US Department of Transportation Federal Aviation Administration

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

Form Approved OMB No. 2120-0020 5/31/2018 | Electronic Tracking Number

For FAA Use Only

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

1. Aircraft

Nationality and Registration Mark	Serial No.
United States N34626	17701907

Make	Model	Series
Cessna	177	B

2. Owner

Name *(As shown on registration certificate)*: ROBERTSON JASON

Address *(As shown on registration certificate)*
Address: 5998 WYNDEMERE DR
City: ERIE State: PA
Zip: 16505-5608 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: Chautauqua Aircraft Sales, INC
Address: 3163 Airport DR. ste 11
City: Jamestown State: NY
Zip: 14701 Country: United States

B. Kind of Agency

	U. S. Certificated Mechanic		Manufacturer
	Foreign Certificated Mechanic	C. Certificate No.	
✓	Certificated Repair Station	CRS# IC1R213K	
	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: [signature] 11-15-17

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	X	Repair Station	☐	Inspection Authorization		Other *(Specify)*

Certificate or Designation No.: CRS#IC1R213K

Signature/Date of Authorized Individual: [signature] 11-15-17

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 appicable airworthiness requirements.

8. Description of Work Accomplished

United States N34626	11-15-17
Nationality and Registration Mark	Date

1. Removed Pilot and Co-pilot seat belts. Installed B.A.S., INC Interia Reel Shoulder Harness system kit Pilot S/N:18359, Co-pilot S/N:18358, per STC SA2067NM and B.A.S. Inc installation instructions report 1200 dated REV A August 1, 2000.

2. Operationally checked and found satisfactory.

3. Instructions for continued airworthiness: as listed in B.A.S., INC ICA report 1502, dated REV C May 3, 2006.

4. Aircraft weight and balance updated to reflect changes

5. B.A.S., INC Owners manual supplement report 1302 dated August 23, 2010 was incorperated in the aircraft operating handbook.

---------- 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	Serial No.	
USA N34626	17701907	
Make	**Model**	**Series**
Cessna	177	B

2. Owner

Name *(As shown on registration certificate)*	Address *(As shown on registration certificate)*
Robertson, Jason	Address 5998 Wyndemere Drive City Erie State PA Zip 16505 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 Dunkirk Avionics LLC
Address 3163 Airport Drive
City Jamestown State New York
Zip 14701 Country USA

B. Kind of Agency

	U. S. Certificated Mechanic		Manufacturer
	Foreign Certificated Mechanic	C. Certificate No.	
✓	Certificated Repair Station		
	Certificated Maintenance Organization	DKZR372X	

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] 9/26/17

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. DKZR372X

Signature/Date of Authorized Individual: [signature] 9/26/17

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.)

USA N34626	9/26/17
Nationality and Registration Mark	Date

Removed an ARC RT359A transponder.

Installed the following equipment:

Garmin GTX345 ADS-B in/out transponder at STA68.75 IAW STC# SA01714WI.

The GTX345 interfaces to the audio panels unswitched input (PMA8000), GTN650 to display weather, traffic and to receive gps position information, to the transponder antenna(AV74) and encoder (SSD120).

The ADS-B out system was shown to meet the equipment performance requirements of 14 CFR part 91.227.

Attached is the Instructions for continued airworthiness for the GTX345 document number 190-00734-11 Rev. 5.

END

☑ Additional Sheets Are Attached

United States of America

Department of Transportation -- Federal Aviation Administration

Supplemental Type Certificate

Number SA01714WI

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

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

Original Product - Type Certificate

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

Description of Type Design Change:

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

Data Required:

(1) Garmin Master Drawing List (MDL) 005-00734-04, Revision 1, dated May 1, 2013 or later FAA-approved revision.

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

Limitations and Conditions:

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

(2) Aircraft installations involving the Garmin transponder GTX 33/33D/330/330D models require the previous installation of an approved ADS-B position source. Refer to the design data specified in the Master Drawing List (MDL) listed above for specific hardware and software requirements.

(3) Aircraft installations involving the Garmin transponder GTX 335/335R/345/345R models without an optional internal GPS require the previous installation of an approved ADS-B position source. Refer to the design data specified in the Master Drawing List (MDL) listed above for specific hardware and software requirements.

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

Date of application: August 7, 2012

Date reissued:

Date of issuance: May 1, 2013

Date amended: April 29, 2014, March 8, 2016

By direction of the Administrator

(*Signature*)

Michael Warren
ODA STC Unit Administrator
ODA-240087-CE
Garmin International, Inc.

(*Title*)

Table I: Approved Aircraft WITHOUT GX000 Equipped Flight Deck System for installation of GTX 33/330 or GTX 335/345 Transponders

Airplane Make (TCDS Holder) [common name or previous make]	Airplane Model Designation	Type Certificate Number	* TC Certification Basis	Master Drawing List Revision (005-00734-04)	AML Revision/Date	Notes
(continued) Textron Aviation Inc. (Textron Aviation Inc.) [Cessna Aircraft Company]	206, P206, P206A, P206B, P206C, P206D, P206E, TP206A, TP206B, TP206C, TP206D, TP206E, U206, U206A, U206B, U206C, U206D, U206E, U206F, U206G, TU206A, TU206B, TU206C, TU206D, TU206E, TU206F, TU206G, 206H, T206H	A4CE	CAR 3 FAR 23	1	Original 5/1/2013	
	337, 337A (USAF 02B), 337B, T337B, 337C, 337E, T337E, T337C, 337D, T337D, M337B (USAF 02A), 337F, T337F, 337G, T337G, 337H, P337H, T337H, T337H-SP	A6CE	CAR 3 FAR 23	1	Original 5/1/2013	
	401, 401A, 401B, 402, 402A, 402B, 402C, 411, 411A, 414, 414A, 421, 421A, 421B, 421C, 425	A7CE	CAR 3	1	Original 5/1/2013	
	177, 177A, 177B	A13CE	FAR 23	1	Original 5/1/2013	
	207, 207A, T207, T207A	A16CE	FAR 23	1	Original 5/1/2013	
	177RG	A20CE	FAR 23	1	Original 5/1/2013	
	404, 406	A25CE	FAR 23	1	Original 5/1/2013	
	501 551	A27CE	FAR 23	1	Original 5/1/2013	
	441	A28CE	FAR 23	1	Original 5/1/2013	
	T303	A34CE	FAR 23	1	Original 5/1/2013	

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

March 8, 2016

Subject: STC Permission to use STC SA01714WI for
Garmin GTX 330, 330D, 33, 33D, 335, and 335R with ADS-B Out (see AML);
Garmin GTX 345 and 345R with ADS-B In and Out (see AML)

Consistent with FAA Order 8110.4( ) and Advisory Circular (AC) 21-40( ), Garmin International grants permission to Garmin dealers, installers, and owners of the Garmin GTX 330, 330D, 33, 33D, 335, 335R, 345, and 345R to use STC SA01714WI and deliverable data associated with it, for the sole and express purpose of installation and approval of the installation of the Garmin GTX 330, 330D, 33, 33D, 335, 335R, 345, and 345R and associated interfaces to other previously approved equipment.

Emmett Griffith
Director of Engineering
Garmin AT, Inc.

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: USA N34626	Serial No.: 17701907	
	Make: Cessna	Model: 177	Series: B
2. Owner	Name *(As shown on registration certificate)*: Robertson, Jason	Address *(As shown on registration certificate)*: Address 5998 Wyndemere Dr. City Erie State PA Zip 16505 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 Dunkirk Avionics LLC
Address 3163 Airport Drive
City Jamestown State New York
Zip 14701 Country USA

B. Kind of Agency

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

C. Certificate No. DKZR372X

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] 10/23/14

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. DKZR372X

Signature/Date of Authorized Individual: [signature] 10/23/14

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.)

USA N34626	10/23/2014
Nationality and Registration Mark	Date

1.) Removed a JP Instruments FS450 fuel flow gauge.

Installed the following equipment:
JP Instruments EDM800 engine analyzer IAW STC# SA2586NM.
JP Instruments fuel flow option IAW STC# SA00432SE.

2.) The EDM800 interfaces to the EGT, CHT, oil temperature, oil pressure, outside air temperature and RPM sensors. The fuel flow interfaces to the gps(gtn650. Refer to the appropriate installation manual for interconnect information.

16.) When the ICA needs to be revised a letter will be submitted to the local FSDO with a copy of the revised FAA Form 337 and revised ICA.

END

☐ Additional Sheets Are Attached

United States Of America

Department of Transportation - Federal Aviation Administration

Supplemental Type Certificate

Number SA2586NM

This Certificate issued to J. P. INSTRUMENTS

PO Box 7033
Huntington Beach, CA 92646

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 Aviation Regulations, including respective Amendments as specified in the attached Approved Model List.

Original Product Type Certificate Number: * *See attached FAA Approved J.P. Instruments

Make: * Master Eligibility List No. SA2586NM for list

Model: * of approved aircraft models and applicable TCDS

Description of Type Design Change:
Installation of J. P. Instruments temperature monitoring systems in accordance with FAA Approved J. P. Instruments Drawing List Report No. 100, Revision D, dated December 19, 1996, or later FAA approved revisions. FAA Approved Airplane/Rotorcraft Flight Manual Supplement No. 1 for EGT-701 temperature indicator, Revision A, dated December 13, 1996, or later FAA approved revisions.

Limitations and Conditions: The approval of the change in type design applies to the basic airplane of the specific models that are otherwise unmodified. 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 installation and any previously approved configuration will not introduce any adverse effect upon the airworthiness of that airplane. 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. (See continuation sheet)

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 31, 1984

Date of issuance: August 14, 1985

Date reissued:

Date amended: July 13, 1987, November 13, 1992, December 19, 1996, May 15, 1998, June 17, 1999

By direction of the Administrator

(Signature)

Manager, Propulsion Branch
Los Angeles 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.

United States Of America
Department of Transportation - Federal Aviation Administration

Supplemental Type Certificate

(Continuation Sheet)

Number SA2586NM

Limitations and Conditions - continued

Cylinder head, oil, turbine inlet and/or exhaust gas temperature, fuel flow equipment, tachometer instruments, and manifold pressure instruments required by the original type design, or if required by other FAA approval, must remain installed and operable.

Aircraft listed on the FAA approved Master Eligibility List SA2586NM and that have been previously modified with a fuel flow indication system that utilizes the Flowscan fuel flow transducer (P/N: 201-A, 201-B, 201-C, or 231 or equivalent as listed on page 4 of the FAA Approved Installation Instructions, Drawing 103) are eligible for installation of the EGT-701 fuel flow option.

This certificate does not constitute installation approval of the fuel flow transducer.

EGT-701 temperature indicator with tachometer (rpm) and manifold pressure options are eligible for the 4 cylinder and 6 cylinder engines listed on the Master Eligibility List (MEL) SA2586NM only.

FAA Approved Airplane/Rotorcraft Flight Manual Supplement No. 1, Revision A, dated December 13, 1996 or later FAA approved revision, is required with the installation of the EGT-70 system.

Eligible dash numbers for the EGT-701 are listed on MEL SA2586NM.

A copy of this certificate must be maintained as part of the permanent records of the modified aircraft.

-END-

MAKE	AIRCRAFT MODEL	Part Number T.C.D.S. (See Sheet. 11 for Series)	
	17-30,-A, 17-31,-A, 17-31TC,-A,		
27. Boeing Boeing	(STEARMAN) A75L3,75,A75, B75, E75, A75, A75L300, IB75A, E75N1 A75J1, A75N1, B75N1, D75N1	A-743 A-743	(9), (E) (7), (C)
28. Cessna	140	3A43	(4), (A)
29. Cessna	120 , 140, with 0-200 Conversion per STC-SA547EA 140A, with 0-200 Conversion per STC-SA547EA	A-768 A-5A2	(4), (A) (4), (A)
30. Cessna	150,A,B,C,D,E,F,G,H,J,K A150K, 150L, A150L, 150M, A150M, 152, A152	3A19	(4), (A)
31. Cessna	170. 170A, 170B	A-799	(6), (B)
32. Cessna Cessna Cessna Cessna	172,172A,B,C,D,E,F,G,H, 172I,K,L,M,N,P,Q,R,S,T 172RG, P172D R172E,F,G,H,J,K,175,175A,B,C	3A12 3A12 3A17 3A17	(6), (B) (4), (A) (4), (A) (6), (B)
33. Cessna Cessna	177,177A, 177B 177RG	A13CE A20CE	(4), (A) (4), (A)
34. Cessna Cessna	180,180A,B,C,D,E,F,G,H,J,K 182,182A,B,C,D,E,F,G,H,J,K, 182L,M,N,P,Q,R, S, T R182, T182, TR182 , 182RS, T182T,	5A6 3A13	(6), (B) (6), (B)
35. Cessna	182 Series STC SA00152WI	3A13	(6), (B)
36. Cessna	182E,F,G,H,J,K, L, M, N, P, Q(Peterson,STC SA3825SW)	3A13	(6), (B)
37. Cessna	F182P, Q, FR182	A42EU	(6), (B)
38. Cessna	185,185A,B,C,D,E,A185E,A185F	3A24	(6), (B)
39. Cessna	188,188A,188B,A188,A188A, A188B,T188C	A9CE	(6*), (B*)
40. Cessna	195,195A, 195B 190	A-790 A-790	(7), (C) (9), (E)
41. Cessna	206,H P206,P206A,B,C,D,E, H TP206A,B,C,D,E, U206,U206A,B,C,D,E,F,G, TU206A,B,C,D,E,F,G T206H	A4CE	(6*), (B*)
42. Cessna	U206,U206A,B,C,D,E,F,G, (Conv. Per STC 2123 NM)	A4CE	(6*), (B*)
43. Cessna	207,207A,T207,T207A	A16CE	(6*), (B*)
44. Cessna	210,210A,B,C,D,E,F 210-5,210-5A,T210F,210G, T210G,210H,T210H,210J,T210J, T210K,210K,210L,T210L,210M, T210M,210N,P210N,T210N,210R P210R,T210R	3A21	(6*), (B*)
45. Cessna	310,310A,B,C,D,E,F,G,H, E31OH,310I,J,K,L,N,P,Q,R 310J-1,E310J,T310P,Q,R T310Q,310R,T310R	3A10	(6T*), (BT*)
46. Cessna	321	3A11	(6T), (BT)
47. Cessna	320,A,B,C,D,E,F,320-1,335, 340(,340A	3A25	(6T*), (BT*)
48. Cessna	336	A2CE	(6T), (BT)
49. Cessna	T303	A34CE	(6T*), (BT*)
50. Cessna	337, 337A,B,C,D,E,F,G,H T337B,C,D,E,F,G,H, M337B,P337H,T337H-SP	A6CE	(6T*), (BT*)
51. Cessna	401, 401A,B, 402,402A,B,C,	A7CE	(6T*), (BT*)

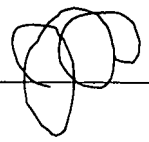
FAA approved AFM Supplement is required with the EGT-701. The EGT-701 is applicable to all EGT-100/200 series.
RPM and MAP applicable to the P\N EGT-701,4 and 6 cylinder engines only **Revision 14**

3/20/08

Subject: Permission to use STC.

