

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
OFFICE OF HEARINGS
WASHINGTON, D.C.

DEPT OF TRANSPORTATION
DOCKETS

OCT -7 P 3:51

In the Matter of Gryder Networks LLC
Honorable Judge Isaac D. Benkin
Docket No. CP09EA0014
DMS No. FAA-2009-0281

RECEIVED
OCT 01 REC'D
HEARING DOCKET

COMPLAINANT'S PREHEARING STATEMENT

COMES NOW the Complainant, by and through its designated representative, the Regional Counsel for the Eastern Region and his designated and authorized agents, and files its Prehearing Statement in accordance with the Prehearing Order Establishing Procedures in this matter.

WITNESS LIST

1. Aviation Safety Inspector Andrew McKee:

Inspector McKee will testify as to his investigation into this matter including the documents he obtained and created during this investigation, the communications he had with the various witnesses he contacted in this matter, and the findings of his investigations. Inspector McKee will testify that Gryder Networks, LLC was retained by the owner of the aircraft in question to refurbish the aircraft. The owner of this aircraft was the Aircraft Owners and Pilot Association (AOPA) and the purpose of refurbishing the aircraft was so that it could be given away in the 2007 AOPA Catch a Card:

Sweepstakes. Inspector McKee will testify that to refurbish the aircraft between November 2006 and January 2008 Gryder Networks, LLC brought the aircraft to several maintenance facilities who performed maintenance on the aircraft but who didn't make the appropriate logbook entries in the aircraft's maintenance records for the maintenance performed. Specifically, Mr. McKee will testify that Mr. Dan Gryder of Gryder Networks, LLC told the various maintenance facilities not to provide him with logbook entries for the maintenance performed. Also, for the logbook entries Mr. Gryder did receive he chose not to put these logbook entries in the aircraft's maintenance records. Additionally, Inspector McKee will testify that two avionics racks were installed into the aircraft, an installation which constituted a major alteration, without the necessary 337 form being submitted to and approved by the FAA. Further he will testify that after a major alteration of an aircraft has been performed a 337 form must be submitted to and approved by the FAA before that aircraft can be considered airworthy. Finally, he will testify that Gryder Networks, LLC operated the aircraft on 10 flights subsequent to the installation of these avionic racks (prior to a 337 form for this installation being submitted to and approved by the FAA) and therefore these 10 flights were operated in an unairworthy condition.

2. Tom Haines:

Mr. Haines will testify that he is an official at AOPA and that he was responsible for overseeing the 2007 AOPA Catch a Cardinal Sweepstakes. He

will testify that Gryder Networks was selected by AOPA to be the Field Project Manager for the Sweepstakes. As Field Project Manager Gryder Networks LLC was responsible for prepurchase inspection of the aircraft, aircraft disassembly, aircraft assembly, aircraft rigging, aircraft control surface balancing, test flight, and all associated FAA paperwork necessary to return the aircraft to an airworthy condition, including, but not limited to the annual inspection, all logbook entries, and the IFR inspection. Mr. Haines will further testify that in exchange for agreeing to be the Field Project Manager for this project Gryder Networks, LLC was provided with editorial promotion in AOPA's publications concerning the Sweepstakes. Additionally, he will testify that Julie Filucci (formerly Julie Boatman) was an employee of AOPA that was assigned to work with Gryder Networks, LLC on the refurbishment project and to write articles about the progress of the project that were published electronically on AOPA's website. Mr. Haines will testify that in January 2008 custody of the aircraft was taken away from Gryder Networks, LLC and Steve Harris (Formerly an employee of AOPA) was dispatched by Mr. Haines to bring the aircraft to the winner of the Sweepstakes. Mr. Haines will testify that Mr. Gryder reported to him that one master signature for all the maintenance performed on the aircraft was all that was required.

3. Steve Harris:

Mr. Harris will testify that in January 2008 he was an official with

AOPA that was sent to bring the Catch a Cardinal Sweepstakes aircraft to the winner of the Sweepstakes in Texas. He will testify that after bringing the aircraft to Texas he believed that the aircraft was not in appropriate condition to be turned over to the winner so with approval from his supervisors the aircraft was taken to Hagerstown Aircraft Services to be looked at. He will testify that Hagerstown Aircraft Services found numerous problems with the aircraft. He will also testify that he spoke to Dan Gryder about retrieving the logbook information and that Dan Gryder said that he doesn't know where the logbook entries are and all Gryder provided was a volume that summed up all the maintenance performed on the aircraft without referencing who performed the work and when.

4. Julie Filucci:

Ms. Filucci will testify as to the articles she wrote for AOPA concerning this project and her work on it with Mr. Gryder. Specifically, she will testify as to the flights in which either Mr. Gryder or herself operated the aircraft.

5. Earl Clements:

Mr. Clements will testify that he performed maintenance on the aircraft including putting in windows, floor boards, and other airframe maintenance. He will testify that he was never given the aircraft's logbooks in order to make a maintenance entry for the work he performed and that Dan

Gryder informed him he was keeping a running journal of the work that was performed.

6. Todd Thaxton:

Mr. Thaxton will testify that he performed an annual inspection on the aircraft in June 2007. He will testify that when he performed the annual inspection the aircraft's maintenance records did not show any maintenance performed on the aircraft subsequent to November 2006 although he was able to review documents (which were not log entries) that discussed some of the work performed. Mr. Thaxton will testify that he provided Dan Gryder a sticker containing his log entry for the annual inspection. He will testify that he never saw any 337 forms concerning the installation of the avionics racks. Finally, he will testify that although he returned this aircraft to service he now believes that an approved 337 form for the installation of these avionics racks was necessary to return this aircraft to service and that therefore he should not have returned this aircraft to service since a 337 form for this installation was not submitted and approved.

7. Kirk Fryar:

Kirk Fryar will testify that the aircraft was brought to his repair shop (SRQ Avionics) and that his repair shop installed the two avionics racks in question. He will testify that the aircraft was taken away from SRQ Avionics, by Gryder Networks, LLC, before SRQ Avionics could complete its work on the aircraft and make a logbook entry for its work. He will testify that he is

unaware of a 337 form for the installation of the avionics racks ever being submitted to or approved by the FAA and also that the installation required a 337 to be submitted to and approved by the FAA in order to allow operation of the aircraft.

8. Scott Collins:

Mr. Collins will testify that the aircraft was brought to Precision Avionics Specialist, of whom he is affiliated with, and that Precision did work on the aircraft but did not make a logbook entry for the work performed in the aircraft's maintenance records because of the actions of Gryder Networks, LLC.

9. Joseph Hartt:

Joseph Hartt will testify as to condition upon which he found the aircraft in 2008 when the aircraft was brought to his place of employment at Hagerstown Aircraft Services. Specifically, he will testify as to the various discrepancies he observed and the maintenance Hagerstown Aircraft Services performed to remedy these discrepancies. He will testify that although one was necessary there was no 337 form submitted to or approved by the FAA for the installation of the two avionics racks. He will testify that the installation of the two avionics racks was done improperly and that Hagerstown Aircraft Services corrected the discrepancy. He will testify as to the 337 form submitted to the FAA by Hagerstown Aircraft Services for the installation of the avionics racks.

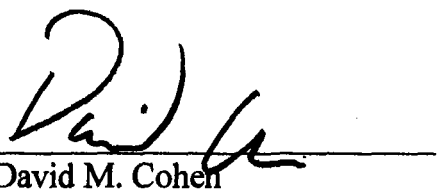
EXHIBIT LIST

1. Letter of Agreement between AOPA and Gryder Networks (6 pages)
2. Gryder letter to Boatman (2 pages)
3. Cessna 177B Serial No. 17702550 Airframe Maintenance Records (7 pages)
4. Volume of maintenance performed between Nov. 2006 and Jan. 2008 (131 pages)
5. HAS Discrepancy Billing List (26 pages)
6. Part's List (3 double sided pages)
7. HAS Labor record (6 pages)
8. HAS Work Order (20 pages)
9. 337 Form for the Avionics Racks (9 double-sided pages)
10. HAS annual inspection return to service entry (1 page)
11. Todd Thaxton letter to McKee (1 page)
12. SRQ Avionics Work Order (2 pages)
13. Precision Avionics Specialist Work Order (1 page)
14. Precision Avionics Specialist Altimeter Certification (1 page)
15. Precision Avionics Specialist letter to McKee (1 page)
16. Filucci (Boatman) article "Assembly of Parts" May 3 (3 pages)
17. Filucci (Boatman) article "Let it Hunt" June 21 (3 pages)
18. Filucci (Boatman) article "Flight Test" (3 pages)
19. Filucci (Boatman) article "In the Air Again" June 28 (3 pages)
20. Filucci (Boatman) article "Time in Type" (3 pages)
21. Filucci (Boatman) article "Coupled" July 12 (3 pages)
22. Filucci (Boatman) article "On Tour" August 9 (5 pages)
23. Filucci (Boatman) article "South Once More" November 1 (2 pages)
24. McKee Record of Visit with Hagerstown Aircraft Services (HAS) (1 page)
25. McKee Record of Call with T. Potter of HAS (1 page)
26. McKee Record of Call with Gryder (1 page)
27. McKee Record of Call with Clements (1 page)
28. McKee Record of Call with Filucci (Boatman) (1 page)
29. McKee Record of Call with Collins (1 page)
30. McKee Record of Call with Swords (1 page)
31. McKee Record of Call with Todd Thaxton (1 page)
32. McKee Record of Call with Kirk at Sarasota Avionics (1 page)
33. Type Certificate Data Sheet (6 double sided pages)
34. Gryder Airmen Information (1 page)
35. Avnet website article (2 pages)
36. "High Flying, Adored" article (3 pages)
37. Article from the Beacon (3 pages)
38. Cardinal Flyers Meet at Sporty's article and photos (2 pages)
39. Batavia Eastern Convention (1 page)
40. AOPA payment records to Gryder Networks, LLC (2 pages)
41. LOI to Gryder (1 page)
42. LOI to Gryder Networks, LLC (1 page)
43. FAA Order 2150.3B Sanction Guidance Page B-20
44. FAA Order 2150.3B Sanction Guidance Page B-6
45. FAA Order 2150.3B Chapter 7 (11 double sided pages)

46. FAA Order 2150.3A p.11-12 (double sided 1 page)

Alfred R. Johnson, Jr.
Regional Counsel

By:


David M. Cohen

Date:

9/30/99

Attorney

Federal Aviation Administration

1 Aviation Plaza, Room 561

Jamaica, NY 11434

Telephone: (718) 553-3270

Facsimile: (718) 995-5699

CERTIFICATE OF SERVICE

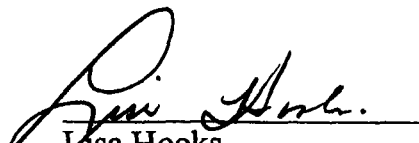
I hereby certify that on this day copies of the foregoing Complainant's Motion to Limit Hearing to Sanction were sent by Federal Express addressed as follows:

The Honorable Isaac D. Benkin
Administrative Law Judge
Office of Hearings, M-20
U.S. Department of Transportation
1200 New Jersey Avenue, S.E.
East Building Ground Floor
Room E12-320
Washington, DC 20590
FAX: (202) 366-7536

Dan Gryder
Gryder Networks, LLC
147 Sky Harbor Way
Griffin, GA 30224

Federal Aviation Administration
Attn: Hearing Docket Clerk, AGC-430
Wilbur Wright Building - Suite 2W1000
600 Independence Avenue, S.W.
Washington, D.C. 20591

Date: SEP 30 2009


Lisa Hooks
Paralegal Specialist

Letter of Agreement

Field Project Manager for:
AOPA, Aircraft Owners and Pilots Association, Inc.
Frederick, MD 21701

This Field Project Manager Letter of Agreement is made as of the 28th day of October, 2006, by and between the Aircraft Owners and Pilots Association, Inc, a corporation organized under the laws of the State of New Jersey ("AOPA"), and Dan Gryder, owner of Gryder Networks, LLC, ("The Field Project Manager").

