U.S Department of Transportation
Federal Aviation Administration

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

Form Approved OMB No. 2120-0020 11/30/2007

Electronic Tracking Number

For FAA Use Only

INSTRUCTIONS: Print or type all entries. See 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	Nationality and Registration Mark: U.S.A. N212CD	Serial No: 1108	
	Make: CIRRUS	Model: SR20	Series: N/A
2. Owner	Name *(As shown on registration certificate)*: PEERS CHRISTOPHER J	Address *(As shown on registration certificate)*: Address: 1444 BOCKHOFER RD City: FOUNTAIN CITY State: INDIANA Zip: 47341 Country: U.S.A.	

3. For FAA Use Only

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

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency			
Name FIRST WING JET CENTER	☐	U.S. Certificated Mechanic	☐	Manufacturer
Address 11329 E SR 32	☐	Foreign Certificated Mechanic		C. Certificate No.
City Zionsville State IN	☒	Certificated Repair Station		1MYR828C
Zip 46077 Country U.S.A.	☐	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	
☐	JOHN R. MCGRATH	03/19/2020

7. Approval for Return to Service

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

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

Certificate or Designation No.	Signature/Date of Authorized Individual	
1MYR828C	JOHN R. MCGRATH	03/19/2020

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.)

U.S.A. N212CD	03/19/2020
Nationality and Registration Mark	Date

- THE INSTALLATION OF THE ADS-B OUT COMPLIANT TRANSPONDER WAS ACCOMPLISHED BY USE OF THE GARMIN INTERNATIONAL STC # SA01714WI AND AML REVISED SEPTEMBER 9, 2019.
- REMOVED EXISTING GARMIN TRANSPONDER GTX 327, P/N 011-00490-00, FROM THE RADIO STACK AT STATION 121 AND INSTALLED THE GARMIN GTX 345 TRANSPONDER, P/N 011-03302-40 I.A.W. THE GARMIN GTX 3XX PART 23 AML STC INSTALLATION MANUAL, 190-00734-10 REVISION 13, DATED SEPTEMBER 3, 2019.
- NEW INTERFACING WIRING WAS MARKED FOR IDENTIFICATION IAW AC 43.13-1B CHAPTER 11, PAGE 11-83 THRU 11-85, PARAGRAPHS 205, 206, 207, AND 208. WIRING ADDITIONS AND CHANGES WERE ACCOMPLISHED I.A.W. SECTION 4 AND APPENDIX B OF THE GARMIN GTX 3XX PART 23 AML STC INSTALLATION MANUAL 190-00734-10 REVISION 13, DATED SEPTEMBER 3, 2019.
- 28VDC IS PROVIDED TO THE TRANSPONDER FROM THE AIRCRAFT AVIONICS BUS WITHIN THE LEFT SIDE CIRCUIT BREAKER PANEL. CIRCUIT PROTECTION IS PROVIDED BY A 3 AMP C/B P/N 7277-2-3. THE C/B IS PLACARDED "XPDR".
- THE GTX 345 AND THE INTERFACING GNS 430W'S AND G500 WERE CONFIGURED I.A.W. SECTION 7 AND THE SOFTWARE LEVEL OF THE GTX TRANSPONDER VERIFIED I.A.W. THE GARMIN GTX 3XX PART 23 AML STC INSTALLATION MANUAL 190-00734-10 REVISION 13, DATED SEPTEMBER 3, 2019.
- OPERATION OF THE TRANSPONDER WAS CHECKED OUT I.A.W. SECTION 8 OF THE GARMIN GTX 3XX PART 23 AML STC INSTALLATION MANUAL 190-00734-10 REVISION 13, DATED SEPTEMBER 3, 2019. AN ENCODING CHECK AND TRANSPONDER TEST WAS ACCOMPLISHED PER FAR 91.411, 91.413 AND PART 43 APPENDICIES E/F.
- THE INSTALLED ADS-B OUT SYSTEM WAS SHOWN TO MEET THE EQUIPMENT PERFORMANCE REQUIREMENTS OF 14 CFR PART 91.227.
- THE AIRCRAFT EQUIPMENT LIST HAS BEEN REVISED.
- AN ELECTRICAL LOAD ANALYSIS HAS BEEN COMPLETED IN ACCORDANCE WITH AC 43.13-2B CHAPTER 2, PAGE 19 PARAGRAPH 208 AND IT WAS DETERMINED THAT THE INSTALLATION OF THE GTX 345 TRANSPONDER DOES NOT EXCEED 80% OF THE AIRCRAFT'S ELECTRICAL SYSTEM CAPACITY.
- AN ELECTRICAL INTERFERENCE CHECK HAS BEEN ACCOMPLISHED I.A.W. SECTION 8, PARAGRAPH 8.3.4 OF THE GARMIN GTX 3XX PART 23 AML STC INSTALLATION MANUAL 190-00734-10 REVISION 13, DATED SEPTEMBER 3, 2019. NO ELECTRICAL INTERFERENCE OR ADVERSE EFFECTS ON OTHER SYSTEMS NOTED.
- A COPY OF THE PILOTS GUIDE P/N 190-01499-00 REVISION F WAS PLACED ABOARD THE AIRCRAFT.
- THE FAA APPROVED AIRPLANE FLIGHT MANUAL SUPPLEMENT (*) 190-00734-15, REVISION 4, DATED SEPTEMBER 09, 2019, HAS BEEN INCORPORATED INTO THE AIRCRAFT FLIGHT MANUAL.
- AN EVALUATION HAS BEEN CONDUCTED AND THIS ALTERATION WILL NOT IMPACT THE AIRWOTHINESS OF THIS AIRCRAFT. THE AIRCRAFT AND AIRCRAFT RECORDS HAVE BEEN REVIEWED TO ENSURE COMPATIBILITY OF THIS ALTERATION WITH ALL PREVIOUSLY APPROVED CHANGES TO THE AIRCRAFT.
- AN ENTRY HAS BEEN MADE INTO THE AIRCRAFTS PERMANENT RECORDS FOR THE WORK PERFORMED IAW 14 CFR PART 43.

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS:

- INSTRUCTIONS FOR CONTINUED AIRWORTHINESS FOR THE GTX345 TRANSPONDER, SECTION 4, OF GARMIN DOCUMENT P/N 190-00734-11 REVISION 7 (*), HAVE BEEN INSERTED INTO THE AIRCRAFTS PERMANENT RECORDS AND ANY PERIODIC CHECKS AND INSPECTIONS LISTED MUST BE COMPLIED WITH AT THE INTERVALS SPECIFIED.

NOTE: ALL DOCUMENTS IDENTIFIED WITH (*) ARE ATTACHMENTS TO THIS FAA FORM 337 AND MUST BE MAINTAINED WITH THE AIRCRAFTS PERMANENT RECORD.

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:
Make:
Model:

* 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.

Description of Type Design Change:

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

Data Required:

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

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

Limitations and Conditions:

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

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

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

Date of application: August 7, 2012

Date of issuance: May 1, 2013

Date reissued:

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

By direction of the Administrator

JR Brownell

(*Signature*)

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

(*Title*)

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 grantor) Print or type* _____

(Address of grantor) _____

(Number and street)

_____

(City, State and Zip code)

Extent of Authority (if licensing agreement): _____

_____

_____

_____

Date of Transfer: _____

Signature of grantor *(In Ink)*: _____

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

Supplemental Type Certificate
(Continuation Sheet)

Number SA01714WI

Date of issuance: May 1, 2013

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

Limitations and Conditions (continued):

(3) Aircraft with G950 or G1000 display systems are limited to Garmin transponder GTX 335R/335DR/345R/345DR models; see Table II of the attached AML. Refer to the design data specified in the Master Drawing List (MDL) listed above for specific hardware and software requirements.

(4) Aircraft modified by this STC must be operated in accordance with the Airplane Flight Manual Supplement or Supplemental Airplane Flight Manual (AFMS) identified above.

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

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

***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	Section	Amdt
23.301 a	23-48	23.773 a(2)	23-45	23.1357 a, b, c, d	23-43
23.303	Original	23.777 a, b	23-62	23.1359 c	23-49
23.305	23-45	23.853 a	23-62	23.1365 a, b, d, e	23-49
23.307 a	Original	23.863 a, b	23-34	23.1367 a, b, c, d	Original
23.337	23-48	23.1301 a, b, c	23-62	23.1431 a, b	23-62
23.561 b(3), e	23-62	23.1306 a, b	23-61	23.1501 a, b	23-21
23.601	Original	23.1307	23-49	23.1525	23-45
23.603	23-23	23.1308 a, b, c	23-57	23.1529	23-26
23.605 a	23-23	23.1309 a(1)(2),b, c, d	23-62	23.1555 a, b, e(2)	23-62
23.607 a, b	23-48	23.1310	23-62	23.1581 a, b, c, f	23-50
23.611	23-48	23.1311 a(2)	23-62	23.1583 h, m	23-62
23.613 a, b	23-45	23.1322 b, d, e	23-43	23.1585 j	23-62
23.627	Original	23.1351 a	23-49	-----	----
23.771 a	23-14	23.1353 h	23-62	-----	----

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

FAA Approved Model List (AML)

STC Number SA01714WI

Installation of Garmin Transponder GTX 33X and GTX 3X5 with ADS-B

FAA APPROVED
JR Brownell
ODA ADMINISTRATOR
9-9-2019
DATE

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

Issued Date:	May 1, 2013
Amended Date:	August 27, 2013,
	March 8, 2016
	July 21, 2016
	December 21, 2017
	February 6, 2019
	September 9, 2019

FAA Approved Model List (AML) STC Number SA01714WI

AML Amendment Log

Date	Description
5/1/2013	Initial Release
8/27/2013	Defined which aircraft were certified with 14CFR 23.1353(h) being part of the certification basis.
08-Mar-2016	Added GTX 3X5 along with additional aircraft models. Split the AML into two tables as noted below
21-July-2016	Corrected typographical error regarding LC42-550FG in Table II
21-Dec-2017	Added aircraft models to both Table I and Table II. See column AML Revision/Date (Revision 4 dated 20-Dec-2017) for the newly added models. Re-added Piper Aircraft Model PA-34-220T to Table I as it was inadvertently dropped off the AML at Revision 2. Removed Beechcraft Model A100C (TCDS A14CE). This aircraft was removed from the TCDS at Rev. 27 since no airplanes have been built, nor are any planned to be made. Removed Table III – Notes Information.
06-Feb-2019	Added aircraft models to Table I. See column AML Amendment/Date (Amendment 5 dated 06-Feb-2019) for the newly added models.
09-Sep-2019	Added additional Aviat Aircraft Inc. models to Table I. See column AML Amendment/Date (Amendment 6 dated 05-Sep-2019) for the newly added models.

NOTE:
This AML contains 2 Tables as part of the 08-Mar-2016 Amendment.