To Whom It May Concern:

J.P. Instruments holder of STC SA2586NM
grants to the purchaser of the
EDM-700 series (PN EGT-701) and the
Classic Scanner (PN EGT-100)
permission to use the STC.

Signed 

United States of America

Department of Transportation—Federal Aviation Administration

Supplemental Type Certificate

Number SA00432SE

This certificate, issued to J. P. Instruments
P.O. Box 7033
Huntington Beach, CA 92646

certifies that the change in the type design for the following product with the limitations and conditions thereto is found to meet the airworthiness requirements of Part 21 of the Regulations.

Original Product—Type Certificate Number: "See attached FAA Approved Model List (AML)
Make: No. SA00432SE for a list of approved airframe
Model: models and applicable airworthiness regulations.

Description of the Type Design Change: Fuel flow transducer installed in accordance with J.P. Instruments (JPI) Fuel Flow Installation Manual, Report No. 503, Revision B, dated March 14, 1997, and manufactured in accordance with JPI Drawing List Report No. 500 Revision B, dated March 14, 1997.

Note: This STC requires the installation of either:
1. JPI Fuel flow option with the EGT-701 temperature indicating system per STC SA2586NM, or

2. JPI FS-450 fuel flow indicating system per STC SA00861SE.

Limitations and Conditions: Approval of this change in type design applies to the aircraft models listed on the AML only. This approval should not be extended to other aircraft of these models on which other previously approved modifications are incorporated unless it is determined that the relationship between this change and any of those other previously approved modifications, including changes in type design, will introduce no adverse effect upon the airworthiness of that aircraft. A copy of this certificate, and FAA Approved Model List (AML) No. SA00432SE 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: January 3, 1997 Date returned:

Date of issuance: May 2, 1997 Date amended: December 16, 2000

By direction of the Administrator

(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(10-84)

Subject: Permission to use STC.
To Whom It May Concern.

J.P. Instruments holder of STC SA00432SE and STC SA00861SE grants to the purchaser of the EDM-700 series (PN EGT-701) or the (FS-450) PN 450000 Series FUEL FLOW INSTALLATION permission to use the STC SA00432SE, or SA00861SE

Signed _____

J.P. INSTRUMENTS FAA APPROVED MODEL LIST (AML) FOR:
1. INSTALLATION OF THE EGT 701 SERIES FUEL FLOW TRANSDUCER STC SA00432SE
2. INSTALLATION OF THE (FS-450) 450000 SERIES STC SA00861SE FUEL FLOW INSTRUMENT and TRANSDUCER

STC SA00432SE Issue Date: May 2, 1997
STC SA00861SE Issue Date: December 18, 2000

ITEM	AIRCRAFT MAKE	AIRCRAFT MODEL A. SINGLE ENGINE AIRCRAFT (ITEMS 1-94) B. TWIN ENGINE AIRCRAFT (ITEMS 95-127)	TYPE CERTIFICATE NUMBER	CERTIFICATION BASIS FOR ALTERATION	AML REVISION DATE
24	Cessna	170, 170A, 170B	A-799	CAR 3	12-18-2000
25	Cessna	FR172E FR172F FR172G, FR172H, FR172J	A18EU	CAR 3 FAR 21.29	03-26-2013
26	Cessna	172, 172A, 172B, 172C, 172D, 172E, 172F, 172G, 172H, 172I, 172K, 172L, 172M, 172N, 172P 172Q, 172R, 172S	3A12	CAR 3 FAR 23	03-26-2013
27	Cessna	172RG, R172E R172F R172G, R172H, R172J, R172K, 175, 175A, 175B 175C, P172D	3A17	CAR 3	12-18-2000
28.	Cessna	177, 177A, 177B	A13CE	FAR 23	12-18-2000
29	Cessna	177RG	A20CE	FAR 23	12-18-2000
30.	Cessna	180, 180A, 180B, 180C, 180D, 180E, 180F, 180G, 180H, 180J, 180K	5A6	CAR 3	12-18-2000
31	Cessna	182, 182A, 182B, 182C, 182D, 182E, 182F, 182G, 182H, 182J, 182K, 182L, 182M, 182N, 182P 182Q, 182R, 182S, 182T, T182T, R182, TR182, T182	3A13	CAR 3	03-26-2013
32	Cessna	185, 185A, 185B, 185C, 185D, 185E, A185E, A185F	3A24	CAR 3	12-18-2000
33	Cessna	188, 188A, 188B, A188, A188A, A188B, T188C	A9CE	FAR 21	12-18-2000
34	Cessna	190, 195, 195A, 195B	A-790	CAR 3	03-26-2013
35	Cessna	206, U206, U206A, U206B, U206C, U206D, U206E, U206F, U206G, 206H, T206H, P206, P206A, P206B, P206C, P206D, P206E, TP206A, TP206B, TP206C, TP206D, TP206E, TU206A, TU206B, TU206C, TU206D, TU206E, TU206F, TU206G	A4CE	CAR 3	03-26-2013
36	Cessna	207, 207A, T207, T207A	A16CE	FAR 23	12-18-2000
37	Cessna	210, 210A, 210B, 210C, 210D, 210E, 210F, 210G, 210H, 210J, 210K, 210L, 210M, 210N, 210R, P210N, P210R, T210F, T210G, T210H, T210J, T210K, T210L, T210M, T210N, T210R, 210-5 (205), 210-5A (205A)	3A21	CAR 3	03-26-2013
38	Cirrus Design Corporation	SR20, SR22	A00009CH	FAR 23	03-26-2013
39	CPAC, Inc *(Commander, Rockwell)*	112, 112B, 112TC, 112TCA, 114, 114A, 114B, 114TC	A12SO	FAR 23	12-18-2000
40	Cub Crafters	CC18-180, CC18-180A	A00006SE	FAR 23	03-26-2013
41	Viking Air Limited *(De Havilland)*	DHC-2 Mk I	A-806	CAR 3, CAR 10	07-06-2009
42	Viking Air Limited *(De Havilland)*	DHC-3	A-815	CAR 3 CAR 10	03-26-2013
43	DeHavilland Support Limited *(Beagle)*	B 121 Series 1, B 121 Series 2, B 121 Series 3	A22EU	FAR 21.29 FAR 23	02-09-2004
44	Diamond	DA40, DA40F	A47CE	FAR 21.29	03-26-2013
45	Diamond	DA20-A1, DA20-C1	TA4CH	FAR 23 FAR 21.29	03-26-2013

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.	
N34626	177-01907	
Make	**Model**	**Series**
Cessna	177B	177

2. Owner

Name *(As shown on registration certificate)*	Address *(As shown on registration certificate)*
Jason Robertson	Address 5998 Wyndemere Dr.
	City Erie State Pa.
	Zip 16505 Country USA

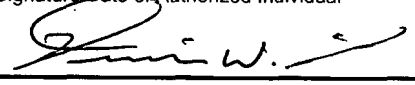
3. For FAA Use Only

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 Irish Air Services LLC	☑ U. S. Certificated Mechanic	☐ Manufacturer	
Address Po Box 61	☐ Foreign Certificated Mechanic	C. Certificate No.	
City North East State Pa.	☐ Certificated Repair Station	AP 3540986	
Zip 16428 Country USA	☐ Certificated Maintenance Organization		

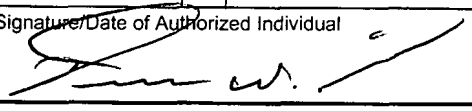
D. I certify that the repair and/or alteration made to the unit(s) identified in item 5 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and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

Extended range fuel per 14 CFR Part 43 App. B ☐	Signature/Date of Authorized Individual
	

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
AP 3540986 IA	

Work completed for [N34626] on

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 appicable airworthiness requirements.

N34626	
Nationality and Registration Mark	Date

8. Description of Work Accomplished

7/09/2012 Tack Time 2622.40
Removed origonal equipment beacon
Installed Whelen MFG beacon 709000 series under STC SA 615 EA
Weight / Balance updated
Equipment list altered

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

[✓] Additional Sheets Are Attached

United States Of America

Department of Transportation - Federal Aviation Administration

Supplemental Type Certificate

Number SA615EA

This Certificate issued to Whelen Engineering Company, Inc.
51 Winthrop Road
Chester, Connecticut 06412-0684

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, 6, 23, 27 *of the* Civil Air/Federal Aviation *Regulations.*

Original Product Type Certificate Number: See Attached Eligibility List dated May 5, 2010

Make:

Model:

Description of Type Design Change:

Installation of Whelen Anti-Collision Strobe Light Systems, Part Number 01-0770006-( ), 01-0770028-( ), 01-0770029-( ), 01-0770062-( ), 01-0770900-( ), 01-0771055-( ), 01-0771080-( ), and 01-0790520-( ) as replacement for originally installed anti-collision lights, when installed in accordance with Whelen Anti-Collision Light Systems Installation and Service Manual, Document No. 05131, Rev B, dated June 2010, or later FAA-approved revision.

Limitations and Conditions:

(See continuation sheet 3 of 7)

The STC holder will provide each person it permits to use this certificate to alter the product written evidence of the agreement in a form acceptable to the Administrator.
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: February 19, 1968

Date of issuance: May 14, 1968

Date reissued: July 6, 2010

Date amended: May 5, 2010

See page 3 for amendment history.

By direction of the Administrator

Robert G. Mann
Manager, Boston Aircraft Certification Office

(Title)

US Department of Transportation
Federal Aviation Administration

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

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification

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 civil penalty not to exceed $1,000 for each such violation (Section 901 Federal Aviation Act of 1958).

1. Aircraft	Make: CESSNA	Model: 177B
	Serial No.: 17701907	Nationality and Registration Mark: N34626
2. Owner	Name *(As shown on registration certificate)*: JASON ROBERTSON	Address *(As shown on registration certificate)*: 5998 WYNDEMERE DR ERIE, PA 16505-5608

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.
QUALITY AVIONICS, INC GROVE CITY REGIONAL AIRPORT 40 OAKLEY KELLY DRIVE MERCER, PA 16137	[ ] U.S. Certificated Mechanic [ ] Foreign Certificated Mechanic [X] Certificated Repair Station [ ] Manufacturer	QU8R488X

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

Date	Signature of Authorized Individual
09-30-2011	GARY LEE HUTCHINSON JR

7. Approval for Return To Service

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

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

Date of Approval or Rejection	Certificate or Designation No.	Signature of Authorized Individual
09-30-2011	QU8R488X	GARY LEE HUTCHINSON JR

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.)

SUMMERY OF ALTERATION PERFORMED:

(1) UP GRADE AIRCRAFT NAVIGATION SYSTEM TO GPS(WAAS)/NAV/COM IN ACCORDANCE WITH GARMIN STC # SA02019SE-D

REMOVED THE FOLLOWING:

(1) LORAN SYSTEM APOLLO RECEIVER 618 , AMP A-6 , ANTENNA COMANT CI-121SP AND WIRING.

(2) NUMBER TWO NAV COLLINS VIR-351, INDICATOR IND-350, COM COLLINS VHF-251 AND WIRING.

(3) ALTITUDE ENCODER ACK A-30.

INSTALLED THE FOLLOWING:

(1) GPS ANTENNA GARMIN GA 35 P/N 013-00235-00 INTERFACED TO THE GTN-650 THROUGH NEW COAX RG 142. MOUNTED IN PLACE OF THE REMOVED LORAN ANTENNA, ON EXISTING DOUBLER REFERENCE GPS ANTENNA DOUBLER SECTION 3.1.2 IN THE GARMIN GTN-650 INSTALLATION MANUAL. THE DOUBLER HAS BEEN FOUND TO MEET THE STRUCTURAL REQUIREMENTS SPECIFIED IN THE ANTENNA INSTALLATION MANUAL. THE LOCATION HAS BEEN FOUND ACCEPTABLE IN ACCORDANCE WITH THE GTN-650 INSTALLATION MANUAL SECTION 2.5.1 GPS/WAAS ANTENNA LOCATION.

(2) INDICATOR GARMIN GI-106A P/N 013-00049-01 IN SPACE PROVIDED BY THE RELOCATION OF THE OLD NAV ONE INDICATOR INTERFACED TO THE NEWLY INSTALLED GTN-650

(3) ALTITUDE ENCODER TRANS-CAL INDUSTRIES SSD120-30N-RS232 INSTALLED ON BOTTOM OF THE GLOVE BOX INTERFACED TO THE NEWLY INSTALLED GARMIN GTN-650 AND THE EXISTING TRANSPONDER ARC RT-359A CIRCUIT PROTECTION PROVIDED BY THE EXISTING TRANSPONDER BREAKER...

(4) NAV SPLITTER GARMIN P/N 013-00112-00 INSTALLED ON REAR SHELF INTERFACED TO THE GARMIN GTN-650 FOR NAV/GLIDE SLOPE OPERATION THROUGH RG-142 COAX AND TO THE EXISTING NAV DIPLEXOR FOR NAV ANTENNA INPUT INSTALLED IN ACCORDANCE WITH THE GTN-650 INSTALLATION MANUAL SECTION 3.3.3.1 NAV ANTENNA CABLE SPLITTER INSTALLATION.

(5) GPS WAAS/NAV/COM GARMIN GTN-650 P/N 011-02256-00 DIRECTLY BELOW THE AUDIO SELECTOR PANEL INTERFACED TO NEWLY INSTALLED GPS ANTENNA GA-35 , ENCODER TCI SSD120-30N-RS232, DIPLEXER GARMIN P/N 013-00112-00 AND EXISTING COM ANTENNA AND COAX, NAV/GLIDE SLOPE ANTENNA, AUTOPILOT S-TEC SYS 50, GPSS AUTOPILOT ROLL STEERING CONVERTER S-TEC ST-901, AUDIO PANEL PSE PMA-8000B AS COM/NAV ONE. POWER FOR THE GPS/NAV IS SUPPLIED FROM A 7.5 AMP BREAKER IN THE EXISTING BREAKER PANEL PLACARDED GTN-650 NAV . POWER FOR THE COM IS SUPPLIED FROM A 10 AMP BREAKER IN THE EXISTING BREAKER PANEL PLACARDED GTN-650 COM 1.

(6) FAA APPROVED AIRCRAFT FLIGHT MANUAL SUPPLEMENT'S FOR GARMIN GTN-650 P/N 190-01007-A2 REV 1 DATED 03-18-2011.

(7) PILOTS GUIDE FOR THE GARMIN GTN-650 SERIES P/N 190-01004-03 REV A DATED 3-1-2011

(8) COCKPIT REFERENCE GUIDE FOR THE GARMIN GTN-650 SERIES P/N 190-01004-04 REV C DATED 3, 2011

(9) PLACARD PLACED ON PANEL STATING " GPS FOR VFR NAVIGATION ONLY PENDING COMPLETION OF FLIGHT FUNCTION CHECK"

☒ Additional Sheets Are Attached

* U.S.G.P.O. 1990-761-753

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.)