1. Appointment

AOPA hereby appoints Dan Gryder as the designated Field Project Manager for the 2007 AOPA Sweepstakes aircraft, a 1977 Cessna Cardinal 177B delivered to the Field Project Manager's facilities in Griffin, Georgia, on November 2, 2006. The Field Project Manager accepts such appointment on the terms and conditions of this Agreement.

2. Scope

- 2.1 The Field Project Manager accepts responsibility for all physical aspects of the aircraft to include the following: prepurchase inspection, aircraft disassembly, aircraft assembly, aircraft rigging, aircraft control surface balancing, test flight, and all associated FAA paperwork necessary to return the aircraft to an airworthy condition, including, but not limited to the annual inspection, all logbook entries, and the IFR inspection. Completion of this work will be no later than May 25, 2007.
- 2.2 The Field Project Manager will also provide the necessary management, consulting as it relates to the coordination of the work and action on behalf of AOPA to ensure the best and safest possible outcome.
- 2.3 The Field Project Manager will provide a safe and secure physical centralized work location for the work to be completed.
- 2.4 The Field Project Manager will provide a comprehensive training package as defined in writing not later than October 1, 2007, for the eventual winner to use or decline as they see fit.

3. Terms of Agreement

- 3.1 This Agreement shall begin on the date when it has been executed by both parties and, unless sooner terminated as hereinafter provided, shall remain effective until January 8, 2008, and this Agreement shall be automatically terminated on said date unless both parties execute and deliver an agreement extending the same.
- 3.2 Upon expiration or termination for any reason, AOPA shall have no obligation toward the Field Project Manager beyond the payment of any invoices that remain outstanding for work already completed.

4. Expenses

- 4.1 AOPA shall pay the Field Project Manager in the amount of that as indicated by Invoice within 30 days of the date of the invoice. [this needs clarification and limits; can we attach as an addendum a copy of a budget for each part of the project Dan is managing and suggest that any estimated overages must be cleared by AOPA in advance?] Should be clear that there is no charge for Dan's services, but he will invoice us for work done by others on the following phases....
- 4.2 All other expenses including, but not limited to travel, food, and entertainment, shall be the sole responsibility of the Field Project Manager
- 4.3 Unless otherwise agreed between the parties in writing, the Field Project Manager shall be solely liable for his expenses incurred pursuant to this Agreement and shall not be reimbursed for such expenses by AOPA. AOPA will be solely liable for its expenses incurred pursuant to this Agreement.
- 4.4 It is expressly agreed and understood that notwithstanding anything in this Agreement to the contrary, no amounts otherwise payable to the Field Project Manager under this Agreement shall be due and payable if or to the extent such are prohibited, restricted, or limited by the laws or regulations of any Government within the Territory or by those of the United States of America, including without limitation foreign corrupt practices laws.

5. Field Project Manager's Status and Responsibility

- 5.1 The Field Project Manager agrees to act in good faith in the development, promotion, and marketing of the 2007 Sweepstakes project, and will cooperate with AOPA in any advertising or promotion programs undertaken by AOPA with respect to the Project.

- 5.2 The Field Project Manager agrees to not engage in any improper business practices and, upon request, to certify that he has not engaged in any improper business practices.
- 5.3 Except for the provisions of paragraph 4.3 the Field Project Manager is an independent contractor and shall be responsible for and pay his own expenses, income taxes, and other taxes incurred in performing hereunder, and shall not be provided any insurance by AOPA.
- 5.4 The Field Project Manager is not authorized to do business in AOPA's name or to obligate AOPA in any way. All proposals, offers and contracts shall be negotiated and signed by the authorized Project Manger of AOPA. For purposes of this Agreement, AOPA's authorized representatives are as follows: Julie K. Boatman, AOPA Sweepstakes Project Manager.
- 5.5 The Field Project Manager agrees during the term of this Agreement not to represent for sale or solicit for sale any goods which are competitive with the spirit of the project, or that may cause a conflict of interest.
- 5.6 The Field Project Manager will make no representations or warranties with respect to the Project, including product warranties, on behalf of AOPA except as expressly authorized in writing by AOPA.
- 5.7 The Field Project Manager shall at all times comply with the laws and regulations of the United States of America in connection with his business and other activities under this Agreement.
- 5.8 The parties acknowledge that in performing his responsibilities hereunder, the Field Project Manager will may, from time to time, receive from AOPA certain confidential information and data concerning AOPA's operations or market tests. Such information may include, without limitation, customer lists, compilations of data, technology, techniques, processes, procedures and similar information (the "Confidential Information"). Such Confidential Information may be incorporated in compilations of data, narrative descriptions, oral presentations, demonstrations or products and, depending upon the circumstances, may not always be specifically designated as being of a confidential or proprietary nature. All communications of the Confidential Information from AOPA to the Field Project Manger shall be confidential and the Field Project Manager agrees that without the prior written consent of a duly-authorized representative of AOPA, it will not disclose, directly or indirectly, or otherwise use any of the Confidential Information to or with any person or organization.

8. Trademarks and Names

The Field Project Manager shall not use any of AOPA's trademarks, trade names, corporate slogans, goodwill or product designations in any advertising copy, promotional material, signs or other written or printed material except as specifically authorized in writing by AOPA. The Field Project Manager shall not register or permit any third party to register any AOPA trademarks or other intellectual property rights.

9. Termination

- 9.1 Either party may terminate this Agreement if the other party breaches any of the provisions of this Agreement and fails to remedy such breach within 30 days after receipt of written notice of such breach, except that AOPA shall be permitted to terminate this Agreement (a) immediately and without notice if the Field Project Manager engages in any improper business practice or fails or refuses to comply with any law or regulation of the United States of America or of any law or regulation of any country in the Territory, and (b) immediately upon written notice for "cause" as defined in Section 3.2 above.
- 9.2 Except as otherwise provided by the laws of Maryland, either party may terminate this Agreement with or without Cause, by giving 30 days written notice of termination to the other party.
- 9.3 Neither termination nor expiration shall relieve either party from the duty to discharge in full all obligations accrued or due prior to the date thereof, except as otherwise specifically provided herein.
- 9.4 Within thirty (30) days after the effective date of termination of this Agreement, the Field Project Manager shall return to AOPA all material containing Confidential Information received from AOPA.
- 9.5 Except as expressly provided herein, neither party by reason of the termination of this Agreement shall be liable to the other because of the loss of anticipated sales, commissions or prospective profits or because of expenditures or investments related to the performance of this Agreement or the goodwill of the parties. All sums owed by either party to the other shall become due and payable immediately upon termination.

10. Severability

If any provision of this Agreement is held to be illegal, invalid, or unenforceable under any present or future law, (a) such provision will be fully severable, (b) this Agreement will be construed as if such illegal, invalid, or unenforceable provision had never comprised a part hereof, (c) the remaining provisions of this Agreement will remain in full force and effect and will not be affected by the illegal, invalid, or unenforceable

provision or by its severance herefrom, and (d) in lieu of such illegal, invalid, or unenforceable provision, there will be added automatically as a part of this Agreement a legal, valid, and enforceable provision as similar in terms to such illegal, invalid, and unenforceable provision as may be possible.

11. Assignment

The Field Project Manager shall not assign this Agreement or any right or obligation under this Agreement, and any purported assignment shall be void and ineffective.

12. Applicable Law and Dispute Settlement

12.1 The construction, performance and completion of this Agreement shall be governed by the internal laws of the State of Maryland, without regard to conflict of law principles. The Field Project Manager hereby submits to the jurisdiction of any state or federal court in Maryland.

12.2 In the event of any dispute arising out of or relating to this Agreement, the parties undertake to make every effort to reach an amicable settlement of their differences. Failing such settlement, the dispute shall be referred to arbitration and settled by arbitration under the Commercial Rules of the American Arbitration Association by one arbitrator appointed in accordance with said Rules.

13. Notices

Any notices required or permitted herein may be hand delivered, faxed, cabled or mailed, properly addressed to the party to be notified at its address set forth below, or at the last known address given by such party to the other, and shall be deemed delivered when transmitted by any of the above means. The addresses of the parties are:

Attention:
Julie K. Boatman
AOPA
421 Aviation Way
Frederick, MD 21701

Dan Gryder
Gryder Networks LLC
147 Sky Harbor Way
Griffin, GA 30224

14. General Conditions

- 14.1 This Agreement shall be signed in duplicate but shall not be binding upon AOPA until a copy, signed by the Field Project Manager, is received and signed by AOPA at its offices in Frederick, MD.
- 14.2 This Agreement is entered into and supersedes all existing agreements between AOPA and the Field Project Manager on the subject matter hereof, and all prior agreements are hereby terminated by mutual consent by the parties.
- 14.3 The Field Project Manager recognizes and agrees that the failure of AOPA at any time to require performance by the Field Project Manager of any provisions of this Agreement shall not operate as a waiver of the right of AOPA to request strict performance of the same or other provisions at a later time.
- 14.4 This Letter of Agreement may be amended or modified only by a writing signed by both parties to this Agreement, and may not be amended by the conduct or oral agreement of the parties.

EXECUTED by the Parties as of the Date first above written.

Dan Gryder, Owner, Gryder Networks LLC

By: _____

Julie K. Boatman, AOPA

By: _____

EXHIBIT

C2

Gryder Networks, LLC
147 Sky Harbor Way, Griffin, GA 30223
www.TheAviatorNetwork.com

October 28, 2006

Julie K. Boatman
AOPA
421 Aviation Way
Frederick, MD 21701

Dear Ms. Boatman,

As per our previous conversations regarding the AOPA 2007 Sweepstakes aircraft project, please accept this letter as confirmation regarding the following points:

- 1) I own and operate Gryder Networks, LLC. Our primary business is general aviation flight training, government contract training, and consulting.
- 2) As an independent consulting representing your organization, I have the resources, tooling, location, and personnel available to complete the project and agree to be responsible for the following three key areas:
 - a. On time - at pre-determined gates
 - b. On budget - or below projected budget.
 - c. Safe - thorough and superior quality as inspected upon completion.
- 3) I agree to donate all consulting, management, comprehensive training package, and hangar work site as needed through January 2008.
- 4) I agree to pay each vendor and subcontractor as needed as relates to airframe labor and document number of hours as well as the labor rate (projected at: \$20 to \$25/hour). Airframe labor and completion estimates are projected in four categories:
 - a. Aircraft disassembly (100 labor hours)
 - b. Cataloging parts and obtaining part numbers for replacements (28 hours)
 - c. Firewall removal, rebuild, and installation (108 hours)
 - d. Aircraft reassembly (100 hours)

5) In return for the above described package, I require proper and appropriate editorial promotion of either/or my name, company name, or company web site on a level commensurate with other contributors.

6) I also request that the further details and agreed target timelines, budgets, and plans should be finalized via formal contract prior to any work beginning or delivery of the aircraft to my facility.

