 Left aft fairing
(1) LSM-200-005-4 Right aft fairing

CAUTION: Hole locations on all fiberglass pieces are indicated by raised "pips". These locations are the hole positions used on the prototype installation. Due to potential manufacturing tolerances, some hole locations may need to be moved slightly. It is the installer's responsibility to make sure that adequate edge margin, (at least .250 inches), is maintained between the new holes drilled to install SPEED SPATS and on all existing fasteners and edges of structural members.

(80) AD43BS Blind rivets
(1) 870-B2 Sealant container
(1) .125 Drill kit
(2) Latex gloves

LoPresti Speed Merchants
800-859-4757 / 772-562-4757 or fax 772-563-0446
http://www.SpeedMods.com
210 Airport Drive East, Sebastian, Florida, 32958, U.S.A.

Important
Your kit was shipped with enough sealant to install all kits at one time. The kits should be installed in the following order:

Fit up, trim, drill and cleco in place the Speed Spats, (main landing gear fairings)
Fit up, trim, drill and cleco in place the Speed Splitters, (flap hinge fairings)
Fit up, trim, drill and cleco in place the Speed Flap Gap Seals, (flap gap seals)

Check that flap movement is not obstructed.

Remove all parts
Clean and deburr holes.
(Now would be a great time to paint your kits)
Install WITH sealant and rivets provided.

Important
If you have any questions about your installation PLEASE call 561-562-4757 and ask for installation support.

TOOLS REQUIRED

Drill
Tape measure
Blind rivet gun
Clecos
Cleco pliers
Heat gun

LoPresti Speed Merchants
800-859-4757 / 772-562-4757 or fax 772-563-0446
http://www.SpeedMods.com
210 Airport Drive East, Sebastian, Florida, 32958, U.S.A.

SPEED SPATS INSTALLATION INSTRUCTIONS

1. You may want to put the airplane on jacks and raise the airplane to a comfortable work height. (This step is neither required nor necessary.)
2. Start the left side installation first. Measure 5.85 inches outboard from the inboard edge of the flap (see drawing LSM-200-006 Zone A5). Make sure that the inboard edge of LSM-200-005-1 just clears the outboard edge of the bead. Adjust the position of LSM-200-005-3 just clears the outboard edge of the bead. Adjust the position of LSM-200-005-3 slightly if necessary.
3. While holding LSM-200-005-3 in place (make sure that it is pulled tightly backwards so that its trailing edge is flush with the trailing edge of the flap). Duct tape LSM-200-005-3 in place. Drill the first of four .125 diameter holes; 2 in outboard flange and 2 in inboard flange.

Before drilling any holes check for adequate (.25") edge margin!

4. Cleco LSM-200-005-3 to the flap.
5. Insert LSM-200-005-1 in the main landing gear well. Align LSM-200-005-1 so that its aft end lies on the joggle in LSM-200-005-3. Make sure that LSM-200-005-1 is pulled firmly against the wheel well liner. Pick any of the marked hold locators in the area of the vertical portion of the wheel well liner and drill a .125 diameter hole through LSM-200-005-1 and the wheel well liner and install a Cleco. Drill the remaining holes in LSM-200-005-1 and the wheel well liner; install Clecoes.

Before drilling any holes check for adequate (.25") edge margin!

6. Adjust the gap between LSM-200-005-1 and LSM-200-005-3 if necessary by sanding the trailing edge of LSM-200-005-1 with a long sanding board.
7. Holding LSM-200-005-1 firmly in place, drill two .125 diameter holes in the flanges on both sides of LSM-200-005-1. Install Clecoes in the holes. Then drill the remaining holes in the side flanges.

Before drilling any holes check for adequate (.25") edge margin.

8. Drill the remaining holes in the side flanges of LSM-200-005-3. Install Clecos in the holes.

Before drilling any holes check for adequate (.25) edge margin.

9. Draw a centerline between two rivets on the flap trailing edge, one on either side of and adjacent to LSM-200-005-3.
10. Five rivets will be located on this line to attach the trailing edge of LSM-200-005-3 to the flap trailing edge.

11. Locate and drill two .125 holes, .375 inches from the inboard and outboard edge of LSM-200-005-3 on the line drawn in step 9.

Before drilling any holes check for adequate (.25) edge margin.

12. Locate three other .125 holes equally spaced between the two holes drilled in step 11.
13. Remove flap push tube bolt and lower flap gently.
14. Drill .125 holes at the 5 positions indicated by the pips on LSM-200-005-3 through the flap leading edge (see LSM-200-006 Zone 8A).

Before drilling any holes check for adequate (.25) edge margin.

15. Mask the wing and flap around both LSM-200-005-1 and LSM-200-005-3 with the provided masking tape, leaving approximately a 1/8-inch gap, between the tap and the fiberglass parts. (The sealant "squeeze out" will form a fillet between the SPAT part and the wing or flap skin.)
16. Remove all Clecos and deburr all holes in the aluminum structure.
17. Mix the sealant per the manufacture's instructions.
18. Spread a thin layer of sealant on the faying surface of LSM-200-5-1 and LSM-200-00-3.
19. Install LSM-200-005-1 and LSM-200-005-3 with a few Clecos. Once LSM-200-005-3 has been located rivet in place.
20. Reinstall flap push tube.
21. Retract flaps. Check Clearances.
22. Allow the sealant to cure overnight.
23. Any mismatch that develops between LSM-200-005-1 and LSM-200-005-3 can be corrected by heating LSM-200-005-1 in the area of the mismatch with a heat gun until it is hot to the touch. Remove the heat gun; press the heated area into position with a block of wood and hold it until the part cools to room temperature.
24. Repeat step 23 for the right side with the following exceptions:
    LSM-200-005-1 is now LSM-200-005-2
    LSM-200-005-3 is now LSM-200-005-4
25. The right side installation is the mirror image of the left side.
26. Use the weight and balance data to complete your new CG.
27. Have an A & I fill out Form 337.
28. Enjoy your mod!

WEIGHT AND BALANCE DATA

The weight and moment arm data for both the single and twin:
2.3 pounds at 132.0 inches

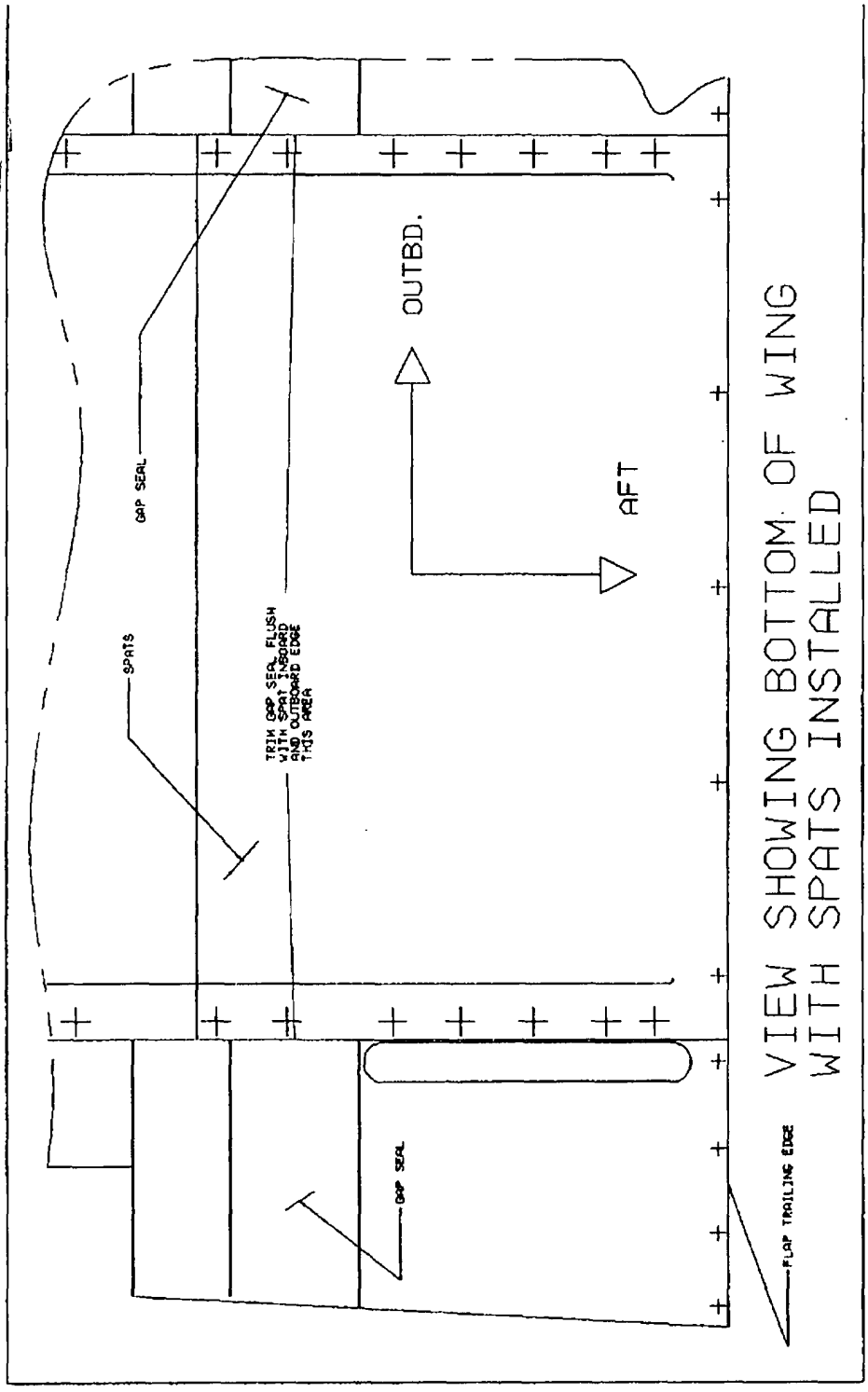
ADDITIONAL INSTALLATION INSTRUCTIONS

Aircraft Equipped With Flap Gap Seals

On aircraft equipped with flap gap seals, the flap gap seals must be trimmed in the area of the SPEED SPATS. See attached figure.

LoPresti Speed Merchants
800-859-4757 / 772-562-4757 or fax 772-563-0446
http://www.SpeedMods.com
210 Airport Drive East, Sebastian, Florida, 32958, U.S.A.

ATTACHMENTS



4.375

LoPresti SPEED MERCHANTS

CONTINUING AIRWORTHINESS FOR LOPRESTI SPEED SPATS AND SPEED SLIPPERS

STC SA3042SO
STC SA3077SO
STC SA3105SO
STC SA3229SO
STC SA3254SO
STC SA00073AT
STC SA00264AT

1. Check SPEED SPATS and SLIPPERS for security of attachment to airplane.
2. Loose or missing fasteners must be replaced.
3. Raise and lower flaps to assure there is no interference between mating parts.
4. Cracked or broken pieces must be replaced.

210 Airport Drive East, Sebastian, FL 32958
(800) 859-4757 (772) 562-4757 FAX (772) 563-0446
Info@**LoPrestiAviation**.com http://www.**LoPrestiAviation**.com

United States of America
Department of Transportation — Federal Aviation Administration

Supplemental Type Certificate

Number SA3229SO

This certificate, issued to LoPresti Speed Merchants
3215 26th Avenue
Vero Beach, FL 32960

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

Original Product — Type Certificate Number: 2A13
Make: Piper
Model: PA-28R-180/200/201/201T
PA-28RT-201/201T

Description of Type Design Change: Installation of main landing gear fairings in accordance with LoPresti Master Drawing List, Report No. 4, dated March 24, 1992, 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 determination should include consideration of significant changes in weight distribution such as an increase in the fixed disposable weight in the fuselage.

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: April 14, 1992
Date of issuance: May 14, 1992

Date reissued:
Date amended:
By direction of the Administrator

John Tigue (Signature)
Manager, Atlanta Aircraft
Certification Office
(Title)

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

This certificate may be transferred in accordance with FAR 21.47.

FAA Form 8110-2 (10-68)

U.S Department of Transportation
Federal Aviation Administration

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

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

Electronic Tracking Number

For FAA Use Only

INSTRUCTIONS: Print or type all entries. See Title 14 CFR §43.9, Part 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. 1421). 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: N289ND	Serial No.: 2844039	
	Make: Piper	Model: PA-28R-201	Series:
2. Owner	Name *(As shown on registration certificate)*: Roscoe Jerry P	Address *(As shown on registration certificate)*: Address 6909 Bonheim Ct; City McLean; State VA; Zip 22101-5100; Country USA	

3. For FAA Use Only

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

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency			
Name Landmark Aviation	☐	U.S. Certificated Mechanic	☐	Manufacturer
Address 1005 Sycolin Road	☐	Foreign Certificated Mechanic	C. Certificate No.	
City Leesburg State VA	☒	Certificated Repair Station	Certified Repair Station YBJR768L	
Zip 20175 Country USA	☐	Certificated Maintenance Organization		

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

Extended range fuel per 14 CFR Part 43 App. B	Signature/Date of Authorized Individual
☐	Charles Schoenduby 09-26-2011

7. Approval for Return to Service

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

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

Certificate or Designation No.	Signature/Date of Authorized Individual
YBJR768L	William B Hertz 09-26-2011

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.)

N289ND	09-26-2011
Nationality and Registration Mark	Date

INSTALLATION OF: LoPresti Speed Merchants Hub Caps

A. Installation:

1. Installed new LoPresti Speed Merchants hub caps P/N LSM-200-700-11 on each main gear wheel using the following hardware:
   a. Lock washers (3ea) P/N MS35333-72
   b. Screws (3ea) P/N AN526C832R8

B. Return to Service:

1. Installation of the LoPresti Speed Merchants Hub Caps were installed in accordance with LoPresti Speed Merchants STC# SA01224AT dated 12/10/1996 and installation drawing LSM-200-701 rev D dated 08-20-1996.
2. Performed post installation operational check of landing gear system. No defects noted at this time. No EMI/RFI noted resulting from this installation.
3. Aircraft weight and balance is not affected by this installation.

C. Instructions for Continued Airworthiness:

1. Check Hub Caps for security of attachment to airplane including security of valve stem access door.
2. Loose or missing fasteners must be replaced.
3. Cracked or broken pieces must be replaced.
4. Items #C1 through #C3 above must be accomplished at each scheduled inspection as required by title 14 CFR part 91.409.
5. Items #C1 above to be checked at each pre-flight inspection.

END

☒ Additional Sheets Are Attached

Life is Short ... Fly ***FAST!***



Speed Merchants
by
LoPresti

CAUTION!

Before installing the hubcaps, make sure that the three tapped holes in the wheel hub are not stripped and are in good shape. If the holes are not in good shape, either replace the hub or repair the holes. Failure to do so could result in the hubcap departing the aircraft. Do NOT use Loctite to secure the mount screws as this can result in damage to the hubcaps. Use a hand driver to install the mounting screws. Use of a power driver may result in damage to the hubcap.

Master Drawing List

Report No. 36

Hub Cap

Bonanza 33 Series
Bonanza 35 Series
Bonanza 36 Series
Beech 23 Series
Beech 24 Series
Beech 19 Series
C-150 Series
C-152 Series
C-172 Series
C-177 Series
C-180 Series
C-182 Series
C185 Series
C-206 Series
C-210 Series
Commander 112 Series
Commander 114 Series
Swift GC-1A Series
Swift GC-1B Series
F-260 Series
Lake LA 4 Series
Lake 250 Series
Maule M-4 Series
Maule M-5 Series
Maule M-6 Series
Maule M-7 Series
Maule M-8 Series
M20 Series
PA16 Series
PA17 Series
PA18 Series
PA20Series
PA22 Series
PA24 Series
PA28 Series
PA30 Series
PA32 Series
PA34 Series
PA39 Series
PA44 Series
PA46 Series
TB9 Series
TB10 Series
TB20 Series
TB21 Series
TB200 Series

Number of Pages 1 through 6 inclusive

Rev. E
03-26-07

Prepared By: _____
Curt LoPresti

Approved By: _____
Jim LoPresti

Installation Drawings

Dwg. No.	Rev	Nomenclature	Models	EO's
			Bonanza 33 Series Bonanza 35 Series Bonanza 36 Series Beech 23 Series Beech 24 Series Beech 19 Series C-150 Series C-152 Series C-172 Series C-177 Series C-180 Series C-182 Series C-185 Series C-206 Series C-210 Series Commander 112 Series Commander 114 Series Swift GC-1A Series Swift GC-1B Series F-260 Series Lake LA 4 Series Lake 250 Series Maule M-4 Series Maule M-5 Series Maule M-6 Series Maule M-7 Series Maule M-8 Series M20 Series PA16 Series PA17 Series PA18 Series PA20 Series PA22 Series PA24 Series PA28 Series PA30 Series PA32 Series PA34 Series PA39 Series PA44 Series PA46 Series TB9 Series TB10 Series TB20 Series TB21 Series TB200 Series	
LSM-200-701	C	Hub Cap Installation		

Manufacturing Drawing

Dwg. No.	Rev	Nomenclature	Models	EO's
			Bonanza 33 Series Bonanza 35 Series Bonanza 36 Series Beech 23 Series Beech 24 Series Beech 19 Series C-150 Series C-152 Series C-172 Series C-177 Series C-180 Series C-182 Series C-185 Series C-206 Series C-210 Series Commander 112 Series Commander 114 Series Swift GC-1A Series Swift GC-1B Series F-260 Series Lake LA 4 Series Lake 250 Series Maule M-4 Series Maule M-5 Series Maule M-6 Series Maule M-7 Series Maule M-8 Series M20 Series PA16 Series PA17 Series PA18 Series PA20 Series PA22 Series PA24 Series PA28 Series PA30 Series PA32 Series PA34 Series PA39 Series PA44 Series PA46 Series TB9 Series TB10 Series TB20 Series TB21 Series TB200 Series	
LSM-200-700	E	Hub Cap		

Revision Control

Dwg. No.	Rev	Date	Nomenclature	Models Bonanza 33 Series Bonanza 35 Series Bonanza 36 Series Beech 23 Series Beech 24 Series Beech 19 Series C-150 Series C-152 Series C-172 Series C-177 Series C-180 Series C-182 Series C-185 Series C-206 Series C-210 Series Commander 112 Series Commander 114 Series Swift GC-1A Series Swift GC-1B Series F-260 Series Lake LA 4 Series Lake 250 Series Maule M-4 Series Maule M-5 Series Maule M-6 Series Maule M-7 Series Maule M-8 Series M20 Series PA16 Series PA17 Series PA18 Series PA20 Series PA22 Series PA24 Series PA28 Series PA30 Series PA32 Series PA34 Series PA39 Series PA44 Series PA46 Series TB9 Series TB10 Series TB20 Series TB21 Series TB200 Series	EO's
MDL	E	04-16-98	Master Drawing List	ALL	
LSM-200-700	E	01-18-07	Hub Cap	ALL	
LSM-200-701	F	03-26-07	Hub Cap Installation	ALL	

United States of America

Department of Transportation -- Federal Aviation Administration

Supplemental Type Certificate

Number SA01224AT

This certificate issued to LoPresti Speed Merchants
2620 North Airport Drive
Vero Beach, FL 32960

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

Original Product - Type Certificate Number: 2A13

Make: Piper*
Model: PA-28* Series*

Description of Type Design Change:
Installation of wheel hub caps with valve stem access door in accordance with LoPresti Speed Merchants Master Drawing List, Report No. 36, Revision 'B', dated April 02, 1997, 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 aircraft. This determination should include consideration of significant changes in weight distribution such as an increase in the

(See continuation sheet 3 of 4)

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

Date of application: September 13, 1996

Date of issuance: December 10, 1996

Date reissued:

Date amended: October 21, 1997; April 17, 1998

By direction of the Administrator

(Signature)

Paul C. Sconyers
Associate Manager
Atlanta Aircraft Certification Office

(Title)

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

This certificate may be transferred in accordance with FAR 21.47.

INSTRUCTIONS: The transfer endorsement below may be used to notify the appropriate FAA Regional Office of the transfer of this Supplemental Type Certificate.

The FAA will reissue the certificate in the name of the transferee and forward it to him.

TRANSFER ENDORSEMENT

Transfer the ownership of Supplemental Type Certificate Number _____

to (*Name of transferee*) _____

(*Address of transferee*) _____ (*Number and street*)

(*City, State, and ZIP code*)

from (*Name of grantor*) (*Print or type*) _____

(*Address of grantor*) _____ (*Number and street*)

(*City, State, and ZIP code*)

Extent of Authority (if licensing agreement): _____

Date of Transfer: _____

Signature of grantor (*In ink*): _____

United States of America
Department of Transportation - Federal Aviation Administration

Supplemental Type Certificate
(Continuation Sheet)

Number SA01224AT
Date of Issuance: December 10, 1996
Date Amended: April 17, 1998

Limitations and Conditions (Continued):
fuselage. "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." *Additional Type Certificate Numbers, Makes, and Models are shown on the (Continuation Sheet, Page 2), as follows:

Make	Model	TCDS No.	Cert. Basis
Augusta	F-260 Series	A10EU	CAR 3/FAR 23
Beech	19 Series	A1CE	CAR 3
Beech	23 Series	A1CE	CAR 3
Beech	24 Series	A1CE	CAR 3
Beech	Bonanza 33 Series	3A15	CAR 3
Beech	Bonanza 35 Series	A-777	CAR 3
Beech	Bonanza 36 Series	3A15	CAR 3
Cessna	150 Series	3A19	CAR 3
Cessna	152 Series	3A19	CAR 3
Cessna	172 Series	3A12	CAR 3
Cessna	177 Series	A13CE	CAR 3
Cessna	180 Series	5A6	CAR 3
Cessna	182 Series	3A13	CAR 3
Cessna	185 Series	3A24	CAR 3
Cessna	206 Series	A4CE	CAR 3
Cessna	210 Series	3A21	CAR 3
Commander Aircraft	112 Series	A12SO	FAR 23
Commander Aircraft	114 Series	A12SO	FAR 23
Lake	LA 4 Series	1A13	CAR 3
Lake	250 Series	1A13	CAR 3
Maule	M-4 Series	3A23	CAR 3
Maule	M-5 Series	3A23	CAR 3/FAR 23
Maule	M-6 Series	3A23	CAR 3
Maule	M-7 Series	3A23	CAR 3/FAR 23
Maule	M-8 Series	3A23	CAR 3/FAR 23
Mooney	M-20 Series	2A3	CAR 3
Piper	PA-16/16S	1A1	CAR 3
Piper	PA-17	A-805	CAR 3
Piper	PA-18 Series	1A2	CAR 3
Piper	PA-20 Series	1A4	CAR 3
Piper	PA-22 Series	1A6	CAR 3
Piper	PA-24 Series	1A15	CAR 3
Piper	PA-28 Series	2A13	CAR 3
Piper	PA-30 Series	A1EA	CAR 3
Piper	PA-32 Series	A3SO	CAR 3
Piper	PA-34 Series	A7SO	FAR 23
Piper	PA-39 Series	A1EA	CAR 3
Piper	PA-44 Series	A19SO	FAR 23

United States of America

Department of Transportation - Federal Aviation Administration

Supplemental Type Certificate

(Continuation Sheet)

Number SA01224AT

Date of Issuance: December 10, 1996

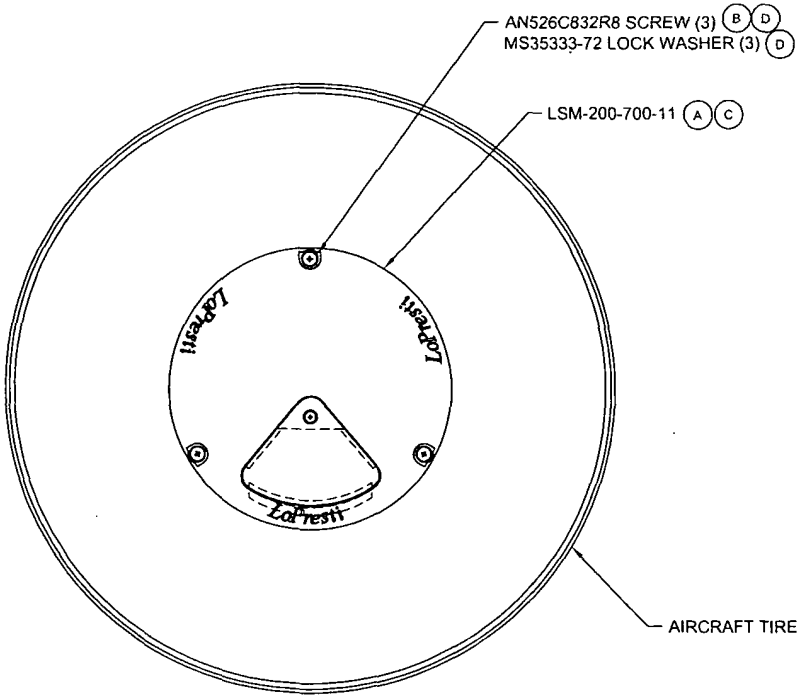
Date Amended: April 17, 1998

Limitations and Conditions (Continued):

Piper	PA-46 Series	A25SO	FAR 23
Swift	GC-1A Series	A-766	CAR 4a
Swift	GC-1B Series	A-766	CAR 4a
Socata(Aerospatiale)	TB Series	A51EU	FAR 21.29

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

This certificate may be transferred in accordance with FAR 21.47.