CESSNA MODEL177B S/N 17701907 N34626 DATED 09-30-2011

COMPATIBILITY:

(1) THE GTN-650 INTERFACE TO THE GARMIN GA-35, S-TEC SYS-50 , S-TEC ST901, TCI SSD120-30N-RS232, GARMIN GI-106A AND PSE PMA-8000B HAS BEEN DETERMINED BY THE MANUFACTURER/ GARMIN AML LIST AND MEETS THE GARMIN REQUIREMENTS OF THE STC AND INSTALLATION MANUAL.

(2) THE AIRCRAFT RADIO DIMMER BUS INTERFACE TO THE GTN-650 HAVE BEEN DETERMINED BY THE MANUFACTURES SPECIFICATION REQUIREMENTS FOUND IN THE AIRCRAFT SERVICE MANUALS AND THE GTN-650 INSTALLATION MANUAL'S AND MEET THE GARMIN REQUIREMENTS OF THE STC .

(3) CONFIGURATIONS WERE MADE TO MEET THE GTN-650 REQUIREMENT'S. A COPY OF THE CHECK OUT LOG AND INSTALLATION WIRING DIAGRAM'S WERE COMPLETED AND INCLUDED WITH THE MAINTENANCE RECORD'S

(4) THE GTN 650 INTERFACE TO THE EXISTING NAV ANTENNA HAS BEEN DETERMINED ACCEPTABLE BY GARMIN'S INSTALLATION MANUAL SUBPARAGRAPH 2.5.3 TITLED NAV ANTENNA LOCATION, SUBPARAGRAPH 3.3.3 TITLED NAV ANTENNA AND SUBPARAGRAPH 2.3.2.1 TITLED OPTIONAL ACCESSORIES NOT SUPPLIED SECTION TITLED VOR/LOC ANTENNA (SHALL MEET TSO C40C AND C36). BROAD BAND, 50 OHM, HORIZONTALLY POLARIZED WITH COAX CABLE. AND BY PERFORMING OPERATIONAL CHECKS WITH PORTABLE RAMP TEST EQUIPMENT (IFR NAV-402) IN ACCORDANCE WITH SUBPARAGRAPH, 5.10.4 TITLED VHF NAV CHECKOUT (GTN-650/750). THE ENTIRE VOR AND ILS BAND WAS CHECKED FOR ACCURACY AND SIGNAL RECEPTION STRENGTH WITH NO DEFICIENCIES NOTED. THIS AIRCRAFT WILL BE FLIGHT CHECKED IN ACCORDANCE WITH THE INSTALLATION MANUAL SUBPARAGRAPH 5.11.3 TITLED VOR FLIGHT CHECK (GTN-650/750) AND SUBPARAGRAPH 5.11.4 TITLED ILS FLIGHT CHECK (GTN- 650/750) WITH NO DISCREPANCIES NOTED ON THE VOR/ILS OPERATION.

(5) THE GTN 650 INTERFACE TO THE EXISTING COM ANTENNA HAS BEEN DETERMINED ACCEPTABLE BY GARMIN'S INSTALLATION MANUAL SUBPARAGRAPH 2.5.2 TITLED COM ANTENNA LOCATION, SUBPARAGRAPH 3.3.2 TITLED COM ANTENNA CABLE CONSIDERATIONS, SUBPARAGRAPH 2.3.2.1 TITLED OPTIONAL ACCESSORIES NOT SUPPLIED SECTION TITLED COM ANTENNA SHALL MEET TSO-C37,C38 OR TSO-C169 50 OHM VERTICALLY POLARIZED WITH COAXIAL CABLE AND BY PERFORMING OPERATIONAL CHECKS WITH PORTABLE RAMP TEST EQUIPMENT IN ACCORDANCE WITH SECTION 5.10 GROUND CHECKS SUBPARAGRAPH 5.10.5.1 TITLED ANTENNA CHECK, SUBPARAGRAPH 5.10.5.2 TITLED RECEIVER/TRANSMITTER OPERATION. THIS AIRCRAFT WILL BE FLIGHT CHECKED IN ACCORDANCE WITH THE INSTALLATION MANUAL. SUBPARAGRAPH 5.11.2 TITLED VHF COM FLIGHT CHECK (GTN-635/650/750) WITH NO DISCREPANCIES NOTED ON COM OPERATION.

THE FOLLOWING INSTALLATION MANUALS AND DATA WERE USED:

(1) GARMIN SUPPLEMENTAL TYPE CERTIFICATE NUMBER SA02019SE-D REVISED 03-18-2011

(2) GARMIN GTN SERIES STC INSTALLATION MANUAL P/N 190-01007-A3 REV 3 DATED 5, 2011

(3) GARMIN GA-35 GPS ANTENNA INSTALLATION MANUAL P/N 190-00848-00 REV F DATED 1, 2011

(4) PSE PMA-8000B AUDIO SELECTOR PANEL INSTALLATION MANUAL P/N 202-890-0202 REV 10 DATED OCTOBER 2010.

(5) GARMIN GI-106A INDICATOR INSTALLATION MANUAL P/N 8017702 REV C DATED 09-12-2003

(6) S-TEC ST-901 GPSS INSTALLATION MANUAL P/N 921170 REV 9 DATED 5,13,2008

(7) TRANS-CAL INDUSTRIES, INC SSD120-30N-RS232 ENCODER INSTALLATION MANUAL P/N 882197 DATED 12-08-2008

(8) WIRING SPECIFICATIONS REFERENCE AC43.13-1B REV 1, CH 11, SEC 5,6,7,8 AND PAR 11-96.

☒ 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 completed.)

CESSNA MODEL177B S/N 17701907 N34626 DATED 09-30-2011

OTHER:

(1) EMI/RFI CHECKS HAVE BEEN PERFORMED WITH NO ADVERSE EFFECTS ON NEW OR EXISTING EQUIPMENT DETECTED. REF AC43.13-1B REV 1, CH 11 PAR 106, 107.

(2) ELECTRICAL LOAD HAS BEEN CHECKED. LOAD DOES NOT EXCEED 80% OF THE GENERATING SYSTEM CAPACITY. REF AC43.13-1B REV 1, CH 11 PAR 37.

(3) EQUIPMENT LIST / WEIGHT AND BALANCE AMENDED. REFERENCE AC 43.13-1B REV 1, CH 10.

(4) VOR/ILS OPERATION APPROVED AND GPS IS APPROVED FOR I.F.R. ENROOT, TERMINAL AND PRECISION AND NON PRECISION APPROACH PENDING A FLIGHT FUNCTIONAL CHECK IN ACCORDANCE WITH THE GTN INSTALLATION MANUAL PARAGRAPH 5.11 TITLED FLIGHT CHECKS SUBPARAGRAPH 5.11.1 TITLED GPS FLIGHT CHECK, SUBPARAGRAPH 5.11.2 TITLED VHF COM FLIGHT CHECK, SUBPARAGRAPH 5.11.3 TITLED VOR FLIGHT CHECK, SUBPARAGRAPH 5.11.4 TITLED ILS FLIGHT CHECK AND SUBPARAGRAPH 5.11.5 TITLED AUTOPILOT FLIGHT CHECK. CONFIRMATION THAT THE FLIGHT CHECKS WERE PERFORMED WILL BE FOUND IN THE AIRFRAME LOGBOOK AND SIGNED BY THE PILOT AND INCLUDE THE LICENSE NUMBER.

THE FOLLOWING DOCUMENT'S ARE ATTACHED TO THIS FORM 337:

(1) PERMISSION TO USE GARMIN SUPPLEMENTAL TYPE CERTIFICATE NUMBER STC SA02019SE-D

(2) GARMIN SUPPLEMENTAL TYPE CERTIFICATE NUMBER SA02019SE-D DATED 03-18-2011

(3) GARMIN FAA APPROVED MODEL LIST PAGE SHOWING THIS AIRCRAFT FOR STC SA02019SE-D

(4) INSTRUCTIONS FOR CONTINUED AIRWORTHINESS FOR GARMIN GTN SERIES P/N 190-01007-A1 REV 1 DATED 03-04-2011

(5) INSTRUCTIONS FOR CONTINUED AIRWORTHINESS FOR GARMIN GPS ANTENNA GA SERIES P/N 190-00673-01 REV F DATED-27-2007.

(6) INSTRUCTIONS FOR CONTINUED AIRWORTHINESS FOR GARMIN GI-106A ORIGINAL

(7) INSTRUCTIONS FOR CONTINUED AIRWORTHINESS FOR TRANS-CAL INDUSTRIES SSD120-30N-RS232 ORIGINAL.

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

☐ Additional Sheets Are Attached

GARMIN

March 18, 2011

Subject: STC Permission to use STC SA02019SE-D for Garmin Model GTN 6xx/7xx Navigation System (See AML)

Consistent with Order 8110.4B and AC21-40, Garmin International grants permission to Garmin dealers, installers, and owners of the Garmin Model GTN 6xx/7xx Navigation System units to use STC SA02019SE-D and deliverable data associated with it, for the sole and express purpose of installation and approval of the installation of the Garmin Model GTN 6xx/7xx Navigation System, and associated interfaces to other previously approved equipment.

Emmett Griffith, Engineering Manager
Garmin AT, Inc.

United States of America

Department of Transportation -- Federal Aviation Administration

Supplemental Type Certificate

Number SA02019SE-D

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

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

Original Product - Type Certificate Number: *See attached Approved Model List (AML) No. SA02019SE-D
Make: dated March 18, 2011 or later FAA-approved revision for list of
Model: approved aircraft models and applicable airworthiness regulations.

Description of Type Design Change:
Installation of Garmin GTN 6XX/7XX Navigation System in accordance with FAA approved Master Drawing List, 005-00533-C0, Revision 1, approved March 18, 2011 or later FAA approved revision.

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

Aircraft modified by this STC must be maintained in accordance with the Instructions for Continued Airworthiness (ICA) listed in the MDL identified above.

A copy of this certificate 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: March 26, 2009

Date of issuance: March 18, 2011

Date reissued:

Date amended:

By direction of the Administrator

Robert M. Grove
(Signature)

Robert M. Grove
ODA STC Unit Administrator
ODA-240087-CE
Garmin International, Inc.

(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 the ownership of Supplement Type Certificate Number _____

To *(Name of transferee)* _____

(Number and street)

_____

(City, State and Zip code)

From *(Name of grantee) Print or type* _____

(Address of grantee) _____

(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 SA02019SE-D

Date of Issuance: March 18, 2011

*Certification Basis

Based on 14 CFR §§ 21.115 and 21.101, and the FAA policy for significant changes in FAA Order 8110.48, the certification basis for this change is as follows:

a. The certification basis for parts **not changed** or **not affected** by this change is shown on the attached AML.
b. The certification basis for parts **changed** or **affected** by this change is:

Section	Amdt		Section	Amdt
23.301(a)	23-48		23.1322(a)(b)(c)(d)(e)	23-43
23.303	23-0		23.1329(h)	23-49
23.305 All	23-45		23.1331(a)(b)(1)	23-43
23.307(a)	23-0		23.1351(a)	23-49
23.337(a)(b)(c)	23-48		23.1357(a)(b)(d)	23-43
23.561(a)(b)(3)(e)	23-48		23.1359(c)	23-49
23.601	23-0		23.1365(a)(b)(d)(e)	23-49
23.603 All	23-23		23.1367(a)(b)(c)(d)	23-0
23.607(b)	23-48		23.1381(a)(b)(c)	23-0
23.613(a)(b)	23-45		23.1431(a)(b)(d)(e)	23-49
23.627	23-0		23.1501(a)(b)	23-21
23.771(a)	23-14		23.1523 All	23-34
23.773(a)(2)	23-45		23.1525 All	23-45
23.777(a)(b)	23-51		23.1529 All	23-26
23.1301(a)(b)(c)(d)	23-20		23.1541(a)(2)(b)	23-21
23.1307	23-49		23.1555(a)(b)(e)(2)	23-50
23.1308(b)(c)	23-57		23.1559(c)	23-50
23.1309(a)(b)(c)(1)(e)	23-49		23.1581(a)(b)(c)(f)	23-50
23.1311(a)(1-4)(6)(7)	23-49		23.1583(h)(m)	23-50
23.1321(a)(c)(e)	23-49		23.1585(j)	23-50

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

FAA Approved Model List (AML)

STC Number SA02019SE-D

Installation of Garmin Model GTN 625/635/650; 725/750 Navigation System

FAA APPROVED
Robert M. Drove
ODA ADMINISTRATOR
18 MARCH 2011
DATE

ODA-240087-CE
Garmin International
1200 E. 151st Street, Olathe KS 66062

Issued Date: March 18, 2011

FAA Approved Model List (AML) STC Number SA02019SE-D

AML Revision Log

Date	Description
3/18/2011	Initial Release

FAA Approved Model List (AML) STC SA02019SE-D

Aircraft Make (TCDS Holder) [common name or previous make]	Aircraft Model	Type Certificate Number	TC Certification Basis *	Master Drawing List		AML Revision Date
				Document Number	Revision (or later FAA approved revision)	
Cessna (Cessna Aircraft Company)	310, 310A (USAF U-3A), 310B, 310C, 310D, 310E (USAF U-3B), 310F, 310G, 310H, E310H, 310I, 310J, 310J-1, E310J, 310K, 310L, 310N, 310P, T310P, 310Q, T310Q, 310R, T310R	3A10	CAR 3	005-00533-C0	1	3/18/2011 Original
Cessna (Cessna Aircraft Company)	172, 172A, 172B, 172C, 172D, 172E, 172F, 172G, 172H, 172I, 172K, 172L, 172M, 172N, 172P, 172Q, 172R, 172S	3A12	CAR 3 FAR 23	005-00533-C0	1	3/18/2011 Original
Cessna (Cessna Aircraft Company)	182, 182A, 182B, 182C, 182D, 182E, 182F, 182G, 182H, 182J, 182K, 182L, 182M, 182N, 182P, 182Q, 182R, 182S, 182T, R182, T182, TR182, T182T	3A13	CAR 3 FAR 23	005-00533-C0	1	3/18/2011 Original
Cessna (Cessna Aircraft Company)	172RG, P172D, R172E, R172F, R172G, R172H, R172J, R172K, 175, 175A, 175B, 175C	3A17	CAR 3	005-00533-C0	1	3/18/2011 Original
Cessna (Cessna Aircraft Company)	150, 150A, 150B, 150C, 150D, 150E, 150F, 150G, 150H, 150J, 150K, 150L, 150M, A150K, A150L, A150M, 152, A152	3A19	CAR 3 FAR 23	005-00533-C0	1	3/18/2011 Original
Cessna (Cessna Aircraft Company)	210, 210A, 210B, 210C, 210D, 210E, 210F, T210F, 210G, T210G, 210H, T210H, 210J, T210J, 210K, T210K, 210L, T210L, 210M, T210M, 210N, P210N, T210N, 210R, P210R, T210R, 210-5 (205), 210-5A (205A)	3A21	CAR 3	005-00533-C0	1	3/18/2011 Original
Cessna (Cessna Aircraft Company)	185, 185A, 185B, 185C, 185D, 185E, A185E, A185F	3A24	CAR 3	005-00533-C0	1	3/18/2011 Original
Cessna (Cessna Aircraft Company)	320, 320A, 320B, 320C, 320D, 320E, 320F, 320-1, 335, 340, 340A	3A25	CAR 3	005-00533-C0	1	3/18/2011 Original
Cessna (Cessna Aircraft Company)	140A	5A2	CAR 3	005-00533-C0	1	3/18/2011 Original
Cessna (Cessna Aircraft Company)	180, 180A, 180B, 180C, 180D, 180E, 180F, 180G, 180H, 180J, 180K	5A6	CAR 3	005-00533-C0	1	3/18/2011 Original
Cessna (Cessna Aircraft Company)	177, 177A, 177B	A13CE	FAR 23	005-00533-C0	1	3/18/2011 Original
Cessna (Cessna Aircraft Company)	207, 207A, T207, T207A	A16CE	FAR 23	005-00533-C0	1	3/18/2011 Original
Cessna (Cessna Aircraft Company)	177RG	A20CE	FAR 23	005-00533-C0	1	3/18/2011 Original