Thank you for the opportunity to assist in this project. I look forward to the challenge of building the safest and the most thorough restoration on behalf of AOPA in the next year.

Thank you,

Dan Gryder, Owner
Gryder Networks, LLC
The AvNet

EXHIBIT

C3

AIRFRAME MAINTENANCE RECORDS

Log No. 1

Aircraft Registration No. N18729

Aircraft Mfg. CESSNA Model 177B Serial No. 17702550

Engine Mfg. LYCOMING Model O-360-A1F6D Serial No. L3113-36A

Engine Mfg. _____ Model _____ Serial No. _____

Propeller Mfg. _____ Model _____ Serial No. _____

Hub Design No. _____ Hub Serial No. _____

Blade Design No. _____ Blade Serial No's. _____

Propeller Mfg. _____ Model _____ Serial No. _____

Hub Design No. _____ Hub Serial No. _____

Blade Design No. _____ Blade Serial No's. _____

I CERTIFY THAT THIS IS
A TRUE AND ACCURATE
COPY OF THE ORIGINAL
DOCUMENT.

SIGNED Charles S. Smith

(All applicable information must be filled in)

ITEM OF PROOF NO. 3



AEROTECH PUBLICATIONS INC.


www.adlog.com
PO BOX 1359 / SOUTHOLD, NY 11971-0965

(631) 765-9375

1-800-235-6444

FAX: (631) 765-9359

© 1979 AeroTech Publications Inc.

DATE	TOTAL TIME IN SERVICE	TACH OR RECORDING METER TIME	DESCRIPTION OF WORK PERFORMED— SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK
			TOTAL brought forward from previous page
8/1/04	4293.3		<p>COMPLETED ANNUAL INSPECTION I/A/W FAR 43-D AND CESSNA CHECKLIST. REMOVED PANELS & INTERIOR AS REQ'D TO INSPECT & LUBRICATE. INSPECTED SEAT RAILS I/A/W AD 87.20.03 RZ, NO DEFECTS NOTED. IGNITION SWITCH OPS CHECKED I/A/W AD 76.07.12 NO DEFECTS NOTED. LUBRICATED/INSPECTED FLIGHT CONTROLS, CHECKED LIGHTS, ALL BEARINGS SERVICED, BALANCED MAIN TIRES. REMOVED NOSE SPEED FAIRING FOR REPAIR, SEE WT & BAL SUPPLEMENT BTD 8/1/04. REPLACED VACUUM SOURCE HOSE / DETERIORATED. ELT INSPECTED / OPS CHECKED I/A/W FAR 91.207d BATTERY REPLACED, EXPIRES 9/06 ADS CHECKED THRU BI-WEEKLY ISSUE 2004-15. SEE RECURRING LIST FOR DETAILS. I CERTIFY THAT THIS AIRFRAME HAS BEEN INSPECTED I/A/W AN ANNUAL INSPECTION AND WAS DETERMINED TO BE IN AIRWORTHY CONDITION</p> <p><i>Thomas Roberts</i> AEP 271600041TA</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;">  <p>ARTEX AIRCRAFT SUPPLIES, INC. 14405 Kell Rd. NE Aurora, OR 97002 (503) 678-7928 800-547-8901</p> <p>LOG BOOK ENTRY <u>8/1/04</u> E.L.T. BATTERY REPLACEMENT DATE <u>9/2006</u></p> </div>
8/25/04	4293.4		<p>CHECK OUT FLIGHT AFTER ANNUAL. N.T.F. REPLACED BRACKETT AIR FILTER ELEMENT P/N BA-5705</p> <p>BEN JONES OWNER/PILOT 461216551</p> <p><i>Ben Jones</i></p>
SUB-TOTAL this page			
TOTAL—Carry forward to next page			

DATE	TOTAL TIME IN SERVICE	TACH OR RECORDING METER TIME	DESCRIPTION OF WORK PERFORMED— SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK
			TOTAL brought forward from previous page
8/27/04	4294.5		INSTALL NEW CONCORDE BATTERY MODEL RG-35 AXC S/N 400466381 STC
			Ben Jones OWNER/PILOT 461216551 <i>Ben Jones</i>
2/24/06	4362.6		COMPLETED ANNUAL INSPECTION I/A/W FAR 43-D + C177B CHECKLIST. EMVD PANELS + INTERIOR AS REQ'D TO INSPECT + LUBRICATE. SERVICED NOSE STRUT, SEAT RAILS INSPECTED I/A/W AD 87-20- 03 RZ NO DEFECTS NOTED. IGNITION SWITCH OPS CHECKED I/A/W AD 76-07-10 NO DEFECTS NOTED. SEE RECURRING LIST FOR COMPLETE DETAILS AS OF ISSUE 2006-03. LUBRICATED FLIGHT CONTROLS INSPECTED LIGHTS BRAKES TIRES + STOPS BATTERY FOR CONDITION. ECU INSPECTED + OPS CHECKED I/A/W FAR 91.207d. BATTERY EXPIRES 9-06. I CERTIFY THAT THIS AIRFRAME HAS BEEN INSPECTED I/A/W AN ANNUAL INSPECTION AND WAS DETERMINED TO BE IN AIRWORTHY <u>CONDITION</u> <i>James Roberts</i> ADP 271600441JA

DALLAS AIR REPAIR-NW REGIONAL AIRPORT

DATE: 10/18/06

N# 18729

MAKE/MODEL: CESSNA 177B

S/N: 177-02550

TTAF: 4415.6 SMOH: 2449.9

PROP O/H: 1899.3

TACH: 4415.6

REPLACED BROKEN ALTERNATOR BRACKET P/N 07A21443.


I CERTIFY THIS AIRCRAFT HAS BEEN REPAIRED/INSPECTED I/A/W CURRENT
FEDERAL AVIATION REGULATIONS AND WAS DETERMINED TO BE IN AN
AIRWORTHY CONDITION WITH RESPECT TO WORK PERFORMED AND IS
HEREBY RETURNED TO SERVICE.

Jack Schedcik
JACK SCHEDCIK
3873472021A

DATE	TOTAL TIME IN SERVICE	TACH RECO ME TI	WORK
			Cessna 177B (IFR Cert) October 19, 2006
			Bench tested the United Altimeter and
			TOTAL Matched the ACK Encoder to 20,000ft. to
			FARs. Performed the Static & Integrated
			System Tests to FAR. 91.411 Paragraph (c)
			Appendix E of Part 43. Performed the---
			Transponder Ramp Test (ARC RT-359A S/N
			9105) to FAR. 91.413 Appendix F of Part
			43. Certified by STAHL AIR INSTRUMENTS,
			INC. CRS#WM1R589K. WO# 2323
			By <u>Y. Stahl</u>
6/10/2005	4424.1		AIRCRAFT Completely Disassembled For
			INSPECTION AND PAINTING OF PARTS. Engine
			Lycoming O-360 A1F6D S/N L31113-36A Removed
			From Aircraft N18729 Sent To Lycoming For
			OVERHAUL. Propeller McCauley B2D340211
			S/N 725087 Removed From Aircraft N18729 SENT
			TO OVERHAUL. Darryl T. Rexroad A/P 267763429JA
			<u>Darryl T. Rexroad</u>


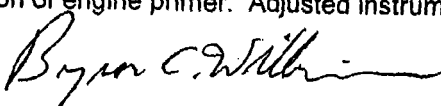
SUB-TOTAL this page

TOTAL—Carry forward to next page

DATE	TOTAL TIME IN SERVICE	TACH OR RECORDING METER TIME	DESCRIPTION OF WORK PERFORMED— SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK														
6/21/2008			 <p>January 21, 2008</p> <p>This aircraft, N778RD, was extensively refurbished as the 2007 AOPA Sweepstakes aircraft. In order to fully document the maintenance records for the period of November 6, 2006 – January 21, 2008, a special refurbishment work package binder has been created to document these changes. This refurbishment work package should be considered part of the permanent aircraft maintenance records. The refurbishment work package is divided into sections as follows:</p> <table border="0"> <tr> <td>100</td> <td>Aircraft paint and exterior</td> </tr> <tr> <td>200</td> <td>Aircraft Engine and Firewall Forward</td> </tr> <tr> <td>300</td> <td>Aircraft electrical and avionics</td> </tr> <tr> <td>400</td> <td>Aircraft airframe</td> </tr> <tr> <td>500</td> <td>Aircraft airframe</td> </tr> <tr> <td>600</td> <td>Aircraft inspection and return to service</td> </tr> <tr> <td>700</td> <td>Aircraft inspection and return to service</td> </tr> </table> <p>See N778RD refurbishment work package binder. An annual aircraft inspection was completed on June 19, 2007 as a part of this package.</p> <p><i>[Signature]</i> <i>[Signature]</i> <i>AV 2658931 IA</i></p>	100	Aircraft paint and exterior	200	Aircraft Engine and Firewall Forward	300	Aircraft electrical and avionics	400	Aircraft airframe	500	Aircraft airframe	600	Aircraft inspection and return to service	700	Aircraft inspection and return to service
100	Aircraft paint and exterior																
200	Aircraft Engine and Firewall Forward																
300	Aircraft electrical and avionics																
400	Aircraft airframe																
500	Aircraft airframe																
600	Aircraft inspection and return to service																
700	Aircraft inspection and return to service																

SUB-TOTAL this page

TOTAL—Carry forward to next page

DATE	TOTAL TIME IN SERVICE	TACH OR RECORDING METER TIME	DESCRIPTION OF WORK PERFORMED— SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK
			TOTAL brought forward from previous page
			 GREGG AIRCRAFT SERVICES, INC. EAST TEXAS REGIONAL AIRPORT 166 DOVEL ROAD LONGVIEW, TX 75603 903-643-0980
			N778RD 1-31-08 TACH: 6.4 Secured left cowl flap cable to actuator bracket and rigged cowl flaps. Wired battery terminal on magneto switch to cabin instrument lights circuit breaker per wiring diagram. Installed ground wire from external power plug to engine mount at airframe using 4 ga. wire. Corrected installation of engine primer. Adjusted instrument air to mid-green. Byron C. Williams A&P2021731 

LANCASTER AVIONICS, INC. 500-U AIRPORT ROAD LITITZ, PA 17543 CRS# LN7R261N
 LOG ID# 1375 14-February-2008 WO# 13428
 N778RD S/N 17702550 CESSNA 177B

Pg 1 / 2

**** ITEM # 13428-1 REPAIR NUMEROUS REPAIR SQUAWKS ****

DISCREPANCY: REPAIR NUMEROUS REPAIR SQUAWKS.

ACTION: 1) EDM800 NOT CONNECTED TO GNS430W'S - FOUND EDM800 RS232 INTERFACE NOT CONNECTED. WIRED EDM800 RX SIGNAL TO #1 GNS430W AND EDM800 TX TO BOTH GNS430W'S. ALSO PROGRAMMED EDM800 AS NEEDED. OPS CHECKED GOOD.

2) ENGINE CLUSTER HAS NO BACKLIGHTING - CONFIRMED. CLUSTER NOT DESIGNED TO BE LIT.

3) PULSE LIGHTS INOP - FOUND SWITCH MISWIRED AND MISLABELED. ALSO FOUND PULSE LIGHT CONTROLLER HALF-UNPLUGGED, REWIRED AND RELABELED SWITCH. REPOSITIONED CONTROLLER CONNECTOR LOCKING MECHANISM TO ALLOW PROPER LOCKING. OPS CHECKED GOOD.