1. **Table I** identifies Aircraft approved for the GTX 33X and GTX 3X5 **WITHOUT** GX000 Equipped flight deck system
2. **Table II** identifies Aircraft approved for the GTX 3X5R only **WITH** G950/G1000 Equipped flight deck system

Table of Tables

FAA Approved Model List (AML) STC SA01714WI

Airplane Make (TCDS Holder) [common name or previous make]	Airplane Model Designation	Type Certificate Number	TC Certification Basis [1]	Master Drawing List Revision (005-00734-04)	AML Amendment/Date
B-N Group LTD. (B-N Group Ltd.) [Pilatus Britten-Norman Limited]	BN-2, BN-2A, BN-2A-2, BN-2A-3, BN-2A-6, BN-2A-8, BN-2A-9, BN-2A-20, BN-2A-21, BN-2A-26, BN-2A-27, BN-2B-20, BN-2B-21, BN-2B-26, BN-2B-27, BN-2T, BN-2T-4R	A17EU	FAR 21 FAR 23	1	Original 5/1/2013
	BN2A MK. III, BN2A MK. III-2, BN2A MK. III-3	A29EU	FAR 21 FAR 23	1	Original 5/1/2013
Boeing (The Boeing Company) [Rockwell International; North American Aviation]	BC-1A, AT-6 (SNJ-2), AT-6A (SNJ-3), AT-6B, AT-6C (SNJ-4), AT-6D (SNJ-5), AT-6F (SNJ-6), SNJ-7, T-6G	A-2-575	CAR 4a	1	Original 5/1/2013
Cessna (Cessna Aircraft Company)	T-50 (Army AT-17, UC-78 series, and Navy JRC-1)	A-722	CAR 4a	6	Amendment 2 08-Mar-2016
Cessna (Cessna Aircraft Company)	F150F, F150G, F150H, F150J, F150K, F150L, F150M, F152, FA150K, FA150L, FA150M, FA152, FRA150L, FRA150M	A13EU	CAR 3	6	Amendment 2 08-Mar-2016
	FR172E, FR172F, FR172J, FR172H, FR172G, FR172K	A18EU	CAR 3 FAR 21	1	Original 5/1/2013
Cessna (Cessna Aircraft Company)	F337E, FT337E, F337F, FT337F, F337G, FT337GP, F337H, FT337HP	A23EU	FAR 23	6	Amendment 2 08-Mar-2016
	F172D, F172E, F172F, F172G, F172H, F172K, F172L, F172M, F172N, F172P, FP172D	A4EU	CAR 3 CAR 10	10	Amendment 4 21-Dec-2017
	F177RG	A26EU	FAR 23	10	Amendment 4 21-Dec-2017
	F182P, F182Q, FR182	A42EU	CAR 3	6	Amendment 2 08-Mar-2016
Cirrus Design Corporation (Cirrus Design Corporation)	SR20, SR22	A00009CH	FAR 23	1	Original 5/1/2013
Costruzioni Aeronautiche Tecnam S.P.A. (Costruzioni Aeronautiche Tecnam S.P.A) [Costruzioni Aeronautiche Tecnam srl]	P2006T	A62CE	FAR 23	6	Amendment 2 08-Mar-2016

4 INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

This section provides Instructions for Continued Airworthiness for the GTX 33X and GTX 3X5 with ADS-B installation. This section satisfies the requirements for continued airworthiness as defined by 14 CFR Part 23.1529 and Part 23 appendix G. Information in this section is required to maintain the continued airworthiness of the GTX 33X and GTX 3X5 as installed under this AML STC.

4.1 Applicability

This document applies to all aircraft equipped with GTX 33X and GTX 3X5 units with ADS-B per STC SA01714WI.

Modification of an aircraft by this STC obligates the aircraft operator to include the maintenance information provided by this document in the operator's Aircraft Maintenance Manual and the operator's Aircraft Scheduled Maintenance Program.

4.2 Airworthiness Limitations

There are no new (or additional) airworthiness limitations associated with this equipment and/or installation..

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.

JR Brownell 9-9-2019

FAA APPROVED

JR Brownell
ODA STC Unit Administrator
ODA-240087-CE

Date

4.3 Servicing Information

GTX 33X and GTX 3X5 LRU maintenance is "on condition" only. Component-level overhaul is not required for the GTX 33X and GTX 3X5 with ADS-B installation.

4.3.1 On Condition Servicing

On Condition replacement and/or servicing should occur when an item exhibits conditions, symptoms, and/or abnormalities as defined in Section 5 of this manual. Replacement and/or servicing should be made only after the technician troubleshoots the system by using the guidance in this manual along with common avionics maintenance practices.

4.3.2 Special Tools

The following tools are needed to perform maintenance tasks.

- Calibrated milliohm meter with an accuracy of ± 0.1 milliohm or better
- Calibrated transponder ramp tester
- Calibrated Pitot/static ramp tester
- GTX 3X5 Install Tool (remote units only)
- 50 Ω 5 watt antenna load

4.4 Maintenance Intervals

Table 4-1 shows systems and components, installed by this STC, which must undergo tests or checks at specific intervals. The inspections based on calendar elapsed time have specifically stated intervals.

NOTE

The maintenance intervals listed in the table below must be adhered to for each installed GTX.

Table 4-1 Maintenance Intervals

Item	Description/Procedure	Section	Interval
Equipment Removal and Reinstallation	Removal and reinstallation of GTX LRUs.	6	On Condition
Cleaning	The GTX 330 and GTX 335/335D/345/345D display and bezel may be cleaned periodically. Cleaning is accomplished using a soft cotton cloth dampened with clean water. **DO NOT** use any chemical cleaning agents. Avoid scratching the surface of the display.	N/A	On Condition
Antenna Visual Inspection	Removal and replacement.	4.5	On Condition
Lightning Strike - Actual or Suspected	Inspect the coaxial cable connections, GTX bonding hardware (including bonding straps and tape), antenna, and surrounding areas.	4.5	On Condition
	The GTX 33/330 and GTX 3X5 receiver sensitivity must be tested and shown to comply with Title 14 CFR Part 43 Appendix F.	4.	On Condition
Testing	The GTX 33/330 and GTX 3X5 must be tested and shown to comply with Title 14 CFR Part 91.227.	8.7	Replacement of GPS Position source(s).
Equipment Visual Inspection	A visual inspection of the equipment installed by this STC must be performed.	4.5	12 Calendar Months
Testing	The GTX 33/330 and GTX 3X5 must be tested and shown to comply with Title 14 CFR Part 91.411, 91.413, and Part 43 Appendix E and F.	4.	Refer to Title 14 CFR Part 91.411, 91.413, and Part 43 Appendix E and F.
Electrical Bonding Test	An electrical bonding test must be performed on equipment installed by this STC.	4.6	10 Years or 2000 hours

4.5 Visual Inspection

Perform a visual inspection in accordance with requirements in this section. Check for corrosion, damage, or other defects for each of the installed items. Replace any damaged parts as required. Inspection may require the temporary removal of a unit or units to gain access to connectors. Follow guidance in Section 6 for equipment removal and replacement. Refer to Appendix A of this manual for equipment locations. Refer to the specific Aircraft Maintenance Manual for instructions on removing any access panels.

GTX 330/330D/335/335D/345/345D Visual Inspection

During normal aircraft inspections not to exceed 12 calendar month intervals, conduct a visual inspection of the GTX 330/330D/335/335D/345/345D installation in the following locations.

Instrument Panel

1. Inspect all GTX 330/330D/335/335D/345/345D keys for legibility of labels and markings.
2. Inspect GTX 330/330D/335/335D/345/345D units for security of attachment.
3. Inspect mounting rack and hardware for integrity.
   a. Verify the racks, fasteners, and support structure are in good condition and securely fastened.
   b. Inspect for signs of corrosion.
   c. For composite aircraft, inspect any aluminum foil tape used to ground the GTX and verify that it is not torn, damaged, or showing signs of corrosion. If any of these occur then the tape must be replaced. Refer to Appendix B for details.
4. Inspect any bonding straps for corrosion, loose connections, or signs of damage. Refer to Appendix B for details.
5. Inspect the condition of the wiring harnesses and coaxial cables.
   a. Inspect all instrument panel wiring and coax for chafing, damage, proper routing of wire bundles and security of attachment in accordance with AC 43.13-1B, chapter 11, section 8, paragraph 11-96. Pay particular attention to possible areas of chafing.
   b. Verify that the harness shows no signs of cracking, chafing, abrasion, melting, or any other form of damage.
   c. Inspect the GTX 330/330D/335/335D/345/345D connectors for corrosion or other defects. Check the integrity of the shield block ground attachments to the harness connector assembly as well as the integrity of the individual shields and their attachment.

GTX 33/33D/335R/335DR/345R/345DR Visual Inspection

During normal aircraft inspections not to exceed 12 calendar month intervals, conduct a visual inspection of the GTX 33/33D/335R/335DR/345R/345DR installation in the following locations.

Remote Mount Rack

1. Inspect GTX 33/33D/335R/335DR/345R/345DR units for security of attachment.
2. Inspect mounting rack and hardware for integrity.
   a. Verify the racks, fasteners, and support structure are in good condition and are securely fastened.
   b. Inspect for signs of corrosion.
   c. For composite aircraft, inspect any aluminum foil tape used to ground the GTX and verify that it is not torn, damaged, or showing signs of corrosion. If any of these occur then the tape must be replaced. Refer to Appendix B for details.
3. Inspect any bonding straps for corrosion, loose connections, or signs of damage. Refer to Appendix B for details.
4. Inspect the condition of the wiring harnesses and coaxial cables.
   a. Verify that all wiring and cables are securely fastened.
   b. Verify that the harness shows no signs of cracking, chaffing, abrasion, melting, or any other form of damage.
   c. Inspect the GTX 33/33D/335R/335DR/345R/345DR connectors for corrosion or other defects. Check the integrity of the shield block ground attachments to the harness connector assembly as well as the integrity of the individual shields and their attachment.

Antenna Visual Inspection

During normal aircraft inspections not to exceed 12 calendar month intervals, conduct a visual inspection of the transponder antennas for the following.

1. Erosion, cracks, dents, or broken antenna. If these conditions are present, antenna must be replaced. Refer to antenna manufacturer's replacement instructions for details.
2. If the attachment is not secure, re-work the installation and complete electrical bonding test specified in Section 4.6.
3. Condition of base seals. In the event the antenna seal shows sign of damage or decomposition, re-seal and complete the electrical bonding test specified in Section 4.6.

Post Lightning Strike Inspection

A post lightning strike inspection must be performed for a suspected or actual lightning strike to antennas or any temperature sensor connected to the GTX unit. Inspect antenna or sensor and surrounding installation to verify that structural damage has not occurred around the areas where lightning may have attached. If there is visible sign of damage to the antenna or sensor, then it should be replaced.

Inspect the antenna coax connection to GTX unit, grounding hardware, bonding straps or tape, and surrounding areas of the remotely mounted GTX to verify damage has not occurred. Repair any damaged areas and components, then complete the electrical bonding test specified in Section 4.6.

4.6 Electrical Bonding Test

1. Disconnect the antenna coaxial cable from the GTX 33X or GTX 3X5.
2. Disconnect all connectors from the GTX 33X or GTX 3X5.
3. Measure the DC resistance between each of the following test points and the aircraft ground reference as defined in Table B-1 and verify the resistance is less than or equal to the appropriate periodic test resistance value.
   - Top metal case of GTX 330/330D/335/335D/345/345D #1 (if installed)
   - Top metal case of GTX 330/330D/335/335D/345/345D #2 (if installed)
   - GTX 33/33D/335R/335DR/345R/345DR #1 chassis (if installed)
   - GTX 33/33D/335R/335DR/345R/345DR #2 chassis (if installed)
4. If the resistance is more than the periodic test resistance value in Table B-1, the bond must be improved enough to meet the reconditioned resistance value.

4.7 Additional Instructions

Electrical load information for the GTX is provided in Section 2.6.

US Department of Transportation
Federal Aviation Administration

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

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

For FAA Use Only

INSTRUCTIONS: Print or type all entries. See Title 14 CFR §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.	
U.S.A. N212CD	1108	
Make	**Model**	**Series**
Cirrus Design Group	SR20	

2. Owner

Name *(As shown on registration certificate)*	Address *(As shown on registration certificate)*
Peers, Chris	Address 700 Otter Lake Loop City Hanson State KY Zip 42413 Country U.S.A.