GTN 625/635/650/725/750 and GMA 35
Instructions for Continued Airworthiness
as installed in

Cessna 177B

(Make and Model Airplane)

Reg. No. N34626 **S/N** 17701907

Dwg. Number:
190-01007-A1 Rev. 1

Garmin Ltd. Or its subsidiaries
c/o Garmin International, Inc.
1200 E. 151st Street
Olathe, Kansas 66062 USA

Record of Revision

Rev.	Date	Description of Change
1	03/04/2011	Initial Release

TABLE OF CONTENTS

1. INTRODUCTION

1.1 Purpose

This document is designed for use by the installing agency of the Garmin GTN 6XX/7XX Navigators and GMA 35 audio panel as Instructions for Continued Airworthiness in response to 14 CFR § 23.1529, and Part 23 Appendix G. This ICA includes information required by the operator to adequately maintain the Garmin GTN 6XX and 7XX Navigator and GMA 35 system installed under Approved Model List (AML) STC.

1.2 Scope

This document identifies the Instructions for Continued Airworthiness for the modification of the aircraft for installation of the Garmin GTN 6XX/7XX and GMA 35 installed under Approved Model List (AML) STC.

1.3 Document Control

This document shall be released, archived, and controlled in accordance with the Garmin document control system. When this document is revised, refer to Section 2.15 for information on how to gain FAA acceptance or approval and how to notify customers of changes.

1.4 Permission to Use Certain Documents

Permission is granted to any corporation or person applying for approval of a Garmin GTN 6XX/7XX and GMA 35 to use and reference appropriate STC documents to accomplish the Instructions for Continued Airworthiness and show compliance with STC engineering data. This permission does not construe suitability of the documents. It is the responsibility of the applicant to determine the suitability of the documents for the ICA.

1.5 Definitions

The following terminology is used within this document:

1) **ACO:** Aircraft Certification Office
2) **AEG:** Aircraft Evaluation Group
3) **BIT:** Built-In Test
4) **COM:** Communications
5) **CFR:** Code of Federal Regulations
6) **FAA:** Federal Aviation Administration
7) **GPS:** Global Positioning System
8) **ICA:** Instructions for Continued Airworthiness
9) **IFR:** Instrument Flight Rules
10) **LED:** Light Emitting Diode
11) **LRU:** Line Replaceable Unit
12) **NAV:** Navigation
13) **MFD:** Multi-Function Display
14) **PMI:** Principal Maintenance Inspector
15) **POI:** Principal Operations Inspector
16) **STC:** Supplemental Type Certificate
17) **TSO:** Technical Standard Order
18) **TVS:** Transient Voltage Suppressor
19) **WAAS:** Wide Area Augmentation System

1.6 Terminology

Except where specifically noted, references made to the 'GTN' will equally apply to the GTN 625/635/650/725/750. Also, 'GTN 7XX' refers specifically to the GTN 725 and GTN 750, and 'GTN 6XX' refers specifically to the GTN 625, GTN 635, and GTN 650.

Throughout this document references will be made to 'metallic' and 'non-metallic' aircraft. For the purposes of this document, metal aircraft will be those with an aluminum skin. Non-metal aircraft will refer to all other aircraft. (e.g., aircraft with composite skin, or aircraft with tube and fabric construction.)

2. INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

2.1 Introduction

Content, Scope, Purpose and Arrangement:	This document identifies the Instructions for Continued Airworthiness for the modification of the aircraft by installation of the Garmin GTN 6XX/7XX Navigators.
Applicability:	Applies to aircraft altered by installation of the Garmin GTN 6XX/7XX and GMA 35.
Definition of Abbreviations:	See Sections 1.5 and Section 1.6
Precautions:	None
Units of measurement:	None
Referenced publications *: * or later FAA Approved revisions	Garmin 190-01007-A3 Rev. 2, *"GTN 6XX/7XX AML STC Installation Manual"* Garmin 190-01007-03 Rev. A, *"GTN 725/750 Pilot's Guide"* Garmin 190-01004-03 Rev. A, *"GTN 625/635/650 Pilot's Guide"*
Retention:	This document, or the information contained within, will be included in the aircraft's permanent records.

The GTN 6XX/7XX AML STC Installation Manual (190-01007-A3) is referenced extensively throughout this document. To improve readability, references to the installation manual are abbreviated as GTN-IM.

2.2 Description of Alteration

The GTN navigators are a family of aviation panel mounted retro-fit products. GTN units utilize a touchscreen as the primary control interface. Traditional knobs and buttons have been minimized to simplify access to the color multi-function display (MFD), NAV and COM transceiver, and GPS/WAAS navigator functions.

The GTN 625/635/650 Navigators (Garmin Touch Navigation) are a new family of 2.65-inch tall aviation panel mounted retro-fit products that are intended to supersede the Garmin 400W Series Navigators. The GTN 6XX product family consists of the GTN 625 GPS/WAAS navigator, the GTN 635 GPS/WAAS/COM navigator, and the GTN 650 GPS/WAAS/NAV/COM navigator.

The GTN 725/750 Navigators (Garmin Touch Navigation) are a new family of 6.00-inch tall aviation panel mounted retro-fit products that are intended to supersede the Garmin 500W Series Navigators.

The GTN 7XX product family consists of the GTN 725 GPS/WAAS navigator, and the GTN 750 GPS/WAAS/NAV/COM navigator.

The optional GMA 35 is an audio panel with a Marker Beacon receiver. The GMA 35 in conjunction with a GTN 7XX provide full audio panel capability, for communication and navigation radios, headsets, microphones, and speakers. The GMA 35 is mounted in a notch behind the GTN 7XX to free up mounting space in the flight deck instrument panel. Installation of the GTN, specific for the aircraft installation, is documented in GTN-IM.

2.3 Control, Operating, and Testing Information

See the *GTN 6XX Pilot's guide* and the *GTN 7XX and GMA 35 Pilot's Guide* for system operating information. See section 2.1 for document part numbers. See GTN-IM for a system description and system limitations.

See GTN-IM, Section 5 for checkout and self-test information. See GTN-IM, Section 5.10 for general ground checks and system test procedures.

2.4 Servicing Information

None. In the event of system failure, troubleshoot the GTN 6XX/7XX and GMA 35 in accordance with Section 2.6 Troubleshooting Information below.

2.5 Periodic Maintenance

The GTN and GMA 35 are designed to detect internal failures. A thorough self-test is executed automatically upon application of power to the units, and built-in tests (BIT) are continuously executed. Detected errors are indicated as failure annunciations, system messages, or a combination of the two.

Operation of the GTN 6XX/7XX and GMA 35 is not permitted unless the inspections described in this section have been completed within time intervals prescribed in Table 1 below. All antennas connected to the GTN should be maintained in accordance with appropriate inspection data for the antenna installation.

Table 1 - Maintenance Intervals

Item	Description/Procedure	Interval
Equipment Removal & Replacement	Removal and replacement of GTN or GMA units Removal and replacement instructions are contained in Section 2.7 of this document and in GTN-IM, Section 3.4.1.	**On Condition**
Cleaning the Front Panel	The front bezel, keypad, and display can be cleaned with a soft cotton cloth dampened with clean water. DO NOT use any chemical-cleaning agents. Care should be taken to avoid scratching the surface of the display.	**On Condition**
Display Backlight	The display backlight LEDs are rated by the manufacturer as having a usable life of at least 36,000 hours. This life may be more or less than the rated time depending on the operating conditions of the GTN. Over time, the backlight lamp may dim and the display may not perform as well in direct sunlight conditions. The user must determine by observation when the display brightness is not suitable for its intended use. Contact the Garmin factory repair station when the backlight lamp requires service.	**On Condition**

Item	Description/Procedure	Interval
Battery Replacement	The GTN has an internal keep-alive battery that will last about 10 years. The battery is used for GPS system information. Regular planned replacement is not necessary. The GTN will display a 'low battery' message when replacement is required. Once the low battery message is displayed, the battery should be replaced within 1 to 2 months. If the battery is not replaced and becomes totally discharged, the GTN unit will remain fully operational, but the GPS signal acquisition time may be increased. There is no loss of function or accuracy of the GTN unit with a dead battery. The battery must be replaced by the Garmin factory repair station or factory authorized repair station.	**On Condition**
Equipment Visual Check	Conduct a visual check of the GTN unit and its wire harness to ensure continued installation integrity. 1. Inspect the GTN unit(s) for security of attachment, including visual inspection of mounting racks and other supporting structure attaching the racks to aircraft instrument panel. Verify the countersunk fastener heads are in full contact with unit mounting rack holes. Re-torque to 8.5-9.5 in-lbs if required. 2. Inspect for signs of corrosion. 3. Inspect all knobs and buttons for legibility. 4. Inspect condition of wiring, shield terminations, routing, and attachment/clamping. 5. Check the fan intake slots on the sides and bottom of the GTN unit's bezel for dust, dirt, or obstructions. Clean as needed. 6. Conduct a visual check of the GPS/WAAS antenna cable overbraid in accordance with Section 8.2.1.3 of the GTN-IM. 7. Conduct a visual check of the WXR cable overbraid in accordance with Section 8.2.1.4 of the GTN-IM If installed.	**12 Calendar Months**
Test-TVS Lightning Protection	The GTN #1 main power input will have a TVS located at the LRU, for IFR non-metallic aircraft only. The TVS must be checked or replaced in accordance with section 8.2.1 of the GTN-IM.	**24 Calendar Months**
Test-Lightning Protection	The GTN #1 main power input and NAV power input will have a TVS located at the LRU, for IFR non-metallic aircraft only. The TVS must be replaced in accordance with section 8.2.1 of the GTN-IM. Conduct a visual check of the GPS/WAAS antenna cable overbraid in accordance with Section 8.2.1.3 of the GTN-IM. Conduct a visual check of the WXR cable overbraid in accordance with Section 8.2.1.4 of the GTN-IM if installed.	**After a suspected or actual lightning strike**

Item	Description/Procedure	Interval
Test-Bonding Check (IFR-certified aircraft only)	Perform an electrical bonding check: 1. Perform electrical bond check between the GTN and nearby exposed portion of the aircraft metallic structure and verify that it is less than 10 milliohms. 2. Remove GTN unit from mounting rack. 3. Measure the resistance between the mounting rack and nearby exposed portion of aircraft metallic structure and verify it is less than 10 milliohms. 4. Reinstall the GTN unit in the mounting rack. In the event of bonding test failure, remove the GTN rack and clean the attachment points at both the GTN rack and the aircraft structure per section 2.5.4 of the GTN-IM and reattach the rack to the rails in the panel. Re-verify the resistance between the mounting rack and nearby exposed portion of aircraft metallic structure and ensure it is less than 2.5 milliohms.	**Every 2000 flight hours or ten (10) years, whichever is first**

2.6 Troubleshooting Information

If error indications are displayed on the GTN 6XX or 7XX, consult the GTN-IM, Section 6, Troubleshooting. Refer to the GTN System Configuration and Checkout Log retained in the aircraft permanent records for a list of the interfaced equipment and system configuration data (example log provided in GTN-IM).

2.7 Removal and Replacement Information

For GTN removal and replacement instructions, refer to GTN-IM Section 3.4.1.1 and Section 3.4.1.2. For GMA 35 removal and replacement instructions, refer to GTN-IM Section 3.4.1.3 and Section 3.4.1.4.

If any GTN LRUs are removed and reinstalled, verify that the LRU unit power-up self-test sequence is successfully completed and no failure messages are annunciated.

If any work has been done on the aircraft that could affect the system wiring, or any interconnected equipment, verify the GTN system unit power-up self-test sequence is successfully completed and no failure messages are annunciated.

Refer to Appendix A of this document or the GTN 6XX/7XX System Configuration and Checkout Log retained in the aircraft permanent records for GTN equipment location.

Refer to the GTN-IM for particular LRU removal/installation procedures and special handling precautions.

2.8 Diagrams

Aircraft specific LRU locations and wire routing diagram are contained in Appendix A of this document.

GTN-IM Appendix B provides diagrams showing sample installation for LRU locations. Appendix E provides point-to-point wiring diagrams for the GTN and interfaced equipment. Appendix F provides point-to-point wiring diagrams for the GMA 35 and interfaced equipment.

Refer to the GTN System Configuration and Checkout Log retained in the aircraft permanent records for a list of the interfaced equipment and unit configuration data (example log provided in GTN-IM).

2.9 Special Inspection Requirements

2.9.1 Lightning Protection Checks

In the event of a suspected or actual lightning strike to the aircraft, the checks outlined in Table 1 for Test-Lightning Protection must be completed.

2.10 Application of Protective Treatments

None. N/A.

2.11 Data Relative to Structural Fasteners

None. N/A.

2.12 Special Tools

For electrical bonding testing, a milli-ohm meter is required.

2.13 Additional Instructions

Refer to GTN-IM Section 3.7 for Electrical Load information applicable to the GTN and GMA 35.

2.14 Overhaul Period

The system does not require overhaul at a specific time period. Power on self-test and continuous BIT will monitor the health of the GTN system. If any LRU indicates an internal failure, the unit may be removed and replaced. See GTN-IM, Section 6 for Troubleshooting information.

2.15 ICA Revision and Distribution

To revise this ICA, Garmin will follow the Garmin ODA procedures manual SOP-055/ACP-016 for *Instructions for Continued Airworthiness*. The latest revision of this ICA document is available on the Garmin website (www.garmin.com). A Garmin Service Bulletin describing ICA revision will be sent to Garmin dealers if a revision is determined to be significant.