-1 HUB CAP INSTL
MAIN LANDING GEAR

REVISION BLOCK			
REV	DESCRIPTION OF CHANGE	DATE/APP STRESS	DATE/APP PROJECT
A	ADDED LSM-200-700-11 AS AN ALTERNATE FOR LSM-200-700-1		2/26/97 C.L.
B	AN507C832R7 WAS AN507C832R5 6 PLCS.		4/2/97 C.L.
C	DELETED LSM-200-700-1; REVISED LSM-200-700-11 DESIGN		3/27/07 C.L.
D	ADDED MS35333-72 LOCK WASHER AN526C832R8 WAS AN526C832R7		4/28/08 C.L.

NOTES

1. POSITION LSM-200-700-11 HUB CAP ON WHEEL PLACING THE VALVE STEM ACCESS DOOR OVER THE VALVE STEM. INSTALL THREE AN525C832R8 SCREWS AND MS35333-72 LOCK WASHERS THRU HUB CAP INTO EXISTING TAPPED HOLES IN WHEEL, TYP BOTH SIDES.
2. OPEN ACCESS DOOR TO CHECK AND SERVICE TIRE PRESSURE.

	QTY REQ PER ASSY	PART NO.	DESCRIPTION	MATERIAL	STOCK SIZE	FINISH	WGT
D	6	MS35333-72	LOCK WASHER				
D B	6	AN526C832R8	SCREW				
C A	2	LSM-200-700-11	HUB CAP ASSY				
	X	-1	HUB CAP INSTALLATION				

NAS523 FASTENER CODE
BASIC CODE | DASH NO. FOR DIA. N=MFG HEAD NEAR SIDE F=MFG HEAD FAR SIDE
D=DIMPLE C=CSNK | FIGURE # NO. OF SHEETS TO BE DIMPLED | DASH NO. FOR LENGTH

BASIC CODES
BB=MS20426AD
BJ=MS20470AD
LZ=NAS1097AD

NHA	EFFECT.	MODEL#

LOPRESTI SPEED MERCHANTS
2620 AIRPORT NORTH DRIVE VERO BEACH FL 32960

DRAWN BY:
STRESS:
PROJECT: C. LOPRESTI 08-20-96

UNLESS OTHERWISE SPECIFIED
DECIMALS .X = ± .10 .XX = ± .03 .XXX = ± .010
ANGLES ± 0° 30'
DIMENSIONS ARE IN INCHES

THIS DRAWING IS PROPRIETARY OF THE LOPRESTI SPEED MERCHANTS AND ITS FURNISHION BY UNAUTHORIZED PERSONS SHALL NOT BE CONSTRUED AS PERMISSION TO REPRODUCE OR SELL IT OR SELL OR BE PART OF DEVICES SHOWN THEREON.

HUB CAP INSTALLATION

LSM-200-701 REV D

SCALE: SHEET 1 OF 1

U.S Department of Transportation
Federal Aviation Administration

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

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

Electronic Tracking Number

For FAA Use Only

INSTRUCTIONS: Print or type all entries. See Title 14 CFR §43.9, Part 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. 1421). 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: N289ND	Serial No.: 2844039	
	Make: Piper	Model: PA-28R-201	Series:
2. Owner	Name *(As shown on registration certificate)*: Roscoe Jerry P	Address *(As shown on registration certificate)*: Address 6909 Bonheim Ct; City McLean; State VA; Zip 22101-5100; Country USA	

3. For FAA Use Only

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

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency			
Name Landmark Aviation	☐	U.S. Certificated Mechanic	☐	Manufacturer
Address 1005 Sycolin Road	☐	Foreign Certificated Mechanic	C. Certificate No.	
City Leesburg State VA	☒	Certificated Repair Station	Certified Repair Station YBJR768L	
Zip 20175 Country USA	☐	Certificated Maintenance Organization		

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

Extended range fuel per 14 CFR Part 43 App. B	Signature/Date of Authorized Individual
☐	Charles Schoenduby 09-26-2011

7. Approval for Return to Service

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

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

Certificate or Designation No.	Signature/Date of Authorized Individual
YBJR768L	William B Hertz 09-26-2011

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.)

N289ND	09-26-2011
Nationality and Registration Mark	Date

INSTALLATION OF: LoPresti Speed Merchants Wing Root Fairings

A. Installation:

1. Fit, drill and installed the following:
   - A. L/H fairing P/N CWRL
   - B. R/H fairing P/N CWRR
   - C. Hardware:
     - a. Screws P/N AN507C-632R8
     - b. Washers P/N DP1075-12SS
     - c. Rivnuts P/N A6K-75
     - d. Foam Tape P/N 189-715
2. Sealed fairings and secured with provided hardware.

B. Return to Service:

1. Installation of the LoPresti Speed Merchants Wing Root Fairings were installed in accordance with LoPresti Speed Merchants STC# SA1216GL dated 08/05/1987 and LoPresti Speed Merchants Wing Root Fairing installation and maintenance manual for PA28R document 28WR-M rev D dated 03/31/2010.
2. No EMI/RFI noted resulting from this installation. Installation is not interfaced with any aircraft system.
3. Aircraft weight and balance information has been revised to reflect this installation.

C. Instructions for Continued Airworthiness:

1. Reference the LoPresti Speed Merchants Wing Root Fairing installation and maintenance manual for PA28R document 28WR-M rev D dated 03/31/2010 section 6.0 for instructions for continued airworthiness.

END

☒ Additional Sheets Are Attached

PIPER PA-28 WING ROOT FAIRING INSTALLATION AND MAINTENANCE MANUAL

Aircraft Eligibility: Piper PA-28-140, PA-28-150, PA-28-151, PA-28-160, PA-28-161, PA-28-180, PA-28-181, PA-28-235, PA-28-236, PA-28-201T, PA-28R-180, PA-28R-200, PA-28R-201, PA-28R-201T, PA-28RT-201, PA-28RT-201T.

Knots 2U, Ltd.
709 Airport Road
Burlington, WI 53105
www.knots2u.com

Revision Control

Rev. No.	Date	Effect
A	09/15/92	Added revision page, revised table of contents, and revised fairing installation procedures.
B	06/01/97	Changed name and address.
C	01/04/99	Moved revision to front cover, general cleanup, changed to #6 Stainless Steel hardware, installation procedure changes.
D	07/01/09	ECO 0172

Table of Contents

Section	Title	Page
	Cover Page	1
	Revision Control	2
	Table of Contents	3
1.0	Right Side Installation P/N CWRR	4
1.1	Locating Holes in Fairing P/N CWRR	4
1.2	Drilling Holes in Fuselage and Fairing	4
1.3	Enlarging Mounting Holes in Fairing	4
1.4	Application of Foam Tape P/N 189-715	4
1.5	Mounting Fairing P/N CWRR	4
2.0	Left Side Installation P/N CWRL	4
3.0	Fairing Removal	4
4.0	Paper Work	5
5.0	Parts List	5
	Detail 1	6
6.0	Maintenance / Instructions for Continued Airworthiness	7

Section 1.0 Right Side Installation P/N CWRR

1.1 Locating Holes in Fairing P/N CWRR

Referring to Detail #1, locate and mark hole locations on the right Wing Root Fairing P/N CWRR. Place fairing in position on right wing holding it tightly against fuselage and wing. Note the location of any existing rivets, or skin seams that may interfere with the hole locations just marked. If an existing rivet falls under a hole location or on a skin seam, the new hole may be moved up to two inches fore or aft or up to .3125" up or down to provide clearance. Re-mark fairing for new locations.

1.2 Drilling Holes in Fuselage and Fairing.

CAUTION MUST BE USED WHEN DRILLING INTO FUSELAGE TO AVOID DRILLING ANY DEEPER THAN NECESSARY. Some models have a fuel line running in the attachment area on the pilot side. Care must be taken not to drill into the fuel line or leave a rivnut or screw that could come in contact with the fuel line. While holding fairing in place, drill a #40 hole at the aft hole location into fairing and fuselage. Place cleco in hole and continue to drill #40 holes at all marked locations using clecos as you go. (To obtain optimum fit, hole locations may be moved up to two inches fore or aft or up to .3125" up or down.)

1.3 Enlarging Mounting Holes in Fairing.

Enlarge all mounting holes in fairing to a # 15 hole size. Holes may then be countersunk or enlarged slightly more to fit the DP1075-12SS washer. Enlarge all holes in airframe to a #15 hole size to fit the A6K-75 rivnut.

1.4 Application of Foam Tape P/N 189-715.

Apply foam tape P/N 189-715 around entire perimeter of fairing. Tape should be placed 1/16" from the edge all around. This will create a seal and yet not be visible from the outside of the fairing.

1.5 Mounting Fairing P/N CWRR.

Install rivnuts P/N A6K-75 in fuselage holes (10 req). Using (10) DP 1075-12SS washers and (10) AN507C-632-R8 screws install fairing P/N CWRR on wing. For a more finished look RTV silicone, or equivalent may be placed in a small bead around Wing Root Fairing.

Section 2.0 Left Side Installation P/N CWRL

Repeat steps 1.1 thru 1.5 on left side of aircraft using P/N CWRL in place of CWRR. . Some models have a fuel line running in the attachment area on the pilot side. Care must be taken not to drill into the fuel line or leave a rivnut or screw that could come in contact with the fuel line.

Section 3.0 Fairing Removal

To remove a wing root fairing simply remove screws and washers.

Section 4.0 Paperwork

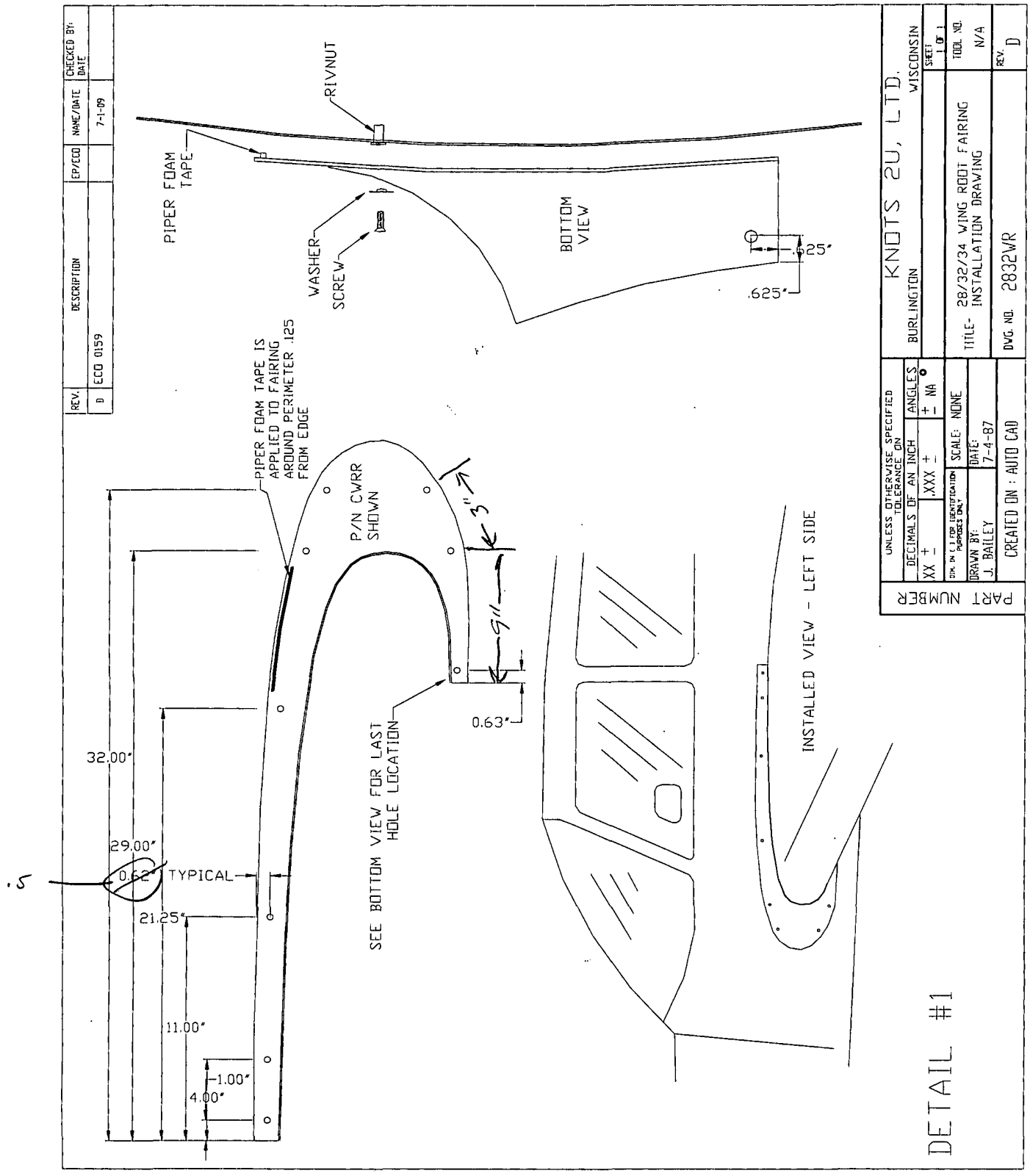
Perform paperwork (337 and logbook entry). Place Knots 2u Ltd. Piper PA-28 Wing Root Fairing Installation and Maintenance Manual with aircraft records.

Wing Root Fairing and Hardware weight: 1.1 lbs
Arm: 64.65"

Section 5.0 Parts List

Part #	Qty	Description
CWRL	1	Left Wing Root Fairing
CWRR	1	Right Wing Root Fairing
AN507C-632R8	20	Countersunk Stainless Steel Screw
DP1075-12SS	20	Tinnerman Stainless Steel Washer
A6K-75	20	Rivnut
189-715	16'	Piper Foam Tape

3mm
10.5
16.5
24
19.5
7.7


RIVNUT
PIPER FOAM TAPE
WASHER
SCREW
BOTTOM VIEW
.625"
.625"
PIPER FOAM TAPE IS APPLIED TO FAIRING AROUND PERIMETER .125 FROM EDGE
P/N CWRR SHOWN
3"
5"
0.63"
SEE BOTTOM VIEW FOR LAST HOLE LOCATION
INSTALLED VIEW - LEFT SIDE
32.00"
29.00"
0.62" TYPICAL
21.25"
11.00"
1.00"
4.00"
DETAIL #1
REV. D ECO 0159 7-1-09
DESCRIPTION
EP/ECO
NAME/DATE
CHECKED BY: DATE
KNOTS 2U, LTD.
BURLINGTON WISCONSIN
TITLE- 28/32/34 WING ROOT FAIRING INSTALLATION DRAWING
TOOL NO. N/A
DWG. NO. 2832WR
REV. D
SHEET 1 OF 1
UNLESS OTHERWISE SPECIFIED TOLERANCE ON DECIMALS OF AN INCH XX ± .XXX ± ANGLES ± NA °
DRAWN BY: J. BAILEY
DATE: 7-4-87
SCALE: NONE
CREATED ON : AUTO CAD
PART NUMBER

Section 6.0 Maintenance / Instructions for Continued Airworthiness

The 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.

For the current copy of this manual please contact Knots 2U, Ltd. at 262 763-5100 or via email at technical@knots2u.com.

1. Before each flight, visually inspect the fairings for loose screws and proper fit.

2. Upon each annual or 100 hour inspection, inspect the fairings for proper fit, loose screws, cracks or separated plies of fiberglass.

3. If any of the above discrepancies are found; repair using proper maintenance techniques and procedures, as outlined in AC 43.13 – 1B Chapter 3.

United States of America

Department of Transportation — Federal Aviation Administration

Supplemental Type Certificate

Number SA1216GL

This certificate, issued to Knots 2U, Ltd.
3106 Bieneman Road
Burlington, WI 53105

certifies that the change in the type design for the following product with the limitations and conditions thereof as specified hereon meets the airworthiness requirements of Part 3 of the Civil Air Regulations. (See Type Certificate Data Sheet No. 2A13 for complete certification basis)

Original Product — Type Certificate Number: 2A13

Make: Piper Aircraft Corporation

Model: PA-28-140, PA-28-150, PA-28-151, PA-28-160, PA-28-161, PA-28-180, PA-28-181, PA-28-235, PA-28-236, PA-28-201T, PA-28R-180, PA-28R-200, PA-28R-201, PA-28R-201T, PA-28RT-201, PA-28RT-201T

Description of Type Design Change:

Install Wing Root Fairings in accordance with Knots 2U, Ltd. Wing Root Fairing Installation Manual, Revision B, dated June 1, 1997, or later FAA approved revisions.

Limitations and Conditions:

Compatibility of this design change with previously approved modifications must be determined by the installer.

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

Date of application: July 20, 1987

Date of issuance: August 5, 1987

Date reissued: May 7, 1997

Date amended: July 15, 1997

By direction of the Administrator

(Signature)

Gregory J. Michalik, Senior Aerospace Engineer
Airframe & Administrative Branch
Chicago Aircraft Certification Office

(Title)

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

This certificate may be transferred in accordance with FAR 21.47.

FAA Form 8110-2 (10-68)

US Department of Transportation
Federal Aviation Administration

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

Form Approved OMB No. 2120-0020 11/30/2007	Electronic Tracking Number
For FAA Use Only	

INSTRUCTIONS: Print or type all entries. See Title 14 CFR FAR 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: **N289ND**	Serial No.: **2844039**	
	Make: **Piper**	Model: **PA28R-201**	Series:
2. Owner	Name *(As shown on registration certificate)*: **Roscoe, Jerry P**	Address *(As shown on registration certificate)*: **6909 Bonheim Ct, McLean, VA 22101-5100**	

3. For FAA Use Only

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

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency		C. Certificate No.
Landmark Aviation **1005 Sycolin Road** **Leesburg, VA 20175 USA**		U.S. Certificated Mechanic	Manufacturer
		Foreign Certificated Mechanic	
	X	Certificated Repair Station	**YBJR768L**
		Certificated Maintenance Organization	

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

Extended range fuel Per 14 CFR Part 43 App. B ☐	Signature/Date of Authorized Individual
	Tom Carpenter 3/11/2011

7. Approval for Return to Service

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

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

Certificate or Designation No.	Signature/Date of Authorized Individual
CRS YBJR768L	**William Hertz** 3/11/2011

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 accomplished.)

N289ND	3/11/2011
Nationality and Registration Mark	Date

Tach: 6969.4 **Hobbs: 9301.0**

INSTALLATION OF LP AERO & KOSOLO & ASSOCIATES ONE PIECE WINDSHIELD CONVERSION

Replacement of windshield assemblies:

A. Removed:
   1. L/H Windshield P/N 63070-042
   2. R/H Windshield P/N 63070-041

B. Installed:
   1. Windshield P/N K2028-3 UV-SG

Installation Data:

A. Installed windshield in accordance with Kosola and Associates Inc STC# SA1696SO dated 11/09/1984, one piece installation drawing K2023 rev H dated 03/31/1994, addendum for installation of .250" thick windshield(s) and windshield installation and handling instructions provided by LP Aero Plastics Inc.
B. Installed K2019-1 support weld assembly and affixed original aircraft sun visors and magnetic compass assembly. Performed magnetic compass swing and affixed correction card.

Return to service:

A. Revised aircraft weight and balance information and provided log entry to owner.
B. Installation does not affect or alter normal aircraft operation and no EMI/EFI was observed resulting from this installation.

Instructions for continued airworthiness:

A. Remove dirt, mud, etc. from exterior surfaces with clean water.
B. Wash with mild soap and warm water or an aircraft plastic cleaner using a soft cloth or sponge and a straight rubbing motion. Do not harshly rub surfaces.
C. Remove oil and grease with a cloth moistened with kerosene.
D. After cleaning plastic surfaces, apply a thin coat of hard polishing wax. Rub lightly with a soft cloth. Do not use a circular motion.
E. A servere scratch or mar in plastic can be removed by using jeweler's rouge to rub out the scratch. Smooth both sides and apply wax.
F. To improve visibility through windshield and windows during flight through rain, a rain repellent such as REPCON should be applied to the windshield and windows. The surfaces of the windshield and windows treated becomes so smooth that water beads up and readily flows off the surface. Apply this product in accordance with the manufacturer's instructions.
G. Refer to the Piper PA28R-201 M/M section 2-26 for further details.
H. The Aircraft Equipment List was revised to reflect these changes; Weight and Balance data was revised and placed in the aircraft records. Appropriate logbook entries made.

END

☒ Additional Sheets Are Attached

NOTES: (K8)

1. Part No. of: Cherry Fasteners
   Townsend Division of Textron
   Santa Ana, CA

2. Part No. of: Bostik
   Boston Street
   Middleton, MA 01949

3. Windshield Color:

K2028-1	Clear
K2028-2	Green
K2028-3	Gray

4. Finish with color to match interior.

(F) 5. If necessary, the lowest bolt out of five (5) may be omitted leaving four(4) bolts (min.) at bottom end attachment.

(G) 6. Acceptable to trim attachment ears on the upper and lower ends of K2019-1 if needed. Maintain proper edge distance of 2 D on fasteners.

(H6)

WINDSHIELD INSTALLATION AND HANDLING INSTRUCTIONS

Depending on your aircraft make and model, the windows which you purchase may require trimming and/or drilling. The following directions will give you tips on the proper procedures for accomplishing this. Check our list of installation supplies for acrylic drill bits, cleaners, finish restorers, tapes and sealants. WE HIGHLY RECOMMEND THE PURCHASE OF OUR ACRYLIC DRILL BITS WHEN HOLES ARE TO BE DRILLED IN THE ACRYLIC.

WINDSHIELD TRIM VARIATION: We can guarantee fit on most of our windshields, but many aircraft manufacturers allowed variations to exist in the original trim of the windshields. We therefore manufacture and trim the replacement windshields for these aircraft slightly oversize to allow trimming for each individual aircraft. These windshields may require trimming or grinding to fit upon installation. NOTE: As a service to our customers we will accurately trim any windshield or window which we manufacture to the exact size of your original window at no additional charge. Please notify us in advance of your shipping the original window or template to us. All transportation charges will be the responsibility of the customer.

HANDLING: It is very important to keep the windshield well supported at all times. Do not allow a strain to be put on the windshield during the cutting or grinding operations. Warm temperatures are not required during these operations however, acrylic will take much more abuse at 80 degrees than at 30 degrees. DO NOT STORE ANY WINDOW OUTDOORS WHILE THE PROTECTIVE COVERING IS STILL ON THE WINDOW. THE COVERING WILL BECOME VERY DIFFICULT, IF NOT IMPOSSIBLE, TO REMOVE WITHOUT DAMAGING THE WINDOW.

PREPARATION FOR INSTALLATION: After inspection of the window, trim the protective covering to expose enough of the edge of the window to allow for fitting including the portions going into channels and under fairings. The remaining protective covering should be left on the window to protect it until fitting has been completed. Residue left behind by the "Spraylat" protective coating may be removed by soaking the area with isopropyl alcohol and rubbing with an alcohol soaked soft flannel cloth. Residue left behind by the adhesive backed paper covering can also be removed by the above method. If, however, the paper covering has been stored on the window for an extended period of time, you will have to soak the paper with kerosene and keep it wet for several hours. You will then be able to remove the paper backing, but the adhesive will remain. This may be removed by using a mixture of equal parts of kerosene and isopropyl alcohol. Soak a soft flannel cloth with this mixture and rub the window with the cloth. The window should be cleaned after this procedure with a dish washing liquid and plenty of water. REMOVE THE REMAINING PROTECTIVE COATING AND INSPECT THE WINDSHIELD BEFORE FINAL INSTALLATION.