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 Midamerica Aircraft Services, LLC		U. S. Certificated Mechanic	Manufacturer
Address 1 Bullfrog Blvd.		Foreign Certificated Mechanic	C. Certificate No.
City Owensboro State KY	X	Certificated Repair Station	8MCR521C
Zip 42301 Country U.S.A.		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 May 15, 2015

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.	Signature/Date of Authorized Individual
8MCR521C	May 15, 2015

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.)

U.S.A. N212CD	05/15/2015
Nationality and Registration Mark	Date

N212CD S.N. 1108 Aircraft Total Time 903.9

Installed JP Instruments EGT-701 engine monitoring system P/N EDM 700-6C as per STC# SA 2586NM under TSO-C43b in accordance with JPI EGT-701 scanner installation manual Revision E. Installed CHT gasket probe P/N M-113 3/8 to coexist factory bayonet probe with JPI CHT probe. Both factory EGT system and CHT system are still operative. There are no changes to engine operation and an Instructions for Continued Airworthiness is not required for this installation. Weight & Balance was computated in the aircraft POH as required. Installed JPI supplement No. 1 and STC# SA2586NM into aircraft POH.

------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 N212CD	1108	
Make	**Model**	**Series**
Cirrus	SR20	

2. Owner

Name *(As shown on registration certificate)*	Address *(As shown on registration certificate)*
Peers, Christopher J.	Address 60232 State Road 15 Lot 12 City Goshen State IN Zip 46528 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 Premier Aviation, LLC	☐	U. S. Certificated Mechanic	☐ Manufacturer
Address 1441 County Road 6 West	☐	Foreign Certificated Mechanic	C. Certificate No.
City Elkhart State IN	☑	Certificated Repair Station	
Zip 46514 Country USA	☐	Certificated Maintenance Organization	R6XR149X

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
	4/14/10

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
R6XR149X	4/14/10

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 N212CD	4/14/2010
Nationality and Registration Mark	Date

Validated that the previous installation of #2 GNS 430 was installed IAW with Garmin instructions. Verified this aircraft and all interfaced equipment are covered under the STC AML. This unit was removed and upgraded to a GNS430W unit. Replaced the existing antenna cable with RG-400 GPS antenna cable as necessary as per STC installation requirements. The existing wiring and shielding was inspected and determined to be IAW the STC AML installation data. Removed existing #2 GPS antenna and replaced with GA35 GPS antenna for WAAS to aircraft top fuselage using Garmin approved data from STC's SA01695SE (GA35 antenna) and SA01933LA (GNS430W) installation instructions. The previously mounted GA56 GPS antenna was approved by FAA Form 337 dated 4/10/2009. Mounting instructions were derived from Cirrus SB 32-2X-34-23R1 for original antenna installation requirements.

A summary of the GNS430 WAAS modification done to the aircraft is as follows:

1. Removed Garmin GA56 antenna and installed new GA35 GPS/WAAS antenna; SN: 55470, using Garmin upgrade manual; PN: 190-00357-06, Revision D and STC #SA01933LA. Used Cirrus Service Bulletin SB 32-2X-34-23R1 for installation of antennas to aircraft fuselage.
2. Removed GNS430 unit and installed GNS430W; SN: 97100468, using the provision left behind from the standard 430 unit. Installation done IAW with Garmin upgrade installation manual; PN: 190-00357-06, Revision D and STC #SA0101933LA.
3. The GNS430W was configured identical to the original 430 unit. Each interface was checked out IAW the 430W Installation Manual; PN: 190-003576-06.
4. Removed the Aircraft Flight Supplement for the GNS430 and installed a GNS430 AFMS; PN: 190-00356-03, Revision B, FAA Approved date 7/31/2009 into the Aircraft Flight Manual.
5. Weight and balance data was not affected by this change. The current load analysis remains valid since the new unit draws the same or less current than the original unit.

The Antenna removal and installation was performed by La Porte Aviation Services.

Representative of La Porte Aviation Services – John Hynes John Hynes IA# 2855704 IA

Instructions for Continued Airworthiness (ICA)

GNS430W – Included Garmin document; PN: 190-00356-65, GNS430W Instructions for Continued Airworthiness in the aircraft maintenance records.

Note: This supersedes ICAW data for the previously installed GNS430.

☑ Additional Sheets Are Attached

400W Series

Instructions for Continued Airworthiness

Document Number 190-00356-65 Rev. B

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	10-19-06	Initial Release
A	11-03-06	Revision for STC Issuance
B	07-30-09	Add the "-D" to STC number when reissued under ODA

1. INTRODUCTION

1.1 PURPOSE

This document is designed for use by the installing agency of the Garmin Model 400W Series GPS/WAAS Nav/Com as Instructions for Continued Airworthiness in response to Federal Aviation regulation (FAR) Part 23.1529, and Part 23 Appendix G. The ICA includes information required by the operator to adequately maintain the Garmin Models 400W series installed under Approved Model List (AML) STC SA01933LA-D.

1.2 Scope

This document identifies the Instruction for Continued Airworthiness for the modification of the aircraft for installation of the Garmin Models 400W series GPS/WAAS Nav/Com installed under Approved Model List (AML) STC SA01933LA-D.

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 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 a Garmin Model 400W Series 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 Instructions for Continued Airworthiness for the modification of the aircraft by installation of the Garmin Models 400W Series GPS/WAAS Nav/Com.
Applicability:	Applies to aircraft altered by installation of the Garmin Model 400W Series GPS/WAAS Nav/Com.
Definition of Abbreviations:	See Section 1.6
Precautions:	None
Units of measurement:	None
Referenced publications: *(or later FAA approved revisions)*	190-00356-02 Rev. G *400W Series Installation Manual* 005-C0221-00 Rev. F *400W Series STC Master Data List*
Retention:	This document, or the information contained within, will be included in the aircraft's permanent records.

2.2 Description of Alteration

The Garmin Model 400W Series GPS/WAAS Nav/Com unit is a 6 ¼ inch wide panel mounted unit with all the interface connections behind the instrument panel. Installation of the Garmin Model 400W Series GPS/WAAS Nav/Com system interfaces, specific for the aircraft installation, is documented in the GNS 400W Series Post-Installation Checkout Log that is retained as part of the aircraft's permanent records. The 400W Series units combine a large number of easily acceptable controls to use the color multi-function display, Nav and Com transceiver, GPS/WAAS navigator in a single unit.

2.3 Control, Operating Information

See the 400W Series Installation Manual, listed under the reference documentation in paragraph 2.1 of this document, for system operation and self-test information.

2.4 Servicing Information

None. In the event of system failure, return the unit to the manufacturer or an approved Garmin repair station.

2.5 Periodic Maintenance Instructions

The 400W Series units are designed to detect internal failure. A thorough self-test is executed automatically upon application of power to the units, and built-in test is continuously executed. Detected errors are indicated on the equipment via failure annunciations and maintenance is on-condition.

Operation of the 400W Series unit is not permitted unless an inspection as described in this section has been completed within the preceding 12 calendar months. Conduct a visual inspection on the 400W series unit and its wire harness to insure installation integrity:

1. Inspect the unit for security of attachment.
2. Inspect all knobs and buttons for legibility.
3. Inspect condition of wiring, routing and attachment/clamping.

2.5.1 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.

2.5.2 Display Backlight

The display backlight lamp is rated by the manufacturer as having a usable life of 20,000 hours. This life may be more or less than the rated time depending on the operating conditions of the 400W series unit. 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.

2.5.3 Battery Replacement

The 400W series 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 400W series 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 400W series unit will remain fully operational, but the GPS signal acquisition time may be increased. This acquisition time can be reduced by entering a new seed position each time the unit is powered on. There is no loss of function or accuracy of the 400W series unit with a dead battery.

The battery must be replaced by the Garmin factory repair station or factory authorized repair station.

2.6 Troubleshooting Information

If error indications are displayed on the 400W series unit, consult the Troubleshooting section contained in the 400W Series Installation Manual, listed under reference documentation in paragraph 2.1 of this

document. The '400W Series Post-Installation Checkout Log' in the aircraft permanent records includes the configuration information for the installation. (See Section 5 in the 400W Series Installation Manual for a sample Log).

2.7 Removal and Replacement Information

If the 400W series unit is removed and reinstalled, verify that the 400W series unit power-up self-test sequence is successfully completed and no failure messages are annunciated.

If the 400W series unit is removed for repair and reinstalled, or if the 400W unit is removed and replaced with a different 400W series unit, then follow 'Post Installation Configuration & Checkout Procedures' procedures contained in the 400W Series Installation Manual listed in paragraph 2.1 of this document, and verify the 400W 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, antenna cable, or any interconnected equipment, verify the 400W series unit power-up self-test sequence is successfully completed and no failure messages are annunciated.

To remove the 400W series unit from the mounting rack, insert a 3/32-inch hex drive tool into the access hole at the bottom of the unit face. Rotate the hex tool counterclockwise until the unit is forced out about 3/8 inches and can be freely pulled from the rack.

The 400W unit is installed in the rack by sliding it straight in until it stops, about 1 inch short of the final position. Insert the hex drive tool into the access hole at the bottom of the unit face. Rotate the hex tool clockwise while pressing on the left side of the bezel until the unit is firmly seated in the rack.

Note: There are no special handling requirements for the 400W series units.

2.8 Diagrams

Refer to the 400W Series Installation Manual (listed under reference documentation in section 2.1 of this document) for drawings applicable to this installation. Point to point wiring diagrams are in Appendix H of the 400W Series Installation Manual. Refer to the GNS 400W Series Post-Installation Checkout Log retained in the aircraft permanent for a list of the interfaced equipment. The antenna cables are routed between the 400W series unit and the antenna with disconnects at each unit. The antenna cable typically is routed behind interior panels in the fuselage.

2.9 Special Inspection Requirements

None, N/A.

2.10 Application of Protective Treatments

None, N/A.

2.11 Data Relative to Structural Fasteners

None, N/A.

2.12 Special Tools

No special tools are required for system checkout. See 400W Series Installation Manual listed in reference documentation in section 2.1 of this document.

2.13 Additional Instructions

None

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 400W series unit. If the unit indicates an internal failure, the unit may be removed and replaced. See troubleshooting section contained in the 400W Series Installation Manual, listed under reference documentation in paragraph 2.1 of this document.

2.15 ICA Revision and Distribution

To revise this ICA, a letter must be submitted to the ACO 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 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.

Premier Aviation, LLC

April 16, 2010

Aircraft Registration Branch
AFS-750
PO Box 25504
Oklahoma City, Oklahoma 73125

Dear FAA:

Enclosed below this coversheet are the following items for **N8277L:**

- FAA form 337 for a Radio installation project
- Applicable ICA for the ~~Autopilot~~ project

These items are for your records. Please feel free to contact me if you have any questions.

Sincerely,

Brian Paugh
General Manager

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 N212CD	1108	
Make	**Model**	**Series**
Cirrus	SR20	

2. Owner

Name *(As shown on registration certificate)*	Address *(As shown on registration certificate)*
Peers, Christopher J.	Address 60232 State Road 15 Lot 12 City Goshen State IN Zip 46528 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 Premier Aviation, LLC	☐	U. S. Certificated Mechanic	☐ Manufacturer
Address 1441 County Road 6 West	☐	Foreign Certificated Mechanic	C. Certificate No.
City Elkhart State IN	✓	Certificated Repair Station	
Zip 46514 Country USA	☐	Certificated Maintenance Organization	R6XR149X

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
	4/14/10

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
R6XR149X	4/14/10

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 N212CD	4/14/2010
Nationality and Registration Mark	Date

This facility removed the following components: GI-106A Nav Indicator, NSD1000 HSI, 1C714 Slaving Amplifier, FD01-0301-1 Flux Detector, VSI, ARNAV ICDS2000 MFD, and ACK A-30 Blind Encoder.