2.16 Assistance

Flight Standards Inspectors or the certificate holder's PMI have the required resources to respond to questions regarding this ICA. In addition, the customer may refer questions regarding this equipment and its installation to the manufacturer, Garmin. Garmin customer assistance may be contacted during normal business hours via telephone 913-397-8200 or email from the Garmin web site at www.garmin.com.

2.17 Implementation and Record Keeping

Modification of an aircraft by this Supplemental Type Certificate obligates the aircraft operator to include the maintenance information provided by this document in the operator's aircraft maintenance manual and/or the operator's aircraft scheduled maintenance program.

3. AIRWORTHINESS LIMITATIONS SECTION

There are no additional Airworthiness Limitations as defined in 14 CFR § 23, Appendix G. G23.4 that result from this modification.

The Airworthiness Limitations section is FAA approved and specifies maintenance required under §§43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved.

APPENDIX A - EQUIPMENT LOCATION AND WIRE ROUTING

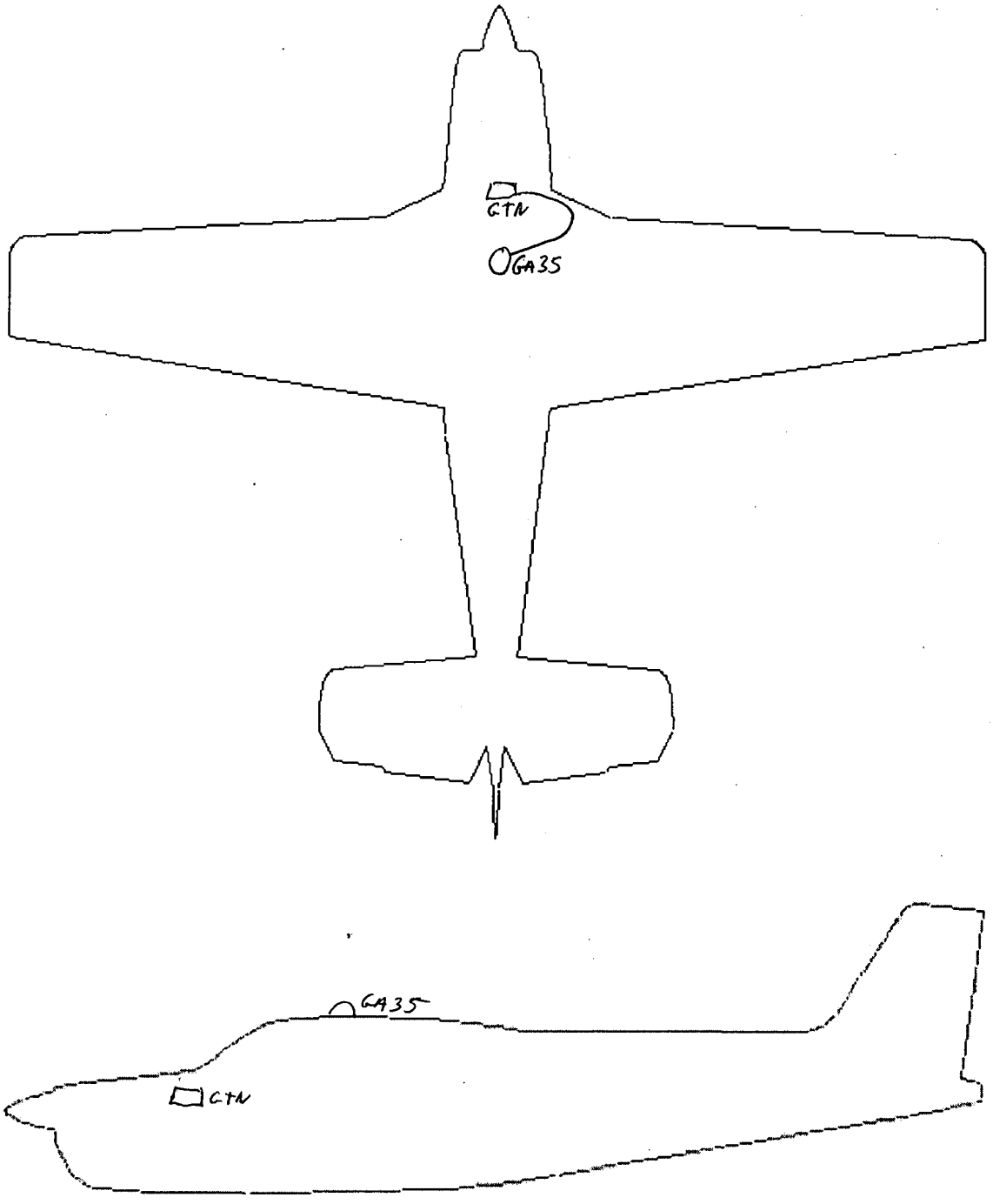
A.1 LRU LOCATIONS

The table below describes the locations of the GTN 6XX/7XX and GMA 35. Check all that apply.

LRU	LRU included in this installation?	Description of Location
GTN 625 #1	☑ Yes ☐ No	Below Audio Selector
GTN 625 #2	☐ Yes ☑ No	
GTN 635 #1	☐ Yes ☑ No	
GTN 635 #2	☐ Yes ☑ No	
GTN 650 #1	☐ Yes ☑ No	
GTN 650 #2	☐ Yes ☑ No	
GTN 725 #1	☐ Yes ☑ No	
GTN 725 #2	☐ Yes ☑ No	
GTN 750 #1	☐ Yes ☑ No	
GTN 750 #2	☐ Yes ☑ No	
GMA 35	☐ Yes ☑ No	

A.2 WIRE ROUTING – SINGLE-ENGINE

The following diagram depicts approximate location of all LRUs and antenna(s) along with the wire routing for the GTN 6XX/7XX and GMA 35 throughout the aircraft structure for a single-engine aircraft:



Equipment List
GTN 6XX/7XX AML STC

Garmin Ltd. or its subsidiaries
c/o Garmin International, Inc.
1200 E. 151st Street
Olathe, Kansas 66062 USA

Dwg. Number:
005-00533-C1 Rev. 2

Rev.	Date	Description of Change
1	03/17/2011	Initial Release
2	05/20/2011	Revise Com software to 2.01.

Company Proprietary Information

GARMIN.

Garmin Ltd. or its subsidiaries
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Olathe, Kansas 66062 U.S.A.

Table of Contents

Table of Tables

1. INTRODUCTION

This document provides a list of required equipment and optional equipment for the GTN 6XX/7XX Navigator AML STC.

1.1 Reference Documents

190-01007-A3, GTN 6XX/7XX AML STC Installation Manual

2. EQUIPMENT LIST

For GTN 625/635/650 equipment, part numbers are listed in Table 1. For GTN 725/750 equipment, part numbers are listed in Table 2.

GTN equipment use a common software. Software part numbers and versions are identified in Table 6.

2.1 Equipment

2.1.1 Required Equipment Installed under this STC

A minimum of one GTN unit is required to be installed from either Table 1 or Table 2 as required equipment for a GTN Navigator system.

The GTN 625/635/650 Navigators are 2.65-inch tall aviation panel mounted retro-fit products. Table 1 identifies unique GTN 6XX Navigator units.

The GTN 725/750 Navigators are 6.00-inch tall aviation panel mounted retro-fit products. Table 2 identifies unique GTN 7XX Navigator units.

Table 1 – GTN 6XX Unit List

Description	Part Number	Vendor
GTN 625 WAAS Navigator, Black	011-02254-00	Garmin
GTN 635 COM/WAAS Navigator, Black	011-02255-00	Garmin
GTN 650 NAV/COM/WAAS Navigator, Black	011-02256-00	Garmin
GTN 650 NAV/COM/WAAS Navigator, Gray	011-02256-50	Garmin

Table 2 – GTN 7XX Unit List

Description	Part Number	Vendor
GTN 725 WAAS Navigator, Black	011-02281-00	Garmin
GTN 750 NAV/COM/WAAS Navigator, Black	011-02282-00	Garmin
GTN 750 NAV/COM/WAAS Navigator, Gray	011-02282-50	Garmin

Specific type and number of units required for installation is specified in the GTN 6XX/7XX AML STC Installation Manual, 190-01007-A3.

2.1.2 Optional Equipment Installed under this STC

The GMA 35 is an optional remote audio panel that is designed to be installed with a GTN 7XX unit. This STC provides installation approval for the optional equipment listed in Table 3.

Table 3 – Optional Equipment List (Approved for Installation under this STC)

Description	Part Number	Vendor
GMA 35 Remote Audio Panel	011-02299-00	Garmin

2.1.3 Interfaced Equipment

This STC provides approval to interface to existing aircraft equipment. Refer to the GTN 6XX/7XX AML STC Installation Manual (P/N 190-01007-A3) Appendices C and D for a complete list of approved interfaced equipment.

2.1.4 Antennas

The GTN Navigator families provide various levels of capability. The table below identifies prerequisite antennas required for installation of specific GTN Navigator units.

Table 4 – Prerequisite Antennas

		GTN Navigator			
Antenna Description	**Must meet TSO**	**625 725**	**635**	**650 750**	**GMA 35** [2]
GPS/WAAS antenna (see Table 5)	TSO-C144( ) [1]	X	X	X	
VHF COM compatible antenna	[TSO-C37( ) and C38( )]or TSO-C169( )		X	X	
VOR/LOC antenna	TSO-C40( ) and C36( )			X	
Glideslope antenna	TSO-C34( )			X	
Marker Beacon antenna	TSO-C35( )				X

Notes:

[1] TSO-C144 is the basic requirement for the GPS/WAAS antenna; additional limitations are identified below.

[2] A marker beacon antenna is applicable only when a GMA 35 remote Audio Panel is installed with a GTN 725 or 750 Navigator and marker beacon annunciations are desired.

All GTN Navigator units require a GPS/WAAS antenna. The GTN requires specific antennas to meet TSO performance requirements. Only the antennas identified in the table below are acceptable for a GTN installation.

Table 5 – Applicable GPS Antennas

Antenna, Description	Mfr	Part Number
GA 35, GPS/WAAS	Garmin	013-00235-0( )
GA 36, GPS/WAAS	Garmin	013-00244-0( )
GA 37, GPS/WAAS/XM	Garmin	013-00245-0( )
A33W, WAAS Antenna	Garmin	013-00261-0( )
GPS/VHF Antenna	Comant	CI-2580-200
GPS/VHF Antenna	Comant	CI-2728-200
GPS/XM/VHF Antenna	Comant	CI-2580-410
GPS/XM/VHF Antenna	Comant	CI-2728-410
GPS Antenna	Comant	CI-428-200
GPS/XM Antenna	Comant	CI-428-410

2.2 Software

2.2.1 GTN Equipment Software

The GTN 6XX and GTN 7XX share a common software image. Table 6 below represents approved software as viewable by the installer on the Configuration Page of the installed GTN unit. Software listed below is applicable to GTN 6XX/7XX hardware identified in Table 1 and Table 2 above.

Table 6 – Software: GTN 6XX/7XX Navigator

Required Software and Versions for GTN Equipment					
GTN 6XX/7XX Software Description	**Ver.**	**Part No.**	**625 725**	**635**	**650 750**
Main Board					
Software	2.00	006-B1026-01	X	X	X
Boot Code	2.00				
FPGA	2.20				
Display Board					
Software	2.0	006-B1028-00	X	X	X
Boot Code	2.0	006-B1029-01	X	X	X
GPS/WAAS Board					
Software	4.0	006-B0339-10	X	X	X
COM Board					
Software	2.01	006-B1061-03		X	X
Boot Code	2.00	006-B1066-02		X	X
FPGA	2.2	006-C0135-22		X	X
NAV Board					
Software	6.01	006-B0082-11			X
Boot Code	2.01	006-B0082-BC			X
FPGA	1.0	006-C0124-00			X

2.2.2 GMA 35 Equipment Software

Table 7 below represents approved software as viewable by the installer on the Configuration Page of a GTN 725 or GTN 750 unit. Software listed below is applicable to GMA 35 hardware identified in Table 3 above.

Table 7 – Software: GMA 35 Remote Audio Panel

Required Software and Versions for GMA 35 Equipment (if installed)		
GMA 35 Software Description	**Ver.**	**Part No.**
Audio		
Software	2.00	006-B0773-00
Boot Code	2.00	006-B0773-BB
Auxiliary		
Software	2.00	006-B0772-00
Boot Code	2.00	006-B0772-BB

2.2.3 Database Cards

Database files for Required Equipment installed under this STC:

Table 8 – GTN 6XX/7XX Database Card

Card Description	Part Number	Notes:
GTN 6XX/7XX Database	010-00900-( )	[1] [2]

Notes:

[1] The base part number for the GTN database card is 010-00900-00.

[2] Other database cards with the prefix 010-00900-( ) support feature-specific pre-programmed database files and are also acceptable.

2.2.4 Enablement Cards

Enablement Cards to enable specific GTN 6XX or 7XX functions:

Table 9 – Enablement Cards

Card Description	Part Number	Notes:
Internal TAWS Enablement	010-00878-01	[1]
16W COMM Enablement	010-00878-04	[1]
ChartView Enablement	010-00878-40	[1], [2]

Notes:

[1] A feature enablement SD card is used to activate the indicated feature. Once used, the enablement card will only function with that specific serial number Navigator.

[2] Can be enabled only for GTN 7XX units.

2.2.5 Optional Software Loader Card

Two means are provided to load software for equipment approved under this STC: 1) A Blank GTN 6XX/7XX Loader Card with a software image downloaded from the Garmin website (refer to the GTN 6XX/7XX AML STC Installation Manual (P/N 190-01007-A3) for downloading software); 2) a pre-programmed GTN 6XX/7XX Loader Card. Table 10 identifies each loader card. In addition, Table 10 also identifies software image that can be downloaded from the website; this image is the same one that comes on the pre-programmed loader card.

Table 10 – GTN 6XX/7XX Software Loader Image

Loader Card Data	
Description	**Part Number**
GTN Software Loader Card (blank)	010-01000-00
GTN Software Loader Card (pre-programmed)	010-00969-01
GTN 6XX/7XX Software Loader Image	006-B1367-01

Each software item listed in Table 6 and Table 7 above (GTN and GMA equipment respectively) is contained in the GTN 6XX/7XX Software Loader Image.

GA Antenna Series

Instructions for Continued Airworthiness

STC Number SA01695SE

Document Number 190-00673-01 Rev. F

Garmin Ltd. Or its subsidiaries
c/o Garmin International, Inc.
1200 E. 151st Street
Olathe, Kansas 66062 USA

Aircraft tail number N34626

Antenna location on aircraft Above pilot

Record of Revision

Rev.	Date	Description of Change
D	08-21-06	Initial STC Issuance
E	11-29-06	Added GA 35 Antenna
F	08-27-07	Added GA 36 & GA 37 Antennas

1. INTRODUCTION

1.1 Purpose

This document is designed for use by the installing agency of the antenna models listed in Table 1 below as Instructions for Continued Airworthiness in response to Federal Aviation regulation (FAR) Part 23.1529, and Part 23 Appendix G. They include information required by the operator to adequately maintain the antenna models listed in Table 1.