MARKING FOR TRIM - PAPER PATTERN: The windshield may be marked with a china marking grease pencil, a felt tip marker, or masking tape. A fast and accurate method for trimming can be accomplished through the use of a paper pattern made by laying a piece of craft paper over the outside of the old original windshield and trimming the paper exactly to size. The paper will lay flat on windshields of simple curvature and can be taped in position. The windshield outline can then be traced onto the paper with a marker. This pattern can then be cut out, properly aligned over the new windshield and the new windshield marked to size. On windshields of compound curvature the paper should be pulled tight across the outside corner of the original windshield and taped at this point. At a 90 degree angle to this the paper should again be pulled tight and taped. The loose areas between the tape should be cut with a razor knife and overlapped with enough cuts to allow the paper to follow the curvature of the windshield. Once this is accomplished, masking tape should be used over all the cuts to hold them in place. An outline of the original may now be made and cut to size. This pattern may then be removed from the original windshield, aligned properly on the new windshield, taped in position and traced. When tracing these patterns on the new windshield allowances should be made for areas which were short on the original installation. If making patterns to us be sure to mark the pattern as to left side, right side, and outside.

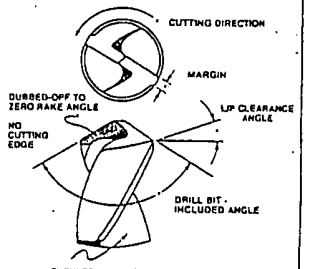
MARKING FOR TRIM - CUT AND FIT: If the original windshield is not in condition to make a pattern then you must cut the new windshield to fit. Remove the wing and cowl fairings and place the new windshield in position allowing the top and sides to hang over. Mark and trim the bottom first. Make sure that the windshield is aligned at the wing roots or that trimming will bring about alignment at the wing roots. After trimming and fitting the bottom, the sides and top will not be difficult to fit. Care should be taken to fit the windshield in place using small cuts rather than one large cut. Remember, you can always trim a little more, but once cut you can never add to it.

MARKING FOR TRIM - OVERLAY: Place the new windshield over the outside of the old windshield and trace a trim line. This will give an oversize rough trim. This method is not recommended for any Cessna windshield or any other windshield where a tight fit between the windshields cannot be achieved.

WINDSHIELD TRIMMING: Trimming is best done with a band saw using a 1/4" or 3/8" wide rake blade with 14 or more teeth per inch. Mask the band saw table to protect the windshield from scratches. Support the windshield during the cutting operation and do not allow the weight of the windshield to rest on the edge being cut away. After cutting, the edges should be sanded with a belt sander to remove all saw marks. Satisfactory results may also be had by using a 7" or 9" disc sander with a coarse 40 to 80 grit sanding disc. This will remove material quite rapidly with only slight pressure. A belt sander may be used with similar results. For best results the edges should be smoothed and rounded with fine sand paper. This can be sanded by hand, with a rotary drum sander, or a file may be used in place of sanding. Smoothing the edges will lessen the tendency towards edge cracking or breakage. It will also extend the service life of the windshield.

NOT RECOMMENDED: Trimming with a jig saw, saber saw, or a hand saw is not advisable. If hand sawing is absolutely necessary, a coping saw with a bone cutting blade with 30 teeth per inch may be used. Extreme care must be used to avoid the blade hanging up and causing a crack. We recommend that the blade be inserted in the saw backward so that the blade cuts when it is drawn towards you. Do not allow the edges of the acrylic to pinch and bind the blade

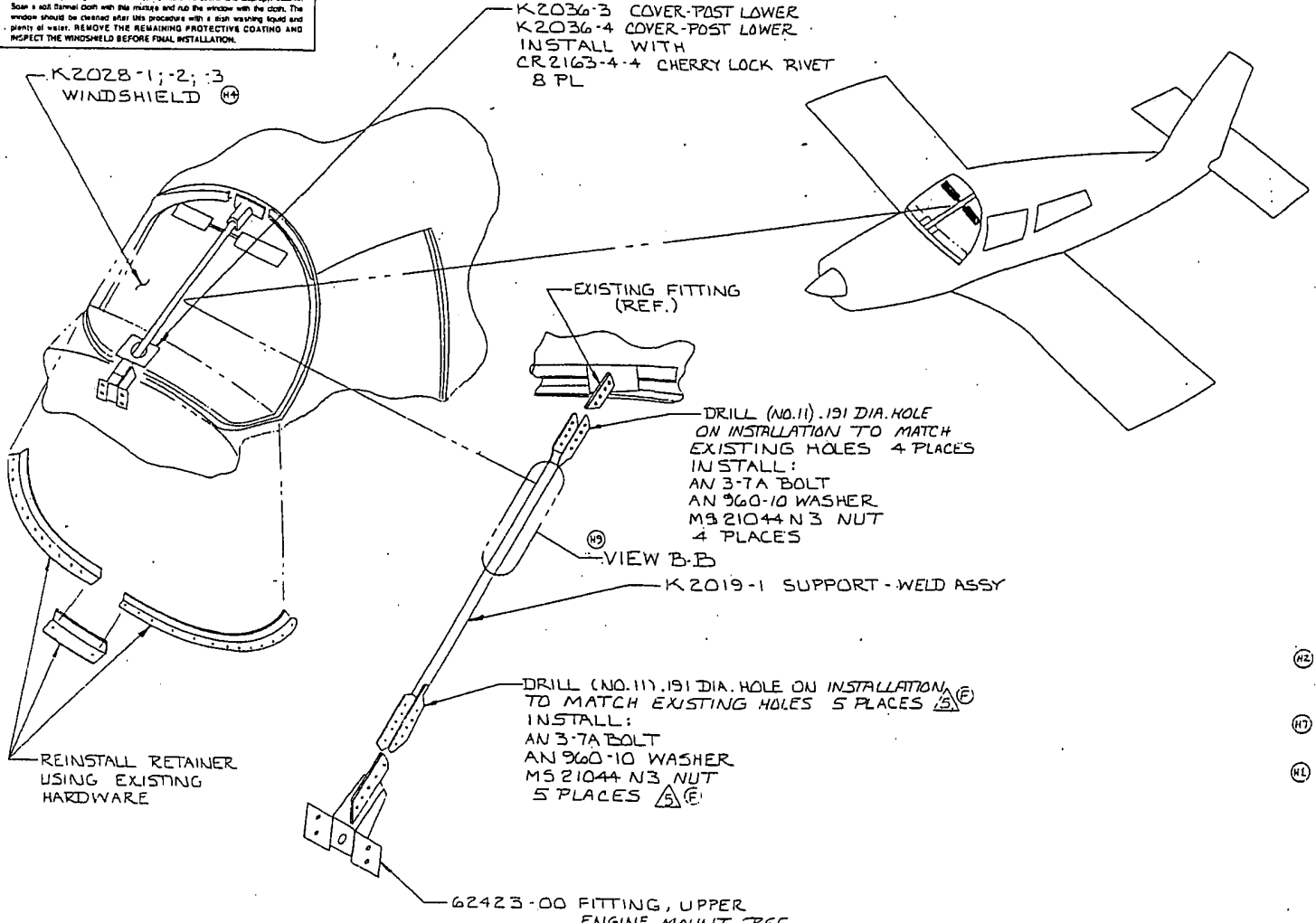
DRILLING WINDSHIELDS: Do not use a standard metal or wood cutting bit to drill acrylic. This type of bit must be resharpened for acrylic. Take this bit and square off the cutting edge as per the drawing. The drill bit sharpened in this way will scrape a clean hole through the acrylic with no tendency to dig in or grab. Sharpen your drill bit as shown or purchase one at our special acrylic drill bits. The small price you pay for the correct drill bit will pay you dividends a hundred fold by drilling smooth clean holes. Practice drilling on your old windshield or a piece of scrap acrylic before drilling your new windshields. Use a high speed with very light pressure when drilling. Holes should be drilled oversize to allow for expansion and contraction of the acrylic. Example: Drill a 3/16" hole for a 1/8" screw. Do not over tighten screws. Screws should be snug only. Over tightening will cause cracks around the holes. STANDARD WOOD OR METAL BITS WILL CAUSE BINDING AS IT BREAKS THROUGH THE OPPOSITE SIDE OF THE ACRYLIC. THIS WILL CAUSE SMALL CHIPS, FRACTURES, CRACKS, OR CAUSE THE WINDOW TO BREAK. DO NOT TAKE THE CHANCE!



(H8) WINDSHIELD REMOVAL INSTRUCTIONS

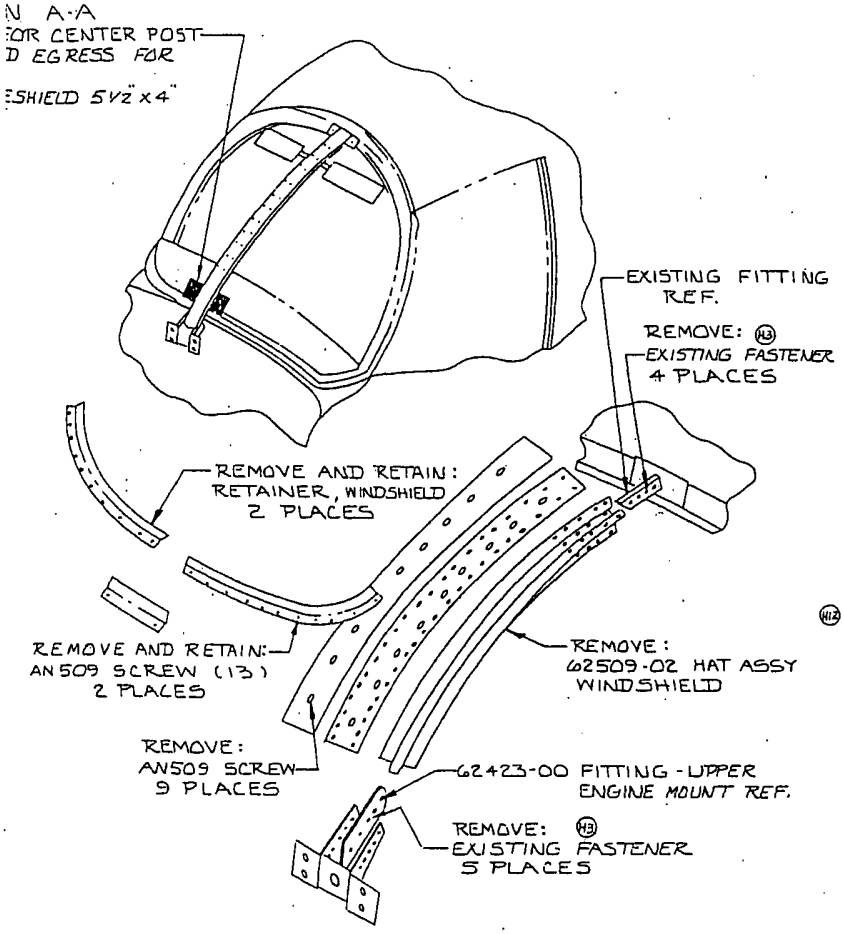
1. Remove bottom right and left side of windshield retainer, approximately (26) screws, then center retainer, approximately (9) screws.
2. Remove right and left halves of windshield.
3. Jack aircraft to support fuselage and empennage (tail group) so to unload weight for (H11) removal of the center post (62509-02 Hat Assembly Ref.).
4. Remove top engine cowl and attach hoist to left lift ring. Lift engine only enough to unload weight for removal of center post (62509-02 Hat Assembly). Do not lift aircraft off the support jacks.
5. Cut hole in glareshield 51/2 wide X 4 inches deep. (See position A-A).
   (H10) "Caution" – After cutting the hole, the glareshield area should be covered to prevent metal chips from drilling to fall into the radios, instruments and controls.
6. (H3) Drill out existing fasteners (5 places) at bottom of center post.
7. (H3) Drill out existing fasteners (4 places) at top of center post.
8. Remove center post from aircraft by cutting center post in the middle to aid in removal.

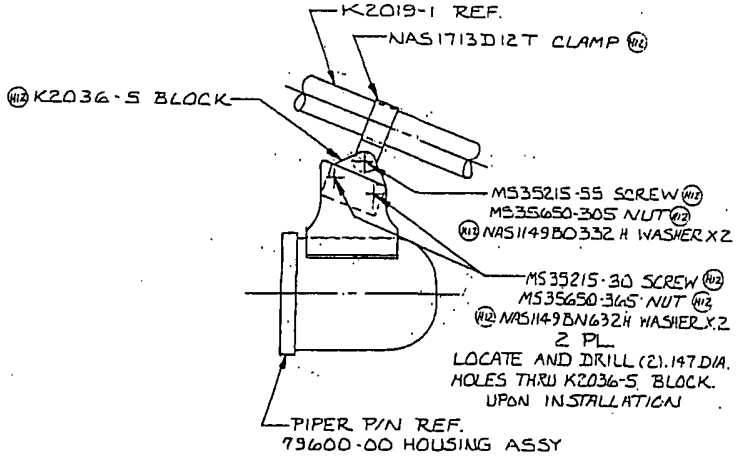
POSIT
PERMITS ACCES
RIVET REMOVAL
CENTER POST
HOLE CUT IN GL
SEE NOTE 5



1. Insta top
2. Rem
3. Refi four nut
4. Fit b aligh
5. Insta
6. Insta
7. Rem
8. Insta
9. Insta on gl
(H2) 10. Rein side adjac
(H7) 11. Prior black
(H1) 12. Weigl cente Weigl faster
(H1) 13. Fill o

REV.	DATE	REVISION	BY	APP
E	31 MARCH 1994	REVISED AND REDRAWN WITH CHANGE INCORPORATED DCN E1 & E2	JAB	
F	1-9-95	ADDED NOTE 5.	JAB	
G	9-22-95	ADDED NOTE 6	JAB	
H	5-21-97	H1: INCORPORATED DCN H1; H2: INCORPORATED DCN H2; H3: EXISTING FASTENERS WAS MS20470AD5; H4: REMOVED "OR -4"; H5: -3 WAS -4 IN B/M; H6: ADDED WINDSHIELD INSTL AND HANDLING INSTRUCTIONS; H7: ADDED NOTE 11; H8: PICTORIAL CHANGE; H9: ADDED VIEW B-B; H10: "INSTALL COMPASS PER VIEW B-B OR RELOCATE" WAS "INSTALL COMPASS; MAY BE RELOCATED"; H11: REVISED NOTE. WAS "JACK AIRCRAFT AND SUPPORT TAIL"; H12: ADDED NAS1713D12T, QTY 1; NAS1149B0332H, QTY 2; NAS1149BN632H, QTY 4; MS35650-305, QTY 1; MS35650-365, QTY 2; MS35215-30, QTY 2; MS35215-55, QTY 1; K2036-5, QTY 1 TO F/D & B/M; H13: ADDED "CAUTION" NOTE.	JAB	





(H9) VIEW B-B

LOCATE COMPASS ON K2019-1 SUPPORT TUBE PER OWNERS REQUEST

(H8) WINDSHIELD INSTALLATION INSTRUCTIONS

2019-1support into place to get proper E.D., then pick up existing holes in bottom fittings. (6)(G)

K2019-1.support. Drill the 5/32 holes out to 3/16.

019-1 support using AN 3-7A bolt, AN960-10 washer and MS 21044N3 nut places on top end and AN 3-7A bolt, AN 960-10 washer and MS 21044N3 5) places on bottom end. (5)(F)

cover, post lower K2036-3 and K2036-4 using CR 2163-4-4 cherrylock; (8) ces on bottom.

iw windshield and seal with Bostik 1100 fast set.

isting windshield retainer at bottom of windshield using existing fasteners.

aircraft from jacks and supports.

n visor to K2019-1 support using existing hardware.

mpass per view B-B or relocate per owner's request on instrument panel or hield. Check magnetic heading and correct as required.

outside air temperature (O.A.T.) gauge at any location, front windshield, left ow, etc., or locate per owner's request maintaining minimum clearance with structure for proper installation.

nstalling the center post, the existing fitting of top should be painted flat

d balance data: The total weight of the new furnished parts is 20.9# with a gravity at sta. 69.0 (inches aft of datum), as installed in the airplane. old removed parts (two-piece original windshield, center post, covers and

Then:	Weight	Arm	Moment (in pounds)
New installation	17.4	69.0	1201
Old installation	-____#	69.0	_____
Difference	_____		_____

A Form 337 and return aircraft back into service.

	QTY	PART NO.	DESCRIPTION	MATL SIZE	MATL SPEC	NOTES
(H12)	1	MS35215-55	SCREW			
(H12)	2	MS35215-30	SCREW			
(H12)	2	MS35650-365	NUT			
(H12)	1	MS35650-305	NUT			
(H13)	4	NAS1149BN632H	WASHER			
(H13)	2	NAS1149B0332H	WASHER			
(H12)	1	NAS1713D12T	CLAMP			
	A/R	BOSTIK 1100 FAST SET	SEALANT	WHITE		2.
	8	CR2163-4-4	CHERRYLOCK RIVET			1.
	9	MS21044N3	NUT			
	9	AN960-10	WASHER			
	9	AN3-7A	BOLT			
(H12)	1	K2036-5	BLOCK			
	1	K2036-4	COVER-POST, LOWER			4.
	1	K2036-3	COVER-POST, LOWER			4.
(H5)	1	K2028-1 THRU -3	WINDSHIELD PA-28			3.
	1	K2019-1	SUPPORT-WELD ASSY			
		-1	WINDSHIELD INSTL			

AIRCRAFT EFFECTIVITY

PA-28-140; -150; -151; -160; -161 -180; -181; -235; -236; -201T
PA-28R-180; -200; -201; -201T
PA-28RT-201; -201T
PA-28S-160; -180

KOSOLA AND ASSOCIATES, INC.
ALBANY, GEORGIA 31706

TOLERANCES	CHKD BY	SCALE	DRAWN BY
DECIMAL .XX ± .1 .XXX ± .03 ± .XXXX ± .010	STRESS	NONE	JAB
FRACTIONAL ± 1/32	TITLE: ONE PIECE WINDSHIELD INSTL		
ANGULAR ± 1°	DATE: 31 MARCH 1994	DRAWING NUMBER: K2023	H

PR8260

MADE IN U.S.A.

KOSOLA AND ASSOCIATES, INC.
PIPER PA-28/28R SERIES ONE-PIECE WINDSHIELD KIT
PACKING LIST

PART NAME	PART NUMBER	QTY	PACKED	P.O. NO. / MFG. DATE
WINDSHIELD	K2028	1		
( ) -1 CLEAR	—	—	—	—
( ) -2 GREEN	—	—	—	—
( ) -3 GRAY	—	—	—	—
SUPPORT-WELD ASSY	K2019-1 ★	1 ✓	1	18 AUG 2009
COVER, POST-LOWER	K2036-3 ★	1 ✓	1	18 AUG 2009
COVER, POST-LOWER	K2036-4 ★	1 ✓	1	18 AUG 2009
BOLT	AN3-7A ★	9 ✓	9 ✓	22695
WASHER	AN960-10 ★	9 ✓	9 ✓	24278
NUT	MS21044N3 ★	9 ✓	9 ✓	24278
CHERRYLOCK RIVET	CR2163-4-4 ★	8 ✓	8 ✓	24907
BLOCK	K2036-5 ★	1 ✓	1 ✓	18 AUG 2009
SCREW	MS35215-55 ★	1 ✓	1	22757
SCREW	MS35215-30 ★	2 ✓	2	
NUT	MS35650-365 ★	2 ✓	2	
NUT	MS35650-305 ★	1 ✓	1	
WASHER	NAS1149BN632H ★	4 ✓	4	
WASHER	NAS1149BO332H ★	2 ✓	2	
CLAMP	NAS1713D12T ★	1 ✓	1	24998
FAST SET SEALANT	BOSTICK 1100 ★	2 ✓	2	25660
DOCUMENT	STC (COPY) ★	1	1	N/A
INSTALLATION DWG.	K2023	1 SET	1	REV. H

22 NOV 2010

KA II #4

United States of America

Department of Transportation — Federal Aviation Administration

Supplemental Type Certificate

Number SA1696SO

This certificate, issued to Kosola and Associates, Inc.
P.O. Box 3529
Albany, Georgia 31706

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

Original Product — Type Certificate Number: 2A13

Make: Piper

Model: PA-28-140,-150,-151,-160,-161,-180,-181,-235, -236,-201T; PA-28S-160,-180; PA-28R-180,-200, 201,-201T; PA-28RT-201,-201T

Description of Type Design Change:

Installation of one-piece windshield in accordance with Kosola and Associates, Inc. Master Drawing List Report DL28, Revision E, dated January 24, 1994 (formerly Global Aeronautics, Inc. Report DL28, Revision C, dated November 8, 1984) 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 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: April 20, 1984

Date of issuance: November 9, 1984

Date reissued:

Date amended: June 1, 1994

By direction of the Administrator

for Roger D. Anderson

Roger D. Anderson
Manager, Atlanta Aircraft
Certification Office

(Title)

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

This certificate may be transferred in accordance with FAR 21.47.

FAA Form 8110-2 (10-68)

Luftfahrt-Bundesamt

Luftfahrt-Bundesamt Postfach 3054 D-38020 Braunschweig

Piloten-Service
Robert Rieger GmbH
Postfach 220

94474 Vilshofen

C.C.:
Federal Aviation Administriation
27, Boulevard du Regent
B-1000 Brussels, Belgium

Kosola and Associated, Inc.
Albany, Georgia 31706, USA

Ihre Zeichen und Nachricht vom	(Bitte bei Antwort angeben) Unsere Zeichen	Unsere Durchwahl	Braunschweig
06.12.96	I314/I303-518(a)/97	331	14.01.97

Project-No.: 314//1/97
Altered Type Certification of Piper PA-28-140, -151, -160, -161, -180, -181, -235, -236, Piper PA-28R-180, -200, -201, -201T, Piper PA-28RT-201, -201T:
Installation of One Piece Windshield in accordance with STC SA1696SO

Dear Mr. Rieger,

According to a.m. application letter and following the data presented we have certified the use of One Piece Windshield (STC SA1696SO) for aircraft Piper PA-28-140, -151, -160, -161, -180, -181, -235, -236, Piper PA-28R-180, -200, -201, -201T, Piper PA-28RT-201, -201T in the Federal Republic of Germany with effect from January 14, 1996.

As confirmation of altered Type Certification we include the German "Mitteilung über die Ergänzung der Musterzulassung"/German Supplemental Type Certificate No. 0815/518, 518a.

Please find enclosed our bill of costs and pay the amount to Bundeskasse Hannover.

Yours sincerely,

Flatter
Senior Type Certification Engineer

Enclosures:
- Mitteilung über die Ergänzung der Musterzulassung/German Supplemental Type Certificate No. 0815/518, 518a
- Bill of Costs No. LBA 314/1/97, dated 14.01.97

Dienstgebäude
38108 Braunschweig
Lilienthalplatz 6

Telefon: (0531) 2355-0
Telex: 952749 Unfall
Telefax: (0531) 2355254

Bundeskasse
Hannover
für
Luftfahrt-Bundesamt

Postbank
Hannover
5018-304
(BLZ 250 100 30)

Landeszentralbank
Hannover
25001000
(BLZ 250 000 00)

Luftfahrt-Bundesamt
I 303-518(a)/97

Braunschweig, 14.01.97

Mitteilung
über die
Ergänzung der Musterzulassung
Nr.:
0815/ 518
518a

Revision: -

EMZ-Inhaber:	Kosola & Associates, Inc.
Änderung:	Einbau einer ungeteilten Cockpitfrontscheibe/ One Piece Windshield
Muster/Baureihe:	Piper PA-28-140, -151, -160, -161, -180, -181, -235, -236 Piper PA-28R-180, -200, -201, -201T Piper PA-28RT-201, -201T
Geräte-Kennblatt Nr.	518, 518a

Die Musterzulassung des o.a. Luftfahrzeuges wird durch folgende Angaben ergänzt:

Die Verwendung der ungeteilten Cockpitfrontscheibe/ One Piece Windshield in Übereinstimmung mit Global Aeronautics, Inc. Report DL28 entsprechend dem FAA Supplemental Type Certificate SA1696SO ist zugelassen.

Unterlagen sind zu beziehen bei:

Piloten-Service Robert Rieger GmbH
Postfach 220
94474 Vilshofen

Kosala and Associated, Inc.
Aeronautical Engineers
5601 Newton Road
P.O. Box 3529
Albany, Georgia 31706
U.S.A.