This facility installed the following components: Garmin G500 System consisting of: GDU620 PFD/MFD, GDC74A Air Data Computer, GRS77 Attitude Heading and Reference Unit, GMU44 Magnetometer, and GTP-59 OAT Probe. The G500 system was installed in accordance with manufacturer's installation manual; PN: 190-01102-06, Revision 3, dated February 2010. The G500 is approved under multiple TSO's for interfaced equipment. The G500 system was installed per STC# SA02015SE-D. The above mentioned system was ramp checked in accordance with manufacturer installation manual listed above and was found to operate within manufacturer's performance specifications. No interference was found between the installed system and the existing systems in the aircraft. Supplementary weight and balance data was recomputed to reflect these equipment changes. The GPS installation complies with the safety requirements of FAR 23.1301, 23.1309, and 23.1431. The G500 system is to be operated in accordance with pilot operating handbook PN: 190-01102-02, Rev. B, dated June 2009. Instructions for normal continued airworthiness are contained on G500 addendum, attached to your 337 form. -- end --

☑ Additional Sheets Are Attached

GARMIN

August 3, 2009

Subject: STC Permission to use STC SA02015SE-D for
Garmin Model G500 Integrated Avionics System (See AML)

Consistent with Order 8110.4B and AC 21-40, Garmin International grants permission to Garmin dealers, installers, and owners of the Garmin Model G500 Integrated Avionics System units to use STC SA02015SE-D and the data associated with it, for the sole and express purpose of installation and approval of the installation of the G500 Integrated Avionics System, and associated interfaces to other previously approved equipment.

Dan Schmidt
Systems and Support Manager
503-391-3380 phone
503-391-3878 fax
dan.schmidt@garmin.com

United States of America

Department of Transportation -- Federal Aviation Administration

Supplemental Type Certificate

Number SA02015SE-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 thereto 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. SA02015SE-D
Make: dated July 30, 2009 or later FAA-approved revision for list of
Model: approved aircraft models and applicable airworthiness regulations.

Description of Type Design Change:
Installation of Garmin G500 Primary Flight Display (PFD) and Multifunction Display (MFD) System.

Required Data
(1) Garmin Master Drawing List (MDL), 005-00570-13, Rev. 1, dated July 23, 2009
(2) Garmin Airplane Flight Manual Supplement (AFMS), 190-01102-01, Rev. 1, approved July 30, 2009

Later FAA-approved revisions to the data listed above are incorporated without further amendment to this STC.

Limitations and Conditions:
(1) Compatibility of this design change with previously approved modifications must be determined by the installer.
(2) A copy of this certificate must be maintained as part of the permanent records for the modified aircraft.
(3) 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.
(4) Aircraft modified by this STC must be operated in accordance with the AFMS identified above.
(5) Aircraft modified by this STC must be maintained in accordance with the Instructions for Continued Airworthiness (ICA) listed in the MDL identified above.

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 3, 2009

Date of issuance: July 30, 2009

Date reissued:

Date amended:

By direction of the Administrator

(Signature)

David G. Armstrong
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.

FAA Approved Model List (AML) STC SA02015SE-D

Aircraft Make (TCDS Holder) [common name or previous make]	**Aircraft Model (alias)**	**Type Certificate Number**	**TC Certification Basis**	**Master Drawing List**		**AML Revision Date**
				Document Number	**Revision** (or later FAA approved revision)	
Cessna (Cessna Aircraft Company)	FR172K	A18EU	CAR 3	005-00570-13	1	
Cessna (Cessna Aircraft Company)	177RG	A20CE	FAR 23	005-00570-13	1	
Cessna (Cessna Aircraft Company)	336	A2CE	CAR 3	005-00570-13	1	
Cessna (Cessna Aircraft Company)	T303 (Crusader)	A34CE	FAR 23	005-00570-13	1	
Cessna (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	005-00570-13	1	
Cessna (Cessna Aircraft Company)	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	005-00570-13	1	
Cessna (Cessna Aircraft Company)	T-50	A-722	CAR 4a	005-00570-13	1	
Cessna (Cessna Aircraft Company)	190, 195, 195A, 195B	A-790	CAR 3	005-00570-13	1	
Cessna (Cessna Aircraft Company) [Columbia or Lancair]	LC40-550FG, LC41-550FG, LC42-550FG	A00003SE	FAR 23	005-00570-13	1	
Cirrus Design Corporation (Cirrus Design Corporation)	SR20, SR22	A00009CH	FAR 23	005-00570-13	1	
CPAC, Inc. (CPAC, Inc.) [Commander]	112, 112TC, 112B, 112TCA, 114, 114A, 114B, 114TC	A12SO	FAR 23	005-00570-13	1	
Cub Crafters, Inc. (Cub Crafters, Inc.)	CC18-180, CC18-180A	A00006SE	FAR 23	005-00570-13	1	
de Havilland (Viking Air Limited)	DHC-2 Mark I, DHC-2 Mark II, DHC-2 Mark III	A-806	CAR 3	005-00570-13	1	
Diamond (Diamond Aircraft Industries GmbH)	DA 40, DA 40F	A47CE	FAR 23	005-00570-13	1	
Diamond (Diamond Aircraft Industries GmbH)	DA 42	A57CE	FAR 23	005-00570-13	1	
Diamond (Diamond Aircraft Industries, Inc.)	DA20-A1, DA20-C1	TA4CH	FAR 23	005-00570-13	1	
Dornier (Dornier-Werke G.m.b.H.)	Do 28 A-1, Do 28 B-1	7A13	CAR 3/10	005-00570-13	1	
Dornier (Dornier-Werke G.m.b.H.)	Do 27 Q-6	A8IN	CAR 3/10	005-00570-13	1	
EADS-PZL "Warszawa-Okecie" (EADS-PZL "Warszawa-Okecie" S.A.)	PZL-104 WILGA 80, PZL-104M WILGA 2000, PZL-104MA WILGA 2000	A55EU	FAR 23	005-00570-13	1	
EADS-PZL "Warszawa-Okecie" (EADS-PZL "Warszawa-Okecie" S.A.)	PZL-KOLIBER 150A, PZL-KOLIBER 160A	A69EU	FAR 23	005-00570-13	1	
Extra (Extra Flugzeugproduktions-und Vertriebs - GmbH)	EA-400	A43CE	FAR 23	005-00570-13	1	
Extra (Extra Flugzeugproduktions-und Vertriebs - GmbH)	EA-300, EA-300/L, EA-300S, EA-300/200	A67EU	FAR 23	005-00570-13	1	

G500 PFD/MFD System

Instructions for Continued Airworthiness

as installed in a

Cirrus Design SR20

Reg. No.: N212CD S/N: 1108

Dwg. Number:
190-01102-00 Rev. 2

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	06/30/09	Initial Release
2	11/30/09	Add replacement instructions for OAT bond strap

1. INTRODUCTION

1.1 Purpose

This document is designed for use by the installing agency of the Garmin G500 PFD/MFD System as Instructions for Continued Airworthiness in response to Federal Aviation regulation (FAR) Part 23.1529, and Part 23 Appendix G. This ICA includes information required by the operator to adequately maintain the Garmin G500 system installed under Approved Model List (AML) STC.

1.2 Scope

This document identifies the Instruction for Continued Airworthiness for the modification of the aircraft for installation of the Garmin G500 PFD/MFD System 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 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 a Garmin G500 system 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) **ADC:** Air Data Computer
4) **AEG:** Aircraft Evaluation Group
5) **AHRS:** Attitude Heading Reference System
6) **CFR:** Code of Federal Regulations
7) **FAA:** Federal Aviation Administration
8) **ICA:** Instructions for Continued Airworthiness
9) **MFD:** Multi-Function Display

10) **PFD:** Primary Flight Display
11) **PMI:** Primary Manufacturing Inspector
12) **STC:** Supplemental Type Certificate
13) **TSO:** Technical Standard Order
14) **TVS:** Transient Voltage Suppressor

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 G500 PFD/MFD System.
Applicability:	Applies to aircraft altered by installation of the Garmin G500 PFD/MFD System.
Definition of Abbreviations:	See Section 1.6
Precautions:	None
Units of measurement:	None
Referenced publications:	Garmin 190-01102-06 Rev. 2 *"G500 AML STC Installation Manual"* or later FAA Approved Revisions Garmin 190-01102-02 Rev. B *"G500 Pilot's Guide"* or later FAA Approved Revisions Mid Continent Instruments 9015762 Rev. G *"4300-4XX Series Installation Manual"* Mid Continent Instruments 9016391 Rev. G *"MD420 Installation Manual"*
Retention:	This document, or the information contained within, will be included in the aircraft's permanent records.

2.2 Description of Alteration

The Garmin G500 PFD/MFD System is a combination of Garmin LRUs designed to provide both a PFD and MFD in the primary field of view. The system consists of a GDU 620 display, GRS 77 AHRS, GDC 74A ADC, GMU 44 magnetometer, and GTP 59 outside air temperature probe. This modification may also include a Garmin GAD 43 Adapter and/or Mid Continent Instruments attitude indicator (models 4300-4( ), or 4200-( ) with MD420). Installation of the Garmin G500 system, specific for the aircraft installation, is documented in the G500 AML STC Installation Manual.

2.3 Control, Operating Information

See the G500 Pilot's Guide or the G500 AML STC Installation Manual, listed under the reference documentation in paragraph 2.1 of this document, for system operation and self-test information.

2.4 Servicing Information

None. In the event of system failure, troubleshoot the G500 system in accordance with Section 2.6 Troubleshooting Information.

2.5 Periodic Maintenance Instructions

All G500 system LRUs are designed to detect internal failures. A thorough self-test is executed automatically upon application of power to the units, and built-in tests are continuously executed. Detected errors are indicated on the GDU 620 display via failure annunciations.

Operation of the G500 system is not permitted unless an inspection as described in this section has been completed within the preceding 12 calendar months. Conduct a visual inspection (look for signs of wear, deterioration, or damage to wires, backshells, or connectors) of the G500 system LRUs and wiring harnesses to ensure installation integrity:

1. Inspect all units for security of attachment.
2. Inspect all knobs and buttons for legibility.
3. Visually inspect each unit's wiring for chafing or wear at each termination.

2.5.1 Transient Voltage Suppressors (non-metallic aircraft only)

The GDU 620 #1, GRS 77 #1, GDC 74A #1, and GAD 43 (if installed) will have a TVS located at each LRU. The optional electronic Mid Continent Instrument standby Attitude Indicator will have a TVS located at the indicator and at the attitude indicator power bus. These components must be inspected every 24 calendar months in accordance with section 8.3.1 of the G500 AML STC Installation Manual.

2.5.2 Aluminum Foil Tape (non-metallic aircraft only)

Any aluminum foil tape used in the G500 installation (see section 3.1 of this document) must be inspected every 24 calendar months in accordance with section 8.3.2 of the G500 AML STC Installation Manual.

2.5.3 GDU 620 – Display Unit

Maintenance of the GDU 620 is 'on condition' only.

2.5.4 GRS 77 – Attitude, Heading Reference System (AHRS)

The GRS 77 utilizes an Earth magnetic field model which is updated once every five years as part of the Aviation Database maintained by the owner/operator. If the magnetic model is not up to date, the unit will issue an alert upon startup indicating the model has expired. The model can be updated in accordance with the database update section of the G500 AML STC Installation Manual.