4) GDL90 TRAFFIC INOP - FOUND GDL90 MIS-PROGRAMMED AND MISSING ALTITUDE INPUT. PROPERLY PROGRAMMED GDL90 AND CORRECTED ALTITUDE INPUT WIRING. OPS CHECKED GOOD.

5) WX500 HEADING INOP AND NOT DISPLAYING ON #2 GNS430 AND GMX200 - ELIMINATED WX500 HEADING SENSE AND REWIRED INTERFACE SO AS GMX200 IS THE WX500 CONTROL AND BOTH GNS430W'S ARE RECEIVE ONLY. OPS CHECKED GOOD.

6) EXCITATION INVERTER INOP - FAILED DURING COURSE OF WORK. REPLACED DEFECTIVE INVERTER WITH NEW WARRANTY EXCHANGE MD26-14. OPS CHECKED GOOD.

7) ALTERNATE STATIC VALVE NOT PLUMBED INTO SYSTEM - PLUMBED ALTERNATE STATIC VALVE INTO STATIC SYSTEM. LEAK CHECKED GOOD.

8) STEC 55X AUTOPILOT HEADING OFF BY 10 DEGREES - CONFIRMED PROBLEM IN KI525A HSI. RECALIBRATED HEADING AND COURSE DATUM. OPS CHECKED GOOD.

9) STEC 55X BUTTON LIGHTING INOP - FOUND DIMMER WIRED NOT CONNECTED. WIRED 55X DIMMER TO AIRCRAFT LIGHTING SYSTEM. OPS CHECKED GOOD.

10) COM'S INTERFERE WITH EACH OTHER (BLEED) - INSTALLED BELLY MOUNTED COM ANTENNA FOR USE WITH #2 COM. OPS CHECKED GOOD.

LANCASTER AVIONICS, INC. 500-U AIRPORT ROAD LITITZ, PA 17543 CRS# LN7R261N
 LOG ID# 1375 14-February-2008 WO# 13428
 N778RD S/N 17702550 CESSNA 177B

Pg 2 / 2

11) RADIOS SAG CAUSING REMOVAL/INSERTION DIFFICULTIES - PROVIDED BACK SUPPORT FOR RADIOS.

12) KC555A COMPASS SYSTEM WILL NEW SLEW CW IN FREE MODE - CONFIRMED PROBLEM WITH KA51B SLAVING ACCESSORY. REPLACED SLAVING ACCESSORY WITH CUSTOMER SUPPLIED REPLACEMENT UNIT AND PERFORMED COMPLETE COMPASS SYSTEM CALIBRATION AND COMPASS SWING. PROVIDED NEW CORRECTION CARD. OPS CHECKED GOOD.

13) FOUND STEC 55X TRIM PROMPTING ARROWS INDICATING INCORRECT DIRECTION FOR TRIM. SWAPPED WIRES AT 55X COMPUTER, PITCH SERVO, AND TRIM SERVO. OPS CHECKED GOOD.

14) VERY LOW SPEAKER VOLUME - REPLACED GARMIN GMA340 AUDIO PANEL WITH SERIAL NUMBER 96270357. OPS CHECKED GOOD.

CRS# LN7R261N

Date

HAZERSTOWN AIRCRAFT SERVICES, INC.

Certified Repair Station: CRS H5GRO500


14235 Oak Springs Road, Hagerstown, MD 21742 (301) 733-7604

DATE

TIME
IN
SERVIC

DATE 4/22/08 TACH 18.1 A/F TT 4505.1 W/O# 0802052
N# 778RD MAKE Cessna MODEL 177B S/N 17702550

Inspected aircraft and determined it to be safe for a ferry flight from Frederick, MD (FDK) to Hagerstown, MD (HGR) for maintenance.

Signed: 
Hagerstown Aircraft Services, Inc Hagerstown, MD 21742
FAA Approved Repair Station H5GRO500

SUB-TOTAL this page

TOTAL—Carry forward to next page

Sold To: A.O.P.A.
421 Aviation Way
Frederick, MD 21701-4798

Shop Order: 0802052
Acct Number: 11955

Opened: 2/14/2008
Closed: 7/10/2008

Aircraft Number: N778RD Type: 177b S/N: 17702550

Eng#	Type	S/N	Total Time:	Hobbs Time:	19.2	Tach Time:	LG Cycles:
1							

Discrepancy: 1

Problem:

Right landing light inop

Instructions:

Action Taken:

Installed new lamp.

Charges This Item:

0.50 Hours @ 78.00 \$ 39.00
Total For This Discrepancy: \$ 39.00

Discrepancy: 2

Problem:

Manifold pressure gauge inop

Instructions:

Action Taken:

Inspection found line not attached at firewall, resecured line, checked manifold gauge & functions properly.

Charges This Item:

0.30 Hours @ 78.00 \$ 23.40
Total For This Discrepancy: \$ 23.40

Discrepancy: 3

Problem:

Engine installation inspection.

Instructions:

Action Taken:

Inspected engine installation and noted discrepancies.

Charges This Item:

2.00 Hours @ 78.00 \$ 156.00
Total For This Discrepancy: \$ 156.00

Discrepancy: 4

Problem:

Suction reads low.

Instructions:

Action Taken:

Inspection found various vacuum hoses not secured or improper sized hoses. Installed new hose and secured lines.

Charges This Item:

2.50 Hours @ 78.00 \$ 195.00
Total For This Discrepancy: \$ 195.00

Discrepancy: 5



Hagerstown Aircraft Services, Inc.

14235 Oak Springs Road

Hagerstown MD 21742

Phone 301 733 7604 Fax 301 739 0527

FAA CRS H5GRO500 www.hgrair.com

Problem:

Cowling to engine alignment not center.

Instructions:**Action Taken:**

Shimmed bottom engine mount rubbers.

Charges This Item:

9.90 Hours @ 78.00 \$ 772.20

Total For This Discrepancy: \$ 772.20

Discrepancy: 6**Problem:**

Interior panel loose at AFT doorframe.

Instructions:**Action Taken:**

Resecured panel with existing hardware.

Charges This Item:

0.25 Hours @ 78.00 \$ 19.50

Total For This Discrepancy: \$ 19.50

Discrepancy: 7**Problem:**

Cabin doors difficult to lock.

Instructions:**Action Taken:**

Adjusted right and left doors. Fit installed supplied striker plates.

Charges This Item:

5.00 Hours @ 78.00 \$ 390.00

Total For This Discrepancy: \$ 390.00

Discrepancy: 9**Problem:**

Paint chipped on instrument panel near transponder.

Instructions:**Action Taken:**

Removed panel for paint. Reinstalled panel.

Charges This Item:

3.50 Hours @ 78.00 \$ 273.00

Total For This Discrepancy: \$ 273.00

Discrepancy: 10**Problem:**

Baggage door seal loose on forward edge.

Instructions:**Action Taken:**

Reattached with 1300L adhesive.

Charges This Item:

0.50 Hours @ 78.00 \$ 39.00

Total For This Discrepancy: \$ 39.00

Discrepancy: 11**Problem:**

Repair paint blisters on MLG strut fairings.

Instructions:



Hagerstown Aircraft Services, Inc.

14235 Oak Springs Road

Hagerstown MD 21742

Phone 301 733 7604 Fax 301 739 0527

FAA CRS H5GRO500 www.hgrair.com

Action Taken:

Removed for paint. Painted strut cuffs, reinstalled on aircraft.

Charges This Item:

2.50 Hours @ 78.00 \$ 195.00

Total For This Discrepancy: \$ 195.00

Discrepancy: 12

Problem:

Repair chipped paint on nose gear fairing.

Instructions:

Action Taken:

Removed for paint. Installed bracket and doubler. Repainted wheel pant top and new brackets. Reinstalled wheel pant.

Charges This Item:

8.30 Hours @ 78.00 \$ 647.40

Total For This Discrepancy: \$ 647.40

Discrepancy: 13

Problem:

Right wing tip cracked

Instructions:

Action Taken:

Removed right and left wing tips for replacement.

Charges This Item:

11.00 Hours @ 78.00 \$ 858.00

Total For This Discrepancy: \$ 858.00

Discrepancy: 14

Problem:

Prop governor not eyeing correctly.

Instructions:

Action Taken:

Removed McCauley governor, sent to American propeller for adjustment and to change model.

Charges This Item:

0.50 Hours @ 78.00 \$ 39.00

Total For This Discrepancy: \$ 39.00

Discrepancy: 15

Problem:

Engine runs hot at all altitudes.

Instructions:

Action Taken:

Installed not previously installed inner baffling retainers.

Charges This Item:

1.00 Hours @ 78.00 \$ 78.00

Total For This Discrepancy: \$ 78.00

Discrepancy: 16

Problem:

Fuel system burn quantity uneven from each tank.

Instructions:

Action Taken:

Inspected fuel vent system, found ok. Removed fuel senders to verify operation. found ok. Inspected tank interior, found ok.

Charges This Item:

5.00 Hours @ 78.00 \$ 390.00



Hagerstown Aircraft Services, Inc.

14235 Oak Springs Road

Hagerstown MD 21742

Phone 301 733 7604 Fax 301 739 0527

FAA CRS H5GRO500 www.hgrair.com

Instructions:

Action Taken:

Resecured with 1300I adhesive.

Charges This Item:

1.00 Hours @ 78.00 \$ 78.00

Total For This Discrepancy: \$ 78.00

Discrepancy: 23

Problem:

Check firewall to engine mount bolt torque.

Instructions:

Action Taken:

Torqued and checked engine mount bolts. Adjusted as needed.

Charges This Item:

0.75 Hours @ 78.00 \$ 58.50

Total For This Discrepancy: \$ 58.50

Discrepancy: 24

Problem:

Primer lines not secured.

Instructions:

Action Taken:

Repositioned back clamp & Installed correct front clamp.

Charges This Item:

2.00 Hours @ 78.00 \$ 156.00

Total For This Discrepancy: \$ 156.00

Discrepancy: 25

Problem:

Right front baffling cracked on engine.

Instructions:

Action Taken:

Removed baffling and patched cracks.

Charges This Item:

5.00 Hours @ 78.00 \$ 390.00

Total For This Discrepancy: \$ 390.00

Discrepancy: 26

Problem:

Exhaust riser pipes cracked on #1 & 2 cylinders.

Instructions:

Action Taken:

Installed repaired exhaust.

Charges This Item:

2.00 Hours @ 78.00 \$ 156.00

Total For This Discrepancy: \$ 156.00

Discrepancy: 27

Problem:

Throttle control bent at carb. attachment.

Instructions:

Action Taken:



Hagerstown Aircraft Services, Inc.

14235 Oak Springs Road

Hagerstown MD 21742

Phone 301 733 7604 Fax 301 739 0527

FAA CRS H5GRO500 www.hgrair.com

Removed cable, installed new cable and secured.

Charges This Item:

3.00 Hours @ 78.00 \$ 234.00

Total For This Discrepancy: \$ 234.00

Discrepancy: 28

Problem:

Oil cooler hoses not secured to prevent chaffing.

Instructions:

Action Taken:

Secured oil cooler hoses to engine mount & firewall with clamps.

Charges This Item:

0.50 Hours @ 78.00 \$ 39.00

Total For This Discrepancy: \$ 39.00

Discrepancy: 29

Problem:

Prop governor control bracket cracked.