Diese Mitteilung gilt in Verbindung mit dem Flugzeug-Kennblatt Nr. 518 und 518a, der jeweils gültigen Ausgabe.

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DIRECTION
GENERALE
DE L'AVIATION CIVILE

Membre des Joint Aviation Authorities

SUPPLEMENT AU CERTIFICAT DE NAVIGABILITE DE TYPE
POUR IMPORTATION
Import Supplemental Type Certificate

Numéro : IM 87-SI0001

Ce certificat établi conformément au Code de l'Aviation Civile et délivré à :
This certificate established in conformity with the French «Code de l'Aviation Civile» and issued to :

KOSOLA AND ASSOCIATES, INC
5601 Newton Road
P.O. Box 3529
Albany, Georgia 31706
ETATS UNIS

atteste que le type d'aéronef désigné ci-dessous :
certifies that the type design for the following product :

Numéro du certificat de navigabilité de type	:	IM-87
Numéro de la fiche de navigabilité associée	:	IM-87
Détenteur du certificat de navigabilité de type	:	New Piper Aircraft Company
Type	:	PA-28-151, PA 28-181, PA 28-161, PA 28-236, PA 28-161 "Warrior II" et PA 28-181 "Archer III"

satisfait aux exigences des règlements de navigabilité applicables en France compte tenu des conditions d'utilisation et des limitations définies dans la fiche de navigabilité associée au présent certificat et portant le numéro IM 87-SI0001.
meets the French airworthiness requirements when operated within the limitations and conditions specified on the Type Certificate Data Sheet associated to this certificate with the number IM 87-SI0001.

La modification faisant l'objet de ce supplément porte sur l'installation d'un pare brise monobloc.
The modification related to this supplement concerns one-piece windshield installation.

La compatibilité de la modification faisant l'objet de ce supplément au certificat de type avec d'autres modifications ou réparations effectuées antérieurement doit être vérifiée par la personne ou la société chargée de l'installation.
The compatibility of the modification or reparation subject of this supplement to the type certificate, with other previous modifications must be verified by the person or the firm in charge of the installation.

date d'approbation : 4 AOUT 2000

Pour le ministre chargé de l'Aviation Civile
l'Ingénieur en Chef des Etudes et Techniques de l'Armement
Chef du bureau navigabilité des aéronefs d'aviation générale

REPUBLIQUE FRANCAISE

DIRECTION GENERALE
DE L'AVIATION CIVILE

Supplément à la fiche de navigabilité n° IM 87- relative au STC n° IM 87-SI0001
AAC n°755

AVION NEW PIPER AIRCRAFT INC. :
- PA 28-xx, numéros de série :

28-151 :	28-7415001 et suivants
28-181 :	28-7690001 et suivants et 28-43001 et suivants
28-161:	28-7716001 à 28-8216300 et 28-41001 et suivants (Cadet uniquement) et 28-8316001 et suivants et 28-42001 et suivants
28-236 :	28-7911001 et suivants

Edition n°1
Nombre de pages : 2

SUPPLEMENT N° IM 87-SI0001
A LA FICHE DE NAVIGABILITE ASSOCIEE
AU CERTIFICAT DE NAVIGABILITE DE TYPE N° IM 87

Détenteur du Supplément au Certificat de type :

KOSOLA AND ASSOCIATES, INC
5601 Newton road
P.O. BOX 3529
ALBANY, GEORGIA 31706
UNITED STATES OF AMERICA

Supplément au Certificat de type n°IM87-SI0001

1-DESCRIPTION DE LA MODIFICATION

La modification faisant l'objet du STC n° IM22-SI0001 porte sur l'installation d'un pare brise monobloc sur avions Piper PA 28 R.

Tous les documents concernant ce STC sont listés dans la Master Data List Report DL28, revision L du 13 juillet 2000.

2- BASES DE CERTIFICATION

La démonstration de conformité a été réalisée par rapport aux règlements de certification CAR 3, paragraphes : 3.159, 3.383, 3.666, 3.669, 3.705.

3- LIMITATIONS

Aucune limitation supplémentaire à la fiche de navigabilité n°IM 22 n'est prévue par l'application du STC sur les avion PA 28 R.

4- DOCUMENT D'INSTALLATION

Les instructions d'installation font l'objet du document : Installation drawing No K2023.

5- DOCUMENT ASSOCIE

Part Manufacturer Approval Listing No 15 du 4 avril 1987.

6- INFORMATIONS DE SUIVI DE NAVIGABILITE

Le suivi de navigabilité de la modification est la responsabilité du détenteur du STC.
Les informations en service peuvent être obtenues auprès de la société

KOSOLA AND ASSOCIATES, INC
5601 Newton road
P.O. BOX 3529
ALBANY, GEORGIA 31706

7- NOTE

La compatibilité de la modification faisant l'objet de ce supplément au certificat de type avec d'autres modifications ou réparations effectuées antérieurement doit être vérifiée par la personne ou la société chargée de l'installation

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DIRECTION
GENERALE
DE L'AVIATION CIVILE

Membre des Joint Aviation Authorities

SUPPLEMENT AU CERTIFICAT DE NAVIGABILITE DE TYPE
POUR IMPORTATION
Import Supplemental Type Certificate

Numéro : IM 22-SI0001

Ce certificat établi conformément au Code de l'Aviation Civile et délivré à :
This certificate established in conformity with the French «Code de l'Aviation Civile» and issued to :

KOSOLA AND ASSOCIATES, INC
5601 Newton Road
P.O. Box 3529
Albany, Georgia 31706
ETATS UNIS

atteste que le type d'aéronef désigné ci-dessous :
certifies that the type design for the following product :

Numéro du certificat de navigabilité de type	:	IM-22
Numéro de la fiche de navigabilité associée	:	IM-22
Détenteur du certificat de navigabilité de type	:	New Piper Aircraft Company
Type	:	PA-28R

satisfait aux exigences des règlements de navigabilité applicables en France compte tenu des conditions d'utilisation et des limitations définies dans la fiche de navigabilité associée au présent certificat et portant le numéro IM 22-SI0001.
meets the French airworthiness requirements when operated within the limitations and conditions specified on the Type Certificate Data Sheet associated to this certificate with the number IM 22-SI0001.

La modification faisant l'objet de ce supplément porte sur l'installation d'un pare brise monobloc.
The modification related to this supplement concerns one-piece windshield installation.

La compatibilité de la modification faisant l'objet de ce supplément au certificat de type avec d'autres modifications ou réparations effectuées antérieurement doit être vérifiée par la personne ou la société chargée de l'installation.
The compatibility of the modification or reparation, subject of this supplement to the type certificate, with other previous modifications must be verified by the person or the firm in charge of the installation.

date d'approbation : 14 AOUT 2000

Pour le ministre chargé de l'Aviation Civile
l'Ingénieur en Chef des Etudes et Techniques de l'Armement
Chef du bureau navigabilité des aéronefs d'aviation générale

REPUBLIQUE FRANCAISE

DIRECTION GENERALE DE L'AVIATION CIVILE

Supplément à la fiche de navigabilité n° IM 22- relative au STC n° IM 22-SI0001
AAC n°755

AVION NEW PIPER AIRCRAFT INC. :
- PA 28 R, numéros de série :

28 R 200 :	28r-35001 à 7135229 ; 28R-7235001 et suivants
28 R 201 :	28R-7737002 à 28R-7837317, 2837001 à 2837061 et 2844001 et suivants
28 R 201T :	28R-7703001 et suivants
28 RT 201 :	28R-7918001 à 28R-7918267 ; 28R-8018001 et suivants
28 RT 201T :	28R-7931001 et suivants

Edition n°1
Nombre de pages : 2

SUPPLEMENT N° IM 22-SI0001 A LA FICHE DE NAVIGABILITE ASSOCIEE AU CERTIFICAT DE NAVIGABILITE DE TYPE N° IM 22

Détenteur du Supplément au Certificat de type :

KOSOLA AND ASSOCIATES, INC
5601 Newton road
P.O. BOX 3529
ALBANY, GEORGIA 31706
UNITED STATES OF AMERICA

Supplément au Certificat de type n°IM22-SI0001

1-DESCRIPTION DE LA MODIFICATION

La modification faisant l'objet du STC n° IM87-SI0001 porte sur l'installation d'un pare brise monobloc sur avions Piper PA 28-151, -181, -161 et -236.

Tous les documents concernant ce STC sont listés dans la Master Data List Report DL28, revision L du 13 juillet 2000.

2- BASES DE CERTIFICATION

La démonstration de conformité a été réalisée par rapport aux règlements de certification CAR 3, paragraphes : 3.159, 3.383, 3.666, 3.669, 3.705.

3- LIMITATIONS

Aucune limitation supplémentaire à la fiche de navigabilité n°IM 87 n'est prévue par l'application du STC sur les avion PA 28 R.

4- DOCUMENT D'INSTALLATION

Les instructions d'installation font l'objet du document : Installation drawing No K2023.

5- DOCUMENT ASSOCIE

Part Manufacturer Approval Listing No 15 du 4 avril 1987.

6- INFORMATIONS DE SUIVI DE NAVIGABILITE

Le suivi de navigabilité de la modification est la responsabilité du détenteur du STC.
Les informations en service peuvent être obtenues auprès de la société

KOSOLA AND ASSOCIATES, INC
5601 Newton road
P.O. BOX 3529
ALBANY, GEORGIA 31706

7- NOTE

La compatibilité de la modification faisant l'objet de ce supplément au certificat de type avec d'autres modifications ou réparations effectuées antérieurement doit être vérifiée par la personne ou la société chargée de l'installation

MINISTERE DE L'EQUIPEMENT, DU LOGEMENT,
DES TRANSPORTS ET DU TOURISME

DIRECTION GÉNÉRALE DE L'AVIATION CIVILE

SERVICE
DE LA FORMATION AERONAUTIQUE
ET DU CONTROLE TECHNIQUE

DIVISION AERONEFS

BUREAU NAVIGABILITE DES
AERONEFS D'AVIATION GENERALE

Paris, le 4 août 2000

FEDERAL AVIATION ADMINISTRATION
Atlanta Aircraft Certification Office
1895 Phoenix Boulevard, Suite 450
Atlanta, Georgia
ETATS UNIS
Attn to M. Melvin D. Taylor

N/Ref : 2000/04807/SFACT/N.AG

Affaire suivie par : Pascal JOUBERT
Tel : (33) 1.58.09.35.38 Fax : (33) 1.58.09.43.19
e-mail : JOUBERT.Pascal@sfact.dgac.fr

Objet : **Suppléments aux certificats de navigabilité de type et suppléments aux fiches de navigabilité des avions Piper PA 28 R et PA 44-180 & PA 44-180T**

Monsieur,

J'ai l'honneur de vous transmettre en pièces jointes les suppléments aux certificats de navigabilité de type pour importation n° IM 22-SI0001 et n° IM 128-SI0001 et les suppléments aux fiches de navigabilité n° IM 22-SI0001 et n° 128-SI0001 des avions Piper PA 28-R et PA 44-180 & PA 44-180T.

Je vous remercie de bien vouloir transmettre ces documents à Kosola and Associates, Inc avec toutes nos félicitations.

Je vous prie d'agréer, Monsieur, l'expression de mes salutations distinguées.

Copies : - Monsieur Kosola

Kosola and associates, Inc
5601 Newton Rd. - PO Box 3529
Albany, GA 31706, USA

Courtesy translation

Subject : ***French Supplemental Type Certificate and Type Certificate Data Sheet of the Piper PA 28R and PA 44-180 & PA 44-180T***

Dear Sir,

Please find enclosed the Supplemental Type Certificate and the Supplemental Type Certificate Data Sheet of the Piper PA 28-R and PA 44-180 & PA 44-180T.

Please convey to Kosola and Associates, Inc those documents with our congratulations.

Yours sincerely,

DRAWING CHANGE NOTICE

TITLE ONE PIECE WINDSHIELD INSTL	KOSOLA AND ASSOCIATES, INC. ALBANY, GEORGIA 31706	K2023 DRAWING NUMBER	J1 DCN NUMBER
REASON ADDING ALTERNATE PART NUMBERS	DWG. REV. LETTER H	REQUESTED BY QC CLASSIFICATON MINOR	CUSTOMER ☐ VENDOR ☐ COMPANY ☐	SH 1 OF 1

THIS ORDER TO BE USED AS PART OF DWG AND SUPERSEDES PARTS AS SHOWN

REVISE F/D AND B/M TO AGREE

WAS:

2	MS35650-365	NUT				
1	MS35650-305	NUT				
4	NAS1149BN632H	WASHER				
2	NAS1149B0332H	WASHER				

NOW:

2	MS35650-365	NUT				10.
1	MS35650-305	NUT				9.
4	NAS1149BN632H	WASHER				8.
2	NAS1149B0332H	WASHER				7.

ADD TO NOTES:

7. ACCEPTABLE TO SUBSTITUTE AN960-B10 FOR NAS1149B0332H.
8. ACCEPTABLE TO SUBSTITUTE AN960-B6 FOR NAS1149BN632H.
9. ACCEPTABLE TO SUBSTITUTE AN345-B10 FOR MS35650-305.
10. ACCEPTABLE TO SUBSTITUTE AN345-B6 FOR MS35650-365.

NEXT ASSEMBLY DRAWING AFFECTED YES☐ NO☐			
JAB		CHOM	10-1-98
BY	CHK.	APPROVALS	DATE

PARTS DISPOSITION

	REVISIONS	REWORK A	REWORK B	SCRAP A	SCRAP B	NOTED A	NOTED B
	PREFORMED STOCK						
	IN PROCESS						
	FINISHED PARTS						
	IN ASSEMBLY						

DRAWING CHANGED BY / CHECKED

DWG REV / DATE

DRAWING CHANGE NOTICE

TITLE ONE PIECE WINDSHIELD INSTL	KOSOLA AND ASSOCIATES, INC. ALBANY, GEORGIA 31706	K2023 DRAWING NUMBER	J2 DCN NUMBER
REASON ADDING NOTE	DWG. REV. LETTER H; REQUESTED BY QC; CLASSIFICATON MINOR	CUSTOMER ☐ VENDOR ☐ COMPANY ☐	SH 1 OF 1
THIS ORDER TO BE USED AS PART OF DWG AND SUPERSEDES PARTS AS SHOWN			
REVISE F/D AND B/M TO AGREE			

ADD TO NOTES:

*. ACCEPTABLE TO NOTCH THE K2036-A LOWER COVER TO CLEAR HUMP IN THE GLARESHIELD IF NECESSARY. NOTCH NOT TO EXCEDE TWO (2) INCHES SQUARE.

* DENOTES NEXT NOTE NUMBER

NEXT ASSEMBLY DRAWING AFFECTED	YES ☐ NO ☐		
JAB			6-5-2001
BY	CHK.	APPROVALS	DATE

PARTS DISPOSITION

	REWORK A	REWORK B	SCRAP A	SCRAP B	NOTED A	NOTED B
REVISIONS						
PREFORMED STOCK						
IN PROCESS						
FINISHED PARTS						
IN ASSEMBLY						

DRAWING CHANGED

BY DWG REV

CHECKED DATE

WINDSHIELD INSTALLATION AND HANDLING INSTRUCTIONS

Depending on your aircraft make and model, the windows which you purchase may require trimming and/or drilling. The following directions will give you tips on the proper procedures for accomplishing this. Check our list of installation supplies for acrylic drill bits, cleaners, finish restorers, tapes and sealants. **WE HIGHLY RECOMMEND THE PURCHASE OF OUR ACRYLIC DRILL BITS WHEN HOLES ARE TO BE DRILLED IN THE ACRYLIC.**

WINDSHIELD TRIM VARIATION: We can guarantee fit on most of our windshields, but many aircraft manufacturers allowed variations to exist in the original trim of the windshields. We therefore manufacture and trim the replacement windshields for these aircraft slightly oversize to allow trimming for each individual aircraft. These windshields may require trimming or grinding to fit upon installation. NOTE: **As a service to our customers we will accurately trim any windshield or window which we manufacture to the exact size of your original window at no additional charge. Please notify us in advance of your shipping the original window or template to us. All transportation charges will be the responsibility of the customer.**

HANDLING: It is very important to keep the windshield well supported at all times. Do not allow a strain to be put on the windshield during the cutting or grinding operations. Warm temperatures are not required during these operations however, acrylic will take much more abuse at 80 degrees than at 30 degrees. **DO NOT STORE ANY WINDOW OUTDOORS WHILE THE PROTECTIVE COVERING IS STILL ON THE WINDOW. THE COVERING WILL BECOME VERY DIFFICULT, IF NOT IMPOSSIBLE, TO REMOVE WITHOUT DAMAGING THE WINDOW.**

PREPARATION FOR INSTALLATION: After inspection of the window, trim the protective covering to expose enough of the edge of the window to allow for fitting including the portions going into channels and under fairings. The remaining protective covering should be left on the window to protect it until fitting has been completed. Residue left behind by the "Spraylat" protective coating may be removed by soaking the area with isopropyl alcohol and rubbing with an alcohol soaked soft flannel cloth. Residue left behind by the adhesive backed paper covering can also be removed by the above method. If, however, the paper covering has been stored on the window for an extended period of time, you will have to soak the paper with kerosene and keep it wet for several hours. You will then be able to remove the paper backing, but the adhesive will remain. This may be removed by using a mixture of equal parts of kerosene and isopropyl alcohol. Soak a soft flannel cloth with this mixture and rub the window with the cloth. The window should be cleaned after this procedure with a dish washing liquid and plenty of water. **REMOVE THE REMAINING PROTECTIVE COATING AND INSPECT THE WINDSHIELD BEFORE FINAL INSTALLATION.**

MARKING FOR TRIM - PAPER PATTERN: The windshield may be marked with a china marking grease pencil, a felt tip marker, or masking tape. A fast and accurate method for trimming can be accomplished through the use of a paper pattern made by laying a piece of craft paper over the outside of the old original windshield and trimming the paper exactly to size. The paper will lay flat on windshields of simple curvature and can be taped in position. The windshield outline can then be traced onto the paper with a marker. This pattern can then be cut out, properly aligned over the new windshield and the new windshield marked to size. On windshields of compound curvature the paper should be pulled tight across the outside center of the original windshield and taped at this point. At a 90 degree angle to this the paper should again be pulled tight and taped. The loose areas between the tape should be cut with a razor knife and overlapped with enough cuts to allow the paper to follow the curvature of the windshield. Once this is accomplished, masking tape should be used over all the cuts to hold them in place. An outline of the original may now be made and cut to size. This pattern may then be removed from the original windshield, aligned properly on the new windshield, taped in position and traced. When tracing these patterns on the new windshield allowances should be made for areas which were short on the original installation. If mailing patterns to us be sure to mark the pattern as to left side, right side, and outside.

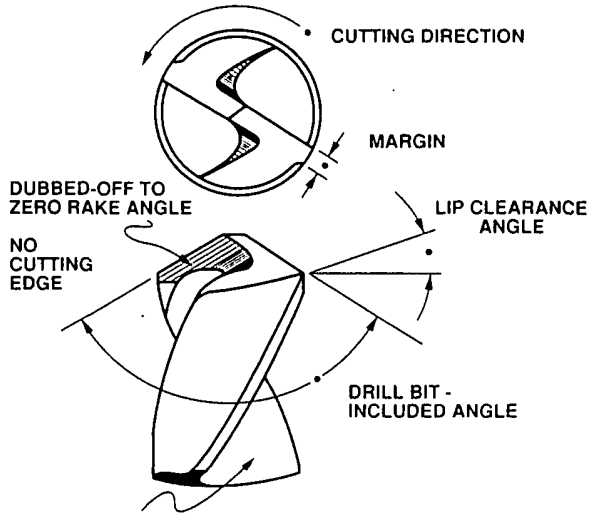
MARKING FOR TRIM - CUT AND FIT: If the original windshield is not in condition to make a pattern then you must cut the new windshield to fit. Remove the wing and cowl fairings and place the new windshield in position allowing the top and sides to hang over. Mark and trim the bottom first. Make sure that the windshield is aligned at the wing roots or that trimming will bring about alignment at the wing roots. After trimming and fitting the bottom, the sides and top will not be difficult to fit. Care should be taken to fit the windshield in place using small cuts rather than one large cut. Remember, you can always trim a little more, but once cut you can never add to it.

MARKING FOR TRIM - OVERLAY: Place the new windshield over the outside of the old windshield and trace a trim line. This will give an oversize rough trim. This method is not recommended for any Cessna windshield or any other windshield where a tight fit between the windshields cannot be achieved.

WINDSHIELD TRIMMING: Trimming is best done with a band saw using a 1/4" or 3/8" wide raker blade with 14 or more teeth per inch. Mask the band saw table to protect the windshield from scratches. Support the windshield during the cutting operation and do not allow the weight of the windshield to rest on the edge being cut away. After cutting, the edges should be sanded with a belt sander to remove all saw marks. Satisfactory results may also be had by using a 7" or 9" disc sander with a coarse 40 to 80 grit sanding disc. This will remove material quite rapidly with only slight pressure. A belt sander may be used with similar results. For best results the edges should be smoothed and rounded with fine sand paper. This can be sanded by hand, with a rotary drum sander, or a file may be used in place of sanding. Smoothing the edges will lessen the tendency towards edge cracking or breakage. It will also extend the service life of the windshield.

NOT RECOMMENDED: Trimming with a jig saw, saber saw, or a hand saw is not advisable. If hand sawing is absolutely necessary, a coping saw with a bone cutting blade with 30 teeth per inch may be used. Extreme care must be used to avoid the blade hanging up and starting a crack. We recommend that the blade be inserted in the saw backward so that the blade cuts when it is drawn towards you. Do not allow the edges of the acrylic to pinch and bind the blade

DRILLING WINDSHIELDS: Do not use a standard metal or wood cutting bit to drill acrylic. This type of bit must be resharpened for acrylic. Take this bit and square off the cutting edge as per the drawing. The drill bit sharpened in this way will scrape a clean hole through the acrylic with no tendency to dig in or grab. Sharpen your drill bit as shown or purchase one of our special acrylic drill bits. The small price you pay for the correct drill bit will pay you dividends a hundred fold by drilling smooth clean holes. Practice drilling on your old windshield or a piece of scrap acrylic before drilling your new windshield. Use a high speed with very light pressure when drilling. Holes should be drilled oversize to allow for expansion and contraction of the acrylic Example: Drill a 3/16" hole for a 1/8" screw. Do not over tighten screws. Screws should be snug only. Over tightening will cause cracks around the holes. **STANDARD WOOD OR METAL BITS WILL CAUSE BINDING AS IT BREAKS THROUGH THE OPPOSITE SIDE OF THE ACRYLIC. THIS WILL CAUSE SMALL CHIPS, FRACTURES, CRACKS, OR CAUSE THE WINDOW TO BREAK. DO NOT TAKE THE CHANCE!**



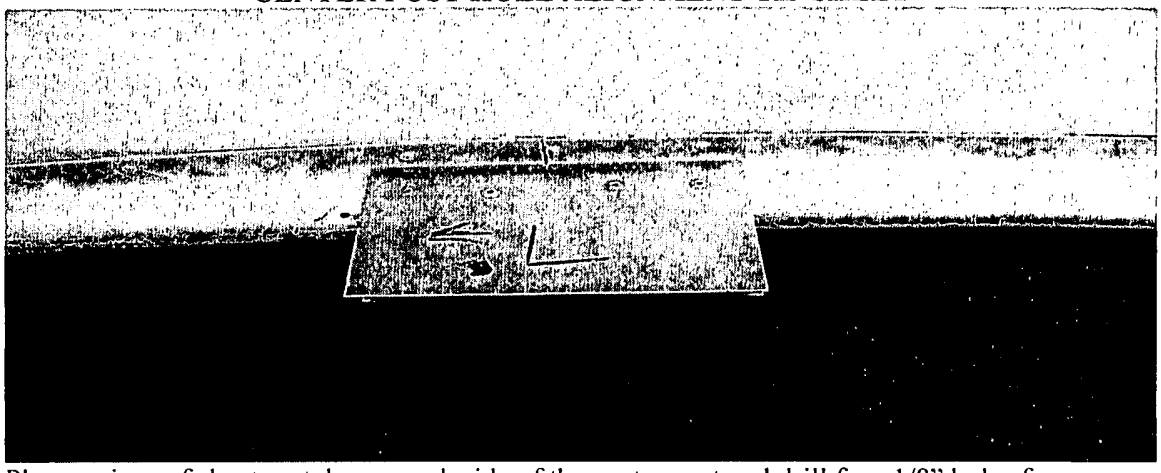
SLOW SPIRAL - POLISHED FLUTES

WARRANTY: Our windshields and windows are warranted against defective materials and workmanship. The warranty is limited only to the replacement of the defective parts. There is no allowance for labor costs incurred during installation and removal of a defective part. Prior to installation the protective coating should be peeled and the part inspected. After inspection the window may be recovered with the protective coating which was removed or recovered with a cling type plastic food wrap. We will not assume any liability for damages due to improper installation or any damage incurred during shipping. Our warranty does not cover cracking, crazing, scratches or breakage. Any item shipped to us without proper authorization will be refused. Call for a return authorization number.