Otherwise maintenance of the GRS 77 is 'on condition' only.

2.5.5 GMU 44 – Magnetometer

Maintenance of the GMU 44 is 'on condition' only.

2.5.6 GDC 74A – Air Data Computer

Test according to Title 14 CFR §§ 91.411 and 91.413 as well as 14 CFR §§ 43 Appendix E. See the pitot-static checkout procedure in Section 5 of the G500 AML STC Installation Manual for the testing procedure.

2.5.7 GTP 59 – OAT Probe

Maintenance of the OAT Probe is 'on condition' only.

2.5.8 GAD 43 – Adapter

Maintenance of the GAD 43 is 'on condition' only.

2.5.9 Mid Continent Instruments Attitude Indicator Models 4300-4( ), or 4200-( ) with MD420

If a Mid Continent Instruments Attitude Indicator is installed as part of the G500 AML STC, the battery pack must be tested by one of the following means:

1. Manual:
    a. Disconnect the battery pack from the Attitude Indicator.
    b. Ensure the battery pack is completely charged and at or near room temperature.
    c. Connect the battery to a load of 90 ohms (rated for 10 watts) for 60 minutes while monitoring the battery voltage level.
        i. If the battery voltage is at or above 15.0 volts while under load at the end of the 60 minute test, the battery may be recharged in accordance with the Mid Continent Instruments Installation Manual and re-installed in the aircraft.
        ii. If the battery voltage is below 15.0 volts while under load at the end of the 60 minute test the battery must be replaced.
2. Automatic:
    a. Use the Mid Continent Instruments Battery Charger/Tester P/N 36029 to test the battery.
        i. If the time required for discharge is 60 minutes or greater, the battery may be recharged in accordance with the Mid Continent Instruments Installation Manual and re-installed in the aircraft.
        ii. If the time required for discharge is less than 60 minutes, the battery must be replaced.

Proper operation of the attitude instrument must be verified with the following procedure:

1. Apply aircraft power to the unit and verify that the invalid flag is removed from view and the STBY PWR indicator is not illuminated.
2. Remove aircraft power from the unit and verify that the invalid flag is not visible and the STBY PWR indicator is flashing.
3. Press the STBY PWR button and verify that the invalid flag is not visible and the STBY PWR indicator is not flashing.
4. Press the STBY PWR button a second time and verify that the invalid flag is displayed.

Otherwise maintenance of the Mid Continent Instruments attitude indicator is 'on condition' only.

2.6 Troubleshooting Information

If error indications are displayed on the GDU 620 display unit, and/or the optional Mid Continent Instruments standby attitude indicator, consult the Troubleshooting section contained in the G500 AML STC Installation Manual. The 'G500 System Post-Installation Checkout Log' in the aircraft permanent records includes the configuration information for the installation. (See Section 5 in the G500 System Installation Manual for a sample Log).

2.7 Removal and Replacement Information

If any G500 LRUs are removed and reinstalled, verify that the LRU unit power-up self-test sequence is successfully completed and no failure messages are annunciated on the GDU 620 display. See the unit replacement procedure in Section 3 of the G500 AML STC Installation Manual.

If any work has been done on the aircraft that could affect the system wiring, antenna cable, or any interconnected equipment, verify the G500 system unit power-up self-test sequence is successfully completed and no failure messages are annunciated on the GDU 620 display.

Refer to the G500 AML STC Installation Manual (listed under reference documentation in Section 2.1 of this document) 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. Refer to the G500 AML STC Series Installation Manual (listed under reference documentation in Section 2.1 of this document) for drawings applicable to this installation. Point to point wiring diagrams are in Appendix F of the G500 AML STC Installation Manual. Refer to the G500 Post-Installation Checkout Log retained in the aircraft permanent records for a list of the interfaced equipment and port configurations.

2.9 Special Inspection Requirements

After a suspected lightning strike, non-metallic aircraft must have all Transient Voltage Suppressors inspected or replaced in accordance with section 2.5.1 of this document. Tube and fabric aircraft must replace the OAT bond strap (if installed) in accordance with section 8.3.3 of the G500 AML STC Installation Manual.

2.10 Application of Protective Treatments

None, N/A.

2.11 Data Relative to Structural Fasteners

Data relative to structural fasteners, such as type, torque, and installation requirements can be found in Section 3 of the G500 AML STC Installation Manual.

2.12 Special Tools

No special tools are required for system checkout. See G500 AML STC Installation Manual listed in reference documentation in Section 2.1 of this document.

2.13 Additional Instructions

None

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 G500 system. If any LRU indicates an internal failure, the unit may be removed and replaced. See the troubleshooting section contained in the G500 AML STC Installation Manual, listed under reference documentation in paragraph 2.1 of this document.

2.15 ICA Revision and Distribution

To revise this ICA, a letter must be submitted to the ACO along with the revised ICA. The ACO will obtain AEG acceptance, and approve any revision to the Airworthiness Limitations in 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 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. APPENDIX A

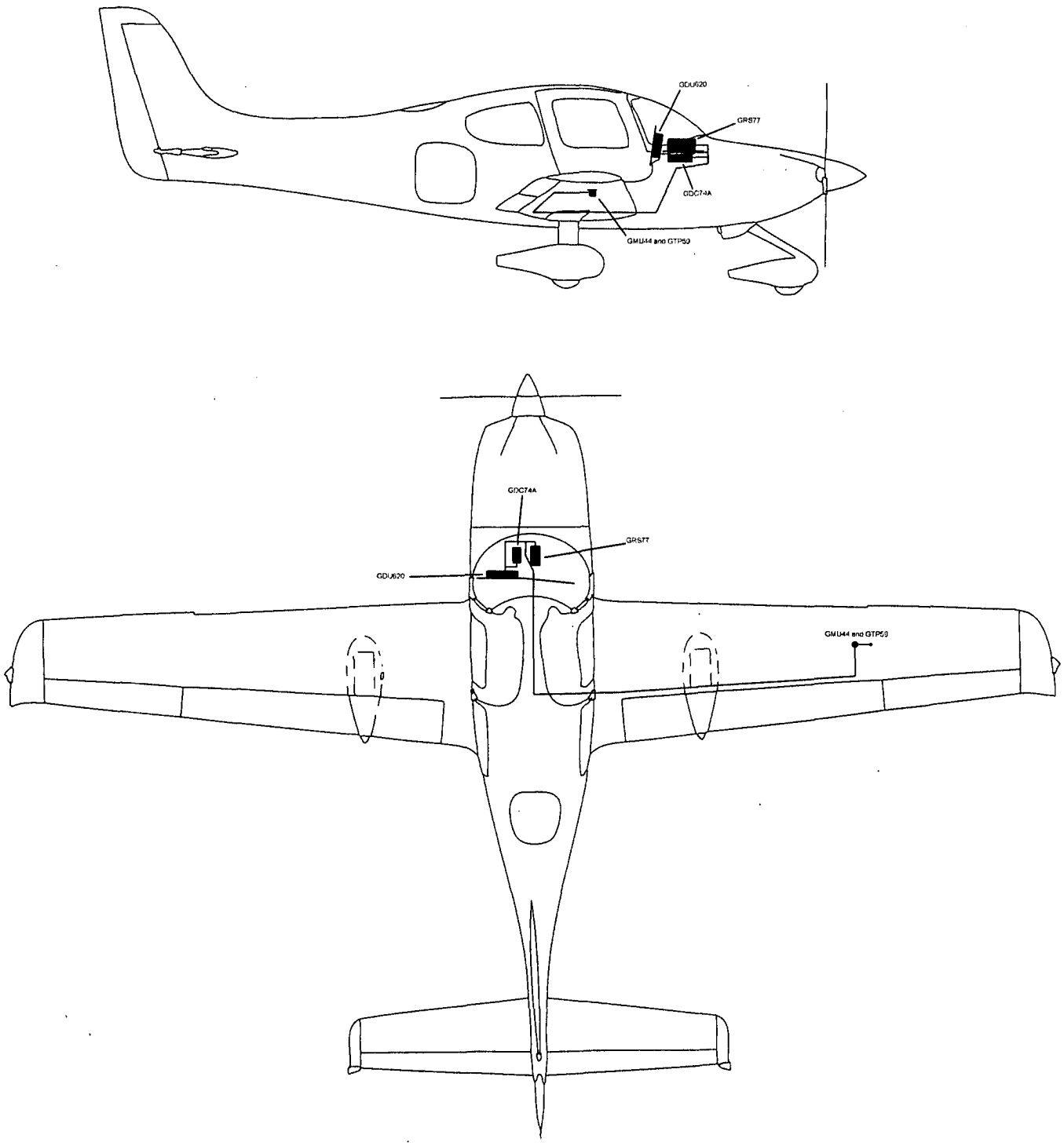
3.1 LRU Locations

The following table describes the locations of the G500 LRUs:

LRU	LRU included in this installation?	Aluminum foil tape used for grounding?	Description of Location
GDU 620 #1	☑ **Yes**	N/A	Pilots Instrument Panel
GRS 77 #1	☑ **Yes**	☐ Yes ☒ No	Behind Instrument Panel on fabricated shelf (top)
GDC 74A #1	☑ **Yes**	☐ Yes ☒ No	Behind Instrument Panel on fabricated shelf (bottom)
GMU 44 #1	☑ **Yes**	N/A	Right wing outboard of fuel tank
GTP 59 #1	☑ **Yes**	N/A	Right wing on access panel (RW6)
GAD 43	☐ Yes ☒ No	☐ Yes ☐ No	
MCI 4300-4 ( )	☐ Yes ☒ No	N/A	
MCI 4200-( )	☐ Yes ☒ No	N/A	
MCI MD420	☐ Yes ☒ No	N/A	
GDU 620 #2 (dual installations only)	☐ Yes ☒ No	N/A	
GRS 77 #2 (dual installations only)	☐ Yes ☒ No	N/A	
GDC 74A #2 (dual installations only)	☐ Yes ☒ No	N/A	
GMU 44 #2 (dual installations only)	☐ Yes ☒ No	N/A	
GTP 59 #2 (dual installations only)	☐ Yes ☒ No	N/A	

3.2 Wire Routing and Component locations

The following diagram depicts the wire routing for the G500 LRUs throughout the aircraft structure for N212CD:



US Department of Transportation
Federal Aviation Administration

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

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

For FAA Use Only

INSTRUCTIONS: Print or type all entries. See Title 14 CFR §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.	
N212CD	1108	
Make	**Model**	**Series**
Cirrus	SR20	

2. Owner

Name *(As shown on registration certificate)*	Address *(As shown on registration certificate)*
PEERS, CHRISTOPHER J.	Address 60232 STATE ROAD 15 LOT 12 City GOSHEN State IN Zip 46528 Country USA

3. For FAA Use Only

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

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency		
Name John Hynes	☑	U. S. Certificated Mechanic	☐ Manufacturer
Address 59895 Locust Rd.	☐	Foreign Certificated Mechanic	C. Certificate No.
City South Bend State IN	☐	Certificated Repair Station	
Zip 46614 Country USA	☐	Certificated Maintenance Organization	2855704

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
	John Hynes 04/09/10 *John Hynes*

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	X	Inspection Authorization		Other *(Specify)*

Certificate or Designation No.	Signature/Date of Authorized Individual
2855704	John Hynes 04/09/10 *John Hynes*

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.

N212CD	04/07/2010
Nationality and Registration Mark	Date

8. Description of Work Accomplished

Installed Rosen Sunvisor Systems replacement visors in accordance with STC SA01285SE. Weight and Balance Negligible. A copy of the STC is attached.