1.2 Scope

This document identifies the Instruction for Continued Airworthiness for the modification of the aircraft for installation of the antenna models listed in Table 1.

Table 1 - List of Antenna Models

Manufacturer	Antenna Model	Description
Garmin	GA 35	GPS/WAAS Antenna
Garmin	GA 36	GPS/WAAS Antenna
Garmin	GA 37	GPS/WAAS with XM Antenna
Garmin	GA 55	XM Antenna
Garmin	GA 55A	XM Antenna
Garmin	GA 56W	GPS/WAAS Antenna
Garmin	GA 56A	GPS/WAAS Antenna
Garmin	GA 57	GPS/WAAS with XM Antenna
Garmin AT	A-34	GPS/WAAS Antenna

1.3 Document Control

This document shall be released, archived, and controlled in accordance with Garmin document control system. When this document is revised, refer to Section 2.15 for information on how to gain FAA acceptance or approval and how to notify customers of changes.

1.4 Airworthiness Limitations Section

There are no additional Airworthiness Limitations as defined in 14 CFR § 23, Appendix G. G23.4 that result from this modification. The Airworthiness Limitations section is FAA approved and specifies maintenance required under §§43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved.

1.5 Permission to Use Certain Documents

Permission is granted to any corporation or person applying for approval of the antenna models listed in Table 1 to use and reference appropriate STC documents to accomplish the Instructions for Continued Airworthiness and show compliance with STC engineering data. This permission does not construe suitability of the documents. It is the responsibility of the applicant to determine the suitability of the documents for the ICA.

1.6 Definitions

The following terminology is used within this document:

1) **AC:** Advisory Circular
2) **ACO:** Aircraft Certification Office
3) **AEG:** Aircraft Evaluation Group
4) **CFR:** Code of Federal Regulations
5) **DER:** Designated Engineering Representative
6) **FAA:** Federal Aviation Administration
7) **IAW:** In Accordance With
8) **ICA:** Instructions for Continued Airworthiness
9) **MFD:** Multi-Function Display unit
10) **PMI:** Primary Manufacturing Inspector
11) **POI:** Primary Operations Inspector
12) **STC:** Supplemental Type Certificate
13) **TC:** Type Certification or Type Certificate
14) **TSO:** Technical Standard Order

2. INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

2.1 Introduction

Content, Scope, Purpose and Arrangement:	This document identifies the Instruction for Continued Airworthiness for the modification of the aircraft by installation of the antenna models listed in Table 1.
Applicability:	Applies to aircraft altered by installation of the antenna models listed in Table 1.
Definition of Abbreviations:	See Section 1.6
Precautions:	None
Units of measurement:	None
Referenced publications: *(or later FAA approved revisions)*	190-00569-00 Rev. F *STC Antenna Installation Manual* 005-C0373-00 Rev. F *Garmin GA Antenna Series Master Data List*
Distribution:	This document should be included in the permanent aircraft records.

2.2 Description of Alteration

Physical installation of the antenna models listed in Table 1.

2.3 Control, Operating Information

There are no pilot controls or operating information. All pilot controls and operating information is through the interfaced receiver unit.

2.4 Servicing Information

The antenna models listed in Table 1 are non-repairable. The antenna must be replaced in event of failure.

2.5 Periodic Maintenance Instructions

This STC is for physical installation and mounting of the antenna models listed in Table 1 and does not include functional operation. The antenna models listed in Table 1, when interfaced to other receiving equipment, are functionally tested by the interfaced receiver.

Within 12 calendar months, conduct a visual inspection on the antenna and its mounting.

2.6 Troubleshooting Information

Troubleshooting is performed with the interfaced receiving unit.

2.7 Removal and Replacement Information

If the antenna is removed and replaced, verify proper operation by successfully completion of the self test of the interfaced receiving equipment.

Penetration of the pressure vessel of a pressurized aircraft is not approved under this STC installation.

Note: There are no special handling requirements for the antennas.

2.8 Diagrams

Refer to the STC Antenna Installation Manual (listed under reference documentation in section 2.1 of this document) for drawings applicable to this installation. There are no wiring diagrams since this STC does not provide wiring interconnections. Location of the antenna varies with aircraft and installation, but must mounted with RF transparent view of the sky. Refer to the cover page of this document for the mounting location of the antenna specific to the aircraft tail number.

2.9 Special Inspection Requirements

Verify there are no cracks on the antenna. Verify there are no cracks or deformation in the mounting structure around the antenna. Verify all sealing fillets around the antenna are good condition.

2.10 Application of Protective Treatments

None, N/A.

2.11 Data Relative to Structural Fasteners

For fastener torque information, refer to the STC Antenna Installation Manual listed in the reference documentation in section 2.1 of this document.

2.12 Special Tools

No special tools are required. Refer to the STC Antenna Installation Manual listed in reference documentation in section 2.1 of this document.

2.13 Additional Instructions for Aircraft Operating under FAR 121/135

1. Aircraft Electrical Loads: There is no power connection to the antenna. The only interface to the antenna is from the receiving equipment. Power loads are addressed with the interfaced receiving equipment.
2. Methods of balancing flight controls: N/A.
3. Special Repair Methods applicable to the airplane: See certificate holder's General Maintenance Manual for instructions.

2.14 Overhaul Period

This STC is for physical installation and mounting of the antenna(s) and does not include functional operation. The antenna(s) do not require overhaul at a specific time period. Antenna health is monitored and self-test conducted by the interfaced GPS/WAAS and XM receivers.

2.15 ICA Revision and Distribution

To revise this ICA, a letter must be submitted to the ACO for approval along with the revised ICA. The ACO will obtain AEG acceptance, and approve any revision to the Airworthiness Limitations Section 1.4. After FAA acceptance/approval, Garmin will release the revised ICA for customer use, and provide any required notification of the revision.

The latest revision of this document will be available on the Garmin website (www.garmin.com). A Garmin Service Bulletin, describing ICA revision, will be sent to dealers if revision is determined to be significant.

2.16 Assistance

Flight Standards Inspectors or the certificate holder's PMI have the required resources to respond to questions regarding this ICA. In addition, the customer may refer questions regarding this equipment and its installation to the manufacturer, Garmin. Garmin customer assistance may be contacted during normal business hours via telephone 913-397-8200 or email from the Garmin web site at garmin.com.

2.17 Implementation and Record Keeping

Modification of an aircraft by this Supplemental Type Certificate obligates the aircraft operator to include the maintenance information provided by this document in the operator's aircraft maintenance manual and/or operator's aircraft scheduled maintenance program.

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

ATTACHMENT PART SECTION 8 OF 337 DATED 09-30-2011

FOR:

GARMIN GI106A INDICATOR

INSTALLED IN THE FOLLOWING AIRCRAFT

MAKE: CESSNA MODEL: R177B S/N: 17701907 REG. #: N34626

REVISION: ORIGINAL DATE: 09/30/2011

This sixteen item checklist is instructions for Continued Airworthiness (ICA), to comply with FAA Inspector's Handbook 8300.10 VOL 2, CH 1, and is applicable to the aircraft listed above when the equipment listed above is installed.

Installation center information:

QUALITY AVIONICS, INC.

C.R.S. QU8R488X

GROVE CITY. AIRPORT

40 OAKLEY-KELLY DR.

MERCER, PA. 16137

Applicable work order number:_1103121_____Dated: __09-30-11_

LOG OF REVISIONS		
REVISION NUMBER	REVISION DATE	DESCRIPTION
Original	09/30/2011	Original ICA

LIST OF EFFECTIVE PAGES		
PAGE	REVISION NUMBER	REVISION DATE
1	ORIGINAL	09/30/2011
2	ORIGINAL	09/30/2011
3	ORIGINAL	09/30/2011
4	ORIGINAL	09/30/2011
5	ORIGINAL	09/30/2011
6	ORIGINAL	09/30/2011

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

Item 1: INTRODUCTION

AIRCRAFT TO BE MODIFIED:

MAKE: CESSNA MODEL: R177B S/N: 17701907 REG. #: N34626

Item 2: DESCRIPTION

MODIFICATION

GARMIN GI106A INDICATOR

Item 3: CONTROL

Operating instructions for the Garmin GI106A indicator can be found in the manufacturer's installation manual P/N 8017702 rev C, Dated September, 2003 or as revised.

Item 4: SERVICING INFORMATION

No periodic servicing of this equipment required.

Item 5: MAINTENANCE INSTRUCTIONS

No scheduled periodic maintenance of this equipment required.

Item 6: TROUBLESHOOTING INFORMATION

Trouble shooting information for the Garmin GI106A indicator can be found in the manufacturer's installation manual P/N 8017702 rev C, Dated September, 2003 or as revised.

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

Item 7: REMOVAL AND REPLACEMENT INFORMATION

Removal, replacement and functional check information for the Garmin GI106A indicator can be found in the manufacturer's installation manual P/N 8017702 rev C, Dated September, 2003 or as revised.

Item 8: DIAGRAMS

For wiring diagrams for the Garmin GI106A indicator can be found in the manufacturer's installation manual P/N 8017702 rev C,

Dated September, 2003 or as revised.

Item 9: SPECIAL INSPECTION REQUIREMENTS

There are no special inspection requirements

Item 10: APPLICATION OF PROTECTIVE TREATMENTS

This equipment does not require the application of any protectants

Item 11: DATA

Does not apply

Item 12: LIST OF SPECIAL TOOLS

Does not apply

Item 13: COMMUTER CATEGORY AIRCRAFT INFORMATION

Does not apply

Item 14: RECOMENDED OVERHAUL PERIODS

No additional overhaul time limitations

Item 15: AIRWORTHINESS LIMITATION SECTION

No additional airworthiness limitations

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

Item 16: REVISION

This Instruction for Continued Airworthiness manual is to be revised any time there is an alteration to the system to which it applies. Once revised, a copy of the revised ICA and a revised copy of the original Form 337, or a new Form 337 spelling out the new alteration, is to be submitted to the local FSDO along with a cover letter. Acceptance of the change is signified by the Inspector's signature in block 3 of the new or revised Form 337 with the accompanying statement, " The attached revised/ new Instructions for Continued Airworthiness (Dated: _____) for the above aircraft or component major alteration have been accepted by the FAA, superseding the Instructions for Continued Airworthiness (Dated: _____).

Upon acceptance of the revision, a maintenance record entry will be made identifying the revision, its location and the date of the Form 337.

Note:

Implementation and record keeping: For major alterations performed in accordance with FAA Field Approval policy, the **Owner/ Operator** operating under **Part 91** is responsible for ensuring that the ICA is made part of the applicable section 91.409 inspection program of the aircraft. This is accomplished when a maintenance entry is made in the aircraft's maintenance record in accordance with section 43.9. This entry records the major alteration and identifies the original ICA location (e.g., block 8 of FAA Form 337, dated _____) along with a statement that the ICA is now part of the aircraft's inspection/ maintenance requirements.

For major alterations performed in accordance with a field approval on an carrier aircraft, the air carrier **operator** is responsible for ensuring that the ICA is made part of the applicable inspection/ maintenance program for their aircraft. If a procedure is not currently included in the operator's manual to incorporate ICA, this process will need to be appropriately addressed (i.e. the operator submits a revision to it's maintenance program to the applicable certificate-holding district office (CHDO).

For aircraft inspected under an Approved Aircraft Inspection Program (AAIP), the **operator** will submit a change to the CHDO in accordance with section 135.419b.

For air carrier aircraft inspected using an annual/ 100 hour inspection program, a reference to the new ICA will be made in the aircraft's maintenance record in accordance with section 43.9. This entry records the major alteration and identifies the original ICA location (e.g. ICA are located /attached to block 8 of FAA Form 337, dated _____). In addition, the **operator** will request a revision to the Operator's Specifications, additional maintenance requirements, which incorporates the ICA into the inspection program.

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

ATTACHMENT PART SECTION 8 OF 337 DATED 09-30-2011

FOR:

TRANS-CAL INDUSTRIES, INC SSD120-30N-RS232

INSTALLED IN THE FOLLOWING AIRCRAFT

MAKE: CESSNA MODEL: 177B S/N: 17701907 REG. #: N34626

REVISION: ORIGINAL DATE: 09/30/2011

This sixteen item checklist is instructions for Continued Airworthiness (ICA), to comply with FAA Handbook Bulletin for Airworthiness HBAW 98-18 dated October 7, 1998), and is applicable to the aircraft listed above when the equipment listed above is installed.

Installation center information:

QUALITY AVIONICS, INC.

C.R.S. QU8R488X

GROVE CITY. AIRPORT

40 OAKLEY-KELLY DR.

MERCER, PA. 16137

Applicable work order number: 1103121 Dated: 09/30/2011

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

Item 1: INTRODUCTION

AIRCRAFT TO BE MODIFIED:

MAKE: CESSNA MODEL: 177B S/N: 17701907 REG. #: N34626

Item 2: DESCRIPTION

Installation of blind encoder with interface to transponder

MODIFICATION

INSTALLATION OF:

TRANS-CAL INDUSTRIES ALTITUDE ENCODER SSD120-30N-RS232

Item 3: CONTROL

Does not apply, there are no control operations to the SSD120-30N-RS232

Item 4: SERVICING INFORMATION

No periodic servicing of this equipment required.

Item 5: MAINTENANCE INSTRUCTIONS

No scheduled periodic maintenance of this equipment required.

Item 6: TROUBLESHOOTING INFORMATION

Refer to the trans-cal industries, Inc manual part number 882197, Rev B, dated DECEMBER, 8 2008 or as revised.

Item 7: REMOVAL AND REPLACEMENT INFORMATION

Removal, replacement and functional check information can be found in the trans-cal industries, Inc manual part number 882197, Rev B, dated DECEMBER, 8 2008 or as revised.

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

Item 8: DIAGRAMS

Does not apply, there are no access plates.

Item 9: SPECIAL INSPECTION REQUIREMENTS

The altitude encoder is to be tested during the aircraft biennial transponder and pitot-static system test as required by federal aviation regulations.

Item 10: APPLICATION OF PROTECTIVE TREATMENTS

This equipment does not require the application of any protectants

Item 11: DATA

Refer to the trans-cal industries, Inc manual part number 882197, Rev B, dated DECEMBER, 8 2008 or as revised.

Item 12: LIST OF SPECIAL TOOLS

Does not apply

Item 13: COMMUTER CATEGORY AIRCRAFT INFORMATION

Does not apply

Item 14: RECOMENDED OVERHAUL PERIODS

No additional overhaul time limitations

Item 15: AIRWORTHINESS LIMITATION SECTION

No additional airworthiness limitations

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

Item 16: REVISION

This Instruction for Continued Airworthiness manual is to be revised any time there is an alteration to the system to which it applies. Once revised, a copy of the revised ICA and a revised copy of the original Form 337, or a new Form 337 spelling out the new alteration, are to be submitted to the local FSDO along with a cover letter. Acceptance of the change is signified by the Inspector's signature in block 3 of the new or revised Form 337 with the accompanying statement, " The attached revised/ new Instructions for Continued Airworthiness (Dated: _____) for the above aircraft or component major alteration have been accepted by the FAA, superseding the Instructions for Continued Airworthiness (Dated: _____).