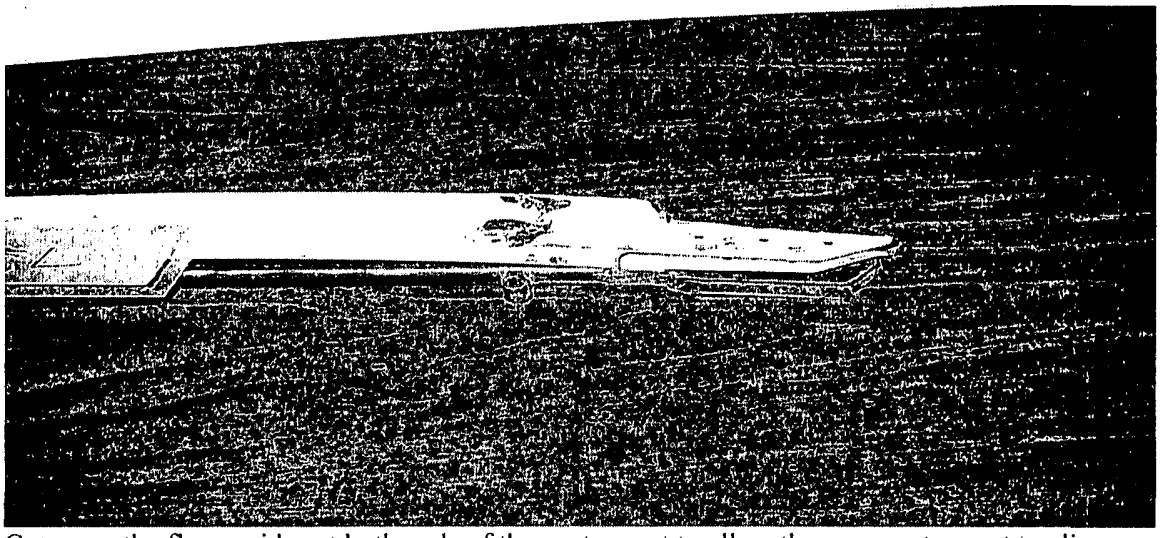
L.P. AERO PLASTICS, INC.
1086 BOQUET RD.
JEANNETTE, PA 15644

Phone: (724) 744-4448
Fax: (724) 744-7372
E-mail windshields@lpaero.com
www.lpaero.com

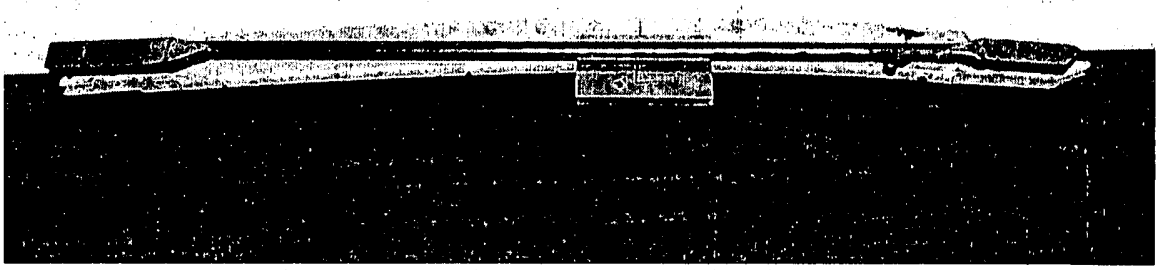
CENTER POST HOLE ALIGNMENT TIP SHEET



Place a piece of sheet metal over each side of the center post and drill four 1/8" holes for pop rivets. Cut the center post between the center two holes and remove the post from the aircraft. Rivet the sheet metal pieces to hold the center post back together.



Cut away the flange sides at both ends of the center post to allow the new center post to align on the old post for back drilling.



Align and clamp the old center post to the new post and back drill through the mounting holes into the new mounting tangs. This will give you proper alignment on all of the mounting holes.

ADDENDUM TO THE INSTALLATION INSTRUCTIONS FOR .250" THICKNESS WINDSHIELDS

Applicable to: Piper PA-28, -32, -34, -44
These instructions were developed for the two piece installations, but the fitting of the windshields and beveling of the edges is applicable to the one piece windshield installation.

REMOVAL OF WINDSHIELDS

1. Remove the retainer molding from around the bottom of the windshield and the trim strip from the center of the windshield halves by removing the attaching screws.

2. Carefully remove the windshield from the frame by lifting the lower portion and pulling it out and down to disengage it from the top and side retainers.

3. Remove all tape and sealant residue from the windshield frame and retainers.

INSTALLATION OF WINDSHIELDS

1. Check the size and contour of the new windshield against the windshields which were removed from your aircraft as well as checking the fit of the new windshield to the airframe. This may be easily done by making a paper overlay of the original windshield with the center post fastened in the original position. Use tape to hold the center strap in place if necessary. Pull the paper taut across the windshield from left to right corners and tape these ends to the windshield. Use a razor to cut darts in the paper to allow it to lay flat on the compound curvature and tape these darts. Once taped, follow the edge of the windshield with a razor knife cutting the paper to the exact size of your original windshield. This pattern can be taped to the outside surface of the new windshield and a trim line transferred with a grease pencil or marker. Trim the new windshield to fit.

2. Tapering of the one piece windshield will not need to be done if the original windshields were .250" thickness. The new windshield is twice as thick as the .125" installation, therefore the edge of the new .250" windshield will need to be tapered to fit the channels and allow the retaining strips to properly align. Starting at the top center of the windshield and proceeding to the lower outside corner, taper the inside surface of the windshield to approximately .125" edge thickness. (Fig. 1, Page 5) Use the original windshield as a guide by marking the acrylic which was engaged in the channel on the new windshield. Masking tape may be used on the inside surface of the new windshield to mark this limit. This inside surface may then be sanded to the proper taper using a disk or orbital sander. **Do not sand any portion of the windshield which will be exposed after final installation. Extreme care must be taken during these sanding steps to**

protect the surface of the windshield. Slide the windshield into position. At the lower outside corner you will note that the skin is bulging. Taper the outside surface of the windshield in this area to allow the skin to lay flat. Taper the bottom edge of the windshield on the outside surface to an edge thickness of approximately .125". At the lower outside corner the windshield will need to be tapered on both the inside and outside to allow it to transition from the area covered by the front retaining strip to the area cover by the permanent skin windshield retainers.

3. The Piper Service Manual windshield installation instructions for your aircraft model may be followed or you may follow these instructions. If channel clearance permits, apply Behr-Manning vinyl foam sealing tape no. 560 or equivalent to both sides of the windshield around the outer edges. The foam tape measuring 1 1/4" x 1/16" may be centered along the edge of the window and then folded down on both the inside and outside surface of the window.

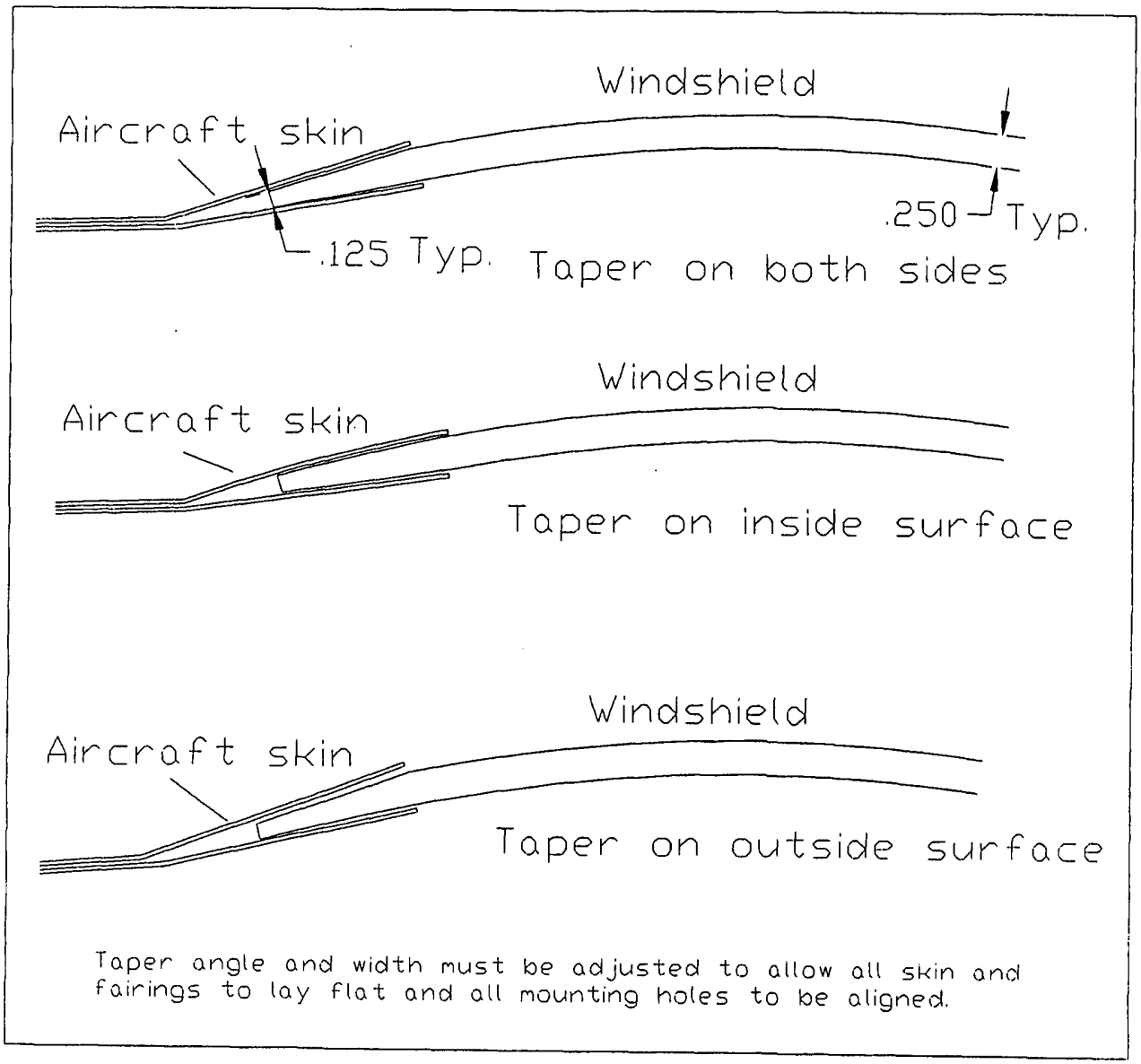
4. Before applying sealants to the windshield or frame, align the windshield in the airframe opening. Install all retainers with several screws and mask the windshield, fuselage skin, and retainers. Allow a slight gap when masking the windshield to allow the sealant to form a fillet. This will protect all surfaces and aid in clean up of excess sealant which will squeeze out when the windshield is pressed into place. Apply a second layer of masking tape over the first so that the top layer can be peeled immediately after you fillet all edges, which will leave a crisp edge. The second layer will protect the windshield from any oozing of the sealant. When masking is completed, remove the retainers and windshields. You may apply Bostik 1100FS, Behr-Manning sealant no. PRC 5000, Dow Corning RTV-732 or equivalent around attachment flanges and mating surfaces.

5. Insert the windshield into the frame and install the retainer moldings. These retainers should not need repositioned to accommodate the thicker window. Secure the windshield retainers with the attachment screws. Smooth all sealant around the perimeter with your finger or a tool to produce a smooth fillet. Fill all gaps at this time.

6. Remove any of the excess sealant. Allow the sealant to cure. Remove all masking tape. Adhesive residue may be cleaned with mineral spirits. Clean windshields with "LP Aero Plastics - Acrylic Polish and Sealant" and a clean, cotton flannel cloth.

7. Complete 337 form and perform weight and balance computations. The original .125" windshields weigh approximately 3.8 lb. per side.

8. Follow the guidelines on acceptable maintenance procedures in the FAA Advisory Circular AC 43.13-1A, or latest revision, in completing all phases of the installation.



Report No. 905/CON
Figure 1
Page 5
11/11/94

1. Approving National Aviation Authority/Country:	2.	3. Form Tracking Number:
FAA/UNITED STATES	**AUTHORIZED RELEASE CERTIFICATE** FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG	01DA448

4. Organization Name and Address:	5. Work Order/Contract/Invoice Number:
KOSOLA AND ASSOCIATES, INC 5601 Newton Rd. Albany, GA 31701 P.O. 1211CE	43376

6. Item:	7. Description:	8. Part Number:	9. Eligibility:*	10. Quantity:	11. Serial/Batch Number:	12. Status/Work:
1	ONE PIECE WINDSHIELD INSTL.	K2044-1	N/A	1	N/A	NEW

13. Remarks:
1. PARTS (S) ARE FAA PMA'D
2. TAG NOT FOR EXPORT
3. INSTL.,S.T.C. # SA00703AT
4. AIR WORTHINESS APPROVAL
5. SEE ATTACHED PACKING LIST
6. DWG # K2044, REV. B
7. ITEMS K2028-1,-2,-3 SUPPLIED BY LP AERO PLASTICS

14. Certifies the items identified above were manufactured in conformity to:	19. ☐ 14 CFR 43.9 Return to Service ☐ Other regulation specified in Block 13
☒ Approved design data and are in condition for safe operation. ☐ Non-approved design data specified in Block 13.	Certifies that unless otherwise specified in block 13, the work identified in Block 12 and described in Block 13 was accomplished in accordance with Title 14, Code of Federal Regulations, part 43 and in respect to that work, the items are approved for return to service.

15. Authorized Signature:	16. Approval/Authorization No.: DARF501467CE	20. Authorized Signature:	21. Approval/Certificate No.:
17. Name (Typed or Printed): DANIEL A. ALVEY	18. Date (m/d/y): MAY 28, 2009	22. Name (Typed or Printed):	23. Date (m/d/y):

User/Installer Responsibilities

It is important to understand that the existence of this document alone does not automatically constitute authority to install the part/component/assembly.

Where the user/installer performs work in accordance with the national regulations of an airworthiness authority different than the airworthiness authority of the country specified in Block 1, it is essential that the user/installer ensures that his/her airworthiness authority accepts parts/components/assemblies from the airworthiness authority of the country specified in Block1.

Statements in Blocks 14 and 19 do not constitute installation certification. In all cases, aircraft maintenance records must contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.

United States of America

Department of Transportation — Federal Aviation Administration

Supplemental Type Certificate

Number SA00703AT

This certificate, issued to Kosola and Associates, Inc.
P. O. Box 3689
Albany, Georgia 31706

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

Original Product — Type Certificate Number: A19SO

Make: Piper

Model: PA-44-180 and PA-44-180T

Description of Type Design Change:

Installation of one-piece windshield in accordance with Kosola and Associates, Inc. Master Drawing List Report DL44, dated January 16, 1995, 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 aircraft.

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

Date of application: December 29, 1994

Date of issuance: February 23, 1995

Date reissued:

Date amended:

By direction of the Administrator

Roger D Anderson
(Signature)
Roger D. Anderson
Manager, Atlanta Aircraft
Certification Office
(Title)

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

This certificate may be transferred in accordance with FAR 21.47.

FAA Form 8110-2 (10-68)

Liberté • Égalité • Fraternité
RÉPUBLIQUE FRANÇAISE

DIRECTION
GENERALE
DE L'AVIATION CIVILE

Membre des Joint Aviation Authorities

SUPPLEMENT AU CERTIFICAT DE NAVIGABILITE DE TYPE
POUR IMPORTATION
Import Supplemental Type Certificate

Numéro : IM 128-SI0001

Ce certificat établi conformément au Code de l'Aviation Civile et délivré à :
This certificate established in conformity with the French «Code de l'Aviation Civile» and issued to :

KOSOLA AND ASSOCIATES, INC
5601 Newton Road
P.O. Box 3529
Albany, Georgia 31706
ETATS UNIS

atteste que le type d'aéronef désigné ci-dessous :
certifies that the type design for the following product :

Numéro du certificat de navigabilité de type	:	IM-128
Numéro de la fiche de navigabilité associée	:	IM-128
Détenteur du certificat de navigabilité de type	:	New Piper Aircraft Company
Type	:	PA 44-180 et PA 44-180T

satisfait aux exigences des règlements de navigabilité applicables en France compte tenu des conditions d'utilisation et des limitations définies dans la fiche de navigabilité associée au présent certificat et portant le numéro IM 128-SI0001.
meets the French airworthiness requirements when operated within the limitations and conditions specified on the Type Certificate Data Sheet associated to this certificate with the number IM 128-SI0001.

La modification faisant l'objet de ce supplément porte sur l'installation d'un pare-brise monobloc.
The modification related to this supplement concerns one-piece windshield installation.

La compatibilité de la modification faisant l'objet de ce supplément au certificat de type avec d'autres modifications ou réparations effectuées antérieurement doit être vérifiée par la personne ou la société chargée de l'installation.
The compatibility of the modification or reparation, subject of this supplement to the type certificate, with other previous modifications must be verified by the person or the firm in charge of the installation.

date d'approbation : 4 AOUT 2000

Pour le ministre chargé de l'Aviation Civile
l'Ingénieur en Chef des Etudes et Techniques de l'Armement
Chef du bureau navigabilité des aéronefs d'aviation générale

1-DESCRIPTION DE LA MODIFICATION

La modification faisant l'objet du STC n° IM128-SI0001 porte sur l'installation d'un pare brise monobloc sur avions Piper PA 44-180 et PA 44-180T.

Tous les documents concernant ce STC sont listés dans la Master Data List Report DL44, revision D du 6 juillet 2000.

2- BASES DE CERTIFICATION

La démonstration de conformité a été réalisée par rapport aux règlements de certification CAR 3, paragraphes : 3.159, 3.383, 3.666, 3.669, 3.705.

3- LIMITATIONS

Aucune limitation supplémentaire à la fiche de navigabilité n°IM 128 n'est prévue par l'application du STC sur les avion PA 44-180 et 44-180T.

4- DOCUMENT D'INSTALLATION

Les instructions d'installation font l'objet du document : Installation drawing No K2044.

5- DOCUMENT ASSOCIE

Part Manufacturer Approval Listing No 15 du 4 avril 1987.

6- INFORMATIONS DE SUIVI DE NAVIGABILITE

Le suivi de navigabilité de la modification est la responsabilité du détenteur du STC.
Les informations en service peuvent être obtenues auprès de la société

KOSOLA AND ASSOCIATES, INC
5601 Newton road
P.O. BOX 3529
ALBANY, GEORGIA 31706

7- NOTE

La compatibilité de la modification faisant l'objet de ce supplément au certificat de type avec d'autres modifications ou réparations effectuées antérieurement doit être vérifiée par la personne ou la société chargée de l'installation

MINISTERE DE L'EQUIPEMENT, DU LOGEMENT,
DES TRANSPORTS ET DU TOURISME

DIRECTION GÉNÉRALE DE L'AVIATION CIVILE

SERVICE
DE LA FORMATION AERONAUTIQUE
ET DU CONTROLE TECHNIQUE

DIVISION AERONEFS

BUREAU NAVIGABILITE DES
AERONEFS D'AVIATION GENERALE

Paris, le 4 août 2000

FEDERAL AVIATION ADMINISTRATION
Atlanta Aircraft Certification Office
1895 Phoenix Boulevard, Suite 450
Atlanta, Georgia
ETATS UNIS
Attn to M. Melvin D. Taylor

N/Ref : 2000/04807/SFACT/N.AG

Affaire suivie par : Pascal JOUBERT
Tel : (33) 1.58.09.35.38 Fax : (33) 1.58.09.43.19
e-mail : JOUBERT.Pascal@sfact.dgac.fr

Objet : Suppléments aux certificats de navigabilité de type et suppléments aux fiches de navigabilité des avions Piper PA 28 R et PA 44-180 & PA 44-180T

Monsieur,

J'ai l'honneur de vous transmettre en pièces jointes les suppléments aux certificats de navigabilité de type pour importation n° IM 22-SI0001 et n° IM 128-SI0001 et les suppléments aux fiches de navigabilité n° IM 22-SI0001 et n° 128-SI0001 des avions Piper PA 28-R et PA 44-180 & PA 44-180T.

Je vous remercie de bien vouloir transmettre ces documents à Kosola and Associates, Inc avec toutes nos félicitations.

Je vous prie d'agréer, Monsieur, l'expression de mes salutations distinguées.

Copies : - Monsieur Kosola

Kosola and associates, Inc
5601 Newton Rd. - PO Box 3529
Albany, GA 31706, USA

Courtesy translation

Subject : ***French Supplemental Type Certificate and Type Certificate Data Sheet of the Piper PA 28R and PA 44-180 & PA 44-180T***

Dear Sir,

Please find enclosed the Supplemental Type Certificate and the Supplemental Type Certificate Data Sheet of the Piper PA 28-R and PA 44-180 & PA 44-180T.

Please convey to Kosola and Associates, Inc those documents with our congratulations.

Yours sincerely,

US Department of Transportation
Federal Aviation Administration

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

Form Approved OMB No. 2120-0020 11/30/2007 | Electronic Tracking Number

For FAA Use Only

INSTRUCTIONS: Print or type all entries. See Title 14 CFR FAR 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: **N289ND**	Serial No.: **2844039**	
	Make: **Piper**	Model: **PA28R-201**	Series:
2. Owner	Name *(As shown on registration certificate)*: **Roscoe, Jerry P**	Address *(As shown on registration certificate)*: **6909 Bonheim Ct, McLean, VA 22101-5100**	

3. For FAA Use Only

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

6. Conformity Statement

A. Agency's Name and Address: **Landmark Aviation, 1005 Sycolin Road, Leesburg, VA 20175 USA**

B. Kind of Agency

	U.S. Certificated Mechanic		Manufacturer
	Foreign Certificated Mechanic	C. Certificate No.	
X	Certificated Repair Station	**YBJR768L**	
	Certificated Maintenance Organization		

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

Extended range fuel Per 14 CFR Part 43 App. B ☐

Signature/Date of Authorized Individual: **James Forgues 3/11/2011**

7. Approval for Return to Service

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

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

Certificate or Designation No.: **CRS YBJR768L**

Signature/Date of Authorized Individual: **William Hertz 3/11/2011**

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 accomplished.)

N289ND	3/11/2011
Nationality and Registration Mark	Date

Tach: 6969.4 **Hobbs: 9301.0**

See Attached Instructions for Continued Airworthiness Inspection

A. Removed the following equipment:

1.	King KX155A Nav/Comm	P/N 069-01032-0201	S/N 18449
2.	King KI208 Indicator	P/N 066-03056-0002	S/N 70177
3.	King KLN89B	P/N 066-01148-0102	S/N 9321
4.	King KA92 GPS Antenna	P/N 011-00134-00	S/N 297076
5.	King KN72 VLOC Converter	P/N 066-04009-0000	S/N 17112

B. Installed the following equipment:

1.	Garmin GNS430 WAAS/GPS/Nav/Com	P/N 011-01060-40	S/N 97108323
2.	Garmin GA35 GPS/WAAS Antenna	P/N 013-00235-00	S/N 71688

C. Installed the GNS430W in the LH avionics stack below the Audio Panel. Installed RG-142 GPS antenna cable to meet manufacturer specified shielding and db limit requirements. The wiring and shielding used meets the requirements of the STC/AML installation data.

D. Each interface was checked out I.A.W. the 430W installation manual. Verified this aircraft and the H.S.I. and autopilot interfaces are covered under the STC AML.

E. Installed Garmin GNS430W WAAS/GPS/Nav/Com according to STC# SA01933LA (PA28R-201); the Garmin GNS 430W Installation Manual, P/N 190-00356-02, Rev. G, dated Dec. 2008 and the Garmin GA35 Antenna Installation Instructions Manual P/N 190-00848-00, Rev. D, dated January 2011. Work performed in reference to criteria specified in AC20-138 paragraph 7c(1), AC 43.13-1B Chapters 11 and 12, AC43.13-2B Chapters 1, 2, and 3.