Instructions:

Action Taken:

Installed welded bracket. Painted and secured.

Charges This Item:

0.50 Hours @ 78.00 \$ 39.00

Total For This Discrepancy: \$ 39.00

Discrepancy: 30

Problem:

Standby vacuum plate not secured to intake pipe.

Instructions:

Action Taken:

Aligned with intake orifice sealed with hi-temp RTV and reclamped.

Charges This Item:

1.00 Hours @ 78.00 \$ 78.00

Total For This Discrepancy: \$ 78.00

Discrepancy: 31

Problem:

Oil leak near rear of engine.

Instructions:

Action Taken:

Removed oil cooler fitting at accessory case. Cleaned and installed with sealant. Leak check ok.

Charges This Item:

0.50 Hours @ 78.00 \$ 39.00

Total For This Discrepancy: \$ 39.00

Discrepancy: 32

Problem:

Engine controls mis-rigged

Instructions:

Action Taken:

Rigged engine controls to match each other and contact stops.

Charges This Item:

1.00 Hours @ 78.00 \$ 78.00

Total For This Discrepancy: \$ 78.00



Hagerstown Aircraft Services, Inc.

14235 Oak Springs Road

Hagerstown MD 21742

Phone 301 733 7604 Fax 301 739 0527

FAA CRS H5GRO500 www.hgrair.com

Discrepancy: 33

Problem:

Various bare power wire terminals exposed.

Instructions:

Action Taken:

Installed boots on right and left P-leads, alternator wires, APU Oil pressure switch & noise filter, ops check ok.

Charges This Item:

1 00 Hours @ 78.00 \$ 78.00

Total For This Discrepancy: \$ 78.00

Discrepancy: 34

Problem:

Inspect engine for cause of excessive vibration.

Instructions:

Action Taken:

Inspection found propeller improperly indexed. Removed propeller and found crankshaft flange bushings installed incorrectly.

Charges This Item:

16.50 Hours @ 78.00 \$ 1,287.00

Total For This Discrepancy: \$ 1,287.00

Discrepancy: 35

Problem:

- Replacement of improperly located crankshaft bushings.

Instructions:

Action Taken:

Removed flange bushings.

Charges This Item:

2.30 Hours @ 78.00 \$ 179.40

Total For This Discrepancy: \$ 179.40

Discrepancy: 36

Problem:

Various control cables not secured and improperly located.

Instructions:

Action Taken:

Inspection found cabin air/heat, defrost and prop. gov. cables improperly routed. Rerouted and secured.

Charges This Item:

3.00 Hours @ 78.00 \$ 234.00

Total For This Discrepancy: \$ 234.00

Discrepancy: 37

Problem:

Secure engine wires and hoses.

Instructions:

Action Taken:

Rerouted wires as needed, secured hoses and wires as needed with clamps and tie straps.

Charges This Item:

4.00 Hours @ 78.00 \$ 312.00

Total For This Discrepancy: \$ 312.00

Discrepancy: 38

Problem:

Rudder trim cable straps hitting aileron cables.



Hagerstown Aircraft Services, Inc.

14235 Oak Springs Road

Hagerstown MD 21742

Phone 301 733 7604 Fax 301 739 0527

FAA CRS H5GRO500 www.hgrair.com

Instructions:

Action Taken:

Inspected cables for damage and found ok. Adjusted angle of step, ops check ok.

Charges This Item:

0.75 Hours @	78.00 \$	58.50
Total For This Discrepancy: \$		58.50

Discrepancy: 39

Problem:

Screws loose in tailcone.

Instructions:

Action Taken:

Inspection found improper size and style screws installed. Installed 6 rivnuts. Secured forward tailcone and side fairings with new screws.

Charges This Item:

0.75 Hours @	78.00 \$	58.50
Total For This Discrepancy: \$		58.50

Discrepancy: 40

Problem:

Wires not secured at battery box & tail section.

Instructions:

Action Taken:

Secured wiring to clear cables and pulleys, installed boots on battery solenoid.

Charges This Item:

0.75 Hours @	78.00 \$	58.50
Total For This Discrepancy: \$		58.50

Discrepancy: 41

Problem:

Reindex spinner bulkhead to ring gear.

Instructions:

Action Taken:

Installed not previously installed shims, bolts, washers, and torqued.

Charges This Item:

0.75 Hours @	78.00 \$	58.50
Total For This Discrepancy: \$		58.50

Discrepancy: 42

Problem:

Annual inspection.

Instructions:

Charges This Item:

23.00 Hours @	78.00 \$	1,794.00
Total For This Discrepancy: \$		1,794.00

Discrepancy: 43

Problem:

ELT Inspection

Instructions:

Action Taken:

Inspected airtex ELT, found airworthy at this time.

Charges This Item:

0.30 Hours @	78.00 \$	23.40
--------------	----------	-------



Hagerstown Aircraft Services, Inc.

14235 Oak Springs Road

Hagerstown MD 21742

Phone 301 733 7604 Fax 301 739 0527

FAA CRS H5GRO500 www.hgrair.com

Total For This Discrepancy: \$ 23.40

Discrepancy: 44

Problem:

Right wing fuel cap plate seeping fuel.

Instructions:

Action Taken:

Removed plate and cleaned sealer, refit fuel cap plate and resealed with sealer.

Charges This Item:

1.00 Hours @ 78.00 \$ 78.00

Total For This Discrepancy: \$ 78.00

Discrepancy: 45

Problem:

Left aileron-rudder interconnect cable chaffing heat duct.

Instructions:

Action Taken:

Enlarged hole in duct to allow no contact movement of cable. Inspected cable and found no damage.

Charges This Item:

0.50 Hours @ 78.00 \$ 39.00

Total For This Discrepancy: \$ 39.00

Discrepancy: 46

Problem:

Carb. Temp. gauge light inop.

Instructions:

Action Taken:

Removed gauge. Found broken wire at light ring, resoldered wire to repair.

Charges This Item:

0.50 Hours @ 78.00 \$ 39.00

Total For This Discrepancy: \$ 39.00

Discrepancy: 47

Problem:

Floorboard rivets not properly securing seat rails.

Instructions:

Action Taken:

Replaced rivets as necessary.

Charges This Item:

41.30 Hours @ 78.00 \$ 3,221.40

Total For This Discrepancy: \$ 3,221.40

Discrepancy: 48

Problem:

Secure wiring on right and left wings.

Instructions:

Action Taken:

Secured wires to existing brackets.

Charges This Item:

1.00 Hours @ 78.00 \$ 78.00

Total For This Discrepancy: \$ 78.00

Discrepancy: 49

Problem:

C/W AD87-20-03R2 Seat tracks.



Hagerstown Aircraft Services, Inc.

14235 Oak Springs Road

Hagerstown MD 21742

Phone 301 733 7604 Fax 301 739 0527

FAA CRS H5GRO500 www.hgrair.com

Instructions:

Action Taken:

Complied with AD 87-20-03 R2, visual inspection of seat tracks and seat rollers and found to be airworthy at this time.

Charges This Item:

0.25 Hours @ 78.00 \$ 19.50

Total For This Discrepancy: \$ 19.50

Discrepancy: 50

Problem:

C/W AD84-26-02 Paper induction air filter.

Instructions:

Action Taken:

Complied with AD 84-26-02 by visual inspection of filter and found airworthy.

Charges This Item:

0.25 Hours @ 78.00 \$ 19.50

Total For This Discrepancy: \$ 19.50

Discrepancy: 51

Problem:

Elevator and Rudder static wicks not fully secured.

Instructions:

Action Taken:

Removed loose rivets. Installed new rivets.

Charges This Item:

0.25 Hours @ 78.00 \$ 19.50

Total For This Discrepancy: \$ 19.50

Discrepancy: 52

Problem:

Right and Left fuel drain valves not secured.

Instructions:

Action Taken:

Secured right wing fuel valve bracket. Safety wired right and left fuel drain valves.

Charges This Item:

0.25 Hours @ 78.00 \$ 19.50

Total For This Discrepancy: \$ 19.50

Discrepancy: 53

Problem:

Flap indicator cable not properly secured on left wing.

Instructions:

Action Taken:

Removed improper sized clamps, Installed 2 new clamps then secured.

Charges This Item:

0.75 Hours @ 78.00 \$ 58.50

Total For This Discrepancy: \$ 58.50

Discrepancy: 54

Problem:

Install Propeller.

Instructions:

Charges This Item:

1.25 Hours @ 78.00 \$ 97.50



Hagerstown Aircraft Services, Inc.

14235 Oak Springs Road

Hagerstown MD 21742

Phone 301 733 7604 Fax 301 739 0527

FAA CRS H5GRO500 www.hgrair.com

		Total For This Discrepancy: \$	97.50
Discrepancy: 55			
<u>Problem:</u> LH Wing tip improperly aligned			
<u>Instructions:</u>			
<u>Action Taken:</u> Adjusted wing tip to align with screw holes.			
Charges This Item:		1.70 Hours @ 78.00 \$	132.60
		Total For This Discrepancy: \$	132.60
Discrepancy: 56			
<u>Problem:</u> Install repaired Prop. Governor.			
<u>Instructions:</u>			
<u>Action Taken:</u> Installed repaired McCauley governor.			
Charges This Item:		3.50 Hours @ 78.00 \$	273.00
		Total For This Discrepancy: \$	273.00
Discrepancy: 57			
<u>Problem:</u> Fabricate Left and Right Fillets - Wings			
<u>Instructions:</u>			
<u>Action Taken:</u> Fabricated Left and Right Fillets.			
Charges This Item:		1.20 Hours @ 78.00 \$	93.60
		Total For This Discrepancy: \$	93.60
Discrepancy: 59			
<u>Problem:</u> Glareshield Repair			
<u>Instructions:</u>			
<u>Action Taken:</u> Removed glareshield browl made repairs to browl by gluing welting to secure welting in place.			
Charges This Item:		2.00 Hours @ 78.00 \$	156.00
		Total For This Discrepancy: \$	156.00
Discrepancy: 60			
<u>Problem:</u> Glareshield vent covers.			
<u>Instructions:</u>			
<u>Action Taken:</u> Fabricated two vent covers on glareshield and painted.			
Charges This Item:		2.50 Hours @ 78.00 \$	195.00
		Total For This Discrepancy: \$	195.00
Discrepancy: 61			
<u>Problem:</u> Reinstall glareshield browl.			
Printed: 7/10/2008		Shop Order: 0802052	Page: 11 of 26



Hagerstown Aircraft Services, Inc.

14235 Oak Springs Road

Hagerstown MD 21742

Phone 301 733 7604 Fax 301 739 0527

FAA CRS H5GRQ500 www.hgrair.com

Instructions:

Action Taken:

Installed glareshield browl.

Charges This Item:

4.00 Hours @ 78.00 \$ 312.00

Total For This Discrepancy: \$ 312.00

Discrepancy: 62

Problem:

Alternator contacting engine baffling.

Instructions:

Action Taken:

Removed alternator. Installed overhauled alternator.

Charges This Item:

1.20 Hours @ 78.00 \$ 93.60

Total For This Discrepancy: \$ 93.60

Discrepancy: 63

Problem:

No documentation for pilot door window sliding vent.

Instructions:

Action Taken:

Inspected pilot door window to verify that sliding vent mod that was previously installed under 337 form dated 5/21/86 has been removed by persons unknown. Generated 337 dated 6/3/08.