Attachments: STC SA01285SE

Instructions for Continued Airworthiness:

1. Introduction: See body of 337

2. Description: Removed the Cirrus OEM visors and replaced them with Rosen visors.

3. Control, operation information: NA

4. Servicing information: Periodically clean the lenses with a soft cloth and Rosen Plastic Cleaner, Polisher & Protectant, or mild soap and water. Do not use abrasives on the lens.

5. Maintenance Instructions: Periodically adjust the pivot tensions on the visor assemblies.

6. Trouble shooting information: NA

7. Removal and replacement information: NA

8. Diagrams: NA

9. Special inspection requirements: NA

10. Application of protective treatments: NA

11. Data: NA

12. List of special tools: NA

13. For commuter category aircraft: NA

14. Recommended overhaul periods: NA

15. Airworthiness Limitation Section: None

16. Revision: For any revision to these instructions, 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 SA01285SE

This certificate, issued to: **Rosen Sunvisor Systems, LLC.**
86365 College View Road
Eugene, OR 97405

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

Original Product—Type Certificate Number: A00009CH
Make: Cirrus Design Corporation
Model: SR20, SR22

Description of the Type Design Change: The manufacture of a Cirrus sunvisor system in accordance with Rosen Sunvisor Systems, LLC. Master Drawing List No. 1740000-DL, Revision B, dated August 13, 2003, or later FAA approved revision. The sunvisor system must be installed and maintained in accordance with Rosen Sunvisor Systems, LLC. Installation and Continued Airworthiness Instructions Document 9050-0174-001, Revision A, dated August 5, 2003, or later FAA approved revision.

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 must be maintained as part of the permanent records for the modified aircraft.

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

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

Date of application: July 2, 2003 *Date reissued:*

Date of issuance: October 27, 2003 *Date amended:*

FEDERAL AVIATION ADMINISTRATION

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(10-68)

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

1. Aircraft	Make: **Cirrus Design Corp.**	Model: **SR20**
	Serial No.: **1108**	Nationality and Registration Mark: **USA N212CD**
2. Owner	Name *(As shown on registration certificate)*: **Peers Christopher J**	Address *(As shown on registration certificate)*: **60232 State Road 15 Lot 12 Goshen, IN 46528-9579**

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.
Premier Aviation, LLC. **1441 County Road 6 West** **Elkhart, IN 46514**		U.S. Certified Mechanic	**R6XR149X**
		Foreign Certified Mechanic	
	X	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	Signature of Authorized Individual
4/3/2009	

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	x	Repair Station		Person Approved by Transport Canada Airworthiness Group	

Date of Approval or Rejection	Certificate or Designation No.	Signature of Authorized Individual
4-10-09	**R6XR149X**	

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.

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

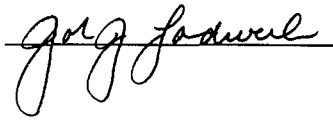
Make: Cirrus
Model: SR20
Serial No.: 1108
Nationality and Reg. No.: USA N212CD

Validated that the previous installation of one GNS 430 was installed IAW with Garmin instructions. Verified this aircraft and all interfaced equipment are covered under the STC AML. This unit was removed and upgraded to a GNS430W unit. Added the required additional length of RG-400/RG-142 GPS antenna cable as necessary as per STC installation requirements. The existing wiring and shielding was inspected and determined to be IAW the STC AML installation data. Relocated existing #2 GPS system, GA56 antenna and installed #1 GPS antenna, GA35 for WAAS to aircraft top fuselage using Garmin approved data from STC's SA01695SE (GA35 antenna) and SA01933LA (GNS430W) installation instructions. Mounting instructions were derived from Cirrus SB 32-2X-34-23R1 for antenna installation requirements.

A summary of the GNS430 WAAS modification done to the aircraft is as follows:

1. Removed Garmin GA56 antenna and installed new GA35 GPS/WAAS antenna; SN: 46585 using Garmin upgrade manual; PN: 190-00357-06, Revision D and STC no SA01933LA. Used Cirrus Service Bulletin SB 32-2X-34-23R1 for installation of antennas to aircraft fuselage.
2. Removed GNS430 unit and installed GNS430W; SN: 97101213, using the provision left behind from the standard 430 unit. Installation done IAW with Garmin upgrade installation manual; PN: 190-00357-06, Revision D and STC no SA0101933LA.
3. The GNS430W was configured identical to the original 430 unit. Each interface was checked out IAW the 430W Installation Manual; PN: 190-003576-06.
4. Removed the Aircraft Flight Supplement for the GNS430 and installed a GNS430 AFMS; PN: 190-00356-03, FAA Approved date 11/20/2007 into the Aircraft Flight Manual.
5. Weight and balance data was not affected by this change. The current load analysis remains valid since the new unit draws the same or less current than the original unit.

The Antenna installation was performed by La Porte Aviation Services.

Representative of La Porte Aviation Services – John Landwerlen  IA# 314908651 IA

Instructions for Continued Airworthiness (ICA)

GNS430W – Included Garmin document; PN: 190-00356-65, GNS430W Instructions for Continued Airworthiness in the aircraft maintenance records.

Note: This supersedes ICAW data for the previously installed GNS430.

☒ Additional Sheets Are Attached

Aircraft Make and Model Designation	Type Certificate Number	Certification Basis	Required Approved Data & Added Model Specific Limitations	AML Revision Date
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	005-C0221-00 005-C0221-01	
207, 207A, T207, T207A	A16CE	FAR 23	005-C0221-00 005-C0221-01	
208, 208A, 208B	A37CE	FAR 23	005-C0221-00 005-C0221-01	
T-303 (Crusader)	A34CE	FAR 23	005-C0221-00 005-C0221-01	
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-C0221-00 005-C0221-01	
320, 320A, 320B, 320C, 320D, 320E, 320F, 320-1, 335, 340, 340A	3A25	CAR 3	005-C0221-00 005-C0221-01	
336	A2CE	CAR 3	005-C0221-00 005-C0221-01	
337, 337A, 337B, T337B, 337C, 337E, T337E, T337C, 337D, T337D, M337B, 337F, T337F, 337G, T337G, 337H, P337H, T337H, T337H-SP	A6CE	CAR 3, FAR 23	005-C0221-00 005-C0221-01	
401, 401A, 401B, 402, 402A, 402B, 402C, 411, 411A, 414, 414A, 421, 421A, 421B, 421C, 425	A7CE	CAR 3	005-C0221-00 005-C0221-01	
404, 406	A25CE	FAR 23	005-C0221-00 005-C0221-01	
441	A28CE	FAR 23	005-C0221-00 005-C0221-01	
501, 551	A27CE	FAR 23	005-C0221-00 005-C0221-01	
525, 525A	A1WI	FAR 23	005-C0221-00 005-C0221-01	
Cirrus Design Corp				
SR20, SR22	A00009CH	FAR 23	005-C0221-00 005-C0221-01	
Commander Aircraft Co.				
112, 112TC, 112B, 112TCA, 114, 114A, 114B, 114TC	A12SO	CAR 3	005-C0221-00 005-C0221-01	
Cub Crafters				
CC18-180, CC18-180A	A00009SE	FAR 23	005-C0221-00 005-C0221-01	
DeHavilland/Bombardier				
DHC-2 Mark I, DHC-2 Mark II, DHC-2 Mark III	A-806	CAR 3	005-C0221-00 005-C0221-01	
(Twin Otter) DHC-6-1, DHC-6-100, DHC-6-200, DHC-6-300	A9EA	CAR 3	005-C0221-00 005-C0221-01	
DHC-3	A-815	CAR 3	005-C0221-00 005-C0221-01	
DH.C1, 21, 22, 22A	A44EU	FAR 21	005-C0221-00 005-C0221-01	

400W Series

Instructions for Continued Airworthiness

Document Number 190-00356-65 Rev. A

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	10-19-06	Initial Release
A	11-03-06	Revision for STC Issuance

1. INTRODUCTION

1.1 PURPOSE

This document is designed for use by the installing agency of the Garmin Model 400W Series GPS/WAAS Nav/Com as Instructions for Continued Airworthiness in response to Federal Aviation regulation (FAR) Part 23.1529, and Part 23 Appendix G. The ICA includes information required by the operator to adequately maintain the Garmin Models 400W series installed under Approved Model List (AML) STC SA01933LA.

1.2 Scope

This document identifies the Instruction for Continued Airworthiness for the modification of the aircraft for installation of the Garmin Models 400W series GPS/WAAS Nav/Com installed under Approved Model List (AML) STC SA01933LA.

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 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 a Garmin Model 400W Series 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 Instructions for Continued Airworthiness for the modification of the aircraft by installation of the Garmin Models 400W Series GPS/WAAS Nav/Com.
Applicability:	Applies to aircraft altered by installation of the Garmin Model 400W Series GPS/WAAS Nav/Com.
Definition of Abbreviations:	See Section 1.6
Precautions:	None
Units of measurement:	None
Referenced publications: *(or later FAA approved revisions)*	190-00356-02 Rev. A *400W Series Installation Manual* 005-C0221-00 Rev. A *400W Series STC Master Data List*
Retention:	This document, or the information contained within, will be included in the aircraft's permanent records.

2.2 Description of Alteration

The Garmin Model 400W Series GPS/WAAS Nav/Com unit is a 6 ¼ inch wide panel mounted unit with all the interface connections behind the instrument panel. Installation of the Garmin Model 400W Series GPS/WAAS Nav/Com system interfaces, specific for the aircraft installation, is documented in the GNS 400W Series Post-Installation Checkout Log that is retained as part of the aircraft's permanent records. The 400W Series units combine a large number of easily acceptable controls to use the color multi-function display, Nav and Com transceiver, GPS/WAAS navigator in a single unit.

2.3 Control, Operating Information

See the 400W Series Installation Manual, listed under the reference documentation in paragraph 2.1 of this document, for system operation and self-test information.

2.4 Servicing Information

None. In the event of system failure, return the unit to the manufacturer or an approved Garmin repair station.

2.5 Periodic Maintenance Instructions

The 400W Series units are designed to detect internal failure. A thorough self-test is executed automatically upon application of power to the units, and built-in test is continuously executed. Detected errors are indicated on the equipment via failure annunciations and maintenance is on-condition.

Operation of the 400W Series unit is not permitted unless an inspection as described in this section has been completed within the preceding 12 calendar months. Conduct a visual inspection on the 400W series unit and its wire harness to insure installation integrity:

1. Inspect the unit for security of attachment.
2. Inspect all knobs and buttons for legibility.
3. Inspect condition of wiring, routing and attachment/clamping.

2.5.1 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.

2.5.2 Display Backlight

The display backlight lamp is rated by the manufacturer as having a usable life of 20,000 hours. This life may be more or less than the rated time depending on the operating conditions of the 400W series unit. 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.

2.5.3 Battery Replacement

The 400W series 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 400W series 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 400W series unit will remain fully operational, but the GPS signal acquisition time may be increased. This acquisition time can be reduced by entering a new seed position each time the unit is powered on. There is no loss of function or accuracy of the 400W series unit with a dead battery.

The battery must be replaced by the Garmin factory repair station or factory authorized repair station.

2.6 Troubleshooting Information

If error indications are displayed on the 400W series unit, consult the Troubleshooting section contained in the 400W Series Installation Manual, listed under reference documentation in paragraph 2.1 of this

document. The '400W Series Post-Installation Checkout Log' in the aircraft permanent records includes the configuration information for the installation. (See Section 5 in the 400W Series Installation Manual for a sample Log).