F. Electrical power to the GNS430W GPS system is provided from the avionics 14V DC buss through an existing 5A circuit breaker (454-706) labeled "GPS". Electrical power to the GNS430 COM system is provided from the avionics 14V DC buss through an existing 10A circuit breaker (454-709) labeled "COM 1". Circuit breakers are mounted in the RH circuit breaker panel, and are accessible to the pilot in flight.

G. The Garmin GNS430W transceiver was installed in the avionics stack at F.S. 58.1. The Garmin GA35 WAAS/GPS Antenna was installed on top of the fuselage at F.S. 95.9.

H. The Garmin GNS430W GPS/VOR/Loc information is displayed on the KI525A HSI as the primary navigation source. GPS/Nav switching and annunciation are integral to the GNS430W. The Garmin GNS430W is interfaced with the PMA8000B Audio Panel for primary Nav/Com audio; the Garmin GTX330 to display traffic information; the GMX200 MFD for position information; the KN62A DME for channeling data; and the SAE5-15 encoder for altitude information.

CONTINUED

☒ Additional Sheets Are Attached

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 accomplished.)

N289ND	3/11/2011
Nationality and Registration Mark	Date

I. A placard stating "GNS430W GPS APPROVED FOR IFR" was installed in clear view of pilot-in-command.

J. An electrical load analysis was performed and found that the continuous load of the alternator output does not exceed 80% of capacity.

K. A complete operational test was performed according to the Garmin GNS430W Installation Manual. The equipment performed satisfactory and did not adversely affect existing components or systems in the aircraft as required by FAR 23.1309.

L. An FAA approved GNS430W AFMS P/N 190-00356-03 inserted in the Aircraft Flight Manual.

M. A Garmin GNS430W Pilots Guide and Reference P/N 190-00356-00, Garmin GNS430W Quick Reference P/N 190-00356-01, Garmin GNS430W Display Interfaces Pilot's Guide Addendum P/N 190-00356-31, and Garmin GNS430W Optional Displays Addendum P/N 190-00356-30 were placed in the aircraft.

N. The Aircraft Equipment List was revised to reflect these changes; Weight and Balance data was revised and placed in the aircraft records. Appropriate logbook entries made.

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 11/30/2007 | Electronic Tracking Number

For FAA Use Only

INSTRUCTIONS: Print or type all entries. See Title 14 CFR FAR 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: **N289ND**	Serial No.: **2844039**	
	Make: **Piper**	Model: **PA28R-201**	Series:
2. Owner	Name *(As shown on registration certificate)*: **Roscoe Jerry P**	Address *(As shown on registration certificate)*: **6909 Bonheim Ct, McLean, VA 22101-5100**	

3. For FAA Use Only

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

6. Conformity Statement

A. Agency's Name and Address: **Landmark Aviation, 1005 Sycolin Road, Leesburg, VA 20175 USA**

B. Kind of Agency

	U.S. Certificated Mechanic		Manufacturer
	Foreign Certificated Mechanic	C. Certificate No.	
X	Certificated Repair Station	**YBJR768L**	
	Certificated Maintenance Organization		

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

Extended range fuel Per 14 CFR Part 43 App. B ☐

Signature/Date of Authorized Individual: **James Forgues 3/11/2011**

7. Approval for Return to Service

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

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

Certificate or Designation No.: **CRS YBJR768L**

Signature/Date of Authorized Individual: **William Hertz 3/11/2011**

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 accomplished.)

N289ND	3/11/2011
Nationality and Registration Mark	Date

Hobbs: 9301.0 Tach: 6969.4

A. Removed the following equipment:

1. Indicator, EGT	P/N 45811	S/N 243462
2. Probe, EGT	P/N 86255	S/N 2252
3. KR87 ADF	P/N 066-1072-00	S/N 35275
4. KI227 ADF Indicator	P/N 066-3063-00	S/N 47313
5. KA44B ADF Antenna	P/N 071-1234-01	S/N 71412

B. Installed the following equipment:

1. JPI EDM700 Graphic Engine Mon	P/N EGT-701-4C	S/N 30821
2. Probe, EGT	P/N MM-111	S/N 0148409, 0148436, 0148442 & 01444996
3. Probe, CHT	P/N M-5050T	S/N 22019, 22168, 22178 & 22194

C. Installed the EDM700 in the LH side of pilot instrument panel in space vacated by removed ADF Indicator. The wiring and shielding used meets the requirements of the STC/AML installation data.

D. Each interface was checked out I.A.W. the EDM700 installation manual. Verified this aircraft and associated interfaces are covered under the STC AML.

E. Installed the JP Instruments EDM700 according to STC# SA2586NM (PA28R-201) and the JP Instruments EDM700 Installation Manual, Report 103, Rev. E, dated 10/28/09. Work performed in reference to criteria specified in AC 43.13-1B Chapters 11 and 12, AC43.13-2B Chapters 1 and 2.

F. Electrical power to the EDM700 system is provided from the avionics 14V DC buss through a 2A circuit breaker labeled "EDM". Circuit breaker is mounted in the RH circuit breaker subpanel, and is accessible to the pilot in flight.

G. The EDM700 display was installed in the LH side of pilot instrument panel at F.S. 59.9.

H. An electrical load analysis was performed and found that the continuous load of the alternator output does not exceed 80% of capacity.

I. A complete operational test was performed according to the EDM700 Installation Manual. The equipment performed satisfactory and did not adversely affect existing components or systems in the aircraft as required by FAR 23.1309.

J. An FAA approved Airplane/Rotorcraft flight Manual Supplement No. 1 for EGT-701 was inserted in the Aircraft Flight Manual.

K. A JP instruments Pilots Guide and Reference was placed in the aircraft.

L. The Aircraft Equipment List was revised to reflect these changes; Weight and Balance data was revised and placed in the aircraft records. Appropriate logbook entries made.

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 11/30/2007 | Electronic Tracking Number

For FAA Use Only

INSTRUCTIONS: Print or type all entries. See Title 14 CFR FAR 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: N289ND	Serial No.: 2844039	
	Make: Piper	Model: PA28R-201	Series:
2. Owner	Name *(As shown on registration certificate)*: Roscoe Jerry P	Address *(As shown on registration certificate)*: 6909 Bonheim Ct, McLean, VA 22101-5100	

3. For FAA Use Only

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

APPROVING INSPECTOR: [signature]

DATE: MAR 18 2011

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

6. Conformity Statement

A. Agency's Name and Address:
Landmark Aviation
1005 Sycolin Road
Leesburg, VA 20175 USA

B. Kind of Agency

	U.S. Certificated Mechanic	☐ Manufacturer
	Foreign Certificated Mechanic	C. Certificate No.
X	Certificated Repair Station	YBJR768L
	Certificated Maintenance Organization	

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

Extended range fuel Per 14 CFR Part 43 App. B ☐

Signature/Date of Authorized Individual: James Forgues 3/11/2011

7. Approval for Return to Service

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

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

Certificate or Designation No.: CRS YBJR768L

Signature/Date of Authorized Individual: William Hertz 3/11/2011

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 accomplished.)

N289ND	3/11/2011
Nationality and Registration Mark	Date

Hobbs: 9301.0 Tach: 6969.4

1. Introduction:
The PMA8000BT is an audio isolation amplifier and audio selector that contains an automatic voice activated (VOX) intercom system and integral marker beacon receiver. It can switch two transceivers (Com 1, Com 2) and six receivers (Nav 1, Nav 2, ADF, DME, MKR and AUX). A full duplex TEL mode allows the PMA8000BT to act as an audio interface between aircraft headphone and microphones and specific aircraft approved (FAA/FCC) cellular telephone equipment, through the front mounted jack.

2. Description:
- Removed the following equipment:
  1. PMA6000M Audio Select Panel P/N PMA6000M S/N W06307-N04498M
- Installed the following equipment:
  1. PMA8000BT Audio Select Panel P/N 050-890-0702 S/N BBT1382

The PS Engineering PMA8000BT Audio Panel and Intercom with Marker Beacon Receiver was installed at the top of the avionics stack at F.S. 60.0. Electrical power to the PMA8000BT is provided from the Avionics 14 volt DC buss through a 5 amp circuit breaker (p/n 454-706) labeled "Audio AMP/MKR" located in the RH circuit breaker panel and is accessible to the pilot in flight. The Audio Panel is interfaced to the GNS430W for Primary Com/Nav audio, the KX155A for secondary Com/Nav audio, the aircraft speaker, the KN62A DME, the 4 place headphone/microphone intercom jacks, The GTX330 for traffic alert audio, the music 1 & 2 entertainment inputs and the existing marker beacon antenna. Installed the PS Engineering PMA8000BT Audio Panel in accordance with the PS Engineering PMA8000BT System Installation and Operation Manual, P/N 200-890-0702, revision 2, dated January 2011; similar to STC SA00710WI (PA-32) and criteria specified in AC 43.13-1B Chapters 11 Section 3, par. 11-31 and 32, Section 4, par. 11-47, 11-51, Sections 5-8, Section 9, par. 11-115 through 11-121, Section 11-13, Section 15 par. 11-186, Section 16 par. 11-205, 209 & 214, and AC43.13-2B Chapter 2 para. 202, 208 and 209. An electrical load analysis was performed and found that the continuous load of the alternator output does not exceed 80% of capacity. A complete operational test was performed according to instructions in PS Engineering Installation Manual. The equipment performed satisfactory and did not adversely affect existing components or systems in the aircraft as required by FAR 23.1309. No EMI was observed during testing. Wires/harnesses were secured to ensure no interference/binding with flight and engine controls. Weight & Balance and Equipment List revised. Appropriate logbook entries made.

3. Control, operation information:
PSEngineering PMA8000BT Audio Panel Pilot's Guide and Operation Manual P/N 202-890-0702, Rev. 2 was placed in the aircraft.

4. Servicing Information:
The PMA8000BT is mounted in the avionics stack. The marker beacon antenna is located on the bottom of the fuselage.

5. Maintenance Instructions:
Maintenance of the PMA8000BT is "on condition" only. Periodic maintenance is not required.

6. Troubleshooting Information:
Troubleshooting should be performed by an authorized PS Engineering Service Center I.A.W. dealer publications.

7. Removal and replacement information:
The PMA8000BT can be removed from the avionics stack using a 3/32" allen key or T-handle. A functional check of the equipment should be performed I.A.W. with section 2.12 of the PS Engineering PMA8000BT Installation and Operation Manual Document P/N 200-890-0702.

8. Diagrams:
None applicable.

CONTINUED

☒ Additional Sheets Are Attached

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 accomplished.)

N289ND	3/11/2011
Nationality and Registration Mark	Date

9. Special inspection requirements:
None applicable.

10. Application of protective treatments:
None applicable

11. Data:
None applicable.

12. List of special tools:
None applicable.

13. For Commuter Category Aircraft:
Not applicable.

14. Recommended overhaul periods:
No additional overhaul time limitations.

15. Airworthiness Limitation Section:
No additional Airworthiness limitations.

16. Revision:
No revisions at this time.
To revise this ICA, a letter must be submitted to the local FSDO with a copy of the revised FAA form 337, and revised ICA.

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 11/30/2007 | Electronic Tracking Number

For FAA Use Only

INSTRUCTIONS: Print or type all entries. See Title 14 CFR FAR 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: **N289ND**	Serial No.: **2844039**	
	Make: **Piper**	Model: **PA28R-201**	Series:
2. Owner	Name *(As shown on registration certificate)*: **Roscoe Jerry P**	Address *(As shown on registration certificate)*: **6909 Bonheim Ct, McLean, VA 22101-5100**	

3. For FAA Use Only

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

APPROVING INSPECTOR

DATE MAR 18 2011

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

6. Conformity Statement

A. Agency's Name and Address:
Landmark Aviation
1005 Sycolin Road
Leesburg, VA 20175 USA

B. Kind of Agency

	U.S. Certificated Mechanic		Manufacturer
	Foreign Certificated Mechanic	C. Certificate No.	
X	Certificated Repair Station	**YBRJ768L**	
	Certificated Maintenance Organization		

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

Extended range fuel Per 14 CFR Part 43 App. B ☐

Signature/Date of Authorized Individual
James Forgues
3/11/2011

7. Approval for Return to Service

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

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

Certificate or Designation No.
CRS YBRJ768L

Signature/Date of Authorized Individual
William Hertz
3/11/2011

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 accomplished.)

N289ND	3/11/2011
Nationality and Registration Mark	Date

Hobbs: 9301.0 Tach: 6969.4

1. Introduction:
The Garmin GTX330 transponder is a radio transmitter and receiver that operates on radar frequencies, receiving ground radar or TCAS interrogations at 1030 MHz and transmitting a coded response of pulses to ground based radar on a frequency of 1090 MHz. The GTX330 is equipped with IDENT capability that activates the Special Position Identification (SPI) pulse for 18 seconds.

2. Description:
- Installed the following equipment:
  1. Garmin GTX330 Transponder P/N 011-00455-60 S/N 84141539

The Garmin GTX330 Transponder was installed in the LH avionics stack at F.S. 57.7. Electrical power to the GTX330 is provided from the Avionics 14 volt avionics buss through a 5 amp circuit breaker (454-706) labeled "XPDR 1" located in the RH circuit breaker panel and is accessible to the pilot in flight. The GTX330 is installed as the number 1 transponder. A Transponder 1/2 select switch was installed with the GTX330 in the number 1 position and the existing KT76C installed in the number 2 position. The GTX330 is interfaced to the PSEngineering PMA8000B for audio alerts and the existing altitude encoding system for Mode c altitude information and the Garmin GNS430W to display traffic information. The GTX330 is interfaced to an existing antenna on the belly of the aircraft. Installed the Garmin GTX330 in accordance with the Garmin GTX330 Installation Manual, P/N 190-00207-02, revision R, dated November 2010; similar to STC# ST01125WI (PA32-260); and criteria specified in AC 43.13-1B Chapters 11 Section 3, par. 11-31 and 32, Section 4, par. 11-47, 11-51, Sections 5-8, Section 9, par. 11-115 through 11-121, Section 11-13, Section 15 par. 11-186, Section 16 par. 11-205, 209 & 214, and AC43.13-2B Chapter 2 para. 202, 208 & 209. An electrical load analysis was performed and found that the continuous load of the alternator output does not exceed 80% of capacity. A complete operational test was performed according to instructions in Garmin GTX330 Installation Manual. The equipment performed satisfactory and did not adversely affect existing components or systems in the aircraft as required by FAR 23.1309. No EMI was observed during testing. Wires/harnesses were secured to ensure no interference/binding with flight and engine controls. Weight & Balance and Equipment List revised. Appropriate logbook entries made. Complied with ATC Transponder check I.A.W. FAR Part 91.413, all parameters within limits FAR Part 43 Appendix F, data correspondence checked to 30,000ft.

3. Control, operation information:
Garmin GTX330 Mode S Transponder Pilot's Guide P/N 190-00207-00, Rev. F was placed in the aircraft.

4. Servicing information:
The GTX330 is mounted in the avionics stack and is accessible from the cockpit

5. Maintenance instructions:
Garmin GTX330 Installation Manual Appendix A states "Maintenance of the GTX330 is 'on condition' only. Periodic maintenance is not required." However, FAR 91.413 requires the transponder be tested to verify that it meets the requirements of FAR Part 43 Appendix F once every 24 months.

6. Troubleshooting information:
Troubleshooting should be performed by an authorized Garmin Service Center I.A.W. dealer publications.

7. Removal and replacement information:
The GTX330 can be removed from the rack using a 3/32 allen wrench inserted through the faceplate and turned counterclockwise until the unit is released from the rack.

8. Diagrams:
None applicable.

CONTINUED

☒ Additional Sheets Are Attached

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 accomplished.)

N289ND	3/11/2011
Nationality and Registration Mark	Date

9. Special inspection requirements:
None applicable.

10. Application of protective treatments:
None applicable

11. Data:
None applicable.

12. List of special tools:
None applicable.

13. For Commuter Category Aircraft:
Not applicable.

14. Recommended overhaul periods:
No additional overhaul time limitations.

15. Airworthiness Limitation Section:
No additional Airworthiness limitations.

16. Revision:
No revisions at this time.
To revise this ICA, a letter must be submitted to the local FSDO with a copy of the revised FAA form 337, and revised ICA.

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 11/30/2007 | Electronic Tracking Number

For FAA Use Only

INSTRUCTIONS: Print or type all entries. See Title 14 CFR FAR 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: **N289ND**	Serial No.: **2844039**	
	Make: **Piper**	Model: **PA28R-201**	Series:
2. Owner	Name *(As shown on registration certificate)*: **Roscoe, Jerry P**	Address *(As shown on registration certificate)*: **6909 Bonheim Ct, McLean, VA 22101-5100**	

3. For FAA Use Only

This data identified herein complied with applicable airworthiness requirements and is approved only for the above described aircraft subject to conformity inspection by a person authorized in FAR 43.

APPROVING INSPECTOR

DATE MAR 18 2011

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

6. Conformity Statement

A. Agency's Name and Address: **Landmark Aviation, 1005 Sycolin Rd, Leesburg, VA 20175 USA**

B. Kind of Agency

	U.S. Certificated Mechanic		Manufacturer
	Foreign Certificated Mechanic	C. Certificate No.	
X	Certificated Repair Station	**YBJR768L**	
	Certificated Maintenance Organization		

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

Extended range fuel Per 14 CFR Part 43 App. B ☐

Signature/Date of Authorized Individual: **James Forgues 3/11/2011**

7. Approval for Return to Service

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

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

Certificate or Designation No.: **CRS YBJR768L**

Signature/Date of Authorized Individual: **William Hertz 3/11/2011**

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 accomplished.)

N289ND	3/11/2011
Nationality and Registration Mark	Date

Hobbs: 9301.0 **Tach: 6969.4**

1. Introduction:

The UMA Navigation Instrument Lighting consists of an AC voltage inverter controlled by a rheostat to adjust the lighting to the navigation instrument light wedges. The UMA Lights were installed for direct instrument lighting and control.

2. Description:

- Removed the following equipment:
  1. Whelen Post Lights P/N A350CN Series S/N NSN

- Installed the following equipment:
  1. UMA Instrument Lights P/N 2-31-W (3 1/8 instrument, wedge)
  2. UMA Instrument Lights P/N 2-35-W (3 1/8 instrument, undercut for VSI)
  3. UMA Instrument Lights P/N 2-30-W (3 1/8 instrument, notched)
  4. UMA Instrument Lights P/N 2-21-W (2 1/4 instrument, wedge)
  5. UMA Lighting Inverter P/N 10-700-14

Installed the UMA Instrument Lights & Inverter according to the UMA EL Bezel Light System Installation Instructions Doc. ST2222-100g dated 03/10/03 and similar to STC# SA01640NY (65-A90-1); and criteria specified in AC43.13-1B Chapter 11 and AC43.13-2B Chapters 2 & 11. Wiring secured to ensure no interference with engine or flight controls. Weight & Balance change negligible.

3. Control, operation information:

The UMA Instrument Light Wedges are controlled by the existing dimming rheostat labeled 'Panel Lights' mounted on the lower pilots instrument panel.

4. Servicing information:

The UMA Light Wedges are sandwiched between the instrument panel and their respective instruments. To remove each wedge, simply remove the associated instrument and the wedge will be released. The Lighting Inverter is mounted on the RH side of the aircraft behind the side panel interior cover at F.S 60.0. Remove RH interior side cover to gain access to the Inverter. Verified existing instrument light dimmer control system capable of UMA instrument electrical load through existing 5amp circuit breaker labeled "Inst Pnl Lts" located in RH subpanel accessible to the pilot in flight. Per manufacturer's instruction, check operation on an annual basis. Replace light wedges if it fails to operate.

5. Maintenance instructions:

Maintenance of the UMA Light Wedges and Inverter are "on condition" only. Periodic maintenance is not required.

6. Troubleshooting Information:

If an instrument wedge fails to light, the leads to the bezel were likely damaged during maintenance of another item in the panel. Over the rated useful life at full intensity of 10,000 hours operation, illumination level will diminish. The rating will be extended by operation at reduced levels.

7. Removal and replacement information:

The UMA Light Wedges and Inverter can be removed from the aircraft using standard shop tools. Future removal/reinstallation is governed by standard acceptable maintenance practices.

CONTINUED

☒ Additional Sheets Are Attached

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 accomplished.)

N289ND	3/11/2011
Nationality and Registration Mark	Date

8. Diagrams:
None applicable.

9. Special inspection requirements:
None applicable.

10. Application of protective treatments:
None applicable.

11. Data:
None applicable.

12. List of special tools:
None applicable.

13. For Commuter Category Aircraft:
Not applicable.

14. Recommended overhaul periods:
No additional overhaul time limitations.

15. Airworthiness Limitation Section:
No additional Airworthiness limitations.

16. Revision:
No revisions at this time.
To revise this ICA, a letter must be submitted to the local FSDO with a copy of the revised FAA form 337, and revised ICA.

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 11/30/2007 | Electronic Tracking Number

For FAA Use Only

INSTRUCTIONS: Print or type all entries. See Title 14 CFR FAR 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: **N289ND**	Serial No.: **2844039**	
	Make: **Piper**	Model: **PA28R-201**	Series:
2. Owner	Name *(As shown on registration certificate)*: **Roscoe, Jerry P**	Address *(As shown on registration certificate)*: **6909 Bonheim Ct, McLean, VA 22101-5100**	

3. For FAA Use Only

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

6. Conformity Statement

A. Agency's Name and Address: **Landmark Aviation, 1005 Sycolin Road, Leesburg, VA 20175 USA**

B. Kind of Agency

	U.S. Certificated Mechanic		Manufacturer
	Foreign Certificated Mechanic	C. Certificate No.	
X	Certificated Repair Station	**YBJR768L**	
	Certificated Maintenance Organization		

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

Extended range fuel Per 14 CFR Part 43 App. B ☐

Signature/Date of Authorized Individual: **James Forgues 4/11/2011**

7. Approval for Return to Service

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

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

Certificate or Designation No.: **CRS YBJR768L**

Signature/Date of Authorized Individual: **William Hertz 4/11/2011**

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 accomplished.)

N289ND	4/11/2011
Nationality and Registration Mark	Date

Tach: 6969.4 **Hobbs: 9301.0**

See Attached Instructions for Continued Airworthiness Inspection

A. Removed the following equipment:

1.	Turn Coordinator	P/N 1394T100-7Z	S/N K07-12271

B. Installed the following equipment:

1.	Turn Coordinator	P/N 01260-0-0-14	S/N 01260-1109-07090 D
2.	Pitch Computer	P/N 01261-4-14	S/N 01261-1112-06898 A
3.	Roll Servo	P/N 0105-R9	S/N 00105-1108-24579 CEFGJ
4.	Pitch Servo	P/N 0107-P4	S/N 00107-1108-19547 CDEFGJK
5.	Trim Servo	P/N 0105-8—T6	S/N 00105-1108-24580 CEFGJ
6.	Pressure Transducer	P/N 0111	S/N 00111-1105-42389 AA
7.	Cable Assembly	P/N 39188-2	S/N X0838-2
8.	Cable Assembly	P/N 39189-4	S/N Cable-1109-04183
9.	GPSS/HDG Switch Assembly	P/N 03975	S/N 03975-1043-06657
10.	GPSS Remote Converter	P/N 03976	S/N 03976-1108-11150 E/A

C. Installed the S-TEC System 30 autopilot according to the S-TEC STC# SA09287AC-D (PA28R-201) Installation Model ST-729 FAA Approved Bulletin No. 829; the Stec Manual Electric Trim System STC# SA7805SW-D (PA28R-201) Installation Model ST-474 FAA Approved Bulletin No. 574; the Stec GPSS/HDG RS232 Converter Interface ST-901 FAA Approved Bulletin No. 901; S-TEC General Installation Information Bulletin No. 700; and criteria specified in AC 43.13-1B Chapters 11 and 12, and AC43.13-2B Chapters 1 and 2.

D. Electrical power to the Autopilot system is provided from Aircraft 14 volt DC avionics buss through a Klixon 5 amp circuit breaker labeled 'AUTOPILOT'. Electrical power to the Turn Coordinator is provided from the aircraft 14 volt DC battery buss through an existing 5 amp circuit breaker labeled 'TURN & BANK'. Both circuit breakers are mounted in the right circuit breaker panel and are accessible to the pilot in flight.