Charges This Item:

1.80 Hours @ 78.00 \$ 140.40

Total For This Discrepancy: \$ 140.40

Discrepancy: 64

Problem:

Research aircraft records for missing documents.

Instructions:

Action Taken:

Researched aircraft records for missing 337 documents and for 337 documents incompletely filled out.

Charges This Item:

25.40 Hours @ 78.00 \$ 1,981.20

Total For This Discrepancy: \$ 1,981.20

Discrepancy: 65

Problem:

No documentation of removal of Narco DME 890.

Instructions:

Action Taken:

Inspected aircraft and found Narco DME 890 receiver with antenna AV-22 (previously installed on 337 form dated 11-5-98 was removed by persons unknown.)

Charges This Item:

0.40 Hours @ 78.00 \$ 31.20

Total For This Discrepancy: \$ 31.20

Discrepancy: 66

Problem:

No documentation for installation of Zephtronics alternator control unit.

Instructions:



Hagerstown Aircraft Services, Inc.

14235 Oak Springs Road

Hagerstown MD 21742

Phone 301 733 7604 Fax 301 739 0527

FAA CRS H5GRO500 www.hgrair.com

Action Taken:

Due to improper or missing documentation, A conformity inspection was performed as follows: Found the original type alternator control unit was removed. Found a Zephtronics P/N R15V00 voltage regulator/alternator control unit was installed I/A/W Tovya Group, Inc. dba Zephtronics STC SA8031SW and their drawing Z00100 Rev A Dated 01/04. Generated 337 form dated 6/3/08.

Charges This Item:

1.30 Hours @ 78.00 \$ 101.40

Total For This Discrepancy: \$ 101.40

Discrepancy: 67

Problem:

No documentation for installation of Skybolt cowl fasteners.

Instructions:

Action Taken:

Due to improper or missing documentation, A conformity inspection was performed as follows: Found the original type cowl and firewall fasteners were removed. Found Skybolt aeromotive corporation cowl and firewall fasteners were installed I/A/W their STC SA3286S0 and their master drawing list-C177, SKMDL177.XLS, REV 002 Dated 4/25/01, Their installation instructions SK4177PM. Doc Rev 02 dated 9/28/07, and AC43.13-18 CH 4 Sec.4. Generated 337 for dated 6/3/08.

Charges This Item:

1.70 Hours @ 78.00 \$ 132.60

Total For This Discrepancy: \$ 132.60

Discrepancy: 68

Problem:

No documentation for installation of Precise Flight Pulse Light.

Instructions:

Action Taken:

Due to improper or missing documentation, A conformity inspection was performed as follows: Found a Precise Flight, Inc. Pulse light control system was installed I/A/W their STC SA4005NM and their installation report # 08076 Doc. No. 025PMAN0001 RevD and AC43.13-1B inserted FMS Doc. No. 000PMAN001 REV. A into POH. Generated 337 form dated 6/3/08.

Charges This Item:

7.00 Hours @ 78.00 \$ 546.00

Total For This Discrepancy: \$ 546.00

Discrepancy: 69

Problem:

No documentation for installation of airframe part of Precise Flight Standby Vacuum System.

Instructions:

Action Taken:

Due to improper or missing documentation, A conformity inspection was performed as follows: Found a Precise Flight, Inc. SVS 5 Standby and vacuum system was installed I/A/W their STC SA2162NM. Installed an FMS in the POH. Generated 337 dated 6/3/08.

Charges This Item:

4.10 Hours @ 78.00 \$ 319.80

Total For This Discrepancy: \$ 319.80

Discrepancy: 70

Problem:

No documentation for installation of avionics racks.

Instructions:

Action Taken:

Due to improper or missing documentation, A conformity inspection was performed as follows: Found a LH & RH avionics equipment rack installed in the forward area of the empennage I/A/W Strong Aero Engineering (DER) Report No. N778RD - WO NO 1 dated 6/5/07 and form 8110-3 dated 6/5/07. Except for wrong sized aluminum was used called for .040 and found .032



Hagerstown Aircraft Services, Inc.

14235 Oak Springs Road

Hagerstown MD 21742

Phone 301 733 7604 Fax 301 739 0527

FAA CRS H5GRO500 www.hgrair.com

was used. See item #99.

Charges This Item:

0.50 Hours @	78.00 \$	39.00
Total For This Discrepancy: \$		39.00

Discrepancy: 71

Problem:

No documentation for installation of Ess Bus.

Instructions:

Action Taken:

Due to improper or missing documentation, A conformity inspection was performed as follows: Found a 14vdc Ess Bus Per drawing # SK-2892 dated 12/03/07 Form 8110.3 dated 12/3/07 by David M. Chadwick DERT-911013-CE and AC43.13-1B. See feild approval 337 for dated 5/1/08 that was generated for installation and FAA field approved.

Charges This Item:

4.00 Hours @	78.00 \$	312.00
Total For This Discrepancy: \$		312.00

Discrepancy: 72

Problem:

No documentation for installation of JPI EMD 800.

Instructions:

Action Taken:

Due to improper or missing documentation, A conformity inspection was performed as follows: Found a JPI EGT-701 engine temp indicating system installed I/A/W their STC SA2586NM and their installation manual #103 RevC. Installed EMS No.1 in POH, generated 337 form dated 6/3/08. See items #85, 101, and 110 for corrections of problems found.

Charges This Item:

1.30 Hours @	78.00 \$	101.40
Total For This Discrepancy: \$		101.40

Discrepancy: 73

Problem:

No documentation for installation of JPI Fuel Flow Transducer.

Instructions:

Action Taken:

Due to improper or missing documentation, A conformity inspection was performed as follows: Found a JPI Fuel Flow Transducer installed I/A/W their STC SA00432SE and their fuel flow installation maual report No. 503 Rev B. Generated a 337 form dated 6/3/08. See item # 105 for correction of problems found.

Charges This Item:

0.50 Hours @	78.00 \$	39.00
Total For This Discrepancy: \$		39.00

Discrepancy: 74

Problem:

No documentation for installation of Monarch Fuel Caps.

Instructions:

Action Taken:

Due to improper or missing documentation, A conformity inspection was performed as follows: Found a William Barton (Monarch Air and Development, Inc.) Fuel caps and filler necks kit were installed I/A/W Mr. William Barton STC SA2376CE and monarch installation drawing # FC-100 Rev. B. Generated 337 Form dated 6/3/08.

Charges This Item:

1.50 Hours @	78.00 \$	117.00
Total For This Discrepancy: \$		117.00

Discrepancy: 75

Problem:

No documentation for installation of LP Aero extra thick windshield.



Hagerstown Aircraft Services, Inc.

14235 Oak Springs Road

Hagerstown MD 21742

Phone 301 733 7604 Fax 301 739 0527

FAA CRS H5GRO500 www.hgrair.com

Instructions:

Action Taken:

Due to improper or missing documentation, A conformity inspection was performed as follows: Found a LP Aero Plastics, Inc. Extra Thick (.250") windshield was installed I/A/W Their STC SA00382NY and their heavy guage windshield installation and installation drawing list report # 329/CON. Generated 337 Form dated 6/3/08.

Charges This Item:

1.50 Hours @	78.00 \$	117.00
Total For This Discrepancy: \$		117.00

Discrepancy: 76

Problem:

No documentation for installation of S-Tec autopilot.

Instructions:

Action Taken:

Due to improper or missing documentation, A conformity inspection was performed as follows: Found a S-Tec Corporation system 55X two-axis autopilot installed I/A/W their STC SA09125 AC-D. Installation included an optional autotrim kit P/N TK-608 and is interfaced with the #1 GNS430W Nav system. Generated 337 Form dated 6/3/08. See item #90 for correction of problem found with installation.

Charges This Item:

4.50 Hours @	78.00 \$	351.00
Total For This Discrepancy: \$		351.00

Discrepancy: 77

Problem:

No documentation for installation of 2 GPS Garmin 430W.

Instructions:

Action Taken:

Due to improper or missing documentation, A conformity inspection was performed as follows: Found 2 Garmin AT GNS430W GPS/NAV/COM units P/N 011-01060-00 installed I/A/W their STC SA01933LS. Also, found 2 Garmin AT GA35 GPS Antennas installed I/A/W their STC SA01695SE. System was interfaced with 6MX200MED. B/K K1525S NAV indicator, HSI, and GDL90. Generated 337 Form dated 6/3/08. See item# 88 for correction of problems found with installation.

Charges This Item:

4.50 Hours @	78.00 \$	351.00
Total For This Discrepancy: \$		351.00

Discrepancy: 78

Problem:

Incomplete documentation for installation of Vortex Generators.

Instructions:

Action Taken:

AOPA copy for 337 Form was not returned to service or mailed to the FAA. Performed conformity inspection and found a set of Micro Aerodynamics, Inc. Vortex generators installed on wings and tail surfaces I/A/W their STC SA01033SE. Signed RTS Block# 7 and dated 6/3/08.

Charges This Item:

0.50 Hours @	78.00 \$	39.00
Total For This Discrepancy: \$		39.00

Discrepancy: 79

Problem:

Incomplete documentation for installation of tailcone fairing.

Instructions:

Action Taken:

Due to improper or missing documentation, A conformity inspection was performed as follows: Found a Maple Leaf Aviation



Hagerstown Aircraft Services, Inc.

14235 Oak Springs Road

Hagerstown MD 21742

Phone 301 733 7604 Fax: 301 739 0527

FAA CRS H5GRO500 www.hgrair.com

Limited/R.S. Designs fiberglass upper tailcone P/N TFU-001 and lower tailcone P/N TFL-002 were installed I/A/W Roy Sochuck drawings and their installation instructions P/N T.F.177 instr. See field approval 337 dated 6/3/08.

Charges This Item:

8.30 Hours @ 78.00 \$ 647.40

Total For This Discrepancy: \$ 647.40

Discrepancy: 80

Problem:

Incomplete documentation of engine part of Precise Flight standby Vacuum.

Instructions:

Action Taken:

Found no engine information was provided on the previously submitted 337 Form for Precise Flight, Inc. Standby vacuum system alteration to engine I/A/W their STC SE1779NM. Filled information in on customer copy of 337 form then resubmitted corrected 337 form to the FAA in Oklahoma City with cover letter of explanation.

Charges This Item:

1.20 Hours @ 78.00 \$ 93.60

Total For This Discrepancy: \$ 93.60

Discrepancy: 81

Problem:

Faa Copy of Power Flow Exhaust 337 has no signatures.

Instructions:

Action Taken:

Photo copied AOPA copy of this 337 with signatures and mailed to FAA in Oklahoma City with cover letter asking clerk to substitute this copy in the place of the one they previously had received.

Charges This Item:

0.80 Hours @ 78.00 \$ 62.40

Total For This Discrepancy: \$ 62.40

Discrepancy: 82

Problem:

No documentation found for removal of II Morrow GPS.

Instructions:

Action Taken:

Due to improper or missing documentation, A conformity inspection was performed as follows: Verified that the "VFR ONLY" stand alone II Morrow GPS 360 and their A-33 antenna that was previously installed I/A/W field approval dated 1/10/00 has been removed. Generated 337 Form dated 6/3/08.

Charges This Item:

2.00 Hours @ 78.00 \$ 156.00

Total For This Discrepancy: \$ 156.00

Discrepancy: 83

Problem:

No documentation found for installation of GMX200 Moving Map.