2.7 Removal and Replacement Information

If the 400W series unit is removed and reinstalled, verify that the 400W series unit power-up self-test sequence is successfully completed and no failure messages are annunciated.

If the 400W series unit is removed for repair and reinstalled, or if the 400W unit is removed and replaced with a different 400W series unit, then follow 'Post Installation Configuration & Checkout Procedures' procedures contained in the 400W Series Installation Manual listed in paragraph 2.1 of this document, and verify the 400W 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, antenna cable, or any interconnected equipment, verify the 400W series unit power-up self-test sequence is successfully completed and no failure messages are annunciated.

To remove the 400W series unit from the mounting rack, insert a 3/32-inch hex drive tool into the access hole at the bottom of the unit face. Rotate the hex tool counterclockwise until the unit is forced out about 3/8 inches and can be freely pulled from the rack.

The 400W unit is installed in the rack by sliding it straight in until it stops, about 1 inch short of the final position. Insert the hex drive tool into the access hole at the bottom of the unit face. Rotate the hex tool clockwise while pressing on the left side of the bezel until the unit is firmly seated in the rack.

Note: There are no special handling requirements for the 400W series units.

2.8 Diagrams

Refer to the 400W Series Installation Manual (listed under reference documentation in section 2.1 of this document) for drawings applicable to this installation. Point to point wiring diagrams are in Appendix H of the 400W Series Installation Manual. Refer to the GNS 400W Series Post-Installation Checkout Log retained in the aircraft permanent for a list of the interfaced equipment. The antenna cables are routed between the 400W series unit and the antenna with disconnects at each unit. The antenna cable typically is routed behind interior panels in the fuselage.

2.9 Special Inspection Requirements

None, N/A.

2.10 Application of Protective Treatments

None, N/A.

2.11 Data Relative to Structural Fasteners

None, N/A.

2.12 Special Tools

No special tools are required for system checkout. See 400W Series Installation Manual listed in reference documentation in section 2.1 of this document.

2.13 Additional Instructions

None

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 400W series unit. If the unit indicates an internal failure, the unit may be removed and replaced. See troubleshooting section contained in the 400W Series Installation Manual, listed under reference documentation in paragraph 2.1 of this document.

2.15 ICA Revision and Distribution

To revise this ICA, a letter must be submitted to the ACO 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 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.

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
GL-FSDO-17

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

1. Aircraft	Make: **Cirrus Design Corp.**	Model: **SR20**
	Serial No.: **1108**	Nationality and Registration Mark: **USA N212CD**
2. Owner	Name *(As shown on registration certificate)*: **Peers, Christopher J**	Address *(As shown on registration certificate)*: **60232 State Road 15 Lot 12 Goshen, IN 46528-9579**

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.
Premier Aviation, LLC. **1441 County Road 6 West** **Elkhart, IN 46514**	( ) U.S. Certified Mechanic ( ) Foreign Certified Mechanic (X) Certificated Repair Station ( ) Manufacturer	**R6XR149X**

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
6-1-2006	

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	X	Repair Station		Person Approved by Transport Canada Airworthiness Group	

Date of Approval or Rejection	Certificate or Designation No.	Signature of Authorized Individual
6-1-2006	**R6XR149X**	

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.

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

Make: Cirrus Design Corp.
Model: SR20
Serial No.: 1108
Nationality and Reg. No.: USA N212CD

A) Performed alteration to GNS430 applying the instructions contained in FAA approved sections of Garmin Service Bulletin 0532, Revision B.

B) Installed and performed Post Installation Check Out Procedure in the airplane, as describes within the 400 Series Installation Manual; PN: 190-00140-02, Revision Q, dated October 2005, as required to assure performance and airworthiness for returning the airplane to service.

C) Inserted FAA approved Addendum, Garmin PN: 190-00140-14, dated April 10, 2006 into previously approved Airplane Flight Manual Supplement, containing limitations for operational use of Terrain functionality.

D) Inserted Pilot's Guide Addendum, Garmin International PN: 190-00140-13, Revision G into the airplane. As described in the FAA approved Addendum, the pilot or flight crew must refer to this Addendum for operational procedures for use of the Terrain functionality.

E) Entered into the airplane maintenance records in accordance with 14 CFR part 43, section 43.9, the incorporation of this modified GNS430 unit, as referenced in the Garmin Service Bulletin 0532, Revision B, and provided copy to the owner/operator.

F) Performed functional ground test and operational flight check shall be accomplished in accordance with 14 CFR part 91, section 91.407(b) of installed GNS430 to ensure that no degradation of performance of it or other equipment and systems to which the GNS430 is interfaced, is affected.

G) Refer to the Instructions for Continued Airworthiness (ICA) included with Appendix A of the 400 Series Installaltion Manual; PN: 190-00140-02 applicable to GNS430 ICA and attached to form 337 for original installation documentation.

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

☒ Additional Sheets Are Attached

U.S. Department of Transportation
Federal Aviation Administration

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

IND FSDO RECEIVED APR 10 2006

Form Approved
OMB No.2120-0020

For FAA Use Only

Office Identification
GL-11 / IND FSDO

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

1. Aircraft	Make: Cirrus Design Corp.	Model: SR 20
	Serial No.: 1108	Nationality and Registration Mark: N212CD
2. Owner	Name (As shown on registration certificate): Peers, Christopher J	Address (As shown on registration certificate): 60232 State Road 15 Lot 12 Goshen, IN 46528-9579

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.
Montgomery Aviation 11329 E. St. Rd. 32 Zionsville, IN 46077	[ ] U.S. Certificated Mechanic [ ] Foreign Certificated Mechanic [X] Certificated Repair Station [ ] Manufacturer	MYNR748K

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 6, 2006

Signature of Authorized Individual: Edward Hobelman

Edward Hobelman

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 Appoved by Transport Canada Airworthiness Group	

Date of Approval or Rejection	Certificate or Designation No.	Signature of Authorized Individual
April 6, 2006	MYNR748K	Edward Hobelman

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.)

April 6, 2006 N212CD

This document is for antennas only, the rest of the installation to be performed by Premiere Aviation LLC, CRS R6XR149X

1) Installed TCAD antennas top and bottom for Ryan International Corp. TCAD Installation.

2) Installation done under authority of STC SA02013CH.

3) Antennas installed in accordance with Engineering order DC1029-09 Rev.F dated 6 June 2004 and current Cirrus Design SR20 M/M.

4) All parts materials and processes were as specified in the documents above.

5) Weight & balance and equipment list to be revised by Premier Aviation LLC, CRS R6XR149X.

6) The aircraft and records have been inspected and reviewed to insure that prior alterations and/or repairs are compatible with this alteration. This alteration will not impact the airworthiness of this aircraft as it relates to prior alterations and/or repairs.

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

☐ Additional Sheets Are Attatched

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 GL-5-506-19

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

1. Aircraft	Make: **Cirrus Design Corp.**	Model: **SR20**
	Serial No.: **1108**	Nationality and Registration Mark: **USA N212CD**
2. Owner	Name *(As shown on registration certificate)*: **Peers, Christopher J**	Address *(As shown on registration certificate)*: **60232 State Road 15 Lot 12, Goshen, IN 46528-9579**

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.
Premier Aviation, LLC. **1441 County Road 6 West** **Elkhart, IN 46514**	[ ] U.S. Certified Mechanic [ ] Foreign Certified Mechanic [X] Certificated Repair Station [ ] Manufacturer	**R6XR149X**

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

Date	Signature of Authorized Individual
4-11-2006	

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	[X]	Repair Station	[ ]	Person Approved by Transport Canada Airworthiness Group	

Date of Approval or Rejection	Certificate or Designation No.	Signature of Authorized Individual
4-11-2006	**R6XR149X**	

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.

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

Make: Cirrus Design Corp.
Model: SR20
Serial No.: 1108
Nationality and Reg. No.: USA N212CD

THIS FACILITY INSTALLED THE FOLLOWING COMPONENTS: TAS600 TRAFFIC AND CONFLICT ALERT DEVICE COMPUTER, AND ASSOCIATED ANNUCIATORS AS REQUIRED TO COMPLY WITH STC #SA02013CH DATED AUGUST 2, 2004 FOR THE CIRRUS SR20 AIRCRAFT. THE TOP AND BOTTOM MOUNT ANTENNAS WERE INSTALLED BY MONTGOMERY AVIATION, CRS#MYNR748K (A CIRRUS SERVICE CENTER). MONTGOMERY AVIATION RETURNED TO SERVICE THE AIRCRAFT ANTENNA INSTALLATION PORTION OF THE PROJECT ON FAA FORM 337 DATED APRIL 6, 2006. THE TAS600 WAS INSTALLED IN ACCORDANCE WITH MANUFACTURERS INSTALLATION MANUAL; PN: 32-2351, REVISION 4, DATED OCTOBER 3, 2005. THE TAS600 SYSTEM IS TSO'D UNDER TSO C147. THE ALTITUDE SECTION IS TSO'D UNDER C-88a, AND THE L-BAND ANTENNAS ARE TSO'D UNDER C74c. THE TAS600 WAS INTERFACED INTO THE EXSISTING ALTITUDE REPORTING SYSTEM, GMA340 AUDIO SYSTEM, AND GNS430 MULTIFUNCTION DISPLAYS ON BOARD. THE TAS600 TRAFFIC AND CONFLICT ALERT SYSTEM HAS BEEN APROVED UNDER THE RYAN 9900BX PREVIOUS APROVAL CONSIDERATIONS UNDER RYAN INTERNATION/AVIDYNE SERVICE BULLETIN 051215, REVISION IR, DATED DECEMBER 15, 2005. THE ABOVE WAS DONE IN COMPLIANCE WITH FAR PART 91.413. THE ABOVE MENTIONED SYSTEM WAS RAMP CHECKED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION MANUAL LISTED ABOVE AND WAS FOUND TO OPERATE WITHIN MANUFACTURER'S PERFORMANCE SPECIFICATIONS. NO INTERFERENCE WAS FOUND BETWEEN THE INSTALLED SYSTEM AND THE EXISTING SYSTEMS IN THE AIRCRAFT. EQUIPMENT WAS INSTALLED UTILIZING AC43.13-2A CHAPTER 2 PARAGRAPH 21, 22, 23, 27 AND CHAPTER 3 PARAGRAPH 37 AS A GUIDELINE. SUPPLEMENTARY WEIGHT AND BALANCE DATA WAS RECOMPUTED TO REFLECT THESE EQUIPMENT CHANGES. THE TAS600 IS TO BE OPERATED IN ACCORDANCE WITH PILOT OPERATING HANDBOOK; PN: 32-2352, REVISION 5, DATED OCTOBER 31, 2005 OR LATER REVISION. INSTRUCTIONS FOR NORMAL CONTINUED AIRWORTHINESS ARE CONTAINED ON RYAN INTERNATIONAL 9900BX ADDENDUM ATTACHED TO YOUR 337 FORM. -- END --

☒ Additional Sheets Are Attached

United States of America

Department of Transportation — Federal Aviation Administration

Supplemental Type Certificate

Number SA02013CH

This certificate issued to Ryan International Corporation
4800 Evanswood Drive
Columbus, Ohio 43229

certifies that the change in the type design for the following product with the limitations and conditions thereof as specified hereon meets the airworthiness requirements of Part 23 *of the* Federal Aviation *Regulations.* See Type Certificate Data Sheet A00009CH for complete certification basis.