E. The Turn Coordinator/Controller was installed in the pilot instrument panel at F.S. 59.7, the Pitch Computer was installed in the aft fuselage at F.S. 187.0, the Roll Servo was installed in the left wing at F.S. 118.0, the Pitch Servo was installed in the aft fuselage at F.S. 331.3, the Trim Servo was installed in the aft fuselage at F.S. 159.0, and the Pressure Transducer was installed forward of pilot instrument panel at F.S. 52.0. The GPSS Switch was installed at the instrument panel F.S. 61.5. The GPSS Converter was installed forward of the pilot instrument panel at F.S. 54.0.

F. The S-TEC System 30 is integrated to the KI525A HSI for HDG steering and GNS430W for GPS steering through the GPSS/HDG switch converter; as well as the GNS430W(#1 Nav) and KX155A (#2 Nav) for Nav Track steering.

G. An electrical load analysis was performed and found that the continuous load of the alternator does not exceed 80% of capacity.

H. A complete operational test was performed of the Autopilot system according to the Ground Check procedure in General Installation Information Bulletin No. 700. The equipment performed satisfactorily and did not adversely affect existing components or systems in the aircraft as required by FAR 23.1309.

I. A FAA Approved Airplane Flight Manual Supplement S-TEC p/n 891545 was placed in the aircraft POH. An Stec System 30 Pilot's Guide was placed in the aircraft.

J. The aircraft equipment list was revised to reflect these changes; weight and balance data was revised and placed in the aircraft records. Appropriate logbook entries made.

END

☐ Additional Sheets Are Attached

S-TEC

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

S-TEC System 20/30, 30 ALT, 40/50, 40X/50X, 55/55X, 60-1, 60-2, PSS, 65, 01284 (MAGIC 2100) Autopilots and Yaw Damper/Trim Systems

1. Introduction

This modification was performed on **Piper models PA-28R-180, PA-28R-200, PA-28R-201, and PA-28R-201T.** The following information, in conjunction with the STC Installation Bulletin (S-TEC P/N) **829**, Master Drawing List **921031, dated 7-11-02** and AFM Supplement(s) **891541, 891542, 891543, 891544, 891545, and 891546, dated 10-13-97** provide adequate guidance to determine that these systems are airworthy.

2. Description

This STC involves the installation of an S-TEC flight control system (System 20/30, 30ALT, 40/50, 40X/50X, 55/55X, 60-1, 60-2, PSS, 65, 01284 (MAGIC 2100) Autopilot and/or Yaw Damper/Trim Systems). The installation may include one or all of the following installations:

Roll servo
Pitch servo
Trim servo (elevator)
Yaw servo
Panel or remotely mounted pitch/roll/yaw computers
Panel mounted controllers, indicators, switches, and breakers
Barometric pressure transducer/static source
Flap motion sensor
Optional systems (flight director/steering horizon, autotrim system, annunciator, altitude selector/alerter, GPSS converter (has separate ICAW), directional gyro, HSI, and/or other optional systems)

Servo installations utilize aluminum bracketry to secure the servos to the airframe. Attachment to the aircraft primary flight controls and trim systems is accomplished through cable, push-rod, and/or chain assemblies. Installation data for all components listed in the STC are included in the Installation Bulletin **829**. Approved interconnections to navigation systems and heading systems are detailed in the Bulletin as well.

3. Controls, Operation Information

Operation of the autopilot and other systems is described in the FAA Approved Flight Manual Supplement(s) (S-TEC P/N) **891541, 891542, 891543, 891544, 891545, and 891546, dated 10-13-97.** Specialized controls, annunciation, operation and interpretation are covered in this required document and in S-TEC Pilot's Operating Handbooks that supplement the approved AFMS.

4. Servicing Information

All servicing of items included in this STC must be accomplished by approved S-TEC dealers using S-TEC Dealer Maintenance Manuals and S-TEC Test Equipment. Locations and access to the components installed under this STC are described and depicted in the installation drawings and Installation Manual. Removal and replacement of components should be determined by functional checks indicated in the AFM Supplement and the Ground Checks and Flight Adjustment section of the Installation Bulletin for Model **ST-729**.

S-TEC

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

S-TEC System 20/30, 30 ALT, 40/50, 40X/50X, 55/55X, 60-1, 60-2, PSS, 65, 01284 (MAGIC 2100) Autopilots and Yaw Damper/Trim Systems

5. Maintenance Instructions

Condition and/or airworthiness inspections required under FAR Part 43, or other FAA approved programs, should include several items regarding the S-TEC autopilot System installed in the aircraft.

1. Perform functional checks indicated in the AFM Supplement and the Ground Checks and Flight Adjustment section of the Installation Bulletin for Model **ST-729**.
2. Component installations should be checked against Installation Bulletin for Model **ST-729** to confirm integrity and condition.
3. In servo installations utilizing bridle cables, tension should be verified against values indicated on the Roll/Pitch/Trim/Yaw Servo Installation drawing(s) (found in the Bulletin Master Drawing List) **921031, dated 7-11-02**. Check for frayed or misaligned bridle cables and excess wear or looseness of any associated idler pulleys.
4. Servo installations utilizing push-rod or chain actuation should be inspected for condition.

6. Trouble Shooting Information

Trouble-shooting this equipment should only be accomplished by authorized S-TEC Dealers with required test equipment and service data. System function should be determined through functional checks indicated in the AFM Supplement(s) **891541, 891542, 891543, 891544, 891545, and 891546, dated 10-13-97** and the Ground Checks and Flight Adjustment section of the Installation Bulletin for Model **ST-729**.

7. Removal and Replacement Information

All components can be removed with common tools and practices. Installation of components required for this alteration must be in accordance with the approved data contained in the Installation Bulletin for Model **ST-729**.

8. Diagrams

See Installation Bulletin for Model **ST-729**.

9. Special Inspection

N/A

10. Application of Protective Treatments

Servos, transducers, flap position sensors should be removed prior to application of corrosion (or other) treatments. Panel mounted components should not be exposed to these treatments.

11. Structural Fasteners

See parts list in the Installation Bulletin for Model **ST-729** for TSO, PMA, and standard hardware information.

12. Special Tools

N/A

13. The following additional information is being supplied (required for Commuter category airplanes):

Electrical loads are described in the Component Weights and Current Drain section of the Installation Bulletin for Model **ST-729**.

14. Overhaul Time Limitations

N/A

15. Airworthiness Limitations

None.

16. Revisions

The S-TEC Service Letter/Bulletin program will be utilized to inform aircraft operators of significant changes to this ICA. Contact S-TEC Corporation at 1-800-USA-STEC.

S-TEC

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

S-TEC System 20/30, 30 ALT, 40/50, 40X/50X, 55/55X, 60-1, 60-2, PSS, 65 Autopilots and Yaw Damper/Trim Systems

1. Introduction

This modification was performed on **Piper models PA-28R-180, PA-28R-200, PA-28R-201, and PA-28R-201T**. The following information, in conjunction with the STC Installation Bulletin (S-TEC P/N) **574**, Master Drawing List **92549, dated 3-14-02; and 92549-1, dated 3-14-02** and AFM Supplement(s) **89940, dated 8-30-91; 891214, dated 1-17-96** provide adequate guidance to determine that these systems are airworthy.

2. Description

This STC involves the installation of an S-TEC flight control system (System 20/30, 30ALT, 40/50, 40X/50X, 55/55X, 60-1, 60-2, PSS, 65 Autopilot and/or Yaw Damper/Trim Systems). The installation may include one or all of the following installations:

Roll servo
Pitch servo
Trim servo (elevator)
Yaw servo
Panel or remotely mounted pitch/roll/yaw computers
Panel mounted controllers, indicators, switches, and breakers
Barometric pressure transducer/static source
Flap motion sensor
Optional systems (flight director/steering horizon, autotrim system, annunciator, altitude selector/alerter, GPSS converter (has separate ICAW), directional gyro, HSI, and/or other optional systems)

Servo installations utilize aluminum bracketry to secure the servos to the airframe. Attachment to the aircraft primary flight controls and trim systems is accomplished through cable, push-rod, and/or chain assemblies. Installation data for all components listed in the STC are included in the Installation Bulletin **574**. Approved interconnections to navigation systems and heading systems are detailed in the Bulletin as well.

3. Controls, Operation Information

Operation of the autopilot and other systems is described in the FAA Approved Flight Manual Supplement(s) (S-TEC P/N) **89940, dated 8-30-91; 891214, dated 1-17-96**. Specialized controls, annunciation, operation and interpretation are covered in this required document and in S-TEC Pilot's Operating Handbooks that supplement the approved AFMS.

4. Servicing Information

All servicing of items included in this STC must be accomplished by approved S-TEC dealers using S-TEC Dealer Maintenance Manuals and S-TEC Test Equipment. Locations and access to the components installed under this STC are described and depicted in the installation drawings and Installation Manual. Removal and replacement of components should be determined by functional checks indicated in the AFM Supplement and the Ground Checks and Flight Adjustment section of the Installation Bulletin for Model **ST-474**.

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

S-TEC System 20/30, 30 ALT, 40/50, 40X/50X, 55/55X, 60-1, 60-2, PSS, 65 Autopilots and Yaw Damper/Trim Systems

5. Maintenance Instructions

Condition and/or airworthiness inspections required under FAR Part 43, or other FAA approved programs, should include several items regarding the S-TEC autopilot System installed in the aircraft.

1. Perform functional checks indicated in the AFM Supplement and the Ground Checks and Flight Adjustment section of the Installation Bulletin for Model **ST-474.**
2. Component installations should be checked against Installation Bulletin for Model **ST-474** to confirm integrity and condition.
3. In servo installations utilizing bridle cables, tension should be verified against values indicated on the Roll/Pitch/Trim/Yaw Servo Installation drawing(s) (found in the Bulletin Master Drawing List) **92549, dated 3-14-02; and 92549-1, dated 3-14-02** Check for frayed or misaligned bridle cables and excess wear or looseness of any associated idler pulleys.
4. Servo installations utilizing push-rod or chain actuation should be inspected for condition.

6. Trouble Shooting Information

Trouble-shooting this equipment should only be accomplished by authorized S-TEC Dealers with required test equipment and service data. System function should be determined through functional checks indicated in the AFM Supplement(s) **89940, dated 8-30-91; 891214, dated 1-17-96** and the Ground Checks and Flight Adjustment section of the Installation Bulletin for Model **ST-474.**

7. Removal and Replacement Information

All components can be removed with common tools and practices. Installation of components required for this alteration must be in accordance with the approved data contained in the Installation Bulletin for Model **ST-474.**

8. Diagrams

See Installation Bulletin for Model **ST-474.**

9. Special Inspection

N/A

10. Application of Protective Treatments

Servos, transducers, flap position sensors should be removed prior to application of corrosion (or other) treatments. Panel mounted components should not be exposed to these treatments.

11. Structural Fasteners

See parts list in the Installation Bulletin for Model **ST-474** for TSO, PMA, and standard hardware information.

12. Special Tools

N/A

13. The following additional information is being supplied (required for Commuter category airplanes):

Electrical loads are described in the Component Weights and Current Drain section of the Installation Bulletin for Model **ST-474.**

14. Overhaul Time Limitations

N/A

15. Airworthiness Limitations

None.

16. Revisions

The S-TEC Service Letter/Bulletin program will be utilized to inform aircraft operators of significant changes to this ICA. Contact S-TEC Corporation at 1-800-USA-STEC.

S-TEC

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

S-TEC GPSS ARINC 429/RS232 CONVERTER/INTERFACE

1. Introduction

This installation is an optional addition to S-TEC autopilots Models 60/65, 55, 40/50, and 20/30 when installed with a heading system and a GPS unit with ARINC 429/RS232 roll steering output. It is installed in accordance with S-TEC Installation Bulletin 901 which is included in the General Installation Bulletin for each autopilot system. Bulletin 901 contains Master Drawing List 921170, dated December 6, 2001 or later FAA approved revision. There is a Pilot's Operating Handbook, P/N 8799.

2. Description

This installation provides S-TEC autopilots with the capability of accepting GPS roll steering outputs and using them to control aircraft track through the autopilot heading mode. It consists of a panel mounted combination switch/annunciator/converter unit or a panel mounted switch/annunciator with a remote mounted converter and connecting cabling to the autopilot and the aircraft heading sensor. Installation data for all components is included in Bulletin 901.

3. Controls, Operation Information

Operation of the GPSS 429/RS232 Converter/Interface Unit is described in S-TEC Pilot's Operating Handbook P/N 8799 that supplements the approved AFMS for each autopilot installation.

4. Servicing Information

All servicing of the GPSS 429/RS232 Converter/Interface must be accomplished by approved S-TEC dealers using S-TEC Dealer Maintenance Manuals and S-TEC Test Equipment. Locations and access to the components of this installation are described and depicted in the installation drawings and Installation Manual. Removal and replacement of components should be determined by functional checks indicated in the Pilot's Operating Handbook and the Post Installation and Functional Tests section of Installation Bulletin 901.

5. Maintenance Instructions

Condition and/or airworthiness inspections required under FAR Part 43, or other FAA approved programs, should include the items shown below for the GPSS 429/RS232 Converter/Interface when installed in the aircraft.

1. Perform functional checks indicated in the Pilot's Operating Handbook and the Post Installation and Functional Tests section of Installation Bulletin 901.
2. Component installations should be checked against Installation Bulletin 901 to confirm integrity and condition.

6. Trouble Shooting Information

Trouble-shooting this equipment should only be accomplished by authorized S-TEC Dealers with required test equipment and service data. System function should be determined through functional checks indicated in the Pilot's Operating Handbook and the Post Installation and Functional Tests section of Installation Bulletin 901.

7. Removal and Replacement Information

All components can be removed with common tools and practices. Installation of components required for this alteration must be in accordance with the approved data contained in Installation Bulletin 901.

S-TEC

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

S-TEC GPSS ARINC 429/RS232 CONVERTER/INTERFACE

8. Diagrams

See Installation Bulletin 901.

9. Special Inspection

N/A

10. Application of Protective Treatments

GPSS 429/RS232 Converter/Interface components should not be exposed to these treatments.

11. Structural Fasteners

See parts list in the Installation Bulletin 901 for TSO, PMA, and standard hardware information.

12. Special Tools

N/A

13. The following additional information is being supplied (required for Commuter category airplanes):

Electrical loads are described in the Component Weights and Current Drain section of Installation Bulletin 901.

14. Overhaul Time Limitations

N/A

15. Airworthiness Limitations

None.

16. Revisions

The S-TEC Service Letter/Bulletin program will be utilized to inform aircraft operators of significant changes to this ICA. Contact S-TEC Corporation at 1-800-USA-STEC.

US Department of Transportation
Federal Aviation Administration

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

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

For FAA Use Only

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

1. Aircraft

Nationality and Registration Mark	Serial No.	
N289ND	2844039	
Make	**Model**	**Series**
Piper	PA-28R-201	

2. Owner

Name *(As shown on registration certificate)*	Address *(As shown on registration certificate)*
University of North Dakota John D. Odegard School of Aerospace Sciences	Address 3980 Campus Rd Stop 9007 City Grand Forks State ND Zip 58202-9007 Country USA

3. For FAA Use Only

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

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency		
Name John D. Odegard School of Aerospace Sciences	☐	U. S. Certificated Mechanic	☐ Manufacturer
Address Grand Forks Int. Airport Mark Andrews Field	☐	Foreign Certificated Mechanic	C. Certificate No.
City Grand Forks State ND	✓	Certificated Repair Station	
Zip 58202 Country USA	☐	Certificated Maintenance Organization	OG5R092N

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

Extended range fuel per 14 CFR Part 43 App. B	Signature/Date of Authorized Individual
☐	Joel D. Robberstad 12-22-2010 Joel Robberstad

7. Approval for Return to Service

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

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

Certificate or Designation No.	Signature/Date of Authorized Individual
OG5R092N	Joel D. Robberstad 12-22-2010 Joel Robberstad

FAA Form 337 (10-06)

NOTICE

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

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

N289ND	12/22/2010
Nationality and Registration Mark	Date

1. Removed Garmin GDL90 UAT data link sensor previously installed with FAA Form 337 Dated 1/31/2008.

2. Revised Weight and Balance and Equipment List.

☐ 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 2/28/2011

Electronic Tracking Number

For FAA Use Only

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

1. Aircraft	Nationality and Registration Mark: N289ND	Serial No.: 2844039	
	Make: Piper	Model: PA-28R-201	Series:
2. Owner	Name *(As shown on registration certificate)*: University of North Dakota	Address *(As shown on registration certificate)*: Address PO Box 9007; City Grand Forks; State ND; Zip 58202-9007; Country USA	

3. For FAA Use Only

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

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency		
Name Odegaard Wings, Inc. Brent Meester	☑	U. S. Certificated Mechanic	☐ Manufacturer
Address 111 First Ave. N. Hangar #5	☐	Foreign Certificated Mechanic	C. Certificate No.
City Kindred State ND	☐	Certificated Repair Station	
Zip 58051 Country USA	☐	Certificated Maintenance Organization	2806269

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

Extended range fuel per 14 CFR Part 43 App. B ☐	Signature/Date of Authorized Individual
	Brent Meester 9-14-2010

7. Approval for Return to Service

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

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

Certificate or Designation No.	Signature/Date of Authorized Individual
2806269	Brent Meester 9-14-2010

FAA Form 337 (10-06)

NOTICE

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

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

N289ND	9/14/2010
Nationality and Registration Mark	Date

Repaired door by fabricating doubler for door frame by lower hinge. Repaired door skin by fabricating lower half and splicing forward and aft of window. Repaired using original rivet size, spacing and edge distance. All work done in accordance with AC 43.13-1B, chapter 4, section 4, paragraph 58, subparagraph G & H, and FAR part 43.13, paragraph A & B. Door not painted or installed by this agency.

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 2/28/2011 | Electronic Tracking Number

For FAA Use Only

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

1. Aircraft	Nationality and Registration Mark: N289ND	Serial No.: 2844039	
	Make: Piper	Model: PA-28R-201	Series:
2. Owner	Name *(As shown on registration certificate)*: University of North Dakota	Address *(As shown on registration certificate)*: Address PO Box 9007; City Grand Forks; State ND; Zip 58202-9007; Country USA	

3. For FAA Use Only

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

6. Conformity Statement

A. Agency's Name and Address

Name: Odegaard Wings, Inc. Brent Meester
Address: 111 First Ave. N. Hangar #5
City: Kindred State: ND
Zip: 58051 Country: USA

B. Kind of Agency

- ☑ U. S. Certificated Mechanic
- ☐ Foreign Certificated Mechanic
- ☐ Certificated Repair Station
- ☐ Certificated Maintenance Organization
- ☐ Manufacturer

C. Certificate No.: 2806269

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

Extended range fuel per 14 CFR Part 43 App. B ☐

Signature/Date of Authorized Individual: Brent Meester 9-14-2010

7. Approval for Return to Service

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

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

Certificate or Designation No.: 2806269

Signature/Date of Authorized Individual: Brent Meester 9-14-2010

FAA Form 337 (10-06)

NOTICE

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

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

N289ND	9/14/2010
Nationality and Registration Mark	Date

Repaired door by fabricating doubler for door frame by lower hinge. Repaired door skin by fabricating lower half and splicing forward and aft of window. Repaired using original rivet size, spacing and edge distance. All work done in accordance with AC 43.13-1B, chapter 4, section 4, paragraph 58, subparagraph G & H, and FAR part 43.13, paragraph A & B. Door not painted or installed by this agency.

END

☐ Additional Sheets Are Attached

U.S. Department of Transportation
Federal Aviation Administration

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

Form Approved OMB No.2120-0020 11/30/2007 | Electronic Tracking Number

For FAA Use Only

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

1. Aircraft

Nationality and Registration Mark	Serial No.
N289ND	2844039

Make	Model	Series
Piper	PA-28R-201	

2. Owner

Name (As shown on registration certificate)
University of North Dakota
John D Odegard School of Aerospace Sciences

Address (As shown on registration certificate)
Address: University Avenue and Tulane Drive, PO Box 9007
City: Grand Forks State: ND
Zip: 58202-9007 Country:

3. For FAA Use Only

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

6. Conformity Statement

A. Agency's Name and Address
Name: University of North Dakota
Address: PO Box 9007 University Station
City: Grand Forks State: ND
Zip: 58202-9023 Country:

B. Kind of Agency

	U.S. Certificated Mechanic		Manufacturer
	Foreign Certificated Mechanic	C. Certificate No.	
X	Certificated Repair Station	0G5R092N	
	Certificated Maintenance Organization		

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

Extended range fuel per 14 CFR Part 43 App. B ☐

Signature/Date of Authorized Individual: Kirk Peterson 1/31/08

7. Approval for Return To Service

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

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

Certificate or Designation No.: 0G5R092N

Signature/Date of Authorized Individual: Kirk Peterson 1/31/08

FAA Form 337 (10-06)

NOTICE

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

8. Description of Work Accomplished

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

N289ND	1/31/08
Nationality and Registration Mark	Date

1. Installed Garmin GMX 200 Multifunction Display per STC SA01692SE and Installation Manual 190-00607-04 RB. Instructions for Continued Airworthiness are contained in the Installation Manul.

2. Installed GDL 90 UAT Data Link Sensor per STC SA02217AK and Installation Manual 560-1049-02 REV B. Instructions for Continued Airworthiness are contained within this Installation Manual.

3. Installed FAA Approved Flight Manual Supplements in the aircraft.

4. Revised Weight and Balance and Equipment List.

5. An electrical load analysis has been conducted with reference. to AC43.13-1B Chapter 11, Section 3 paragraph 11-33.

********** NOTHING FOLLOWS **********

☑ Additional Sheets Are Attached

United States of America

Department of Transportation—Federal Aviation Administration

Supplemental Type Certificate

Number **SA01692SE**

This certificate, issued to: **Garmin AT, Inc.**
2345 Turner Road SE
Salem, OR 97302

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

Original Product—Type Certificate Number: *See attached Approved Model List (AML)

Make: No. SA01692SE for list of approved aircraft

Model: models and applicable airworthiness regulations.

Description of the Type Design Change: Installation of a Garmin GMX200 Multi Function Display in accordance with Garmin Supplemental Type Certificate Master Data List, P/N 005-C0315-00, Revision A, dated July 25, 2006, or later FAA approved revision.

Limitations and Conditions: Compatibility of this design change with previously approved modifications must be determined by the installer. A copy of this certificate and the FAA approved Flight Manual Supplement, Garmin Document No. 190-00607-01, Revision A, dated August 11, 2006, or later FAA approved revision must be maintained as part of the permanent records for the modified aircraft.

If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission.

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

Date of application: July 18, 2005 *Date reissued:*

Date of issuance: August 11, 2006 *Date amended:*

FEDERAL AVIATION ADMINISTRATION

By direction of the Administrator

Kenneth Bairstow

(Signature)

Acting Manager, Seattle Aircraft Certification Office

(Title)

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

This certificate may be transferred in accordance with FAR 21.47.

FAA FORM 8110-2(10-68)

United States Of America

Department of Transportation - Federal Aviation Administration

Supplemental Type Certificate

Number SA02217AK

This Certificate issued to GARMIN AT, Inc.
2345 Turner Road SE
Salem, OR 97302

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

Original Product Type Certificate Number: * See attached FAA Approved Model List (AML) No. SA02217AK, dated December 1, 2004, or later FAA approved revision, for a list of approved airplane models and applicable airworthiness applications.

Make:

Model:

Description of Type Design Change: Installation of Garmin AT Model GDL90 UAT Data Link System, in accordance with Garmin AT, Inc., GDL 90 UAT Master Data List, P/N 560-0278-01, Revision A, dated November 12, 2004, or later FAA approved revision.

Limitations and Conditions: Compatibility of this design change with previously approved modifications must be determined by the installer

FAA approved Airplane Flight Manual Supplement, Document Number 560-0277-00, Revision B, dated December 1, 2004 or later FAA approved revision is a required part of this installation.

For Instructions for Continued Airworthiness refer to Garmin AT GDL 90 UAT Data Link Sensor Instructions for Continued Airworthiness, P/N 560-0279-01, Revision A, dated November 12, 2004, or later FAA approved revision.

If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission.

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

Date of application: December 01, 2003

Date reissued:

Date of issuance: June 08, 2004

Date amended: December 1, 2004

Federal Aviation Administration

By direction of the Administrator

(Signature)

Gregory J. Holt
Manager
Anchorage Aircraft Certification Office

(Title)

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

This certificate may be transferred in accordance with FAR 21.47.