Instructions:

Action Taken:

Due to improper or missing documentation, A conformity inspection was performed as follows: Found a Garmin AT, Inc. GMX200 multifunction display installed I/A/W their STC SA 01692SE. It was found to be interfaced with #1 GNS430W and Garmin GDL90. Generated 337 form dated 6/3/08.

Charges This Item:

3.50 Hours @ 78.00 \$ 273.00

Total For This Discrepancy: \$ 273.00

Discrepancy: 84

Problem:

No documentation found for installation of GDL90 Data Link Transceiver.



Hagerstown Aircraft Services, Inc.

14235 Oak Springs Road

Hagerstown MD 21742

Phone 301 733 7604 Fax 301 739 0527

FAA CRS H5GRO500 www.hgrair.com

Instructions:

Action Taken:

Due to improper or missing documentation, A conformity inspection was performed as follows: Found a Garmin AT GDL90 system installed with a A33 GPS AUX and 2 each A40 Antennas and interfaced with Garmin GMX200 MFD and A/C encoding altimeter. Capstone feature disabled. Found installed I/A/W STC SA02217AK. Generated 337 form dated 6/3/08.

Charges This Item:

4.00 Hours @	78.00 \$	312.00
Total For This Discrepancy:	\$	312.00

Discrepancy: 85

Problem:

EDM-800 CHT & EGT Probe wires installed improperly.

Instructions:

Action Taken:

Found the CHT & EGT probe wires had no support and the probe wires had excessive bends exiting probe. Cut harness loose to reroute harness higher and installed clamps. Installed loops on the EGT & CHT probe wires to alleviate tension. I/A/W manufactures installation manual. Function checked, engine not running. Function checked satisfactory.

Charges This Item:

6.25 Hours @	78.00 \$	487.50
Total For This Discrepancy:	\$	487.50

Discrepancy: 86

Problem:

Empty / Non-sealed holes in firewall.

Instructions:

Action Taken:

Sealed around engine harness on the firewall with RTV. Sealed up empty screw holes on firewall with RTV.

Charges This Item:

1.00 Hours @	78.00 \$	78.00
Total For This Discrepancy:	\$	78.00

Discrepancy: 87

Problem:

Throttle cable chaffing against prop governor bracket.

Instructions:

Action Taken:

Wrapped throttle cable in spiral wrap and installed railroad track material on prop. governor bracket. I/A/W AC43.131B.

Charges This Item:

0.50 Hours @	78.00 \$	39.00
Total For This Discrepancy:	\$	39.00

Discrepancy: 88

Problem:

GPS Antenna doublers not riveted.

Instructions:

Action Taken:

Both GPS Antenna doublers were not riveted to skin as per installation. Removed rear headliner and trim around both rear windows. Removed both antennas and antenna doublers, drilled doublers for rivets. Installed doublers and cleaned skin. Touched up paint. Installed and sealed antenna's with PRC. I/A/W Garmin GNS400W series installation manual.

Charges This Item:

7.55 Hours @	78.00 \$	588.90
Total For This Discrepancy:	\$	588.90

Discrepancy: 89



Hagerstown Aircraft Services, Inc.

14235 Oak Springs Road

Hagerstown MD 21742

Phone 301 733 7604 Fax 301 739 0527

FAA CRS H5GRO500 www.hgrair.com

Problem:

Loose / Chaffing wires in headliner.

Instructions:**Action Taken:**

Installed adel clamp, tightened loose adel clamp and installed spiral wrap were potential chaffing will occur. Tied wires with zip ties. Rerouted left GPA antenna cable to prevent chaffing, Reinstalled interior. I/A/W AC43.13-1B Sec. 11 & 12.

Charges This Item:

6.25 Hours @ 78.00 \$ 487.50

Total For This Discrepancy: \$ 487.50

Discrepancy: 90**Problem:**

S-Tec improperly installed & missing parts.

Instructions:**Action Taken:**

A conformity check was performed on the S-Tec. See attached sheets for repairs on pages 14, 17, 18, & 19.

Charges This Item:

24.25 Hours @ 78.00 \$ 1,891.50

Total For This Discrepancy: \$ 1,891.50

Discrepancy: 91**Problem:**

Nav antenna combiner loose in vertical stab.

Instructions:**Action Taken:**

Vertical stab was removed, found the nav antenna combiner loose. Drilled mounting holes, installed tric-nuts and mounted cable clamp on skin. Installed anti-chafe spiral wrap and secured Antenna coax. I/A/W AC43.13-1B Sec 11 & 12.

Charges This Item:

1.00 Hours @ 78.00 \$ 78.00

Total For This Discrepancy: \$ 78.00

Discrepancy: 92**Problem:**

Create binder for flight manual supplement's.

Instructions:**Action Taken:**

Created and set up a small 3 ring binder to hold the numerous flight manual supplement's for installed equipment.

Charges This Item:

5.70 Hours @ 78.00 \$ 444.60

Total For This Discrepancy: \$ 444.60

Discrepancy: 93**Problem:**

Flux valve bracket installed improperly.

Instructions:**Action Taken:**

Reattached bracket to top skin, I/A.W AC43.13-1B Ch. 4 Sect. 4.

Charges This Item:

2.50 Hours @ 78.00 \$ 195.00

Total For This Discrepancy: \$ 195.00

Discrepancy: 94**Problem:**

Wire ground has tinnerman instead of nut.



Hagerstown Aircraft Services, Inc.

14235 Oak Springs Road

Hagerstown MD 21742

Phone 301 733 7604 Fax 301 739 0527

FAA CRS H5GRO500 www.hgrair.com

Instructions:

Action Taken:

Removed ground and tinnerman clip, Reinstalled ground, I/A/W AC43.13-1B.

Charges This Item:

0.25 Hours @ 78.00 \$ 19.50

Total For This Discrepancy: \$ 19.50

Discrepancy: 95

Problem:

Four screws from cabin heat valve missing nuts.

Instructions:

Action Taken:

Installed washers and locknuts.

Charges This Item:

0.50 Hours @ 78.00 \$ 39.00

Total For This Discrepancy: \$ 39.00

Discrepancy: 96

Problem:

Left Mag ground broken.

Instructions:

Action Taken:

Removed Mag lead and bad ground, repaired Mag ground and reinstalled Mag, lead and ground. Mag check during run-up. All check's satisfactory.

Charges This Item:

0.75 Hours @ 78.00 \$ 58.50

Total For This Discrepancy: \$ 58.50

Discrepancy: 97

Problem:

Landing/Taxi lights loose (no star washer or lockwasher installed.)

Instructions:

Action Taken:

Removed leads and installed starwashers.

Charges This Item:

0.50 Hours @ 78.00 \$ 39.00

Total For This Discrepancy: \$ 39.00

Discrepancy: 98

Problem:

Electric trim servo - bad rivets in brackets.

Instructions:

Action Taken:

Replaced rivets I/A/W AC43.13-1B CH. 4 Sect. 4

Charges This Item:

0.50 Hours @ 78.00 \$ 39.00

Total For This Discrepancy: \$ 39.00

Discrepancy: 99

Problem:

Left and right radio racks at battery station made with improper gage metal.

Instructions:

Action Taken:



Hagerstown Aircraft Services, Inc.

14235 Oak Springs Road

Hagerstown, MD 21742

Phone 301 733 7604 Fax 301 739 0527

FAA CRS H5GRO500 www.hgrair.com

Fabricated new racks with .040 2024-T3 aluminum. Installed new racks I/A/W AC43.13-1B. CH 4 Sect. 4. 8110-3 Dated 12/3/07.

Charges This Item:

13.00 Hours @ 78.00 \$ 1,014.00

Total For This Discrepancy: \$ 1,014.00

Discrepancy: 100

Problem:

Nut plate in right wing lower outboard inspection plate is bad.

Instructions:

Action Taken:

Removed and replaced nutplate #S3429-2A I/A/W AC43.13-1B CH. 4 Sect. 4.

Charges This Item:

0.50 Hours @ 78.00 \$ 39.00

Total For This Discrepancy: \$ 39.00

Discrepancy: 101

Problem:

EDM-800 Oil temp. probe not hooked up.

Instructions:

Action Taken:

Found EDM-800 oil temp probe wire loose behind instrument panel. Removed tape from pins and installed probe wire into J1. Function checked - checked satisfactory.

Charges This Item:

0.50 Hours @ 78.00 \$ 39.00

Total For This Discrepancy: \$ 39.00

Discrepancy: 102

Problem:

Ground blocks missing one thumbscrew each.

Instructions:

Action Taken:

Installed thumb jack screws on both ground blocks.

Charges This Item:

0.50 Hours @ 78.00 \$ 39.00

Total For This Discrepancy: \$ 39.00

Discrepancy: 103

Problem:

Co-Pilot push to talk Inop.

Instructions:

Action Taken:

Repaired a cut wire that was found. Function Checked - Checked satisfactory.

Charges This Item:

0.50 Hours @ 78.00 \$ 39.00

Total For This Discrepancy: \$ 39.00

Discrepancy: 104

Problem:

Create binder for "Instructions for continued airworthiness documents".

Instructions:

Action Taken:

Created binder for Instructions for continued airworthiness documents associated with various STC/Installed items.

Charges This Item:

2.50 Hours @ 78.00 \$ 195.00



Hagerstown Aircraft Services, Inc.

14235 Oak Springs Road

Hagerstown MD 21742

Phone 301 733 7604 Fax 301 739 0527

FAA CRS H5GRO500 www.hgrair.com

Total For This Discrepancy: \$ 195.00

Discrepancy: 105

Problem:

JPI Fuel Flow readings are inaccurate.

Instructions:

Action Taken:

Removed improperly installed system Ground and relocated to the engine. Reconfigured fuel flow plumbing configuration due to the inaccurate FF readings, the system plumbing allowed fuel to recycle back through the boost pump connections and the FF transducers orientation was installed improperly.

Charges This Item:

13.75 Hours @ 78.00 \$ 1,072.50

Total For This Discrepancy: \$ 1,072.50

Discrepancy: 106

Problem:

Swing HSI flux gate.

Instructions:

Action Taken:

Performed compass swing for the HSI due to work done on the flux valve bracket. HSI system was calibrated.

Charges This Item:

11.00 Hours @ 78.00 \$ 858.00

Total For This Discrepancy: \$ 858.00

Discrepancy: 107

Problem:

Oil pressure firewall fitting leaking oil.

Instructions:

Action Taken:

Removed oil pressure firewall fitting. Resealed pipe threaded fitting, reinstalled. Leak checked ok.

Charges This Item:

0.70 Hours @ 78.00 \$ 54.60

Total For This Discrepancy: \$ 54.60

Discrepancy: 108

Problem:

337 for engine part of standby vacuum system improperly filled out.

Instructions:

Action Taken:

Found no information on the 337 form for the Precise Flight standby vacuum system engine STC SE1779NM dated 6/18/07. Filled in engine information on customer copy of 337 then mailed a copy to the FAA in Oklahoma City with cover letter of explanation.

Charges This Item:

1.50 Hours @ 78.00 \$ 117.00

Total For This Discrepancy: \$ 117.00

Discrepancy: 109

Problem:

337 for Vertex Generators has no sign off for block 7 "Return to Service" also never mailed to the FAA.

Instructions:

Action Taken:

A conformity inspection was performed as follows: Found a Micro Aerodynamics, Inc. set of Vortex Generators installed on top of the wings and on the tail surfaces I/A/W their STC SA01033SE. Finished filling out 337 for previously started then mailed to the FAA dated 6/3/08.