Original Product - Type Certificate Number : A00009CH

Make : Cirrus Design Corporation

Model : SR20 ; SR22

Description of Type Design Change:
Installation of a Ryan International Corporation Model 9900BX Traffic Advisory System (TAS) in accordance with Ryan International Corporation Master Data List, Doc. No. DC1029-01, Revision 12, dated July 29, 2004, 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) FAA Approved Airplane Flight Manual Supplement, Ryan International Corporation Doc. No. 32-2353C, Revision 5, approved May 7, 2004, or later FAA approved revision, is required on board the modified aircraft.
3) FAA Approved Instructions for Continued Airworthiness, Ryan International Corporation Doc. No. ICAW010807C, Chapter 10, Revision 3, dated March 31, 2004, approved August 2, 2004, or later FAA approved revision is required for this modification.
4) If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission.

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 21, 2003

Date reissued :

Date of issuance : August 2, 2004

Date amended :

By direction of the Administrator

Charles L. Smalley

(Signature)

Charles L. Smalley
Manager, Systems and Flight Test Branch
Chicago Aircraft Certification Office

(Title)

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

This certificate may be transferred in accordance with FAR 21.47

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

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

TRANSFER ENDORSEMENT

Transfer the ownership of Supplemental Type Certificate Number SA02013CH

to *(Name of transferee)* DR. CHRISTOPHER PEERS

(Address of transferee) 2012 SOUTH MAIN STREET SUITE C
(Number and street)

GOSHEN, IN 46526
(City, State, and ZIP code)

from *(Name of grantor)* *(Print or type)* PREMIER AVIATION, LLC

(Address of grantor) 1441 CR 6 WEST
(Number and street)

ELKHART, IN 46514
(City, State, and ZIP code)

Extent of Authority (if licensing agreement): AS PER ATTACHED AUTHORIZATION LETTER FROM AYAN INTERNATIONAL

Date of Transfer: 4-11-06

Signature of grantor *(In ink)*:

RYAN INTERNATIONAL CORPORATION

4590 EVANSWOOD DRIVE · COLUMBUS, OHIO 43229-6296 · 614/885-5300 · FAX 614/885-8307

PERMISSION TO USE STC SA02013CH

Date: August 2, 2004

The Ryan TCAD dealer installing the Ryan 9900BX Traffic Advisory System (TAS) is permitted to use STC SA02013CH, dated August 2, 2004.

Roger V. Ryan
Vice President
Plant Manager

Ryan

DEC 0 3 2001

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 SBN FSDO GL-17

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: Cirrus Design	Model: SR20
	Serial No.: 1108	Nationality and Registration Mark: N212CD
2. Owner	Name *(As shown on registration certificate)*: Christopher J. Peers	Address *(As shown on registration certificate)*: 60232 SR 15 Lot 12, Goshen, IN 46528

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.
Beniamin Snyder 66831 County Road 1 Wakarusa, IN 46573	☒ U.S. Certified Mechanic ☐ Foreign Certified Mechanic ☐ Certified Repair Station ☐ Manufacturer	316947906 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
11-30-2001	Beniamin Snyder

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
11-30-2001	365549329 IA	Larry Crowder

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:)

11-30-01 N212CD M/N SR20 S/N 1108 TTAF 68.8

Lower Aft Vertical Spar Repair

The following repair was completed IAW Cirrus Design SR20 Maintenance Manual p/n 12137-001 Rev. #5 May 3, 2001 Section 51 "Standard Practices: Structures" and Cirrus Design Repair Deviation ID # R6361 "Repair of Tail Strike Damage on SR20-1108" approved by DER Paul Brey dated November 13, 2001.

1. Removed rudder, lower rudder hinges, tie down ring bracket, and rudder push pull rod. Inspected for damage. Lower left aft spar disbonded from tail skin. Damage measured less than 6" in length.
2. Removed paint layer around damaged area and cleaned with alcohol. Filled bond depressions with filler paste and heat cured for 3 hours at 150-195 °F.
3. Laid 3 layers of fiberglass type 7781-F16, with each layer alternating 45° and extending ½"-1" from previous layer with the initial layer extending beyond the damage by at least 1", using the MGS L418/418 resin system. Applied peel ply.
4. Heat cured repair a minimum of 10 hours monitoring the surface temperature between 175-195 °F. Removed peel ply.
5. Match drilled bracket and hinge holes, and painted repair area. Applied tin plated copper tape where originally installed.
6. Installed new tie down ring bracket, lower rudder hinges, rudder push pull rod, rudder, and inspection panels. Safetied all hardware.

Weight and Balance Change is Negligible

Completed Log Book Entry

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

☐ Additional Sheets Are Attached

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

Form Approved
O.M.B. No. 2120-0018

U.S. Department of Transportation
Federal Aviation Administration

APPLICATION FOR AIRWORTHINESS CERTIFICATE

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

I. AIRCRAFT DESCRIPTION

1. REGISTRATION MARK	2. AIRCRAFT BUILDER'S NAME (Make)	3 AIRCRAFT MODEL DESIGNATION	4. YR MFR	FAA CODING
N212CD	CIRRUS	SR20	2000	21 30000
5. AIRCRAFT SERIAL NO.	**6. ENGINE BUILDERS NAME (Make)**	**7. ENGINE MODEL DESIGNATION**		41515
1108	TCM	IO-360-ES		
8. NUMBER OF ENGINES	**9. PROPELLER BUILDER'S NAME (Make)**	**10. PROPELLER MODEL DESIGNATION**		**11. AIRCRAFT IS (Check if applicable)**
1	HARTZELL	PHC-J3YF-1MF/F7392-1		☐ IMPORT

II. CERTIFICATION REQUESTED

APPLICATION IS HEREBY MADE FOR: *(Check applicable items)*

A 1 ☒ STANDARD AIRWORTHINESS CERTIFICATE *(Indicate category)* ☒ NORMAL ☐ UTILITY ☐ ACROBATIC ☐ TRANSPORT ☐ GLIDER ☐ BALLOON

B ☐ SPECIAL AIRWORTHINESS CERTIFICATE *(Check appropriate items)*

- 2 ☐ LIMITED
- 5 ☐ PROVISIONAL *(Indicate class)*: 1 ☐ Class I; 2 ☐ Class II
- 3 ☐ RESTRICTED *(Indicate operation(s) to be conducted)*: 1 ☐ AGRICULTURE AND PEST CONTROL; 2 ☐ AERIAL SURVEYING; 3 ☐ AERIAL ADVERTISING; 4 ☐ FOREST *(Wildlife conservation)*; 5 ☐ PATROLLING; 6 ☐ WEATHER CONTROL; 7 ☐ CARRIAGE OF CARGO; 0 ☐ OTHER *(Specify)*
- 4 ☐ EXPERIMENTAL *(Indicate operations to be conducted)*: 1 ☐ RESEARCH AND DEVELOPMENT; 2 ☐ AMATEUR BUILT; 3 ☐ EXHIBITION; 4 ☐ RACING; 5 ☐ CREW TRAINING; ☐ MKT SURVEY; 0 ☐ TO SHOW COMPLIANCE WITH FAR
- 8 ☐ SPECIAL FLIGHT PERMIT *(Indicate operation to be conducted then complete Section VI or VII as applicable on reverse side)*: 1 ☐ FERRY FLIGHT FOR REPAIRS ALTERATIONS MAINTENANCE OR STORAGE; 2 ☐ EVACUATE FROM AREA OF IMPENDING DANGER; 3 ☐ OPERATION IN EXCESS OF MAXIMUM CERTIFIED TAKE-OFF WEIGHT; 4 ☐ DELIVERING OR EXPORT; 5 ☐ PRODUCTION FLIGHT TESTING; 6 ☐ CUSTOMER DEMONSTRATION FLIGHTS

C 6 ☐ MULTIPLE AIRWORTHINESS CERTIFICATE *(Check ABOVE: "Restricted Operation" and Standard" or "Limited" as applicable)*

III. OWNER'S CERTIFICATION

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

NAME	ADDRESS
CIRRUS DESIGN CORPORATION	4515 TAYLOR CIRCLE DULUTH, MN 55811

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

☒ AIRCRAFT SPECIFICATION OR TYPE CERTIFICATE DATA SHEET *(Give No. and Revision No.)* A00009CH REVISION 1	☒ AIRWORTHINESS DIRECTIVES *(Check if all applicable AD's complied with and give latest AD No.)* 2000-25
☐ AIRCRAFT LISTING *(Give page number)* N/A	☐ SUPPLEMENTAL TYPE CERTIFICATE *(List number of each STC incorporated)* N/A

C. AIRCRAFT OPERATION AND MAINTENANCE RECORDS

CHECK IF RECORDS IN COMPLIANCE WITH FAR 91.417	TOTAL AIRFRAME HOURS	3 EXPERIMENTAL ONLY *(Enter hours flown since 1st certificate issued or renewed)*
☒	3.9 Hours	

D. CERTIFICATION - I hereby certify that I am the register 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
12/27/00	Joseph C. Kehoe QA Representative	Joseph C Kehoe

IV. INSPECTION AGENCY VERIFICATION

A. THE AIRCRAFT DESCRIBED ABOVE HAS BEEN INSPECTED AND FOUND AIRWORTHY BY *(Complete these sections 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	NAME AND TITLE *(Print or type)*	SIGNATURE

V. FAA REPRESENTATIVE CERTIFICATION

(Check ALL applicable blocks in items A and B)

A. I find that the aircraft described in Section I or VII meets requirements for ☒ THE CERTIFICATE REQUESTED; 4 ☐ AMMENDMENT OR MODIFICATION OF CURRENT AIRWORTHINESS CERTIFICATE

B. Inspection for a special flight permit under Section VII was conducted by ☐ FAA INSPECTOR ☒ FAA DESIGNEE ☐ CERTIFICATE HOLDER UNDER ☐ FAR 65 ☐ FAR 121, 127, OR 1 ☐ FAR 145

DATE	DISTRICT OFFICE	4 DESIGNEE'S SIGNATURE AND NO.	1 FAA INSPECTOR'S SIGNATURE
12/27/00	CE-46	JEFFREY K. HOLTER DMIR410073CE	

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

*U.S.GPO:1989-241-672/90913

VI. PRODUCTION FLIGHT TESTING

A. MANUFACTURER

NAME	ADDRESS

B. PRODUCTION BASIS *(Check applicable items)*

- ☐ PRODUCT 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 PRODUCT FLIGHT TEST

A. DESCRIPTION OF AIRCRAFT

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

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

FROM	TO	
VIA	DEPARTURE DATE	DURATION

C. CREW REQUIRED TO OPERATE THE AIRCRAFT AND ITS EQUIPMENT

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

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

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

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

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

VIII. AIRWORTHINESS DOCUMENTATION (FAA use only)

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

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION—FEDERAL AVIATION ADMINISTRATION

STANDARD AIRWORTHINESS CERTIFICATE

1 NATIONALITY AND REGISTRATION MARKS	2 MANUFACTURER AND MODEL	3 AIRCRAFT SERIAL NUMBER	4 CATEGORY
N212CD	CIRRUS SR20	1108	NORMAL

5 AUTHORITY AND BASIS FOR ISSUANCE

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

Exceptions

NONE

6 TERMS AND CONDITIONS

Unless sooner surrendered suspended, revoked, or a termination date is otherwise established by the Administrator, this airworthiness certificate is effective as long as the maintenance, preventative maintenance, and alterations are performed in accordance with Parts 21, 43, and 91 of the Federal Aviation Regulations, as appropriate, and the aircraft is registered in the United States.

DATE OF ISSUANCE	FAA REPRESENTATIVE	DESIGNATION NUMBER
12/27/00	JEFFREY K. HOLTER	DMIR410073CE

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 (8-82) * U.S. G.P.O.:1993 669-038