Upon acceptance of the revision, a maintenance record entry will be made identifying the revision, its location and the date of the Form 337.

Note:

Implementation and record keeping: For major alterations performed in accordance with FAA Field Approval policy, the **Owner/ Operator** operating under **Part 91** is responsible for ensuring that the ICA is made part of the applicable section 91.409 inspection program of the aircraft. This is accomplished when a maintenance entry is made in the aircraft's maintenance record in accordance with section 43.9. This entry records the major alteration and identifies the original ICA location (e.g., block 8 of FAA Form 337, dated _____) along with a statement that the ICA is now part of the aircraft's inspection/ maintenance requirements.

For major alterations performed in accordance with a field approval on an carrier aircraft, the air carrier **operator** is responsible for ensuring that the ICA is made part of the applicable inspection/ maintenance program for their aircraft. If a procedure is not currently included in the operator's manual to incorporate ICA, this process will need to be appropriately addressed (i.e. the operator submits a revision to it's maintenance program to the applicable certificate-holding district office (CHDO).

For aircraft inspected under an Approved Aircraft Inspection Program (AAIP), the **operator** will submit a change to the CHDO in accordance with section 135.419b.

For air carrier aircraft inspected using an annual/ 100 hour inspection program, a reference to the new ICA will be made in the aircraft's maintenance record in accordance with section 43.9. This entry records the major alteration and identifies the original ICA location (e.g. ICA are located /attached to block 8 of FAA Form 337, dated _____). In addition, the **operator** will request a revision to the Operator's Specifications, additional maintenance requirements, which incorporates the ICA into the inspection program.0

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.	
N 34626	17701907	
Make	**Model**	**Series**
Cessna	177B	177

2. Owner

Name *(As shown on registration certificate)*	Address *(As shown on registration certificate)*
Jason Robertson	Address 5998 Wyndemere Dr.
	City Erie State Pa.
	Zip 16505 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 Irish Air Services LLC	☑	U. S. Certificated Mechanic	☐ Manufacturer
Address Po Box 61	☐	Foreign Certificated Mechanic	C. Certificate No.
City North East State Pa.	☐	Certificated Repair Station	AP 3540986
Zip 16428 Country Erie	☐	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

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. AP 3540986 IA

Signature/Date of Authorized Individual

FAA Form 337 (10-06)

Work completed for [N 34626] on

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 appicable airworthiness requirements.

N 34626	6/07 /2011
Nationality and Registration Mark	Date

8. Description of Work Accomplished

A Brackett Air Filter assembly Pn. Ba 5710 was installed previously by persons unknown.
I have checked this installation and find it meets the criteria set forth by STC # SA 71 GL
This alteration does not conflict with any previous alteration

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

✓ Additional Sheets Are Attached

United States Of America
Department of Transportation - Federal Aviation Administration

Supplemental Type Certificate

Number SA71GL

This certificate issued to: BRACKETT AERO FILTERS, INC.
7052 Government Way
Kingman, Arizona 86401

certifies that the change in the type design for the following product with the limitations and conditions thereto is found to meet the airworthiness requirements of Part [illegible] of the Regulations.

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

Make: (AML) No. SA71GL for list of approved aircraft

Model: models and applicable airworthiness regulations.

Description of Type Design Change: Installation of air filters in accordance with AML No. SA71GL dated April 17, 1995, or later FAA approved revision.

Limitations and Conditions: Approval of this change in type design applies to the above aircraft model(s) only. This approval should not be extended to aircraft of this model 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 that aircraft. A copy of this Certificate and FAA Approved Model List (AML) No. SA71GL dated April 17, 1995, or later FAA approved revision must be maintained as part of the permanent records for the modified 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: January 9, 1975 Date received: March 3, 1983, June 20, 2000

Date of issuance: February 21, 1975 Date reissued: April 17, 1995

By direction of the Administrator

for Manager, Tech. and Admin. Support Staff
Los Angeles Aircraft Certification Office
(Title)

FEDERAL AVIATION ADMINISTRATION

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

FAA Form 8110-3(10-68)

This certificate may be transferred in accordance with FAR 21.47.

FAA APPROVED MODEL LIST (AML) NO. SA71GL
BRACKETT AERO FILTERS, INC.
FOR
INSTALLING AIR FILTERS

Issue Date: April 17, 1995

ITEM	AIR FILTER MODEL NUMBER	TOP DRAWING NUMBER	TOP DRAWING REVISION & DATE	AIRCRAFT MAKE	AIRCRAFT MODEL	ORIGINAL TYPE CERTIFICATE NUMBER	CERT. BASIS	AML AMENDMENT DATE
34	BA-5110	BA-5110	H 5/5/95	Cessna	170/A/B	A-799	CAR 3	7/12/95
				Cessna	172/A/B/C/D/E/F/G/H/I/K/L/M	3A12	CAR 3	7/12/95
				Mooney Mite	M-18C	A-803	CAR 3	7/12/95
				Reims Aviation	(Cessna) F172D/E/F/G/H/K/L/M	A4EU	CAR 10	7/12/95
				*** END OF DATA ***				
35	BA-5110A	BA-5110A	D 5/5/95	Cessna	172N, P	3A12	CAR 3	7/12/95
				Reims Aviation	(Cessna) F172N, P	A4EU	CAR 10	7/12/95
				*** END OF DATA ****				
36	BA-5210	BA-5210	N/C 7/22/88	Cessna	T303	A34CE	FAR 23	-------
				*** END OF DATA ***				
37	BA-5710	BA-5710	C 6/3/86	Cessna	177/A/B	A13CE	FAR 23	-------
				Cessna	177RG	A20CE	FAR 23	-------
				Reims Aviation	(Cessna) F177RG	A26EU	FAR 23	-------
				*** END OF DATA				

RTP

US Department of Transportation
Federal Aviation Administration

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

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification
WP07

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 civil penalty not to exceed $1,000 for each such violation (Section 901 Federal Aviation Act of 1958).

1. Aircraft	Make Cessna	Model 177B
	Serial No. 17701907	Nationality and Registration Mark N-34626
2. Owner	Name *(As shown on registration certificate)* Hagen, Richard A	Address *(As shown on registration certificate)* 16449 S 1st Ave Phoenix, AZ 85045-0701

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.
Jason Bowman 3152 W Thude Dr Chandler, AZ 85226	X U.S. Certificated Mechanic Foreign Certificated Mechanic Certificated Repair Station Manufacturer	2864397 A&P

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
March 2, 2005	Jason Bowman

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	X	Inspection Authorization	Other *(Specify)*
		FAA Designee		Repair Station		Person Approved by Transport Canada Airworthiness Group	

Date of Approval or Rejection	Certificate or Designation No.	Signature of Authorized Individual
March 2, 2005	459276065 IA	Kevin A Bowman

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.)

N-34626 March 2, 2005 TTAF: 2080.4

Installed main landing gear wheel pants (P/N 89-1102-16 and 89-1102-17) from Maple Leaf Aviation in accordance with STC SA902NE, Maple Leaf Aviation installation instructions, drawing GA1102-SEMB, Rev. A, dated 5/29/1989, and drawing AD1102-SEMB, Rev. A, dated 4/6/1989. Installed nose landing gear wheel pant (P/N PD85-1101) from Maple Leaf Aviation in accordance with STC SA902NE, Maple Leaf Aviation installation instructions, and drawing AD1101-SENB, Rev. C, dated 6/1/1994. Installed fiberglass stabilator tips (P/N ST-001) from Maple Leaf Aviation in accordance with STC SA00908NY, Maple Leaf Aviation installation instructions, and drawing ID-RS 177 ST-001 dated 2/19/1997. Weight and balance change negligible.

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

☐ Additional Sheets Are Attached

* U.S.G.P.O. 1990-761-753

MAPLE LEAF Aviation Limited

BRANDON MUNICIPAL AIRPORT – NO. 3 HANGAR, McGILL FIELD
455 AGNEW DRIVE, BRANDON, MANITOBA, CANADA

MAILING ADDRESS:
GROUP 520, BOX 16, R.R.#5
BRANDON, MANITOBA R7A 5Y5

TEL: (204) 728-7618
FAX: (204) 725-1719
E-MAIL: mla@inetlink.ca

AUTHORIZATION FOR USE OF STC/STA DOCUMENT

THIS SUPPLEMENT TYPE CERTIFICATE/SUPPLEMENT TYPE APPROVAL IS THE PROPERTY OF MAPLE LEAF AVIATION LIMITED. MAPLE LEAF AVIATION LIMITED AUTHORIZES THE USE OF THE STC/STA DATA ONLY FOR AIRCRAFT SPECIFIED BELOW. ANY USE OF THIS STC BEYOND THE AIRCRAFT SPECIFIC BELOW IS A VIOLATION OF PROPRIETARY LAWS AND IS SUBJECT TO LEGAL ACTION.

PLEASE KEEP THE STC/STA, INSTALLATION INSTRUCTIONS, FLIGHT MANUAL SUPPLEMENT AND THIS AUTHORIZATION SHEET IN A SECURE LOCATION.

Maple Leaf Aviation Limited (STC/STA Holder) hereby authorizes

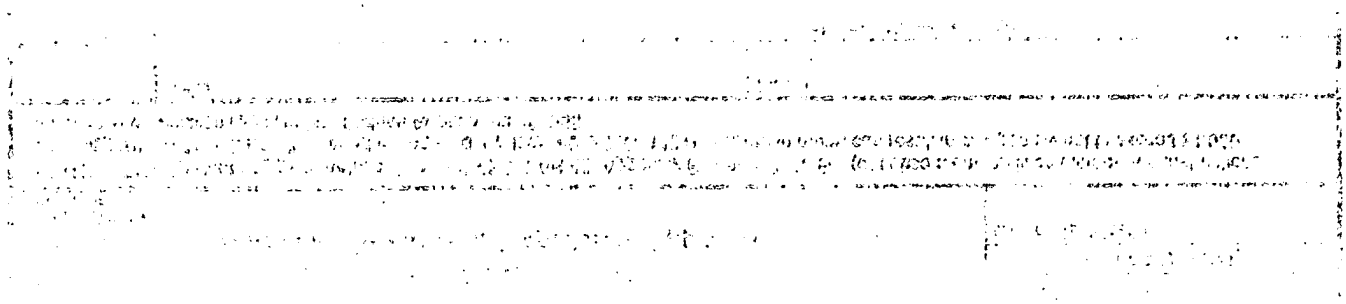
Mr. Richard Hagen
16449 S. 1st Avenue
Phoenix, Arizona 85045-0701
USA

to use the following STC/STA's	**Part Name and Serial Number**
SA672NE	Nose Wheel Fairing 2010-0273
SA00908NY	Stabilator Tip C1204221 & C1204222
SA902NE	Main Wheel Fairing 3010-215L & 3010-214R

on Aircraft:
N34626
s/n 17701907

DATE: February 7, 2005

Maple Leaf Aviation Limited
Mr. David J. Wall or Mr. James D. Wall



12/23

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
ANM Den FSDO

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

1. Aircraft	Make: CESSNA	Model: 177B
	Serial No.: 17701907	Nationality and Registration Mark: 34626
2. Owner	Name *(As shown on registration certificate)*: RICHARD A. HAGEN	Address *(As shown on registration certificate)*: 16449 S. 1ST AVE. PHOENIX AZ 85045-0701

3. For FAA Use Only

4. Unit Identification				**5. Type**	
Unit	Make	Model	Serial No.	Repair	Alteration
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.
FIREWALL FORWARD 5212 CESSNA DR LOVELAND CO 80538	☒ U.S. Certified Mechanic ☐ Foreign Certified Mechanic ☐ Certified Repair Station ☐ Manufacturer	A&P 520767337

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
12-19-2003	

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						Other *(Specify)*
	☐ FAA Flt Standards Inspector	☐ Manufacturer	☒ Inspection Authorization			
	☐ FAA Designee	☐ Repair Station	☐ Person Approved by Transport Canada Airworthiness Group			

Date of Approval or Rejection	Certificate or Designation No.	Signature of Authorized Individual
12-19-2003	A&P517660922 I.A.	

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 J.P.Instruments FS-450 fuel flow indicator system In Accordance with installation manual Report #400 Rev. NC: Dated 08-16-2000.

Appendix-A. Report No. 503 used for transducer installation.

Transducer mounted on tubulor engine mount using Adel clamps. Removed original equipment clock and used existing hole to mount FS-450 indicator. Installed 2 amp inline fuse under panel of pilots side.

Instructions for Continued Airworthiness is limited to removing components for replacement.

All work performed conforms with AC 43.13-1A chap. 11 sec. 2, 3, 7.

Weight and balance is negligible for this installation.

Equipment list updated and operating handbook supplied to customer.

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

☐ Additional Sheets Are Attached

U.S.GPO:1989-0-663-171

12/23

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
DEN FSDO

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

1. Aircraft	Make: Cessna	Model: 177B
	Serial No.: 17701907	Nationality and Registration Mark: N34626
2. Owner	Name *(As shown on registration certificate)*: Hagen Richard B	Address *(As shown on registration certificate)*: 16449 S 1st Ave Phoenix AZ 85045

3. For FAA Use Only

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

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

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency	C. Certificate No.
Thomas E. Harvey c/o Firewall Forward Inc. 5212 Cessna Dr. Loveland. CO 80538	☒ U.S. Certificated Mechanic ☐ Foreign Certificated Mechanic ☐ Certificated Repair Station ☐ Manufacturer	A&P524088369

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
12-18-03	

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	X	Inspection Authorization	Other *(Specify)*
	FAA Designee		Repair Station		Person Approved by Transport Canada Airworthiness Group	

Date of Approval or Rejection	Certificate or Designation No.	Signature of Authorized Individual
12-18-03	522901579IA	

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.)

Completed modification of engine exhaust system for improved engine performance by installation of Power Flow Systems, Inc. Tuned Exhaust System per Master Drawing List, PFS-13740-00, Revision, IR dated: 06-05-03, Installation Instructions Report, PFS-13750-00, Revision A, dated: 08/30/02 and Instructions for Continued Airworthiness Report, PFS-13760, Revision A, dated:08/03/02, or later FAA approved revisions per STC SA02674AT. Aircraft weight and balance revised. END.