APR 29 2005

U.S. Department of Transportation
Federal Aviation Administration

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

Form Approved
OMB No.2120-0020

For FAA Use Only

Office Identification
GL-21

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: New Piper	Model: PA-28R-201
	Serial No.: 2844039	Nationality and Registration Mark: N289ND
2. Owner	Name (As shown on registration certificate): University of North Dakota	Address (As shown on registration certificate): PO Box 9007 Grand Forks, ND 58202-9007

3. For FAA Use Only

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

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

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency	C. Certificate No.
JDO School of Aerospace Sciences Grand Forks Intl. Airport Mark Andrews Field Grand Forks, ND 58203	[ ] U.S. Certificated Mechanic [ ] Foreign Certificated Mechanic [X] Certificated Repair Station [ ] Manufacturer	OG5R092N

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

Date	Signature of Authorized Individual
4/27/05	Morgan R. Stroh — Morgan R. Stroh

7. Approval for Return To Service

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

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

Date of Approval or Rejection	Certificate or Designation No.	Signature of Authorized Individual
4/27/05	OG5R092N	Stephen J. Carpenter

FAA Form 337 (12-88)

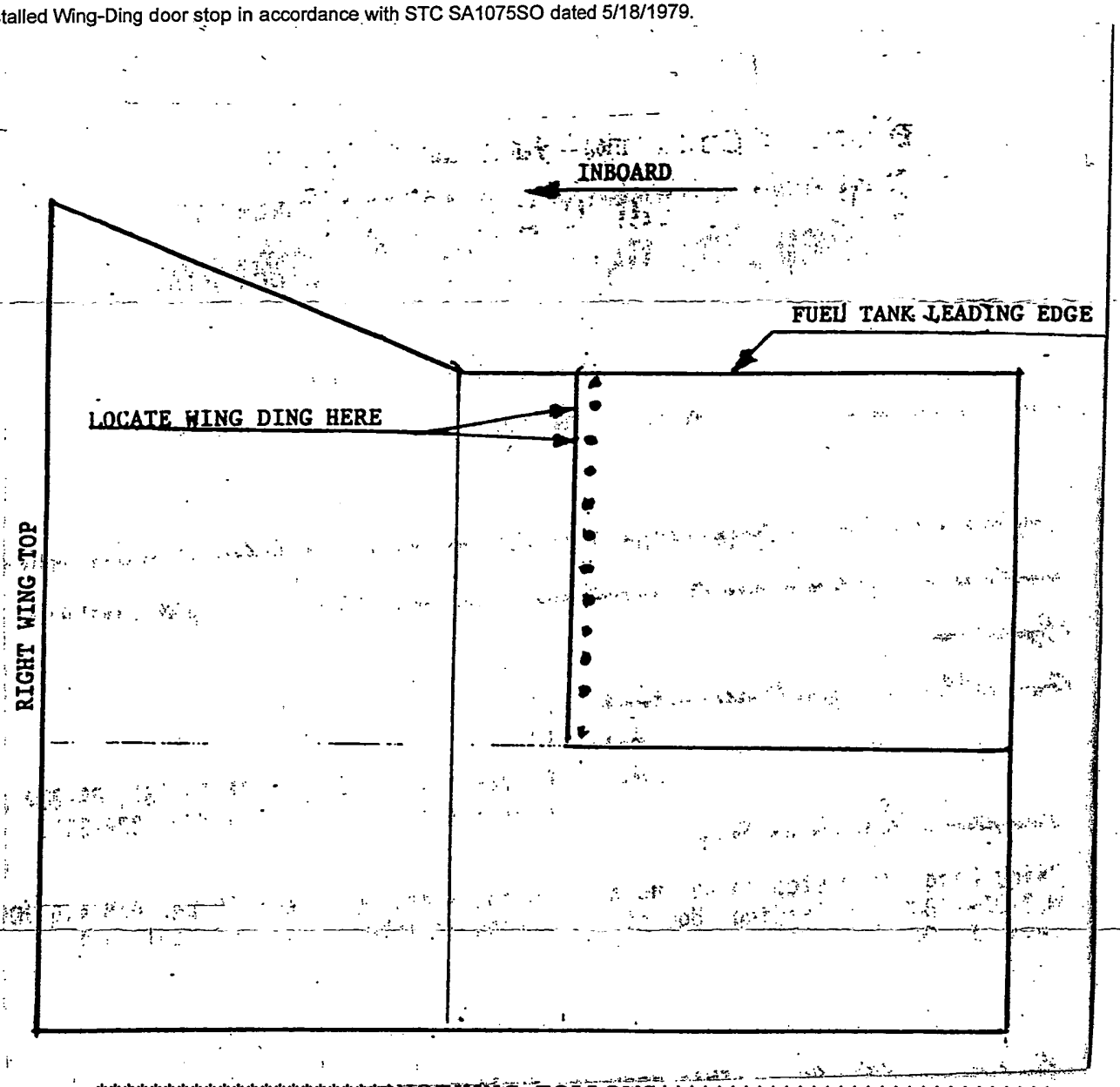
NOTICE

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

8. Description of Work Accomplished

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

Installed Wing-Ding door stop in accordance with STC SA1075SO dated 5/18/1979.



**********NOTHING FOLLOWS**********

☐ Additional Sheets Are Attatched

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

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

1. Aircraft	Make Piper	Model PA-28R-201
	Serial No. 2844039	Nationality and Registration Mark N289ND
2. Owner	Name (As shown on registration certificate) University of North Dakota John D Odegard School of Aerospace Sciences	Address (As shown on registration certificate) PO BOX 9007 Grand Forks ND 58202

3. For FAA Use Only

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

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

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency	C. Certificate No.
University of North Dakota PO Box 9007 Grand Forks ND 58202	☐ U.S. Certificated Mechanic ☐ Foreign Certificated Mechanic ☑ Certificated Repair Station ☐ Manufacturer	OG5R092N

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 3-15-01 | Signature of Authorized Individual Kirk Peterson — Kirk Peterson

7. Approval for Return To Service

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

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

Date of Approval or Rejection	Certificate or Designation No.	Signature of Authorized Individual
3-15-01	0G5R092N	Kirk Peterson — Kirk Peterson

FAA Form 337 (12-88)

NOTICE

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

8. Description of Work Accomplished

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

1. Installed flighthour meter per FAA 337 dated 7 February 2001. This 337 was approved for duplication on identical aircraft when accomplished by the original modifier. Unit receives power from weight off wheels switch and ground through engine oil pressure switch.

2. Removed engine hourmeter power wire from oil pressure switch and connected to wire M1A20 power wire. Rerouted engine hourmeter ground through engine oil pressure switch. Engine hourmeter operates identically to original configuration. It now receives ground through oil pressure switch instead of power. The engine oil pressure switch goes to no other device except the engine hourmeter and the installed flighthour meter.

3. Referred to and complied with AC43.13-1B Chapter 11, section 3, section 4, section 5, section 6, and section 8.

4. Revised weight and balance and equipment lists.

5. Continued airworthiness is assured by the phase 1 inspection which requires an inspection of the instrument panel wiring, instrument mounting and condition of components.

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

☒ Additional Sheets Are Attached

U.S. Department of Transportation
Federal Aviation Administration

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

Form Approved
OMB No.2120-0020

For FAA Use Only

Office Identification
GL 21

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

1. Aircraft	Make: Piper	Model: PA-28R201
	Serial No.: 2844039	Nationality and Registration Mark: N289ND
2. Owner	Name (As shown on registration certificate): UNIVERSITY OF NORTH DAKOTA	Address (As shown on registration certificate): PO BOX 9007 GRAND FORKS, ND 58202-9007

3. For FAA Use Only

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

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

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency	C. Certificate No.
JDOSAS Grand Forks International Airport Mark Andrews Field GRAND FORKS, ND 58202	[ ] U.S. Certificated Mechanic [ ] Foreign Certificated Mechanic [X] Certificated Repair Station [ ] Manufacturer	OG5R092N

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

Date	Signature of Authorized Individual
3/29/01	Robert J. Martin Robert J. Martin

7. Approval for Return To Service

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

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

Date of Approval or Rejection	Certificate or Designation No.	Signature of Authorized Individual
3/29/01	OG5R092N	Robert J. Martin Robert J. Martin

FAA Form 337 (12-88)

NOTICE

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

8. Description of Work Accomplished

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

Installed Bracket Air Filter, Part Number BA-105 in accordance with STC-SA693CE list #1 and FAA-PMA supplement #1. For continued airworthiness the installation will be maintained in accordance with the manufacturers recomendation. Weight and balance remain unchanged.

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

☐ Additional Sheets Are Attached

BRACKETT AIR FILTER DOCUMENT I-194

PLACE IN AIRCRAFT RECORDS

CONTINUED AIRWORTHINESS INSPECTION
REQUIREMENTS AS PER FAR 23.1529
AND GENERAL PROCEDURES OF PART 43

INSPECTION INTERVALS: Pre-flight inspections, engine backfire inspection, 100 hour inspections, annual inspections, filter element replacements.

INSPECTION PROCEDURES

A. Pre-flight inspection: Per Pilots Operating Handbook, check filter assembly for security, damage or 50% contamination of element face. If found report to maintenance personnel prior to flight.

B. Engine start-up backfire inspection: Prior to flight, check the entire intake system for security or damage. If a fire was present, the downstream face of the foam element will show erosion. If any irregularities are found see Chart I and also refer to the Aircraft Maintenance Manual for the intake system.

C. At element replacement intervals: With the element removed, inspect the filter grill, filter frame, filter mountings and entire intake system for security, wear and any deformation. Note: On filter assemblies with gaskets, visually inspect inside and outside of frame for any signs of gasket looseness, movement or deterioration. If found refer to Chart I or the proper maintenance manual for your aircraft or component.

PART	REPLACE	REWORK	INSTRUCTIONS
FRAME	X		COMPLETE NEW ASSEMBLY
GASKET	X		ON FILTER FRAME, REMOVE OLD NEOPRENE GASKET AND ALL TRACES OF ADHESIVE DOWN TO A CLEAN ANODIZED FRAME SURFACE. USE ADHESIVE 3M#847 OR DOW CORNING RTV-732. COAT ENTIRE MATING SURFACE (GASKET TO FRAME). APPLY ADHESIVE FOLLOWING MANUFACTURER'S LABEL DIRECTIONS. WHEN FRAME AND GASKET ARE PLACED TOGETHER, CLAMP OR WEIGHT DOWN AT .75 LB./SQ. IN. OF CONTACT AREA. ALLOW TO CURE 24 HOURS PRIOR TO INSTALLATION. PRIOR TO REINSTALLATION OF FILTER, CHECK AIRBOX MATING SURFACE FOR IRREGULARITIES. IF FOUND, CORRECT PER MANUFACTURER'S REQUIREMENTS. UPON REINSTALLATION CHECK THAT THE GASKET MAKES 100% CONTACT. THE GASKET SHOULD BE COMPRESSED 50% FOR OPTIMUM SEAL.
GRILL	X		REPLACE WITH NEW GRILL
HARDWARE	X		REPLACE UNSERVICEABLE WITH NEW
SCREEN	X		COMPLETE NEW ASSEMBLY
SCREEN/GASKET	X		COMPLETE NEW ASSEMBLY (ASSEMBLIES USING SCREEN GASKETS PRE 1981; BA-4106, BA-5110 AND BA-8110.)
ELEMENT	X		REPLACE ELEMENT

DATE: 3-16-94

CHART 1

BRACKETT AIR FILTERS

INSTRUCTIONS

ASSEMBLY PART NO BA-105, D.N. 6485709

APPROVED ON AIRCRAFT MODELS: SEE FAA APPROVED
APPLICABILITY LIST

REPLACES: Piper 460-630, CA-144PL

FAA APPROVAL DATA: STC-SA693CE List No. 1
FAA-PMA Supplement No. 1

Your new polyurethane air filter element has been designed to provide maximum dust collecting efficiency, good air flow, lightweight and economical replacement.. The element has been treated with a special treatment called a wetted agent and is approximately 98% efficient. The special wetted agent is the secret to the efficiency of capturing dust and repelling water. The element has also been treated with a fire retardant. For the above reasons, replace the element each 200 hours of use or every 12 months or when 50% covered with foreign material. DO NOT WASH AND REUSE.

INSTALLATION INSTRUCTIONS

STEP 1: Install filter using the same procedure as with the original filter.

STEP 2: Apply service decal to the filter canister. PLACE SO IT IS READABLE.

STEP 3: NOTE: After initial installation of filter assembly fill out FAA Form 337 for return to service. On future replacement of parts this form will not be required.

SERVICING: Under normal conditions, replace filter element, P/N BA-10, D.N. 6485684 after 200 hours use or 1 year intervals. Under severely dusty conditions, check daily and replace when element is 50% covered with foreign material.

Instruction Sheet
Part No. BA-105-3
Date: Rev. 8-23-88

Mfg. by:
Brackett Aircraft Co., Inc.
Kingman, AZ 86401

United States of America

Department of Transportation — Federal Aviation Administration

Supplemental Type Certificate

Number SA693CE

This certificate, issued to Brackett Aircraft Company, Inc.

certifies that the change in the type design for the following product with the limitations and conditions thereof as specified hereon meets the airworthiness requirements of Part Specified under "Certification Basis" on the applicable Data Sheets or Aircraft Specifications. *Regulations.*

Original Product — Type Certificate Number

Make As shown on Approved Model List(s).

Model

NOTE: FAA - Approved Model List(s) form a part of this Certificate.

Description of Type Design Change.

Replace existing engine induction air filter with AC Spark Plug Division filter in accordance with Approved AC Filter List(s).

Limitations and Conditions: This approval should not be extended to other specific airplanes of these models on which other previously approved modifications are incorporated unless it is determined that the interrelationship between this change and any of those other previously approved modifications will introduce no adverse effect upon the airworthiness of the airplanes.

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

Date of application: March 2, 1970

Date of issuance: March 26, 1970

Date reissued February 27, 1978, March 3, 1983

Date amended Date approved on Model List(s)

By direction of the Administrator

(Signature)

Supervisor, Aircraft Modification Section

(Title)

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

This certificate may be transferred in accordance with FAR 21.47.

FAA Form 8110-2 (10-68)

BRACKETT AIRCRAFT COMPANY INC.

STC SA693CE

APPROVED MODEL LIST NO. 1 PAGE NO. 5

BRACKETT FILTER MODEL BA-105 APPLICABILITY LIST

AIRPLANE MODEL	T.C. NO.	DESCRIPTION OF TYPE DESIGN CHANGE	APPROVED DATE
Piper PA28R-201 PA28RT-201	2A13	Install BA-105 filter assembly as a direct replacement part.	Jan. 9, 1981
Piper PA-44	A19SO	BA-105 defined by AC drawing no. 6485709.	Jan. 9, 1981
Grumman G164B	1A16		Jan. 9, 1981
Piper PA34-200 with Lycoming IO-360-C1E6 or LIO-360-C1E6 engine	A7SO		Jan. 29, 1974
Piper PA28R-180	2A13		Sept. 4, 1970
Piper PA-28R-200	2A13		Sept. 4, 1970
Piper PA30, PA39	A1EA		Sept. 4, 1970

O.M.B. No. 2120-0018

U.S. 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 attachment. For special flight permits complete Sections II and VI as applicable.

I. AIRCRAFT DESCRIPTION

1. REGISTRATION MARK	2. AIRCRAFT BUILDER'S NAME (Make)	3. AIRCRAFT MODEL DESIGNATION	4. YR. MFR.	FAA CODING
N289ND	PIPER	PA-28R-201	2000	1102816
5. AIRCRAFT SERIAL NO.	**6. ENGINE BUILDER'S NAME (Make)**	**7. ENGINE MODEL DESIGNATION**		41511
2844039	LYCOMING	IO-360-C1C6		
8. NUMBER OF ENGINES	**9. PROPELLER BUILDER'S NAME (Make)**	**10. PROPELLER MODEL DESIGNATION**	**11. AIRCRAFT IS (Check if applicable)**	
1	McCAULEY	B2D34C213-B	IMPORT	

II. CERTIFICATION REQUESTED

APPLICATION IF HEREBY MADE FOR: (Check applicable items)

A	1	X	STANDARD AIRWORTHINESS CERTIFICATE (Indicate category)	X	NORMAL		UTILITY		ACROBATIC		TRANSPORT		GLIDER		BALLOON	
B			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 AND PEST CONTROL	2		AERIAL SURVEYING	3		AERIAL ADVERTISING				
				4		FOREST (Wildlife conservation)	5		PATROLLING	6		WEATHER CONTROL				
				7		CARRIAGE OF CARGO	0		OTHER (Specify)							
N/A	4		EXPERIMENTAL (Indicate operation(s) to be conducted)	1		RESEARCH AND DEVELOPMENT	2		AMATEUR BUILT	3		EXHIBITION				
				4		RACING	5		CREW TRAINING			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 MAXIMUM CERTIFICATED TAKE-OFF WEIGHT										
				4		DELIVERING OR EXPORT	5		PRODUCTION FLIGHT TESTING							
				6		CUSTOMER DEMONSTRATION FLIGHTS										
C	6		MULTIPLE AIRWORTHINESS CERTIFICATE (Check ABOVE "Restricted Operation" and "Standard" or "Limited" as applicable.)													

III. OWNER'S CERTIFICATION

A. REGISTERED OWNER (As shown on certificate of aircraft registration) — IF DEALER, CHECK HERE → X

NAME	ADDRESS
THE NEW PIPER AIRCRAFT, INC.	2926 PIPER DRIVE, VERO BEACH, FL 32960

B. AIRCRAFT CERTIFICATION BASIS (Check applicable blocks and complete items as indicated)

X	AIRCRAFT SPECIFICATION OR TYPE CERTIFICATE DATA SHEET (Give No. and Revision No.) 2A13 REV.44	X	AIRWORTHINESS DIRECTIVES (Check if all applicable AD's complied with and give latest AD no.) 2000-24
	AIRCRAFT LISTING (Give page number(s)) N/A		SUPPLEMENTAL TYPE CERTIFICATE (List number of each STC incorporated) N/A

C. AIRCRAFT OPERATION AND MAINTENANCE RECORDS

X	CHECK IF RECORDS IN COMPLIANCE WITH ~~XXXXXX~~ FAR 91.417	TOTAL AIRFRAME HOURS 5.9	3	EXPERIMENTAL ONLY (Enter hours flown since last certificate issued or renewed) N/A

D. CERTIFICATION - I hereby certify that I am the registered owner (or his agent) of the aircraft described above, that the aircraft is registered with the Federal Aviation Administration in accordance with Section 501 of the Federal Aviation Act of 1958, and applicable Federal Aviation Regulations, and that the aircraft has been inspected and is airworthy and eligible for the airworthiness certificate requested.

DATE OF APPLICATION	NAME AND TITLE (Print or type)	SIGNATURE
DEC 19 2000	K.S. MC GLOTHLIN AGENT	

IV. INSPECTION AGENCY VERIFICATION

A. THE AIRCRAFT DESCRIBED ABOVE HAS BEEN INSPECTED AND FOUND AIRWORTHY BY (Complete this section only if FAR 21.183(d) applies).

2	FAR PART 121 or 127 CERTIFICATE HOLDER (Give Certificate No.)	3	CERTIFICATED MECHANIC (Give Certificate No.)	6	CERTIFICATED REPAIR STATION (Give Certificate No.)
2	AIRCRAFT MANUFACTURER (Give name or firm)				

DATE	TITLE	SIGNATURE

V. FAA REPRESENTATIVE CERTIFICATION

(Check ALL applicable blocks in items A and B)

A. I find that the aircraft described in Section I or VII meets requirements for
- X THE CERTIFICATE REQUESTED
- 4 AMENDMENT OR MODIFICATION OF CURRENT AIRWORTHINESS CERTIFICATE

B. Inspection for a special flight permit under Section VII was conducted by
- FAA INSPECTOR
- FAR DESIGNEE
- CERTIFICATE HOLDER UNDER
- FAR 65
- FAR 121, 127 OR 135
- FAR 145

DATE	DISTRICT OFFICE		DESIGNEE'S SIGNATURE AND NO.		FAA INSPECTOR'S SIGNATURE
DEC 19 2000	CE44	4	RICHARD L. MURDOCK DOA SO-1	1	

FAA Form 8130-6 (11-88) SUPERSEDES PREVIOUS EDITION

VI. PRODUCTION FLIGHT TESTING

A. MANUFACTURER

NAME	ADDRESS

B. PRODUCTION BASIS *(Check applicable item)*

- ☐ PRODUCTION CERTIFICATE *(Give production certificate number)*
- ☐ TYPE CERTIFICATE ONLY
- ☐ APPROVED PRODUCTION INSPECTION SYSTEM

C. GIVE QUANTITY OF CERTIFICATES REQUIRED FOR OPERATING NEEDS →

DATE OF APPLICATION	NAME AND TITLE *(Print or type)*	SIGNATURE

VII. SPECIAL FLIGHT PERMIT PURPOSES OTHER THAN PRODUCTION FLIGHT TEST

A. DESCRIPTION OF AIRCRAFT

REGISTERED OWNER	ADDRESS
BUILDER (Make)	MODEL
SERIAL NUMBER	REGISTRATION MARK

B. DESCRIPTION OF FLIGHT — CUSTOMER DEMONSTRATION FLIGHTS ☐ *(Check if applicable)*

FROM	TO	
VIA	DEPARTURE DATE	DURATION

C. CREW REQUIRED TO OPERATE THE AIRCRAFT AND ITS EQUIPMENT

☐ PILOT ☐ CO-PILOT ☐ NAVIGATOR ☐ OTHER *(Specify)*

D. THE AIRCRAFT DOES NOT MEET THE APPLICABLE AIRWORTHINESS REQUIREMENTS AS FOLLOWS

E. THE FOLLOWING RESTRICTIONS ARE CONSIDERED NECESSARY FOR SAFE OPERATION *(Use attachment if necessary)*

F. CERTIFICATION - I hereby certify that I am the registered owner (or his agent) of the aircraft described above, that the aircraft is registered with the Federal Aviation Administration in accordance with Section 501 of the Federal Aviation Act of 1958, and applicable Federal Aviation Regulations; and that the aircraft has been inspected and is airworthy for the flight described.

DATE	NAME AND TITLE *(Print or type)*	SIGNATURE

VIII. AIRWORTHINESS DOCUMENTATION (FAA use only)

X	A. Operating Limitations and Markings in Compliance with FAR 91.9 ~~91XD~~ as Applicable		G. Statement of Conformity, FAA Form 8130-9 *(Attach when required)*
	B. Current Operating Limitations Attached		H. Foreign Airworthiness Certification for Import Aircraft *(Attach when required)*
	C. Data, Drawings, Photographs, etc. *(Attach when required)*		I. Previous Airworthiness Certificate Issued in Accordance with FAR _____ CAR _____ *(Original Attached)*
X	D. Current Weight and Balance Information Available in Aircraft		
	E. Major Repair and Alteration, FAA Form 337 *(Attach when required)*	X	J. Current Airworthiness Certificate Issued in Accordance with FAR 21.183 (a) per 21.273 *(Copy attached)*
X	F. This inspection Recorded in Aircraft Records		

UNITED STATES OF AMERICA

DEPARTMENT OF TRANSPORTATION—FEDERAL AVIATION ADMINISTRATION

STANDARD AIRWORTHINESS CERTIFICATE

1. NATIONALITY AND REGISTRATION MARKS	2. MANUFACTURER AND MODEL		3 AIRCRAFT SERIAL NUMBER	4. CATEGORY
N289ND	PIPER	PA-28R-201	2844039	NORMAL

5. AUTHORITY AND BASIS FOR ISSUANCE

This airworthiness certificate is issued pursuant to the Federal Aviation Act of 1958 and certifies that, as of the date of issuance, the aircraft to which issued has been inspected and found to conform to the type certificate therefor, to be in condition for safe operation, and has been shown to meet the requirements of the applicable comprehensive and detailed airworthiness code as provided by Annex 8 to the Convention on International Civil Aviation, except as noted herein.

Exceptions:

NONE

6. TERMS AND CONDITIONS

Unless sooner surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator, this airworthiness certificate is effective as long as the maintenance, preventative 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	FAA REPRESENTATIVE	DESIGNATION NUMBER
DEC 1 9 2000	RICHARD L. MURDOCK	DOA SO-1

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

FAA Form 8100-2 (7-67) FORMERLY FAA FORM 1362

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