☒ Additional Sheets Are Attached

U.S.GPO:1989-0-663-171

Current as of 06/19/03
Use with PFS-13701,
PFS-13702, PFS-13703

United States of America
Department of Transportation — Federal Aviation Administration

Supplemental Type Certificate

Number SA02674AT

This certificate issued to Power Flow Systems, Inc.
1585 Aviation Center Parkway
Hangar 804
Daytona Beach, FL 32114

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

Original Product - Type Certificate Number A13CE

Make: Cessna
Model: 177, A, B

Description of Type Design Change:
Modification of engine exhaust system for improved engine performance by installation of Power Flow Systems, Inc. Tuned Exhaust System per Master Drawing List, PFS-13740-00, Revision, IR, dated: 06/05/03, Installation Instructions Report, PFS-13750-00, Revision A, dated: 08/30/02 and Instructions for Continued Airworthiness Report, PFS-13760, Revision A, dated: 08/03/02, or later FAA approved revisions.

Limitations and Conditions: Airplane Flight Manual Supplement is not part of this STC. " 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 other previously approved modifications will produce no adverse effect upon the airworthiness of that airplane. 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: June 05, 2003

Date of issuance: June 09, 2003

Date reissued: June 19, 2003

Date amended:

By direction of the Administrator

Jerry Robinette
(Signature)

for Melvin D. Taylor
Manager
Atlanta Aircraft Certification Office

(Title)

FAA AIRCRAFT REGISTRY
CAMERA NO. IN DATE: 12 - 24 - 91

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

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

Form Approved
Budget Bureau No. 04-R060.1

FOR FAA USE ONLY

OFFICE IDENTIFICATION WP25 W5

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE: Cessna	MODEL: 177 B
	SERIAL NO.: 17701907	NATIONALITY AND REGISTRATION MARK: U.S.A. N34626
2. OWNER	NAME (As shown on registration certificate): Gerald F. Robertson Or Lorene E. Robertson	ADDRESS (As shown on registration certificate): 2941 Boeing Road, Cameron Park, Ca. 95682

3. FOR FAA USE ONLY

4. UNIT IDENTIFICATION

UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE: REPAIR	5. TYPE: 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.
Gerald F. Robertson, 2941 Boeing Rd., Cameron Pk. Ca. 95682	X U.S. CERTIFICATED MECHANIC	A&P 1015598
	FOREIGN CERTIFICATED MECHANIC	
	CERTIFICATED REPAIR STATION	
	MANUFACTURER	

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

DATE: November 12, 1991

SIGNATURE OF AUTHORIZED INDIVIDUAL: Gerald F. Robertson

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	X	INSPECTION AUTHORIZATION	OTHER (Specify)
	FAA DESIGNEE		REPAIR STATION		CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	

DATE OF APPROVAL OR REJECTION	CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL
Nov 12 1991	124526	Eugene H. Jost

FAA Form 337 (7-67) (8320)

FAA AIRCRAFT REGISTRY
CAMERA NO. IN DATE: 12 - 24 - 91

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.)*

Installation of fuel inlets and caps in accordance with Barton Drawing list No. WW-1 dated November 7, 1988, or later "FAA Approved" revisions. All work performed as per STC.-#SA2457CE. No significant weight change.

----------End----------

NOV 14 1991

☐ ADDITIONAL SHEETS ARE ATTACHED

U S GPO 1981 775-332 47

FAA AIRCRAFT REGISTRY
CAMERA NO. 3N DATE: 5-8-90

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

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

Form Approved
Budget Bureau No. 04-R060.1

FOR FAA USE ONLY

OFFICE IDENTIFICATION
SAC - FSDO

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE: Cessna	MODEL: 177B
	SERIAL NO.: 17701907	NATIONALITY AND REGISTRATION MARK: N34626
2. OWNER	NAME (As shown on registration certificate): Gerald F. Robertson or Lorene E. Robertson	ADDRESS (As shown on registration certificate): 2941 Boeing Road, Cameron Park, Ca. 95682

3. FOR FAA USE ONLY

4. UNIT IDENTIFICATION / 5. TYPE

UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE: REPAIR	5. TYPE: ALTERATION
AIRFRAME	(As described in item 1 above)				X
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE: System-50 / MANUFACTURER: S-Tec Corp.	ST-243-50	1502		X

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS	B. KIND OF AGENCY	C. CERTIFICATE NO.
Gerald F. Robertson 2941 Boeing Road, Cameron Park, Ca. 95682	X U.S. CERTIFICATED MECHANIC FOREIGN CERTIFICATED MECHANIC CERTIFICATED REPAIR STATION MANUFACTURER	1015598

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: Feb. 24, 1990

SIGNATURE OF AUTHORIZED INDIVIDUAL: Gerald F Robertson

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	X	INSPECTION AUTHORIZATION	OTHER (Specify)
	FAA DESIGNEE	REPAIR STATION		CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	

DATE OF APPROVAL OR REJECTION	CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL
Feb. 24-1990	1244526	Eugene H. Jost

FAA Form 337 (7-67) (8320)

FAA AIRCRAFT REGISTRY
CAMERA NO. 3N DATE: 5-8-90

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 S-Tec Autopilot as per S-Tec's installation instructions and as per STC #SA5317SW-D as follows.

Installation of S-Tec System 50 two axis flight guidance system, Model St-243-50, according to bulletin No. 343 dated 5-01-84 & Master Drawing List No. 92275 dated 5-01-84 and later FAA approved revisions of the above data. (14 Volt System).

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

RECEIVED
SACRAMENTO FSDO
MAR 23 1990

☐ ADDITIONAL SHEETS ARE ATTACHED

C FAA AC 72-4908

U.S. GPO 1981 - 775-332/47

FAA AIRCRAFT REGISTRY
CAMERA NO. 4N DATE: 4-2-84

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

Form Approved
Budget Bureau No. 04-R060.1

FOR FAA USE ONLY
OFFICE IDENTIFICATION
WP-64

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

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE: Cessna	MODEL: 177B
	SERIAL NO.: 17701907	NATIONALITY AND REGISTRATION MARK: N34626
2. OWNER	NAME (As shown on registration certificate): Gerald F. Robertson	ADDRESS (As shown on registration certificate): 2941 Boeing Road, Shingle Springs CA 95682

3. FOR FAA USE ONLY

4. UNIT IDENTIFICATION / 5. TYPE

UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE: REPAIR	5. TYPE: ALTERATION
AIRFRAME	••••••••••••••••••••••• (As described in item 1 above) •••••••••••••••••••••••				XX
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE / MANUFACTURER				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS	B. KIND OF AGENCY	C. CERTIFICATE NO.
Beechcraft West 19990 Skywest Dr. Hayward CA 94541	U.S. CERTIFICATED MECHANIC	
	FOREIGN CERTIFICATED MECHANIC	
	XX CERTIFICATED REPAIR STATION	4556
	MANUFACTURER	

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

DATE: April 23, 1982

SIGNATURE OF AUTHORIZED INDIVIDUAL: J. L. Brunty

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	XX	REPAIR STATION		CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	

DATE OF APPROVAL OR REJECTION	CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL
April 23, 1982	4556	J. L. Brunty

FAA Form 337 (7-67) (8320)

FAA AIRCRAFT REGISTRY
CAMERA NO. 4N DATE: 4-2-84

NOTICE

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

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

Installed Trans-Cal Model D120-P2-T, Blind Encoder TSO C 88. Unit was wired to the existing Transponder, Cessna 300, RT359A, TSO C74c, Class 1B. Unit was wired per manufacturers instructions. The system was checked to 20,000 feet.

All work done in accordance with AC43.13-2, Chapter 2 & 3.

END

☐ ADDITIONAL SHEETS ARE ATTACHED

☆U.S. GOVERNMENT PRINTING OFFICE: 1977—771-021/344

FAA AIRCRAFT REGISTRY
CAMERA NO. 4N DATE: 4-2-84

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
N34626	Cessna 177B	17701907	Normal & Utility

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

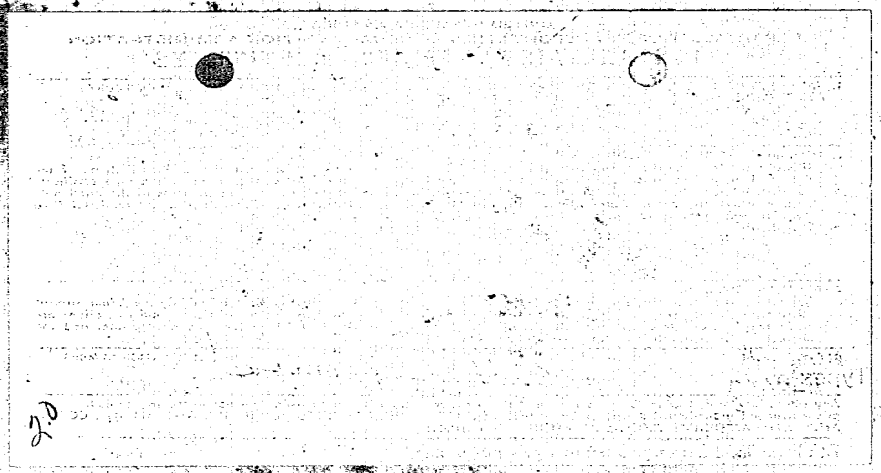
6. TERMS AND CONDITIONS
Unless sooner surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator, this airworthiness certificate is effective as long as the maintenance, preventative maintenance, and alterations are performed in accordance with Parts 21, 43, 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
Typed by #3	Cessna Aircraft Co., Pawnee Div. By [signature]	PC4

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 GPO : 1967—O-270-931

FAA AIRCRAFT REGISTRY
CAMERA NO. 4N DATE: 4-2-84



FAA AIRCRAFT REGISTRY
CAMERA NO. 4N DATE: 4-2-84

Form Approved
Budget Bureau No. 04-R0058

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

APPLICATION FOR AIRWORTHINESS CERTIFICATE

INSTRUCTIONS—Print or type. Do not write in shaded areas; these are for FAA use only. Submit original only to an authorized FAA Representative. If additional space is required, use an attachment. For special flight permits complete Sections II and VI or VII as applicable.

I. AIRCRAFT DESCRIPTION

1. REGISTRATION MARK: N34626	2. AIRCRAFT BUILDER'S NAME (make): Cessna	3. AIRCRAFT MODEL DESIGNATION: 177B	4. YR. MFG.: 1973	FAA CODING: 20737Ø8 41514
5. AIRCRAFT SERIAL NO.: 17701907	6. ENGINE BUILDER'S NAME (make): Lycoming	7. ENGINE MODEL DESIGNATION: O-360-A1F6D		
8. NUMBER OF ENGINES: One	9. PROPELLER BUILDER'S NAME (make): McCauley	10. PROPELLER MODEL DESIGNATION: B2D34C208/82PA-6		11. AIRCRAFT IS: IMPORT

II. CERTIFICATION REQUESTED

APPLICATION IS HEREBY MADE FOR: (Check applicable items)

A 1 X STANDARD AIRWORTHINESS CERT. (Indicate category) X NORMAL X 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 & PEST CONTROL	2 AERIAL SURVEYING	3 AERIAL ADVERTISING
		4	FOREST (Wild life conservation)	5 PATROLLING	6 WEATHER CONTROL
		0	OTHER (Specify)		
4	EXPERIMENTAL (Indicate operation(s) to be conducted)	1	RESEARCH AND DEVELOPMENT	2 AMATEUR BUILT	3 EXHIBITION
		4	RACING	5 CREW TRAINING	6 MKT. SURVEY
		0	TO SHOW COMPLIANCE WITH FAR		
8	SPECIAL FLIGHT PERMIT (Indicate operation to be conducted then complete Section VI or VII as applicable on reverse side)	1	FERRY FLIGHT FOR REPAIRS, ALTERATIONS, MAINTENANCE OR STORAGE		
		2	EVACUATE FROM AREA OF IMPENDING DANGER		
		3	OPERATION IN EXCESS OF MAX. CERTIFICATED TAKE-OFF WEIGHT		
		4	DELIVERING OR EXPORT	5 PRODUCTION FLIGHT TESTING	

C 6 MULTIPLE AIRWORTHINESS CERTIFICATE (Check appropriate Restricted Operation and Standard or Limited as applicable above)

III. OWNER'S CERTIFICATION

A. REGISTERED OWNER (As shown on Certificate of Aircraft Registration) — IF DEALER, CHECK HERE → X

NAME: Cessna Aircraft Company
ADDRESS: 5800 East Pawnee Road, Wichita, Kansas 67201

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

X AIRCRAFT SPECIFICATION OR TYPE CERTIFICATION DATA SHEET (Give No. and Revision No.): A13CE Rev. 9
X AIRWORTHINESS DIRECTIVES (Check if all applicable AD's complied with and give latest AD No.): 73-4
AIRCRAFT LISTING (Give page No(s).)
SUPPLEMENTAL TYPE CERTIFICATE (List number of each STC incorporated)

C. AIRCRAFT OPERATION AND MAINTENANCE RECORDS

X CHECK IF RECORDS IN COMPLIANCE WITH FAR 91.173 — TOTAL AIRFRAME HOURS— 2.0 — 3 EXPERIMENTAL ONLY—Enter hours flown since last certificate issued or renewed

D. CERTIFICATION—I hereby certify that I am the owner (or his agent) of the aircraft described above; that the aircraft is registered with the Federal Aviation Administration in accordance with Section 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
2-24-73	V. G. Weddle, Owner's Agent	V. G. Weddle

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.)
5 AIRCRAFT MANUFACTURER (Give Name of Firm)

DATE — TITLE — SIGNATURE

V. FAA REPRESENTATIVE CERTIFICATION

(Check ALL applicable blocks) I find that the aircraft described in Section I or VII meets the requirements for: [X] The certification requested, or [4] Amendment or modification of its current airworthiness certificate. Inspection for a special flight permit under Section VII was conducted by: [ ] FAA Inspector [ ] Certificate holder under: [ ] FAR 65, [ ] FAR 121 or 127, or [ ] FAR 145.

DATE	DISTRICT OFFICE	DESIGNEE'S SIGNATURE AND NO.	FAA INSPECTOR'S SIGNATURE
4-2-73	ICT EMDO 3-0-43	4 Cessna Aircraft Co., Pawnee Div. Delegation Option Manufacturer, CE-1 By R. D. Humphries	1

FAA Form 8130-6 (7-70)

FAA AIRCRAFT REGISTRY
CAMERA NO. 4N DATE: 4-2-84

Typed by #38

Typed by #7

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

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)*

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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 91.31 as Applicable
- [ ] B. Current Operating Limitations Attached
- [ ] C. Data, Drawings, Photographs, etc. *(Attach when required)*
- [X] D. Current Weight and Balance Information Available in Aircraft
- [ ] E. Major Repair and Alteration; FAA 337 *(Attach when required)*
- [X] F. This Inspection Recorded in Aircraft Records
- [ ] G. Statement of Conformity, FAA Form 317 *(Attach when required)*
- [ ] H. Foreign Airworthiness Certification for Import Aircraft *(Attach when required)*
- [ ] I. Previous Airworthiness Certificate Issued in Accordance with FAR _____ CAR _____ *(Original attached)*
- [X] J. Current Airworthiness Certificate Issued in Accordance with FAR 21.183 (a) *(Copy attached)*

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