Hagerstown Aircraft Services, Inc.

14235 Oak Springs Road

Hagerstown MD 21742

Phone 301 733 7604 Fax 301 739 0527

FAA CRS H5GRO500 www.hgrair.com

Charges This Item:	2.50 Hours @ 78.00 \$	195.00
	Total For This Discrepancy: \$	195.00
Discrepancy: 110		
Problem: EDM-800 Oil temp probe not installed.		
Instructions:		
Action Taken: Behind panel the oil temp probe wires were found uninstalled and capped with tape. Removed tape and install probe wire into connector. Oil temp checked satisfactory.		
Charges This Item:	3.00 Hours @ 78.00 \$	234.00
	Total For This Discrepancy: \$	234.00
Discrepancy: 111		
Problem: Avionics conformity check.		
Instructions:		
Action Taken: Due to improper or missing documentation, An avionics inspection was performed I/A/W/ manufacturer installation manuals for installed equipment in Aircraft. All discrepancies found were noted in workorder and were corrected.		
Charges This Item:	19.50 Hours @ 78.00 \$	1,521.00
	Total For This Discrepancy: \$	1,521.00
Discrepancy: 112		
Problem: Paperwork and clean-up.		
Instructions:		
Action Taken: Completed work sheet pages, sign-off's and verified all open documents completed and cleaned aircraft.		
Charges This Item:	8.00 Hours @ 78.00 \$	624.00
	Total For This Discrepancy: \$	624.00
Discrepancy: 113		
Problem: Weigh Aircraft.		
Instructions:		
Action Taken: Reweighed aircraft I/A/W Manufacturers maint. manual: Nose 461, LM 799, & RM 829. New E.W: 1729 C.G.: 105.97		
Charges This Item:	Flat-Fee Labor: \$	250.00
	Total For This Discrepancy: \$	250.00
Discrepancy: 114		
Problem: Revise aircraft equipment list.		
Instructions:		
Action Taken: Revised aircraft equipment list to reflect changes verified to have been made previously.		
Charges This Item:	3.50 Hours @ 78.00 \$	273.00
	Total For This Discrepancy: \$	273.00



Hagerstown Aircraft Services, Inc.

14235 Oak Springs Road

Hagerstown MD 21742

Phone 301 733 7604 Fax 301 739 0527

FAA CRS H5GRO500 www.hgrair.com

Discrepancy: 115

Problem:

Test fly aircraft.

Instructions:

Action Taken:

Test flew aircraft to ops check equipment and systems, I/A/W manufacturers maint. Manual.

Charges This Item:

4.50 Hours @ 78.00 \$ 351.00

Total For This Discrepancy: \$ 351.00

Discrepancy: 116

Problem:

Created from Inventory Receive operation.

Instructions:

Action Taken:

Outside Repair Completed: 2/26/2008

Item: 13600, S/N: 08-0118-10

Repaired By: Power Flow Exhaust Systems, Inc.

PO #: ER08-0095

Charges This Item:

Freight: \$ 25.00

Total For This Discrepancy: \$ 25.00

Discrepancy: 117

Problem:

Created from Inventory Receive operation.

Instructions:

Action Taken:

Outside Repair Completed: 2/26/2008

Item: 11600, S/N: 08-0118-7

Repaired By: Power Flow Exhaust Systems, Inc.

PO #: ER08-0095

Charges This Item:

Freight: \$ 25.00

Total For This Discrepancy: \$ 25.00

Discrepancy: 118

Problem:

Created from Inventory Receive operation.

Instructions:

Action Taken:

Outside Repair Completed: 3/07/2008

Item: C29003-K/T11, S/N: 76026-1

Repaired By: Ameritech Industries Inc.

PO #: SR08-0013

Charges This Item:

Freight: \$ 25.62

Total For This Discrepancy: \$ 25.62

Part Number	Description	Credit	Quantity	Units	List Price	Disc	Unit Price	Extended
1750042-1	Shim		6.00	Each	48.720		48.720 \$	292.32
	Freight		1.00				20.800 \$	20.80



Hagerstown Aircraft Services, Inc.

14235 Oak Springs Road
Hagerstown MD 21742

Phone 301 733 7604 Fax 301 739 0527
FAA CRS H5GRO500 www.hgrair.com

1752091-13	Hinge	2.00	Each	60.700	60.700 \$	121.40
	Freight	1.00			12.290 \$	12.29
MCC299505-0301	Throttle Control	1.00	Each	253.170	253.170 \$	253.17
	Freight	1.00			24.000 \$	24.00
1723005-12	Wing Tip	1.00	Each	798.000	798.000 \$	798.00
	Freight	1.00			24.790 \$	24.79
75657-S	Bushing	1.00	Each	30.340	30.340 \$	30.34
75656-S	Bushing	2.00	Each	61.030	61.030 \$	122.06
72155-S	Bushing	1.00	Each	61.480	61.480 \$	61.48
GE4509	Lamp	1.00	Each		59.320 \$	59.32
306-8	AEROQUIP HOSE	2.00	FOOT		4.500 \$	9.00
AN7-45A	BOLT	2.00	Each		6.970 \$	13.94
MS21919WDG16	CLAMP SHELF LIFE 96 MTHS	1.00	Each		2.350 \$	2.35
MS21919WDG11	CLAMP SHELF LIFE 96 MTHS	1.00	Each		1.600 \$	1.60
6504	CLAMP	4.00	Each		1.800 \$	7.20
MS21919WDG12	CLAMP SHELF LIFE 96 MTHS	2.00	Each		2.400 \$	4.80
MS25171-1S	NIPPLES	10.00	Each		2.210 \$	22.10
MS25171-3S	NIPPLES	2.00	Each		4.460 \$	8.92
MS21919WDG7	CLAMP SHELF LIFE 96 MTHS	2.00	Each		1.600 \$	3.20
MS21919WDG6	CLAMP SHELF LIFE 96 MTHS	4.00	Each		1.200 \$	4.80
MS21919WDG8	CLAMP SHELF LIFE 96 MTHS	2.00	Each		1.800 \$	3.60
AN742D6	CLAMP	4.00	Each		2.100 \$	8.40
AN742D3	CLAMP	6.00	Each		0.640 \$	3.84
MS21045L3 (AN365-1032C)	ALL METAL NUT	20.00	Each		0.650 \$	13.00
MS25171-4S	NIPPLES	1.00	Each		3.260 \$	3.26
A-A59178-2	Nipple	1.00	Each		2.740 \$	2.74
NAS1329A08K120	RIVNUT	6.00	Each		0.310 \$	1.86
8RX3/8PHB	PAN HD SDRW	4.00	Each		0.100 \$	0.40
MS24693C50	Stainless Screw	4.00	Each		0.150 \$	0.60
AN526C832R8	S/S SCREW	10.00	Each		0.120 \$	1.20
0450277-202	Baffle Spring	2.00	Each		13.400 \$	26.80
0450277-210	Baffle Spring	2.00	Each		18.400 \$	36.80
AN4-10A	BOLT	12.00	Each		0.520 \$	6.24
AN960-416L	WASHER	12.00	Each		0.100 \$	1.20
S1450-3-10-032	WASHER	2.00	Each		0.310 \$	0.62
AN3-20	Bolt	1.00	Each		0.860 \$	0.86
2024-T3-.032	ALCLAD ALUM. SHEET 48"X144"	1.00	SQ. FT		5.750 \$	5.75
S1588-2 (0726001-7)	GASKET NO SHELF LIFE	2.00	Each		21.200 \$	42.40
PR1422B1/2 PT	PRC Pint	0.50	Each		78.800 \$	39.40
AN742D6	CLAMP	2.00	Each		2.100 \$	4.20
A1633-11	O Ring	1.00	Each		3.920 \$	3.92
DOFF10300J-R	Alternator, O/H	1.00	Each	424.000	424.000 \$	424.00
	Freight	1.00			18.380 \$	18.38
SK203C177P-FW4	Firewall Kit	1.00	Each	524.800	524.800 \$	524.80
	Freight	1.00			13.680 \$	13.68
CI-015	Decal	1.00	Each	5.040	5.040 \$	5.04
	Freight	1.00			3.600 \$	3.60
100LL	100LL AvGas, From Truck	35.00	Gallon		5.750 \$	201.25
100 AEROSHELL	Aeroshell Oil Straight Mineral	2.00	Quart		4.450 \$	8.90
921-047-00	GASKET SHELF LIFE 96MTHS	2.00	Each		2.810 \$	5.62
LSNASE	Logbook Set	1.00	Each	75.600	75.600 \$	75.60
	Freight	1.00			37.200 \$	37.20
4431	STANDOFF	1.00	Each	1.070	1.070 \$	1.07



Hagerstown Aircraft Services, Inc.

14235 Oak Springs Road

Hagerstown MD 21742

Phone 301 733 7604 Fax 301 739 0527

FAA CRS H5GRO500 www.hgrair.com

	Freight	1.00			2.870	\$	2.87
1101C440-6	SCREW	1.00	Each	0.170	0.170	\$	0.17
	Freight	1.00			2.960	\$	2.96
1202C4-015A	STARWASHER	2.00	Each	0.070	0.070	\$	0.14
	Freight	1.00			2.390	\$	2.39
4425	CHAFE STRIP	2.00	Each	8.820	8.820	\$	17.64
	Freight	1.00			9.520	\$	9.52
1406C632A	NUT	2.00	Each	0.380	0.380	\$	0.76
1102C632-8A	SCREW	2.00	Each	0.140	0.140	\$	0.28
SHEET PROTECTORS	Sheet Protectors For Binders	9.00	Each		0.120	\$	1.08
MS21919WDG4	CLAMP SHELF LIFE 96 MTHS	1.00	Each	1.130	1.130	\$	1.13
MS21919WDG6	CLAMP SHELF LIFE 96 MTHS	1.00	Each	1.200	1.200	\$	1.20
MS21919WDG9	CLAMP SHELF LIFE 96 MTHS	1.00	Each	1.400	1.400	\$	1.40
MS21919WDG14	CLAMP SHELF LIFE 96 MTHS	1.00	Each	2.250	2.250	\$	2.25
MS21045-3	lock nut	2.00	Each	0.640	0.640	\$	1.28
MS21919WDG12	CLAMP SHELF LIFE 96 MTHS	1.00	Each	2.400	2.400	\$	2.40
MS21919WDG4	CLAMP SHELF LIFE 96 MTHS	1.00	Each	1.130	1.130	\$	1.13
MS21045-3	lock nut	1.00	Each	0.640	0.640	\$	0.64
AN526C1032R10	S/S SCREW	1.00	Each	0.320	0.320	\$	0.32
H880014	GROMMET	1.00	Each	0.950	0.950	\$	0.95
MS21919WDG9	CLAMP SHELF LIFE 96 MTHS	1.00	Each	1.400	1.400	\$	1.40
AN525-10R7	Screw	1.00	Each	0.240	0.240	\$	0.24
AN960-10	WASHER	1.00	Each	0.100	0.100	\$	0.10
NAS1149FN832P	Washer	3.00	Each	0.060	0.060	\$	0.18
AN960-6	WASHER	2.00	Each	0.060	0.060	\$	0.12
MS21256-1	RETAINING CLIP	4.00	Each	1.130	1.130	\$	4.52
MS24665-134	COTTER PIN	3.00	Each	0.120	0.120	\$	0.36
1253-1	WASHER, TENSION, .040 THICK	6.00	Each	0.100	0.100	\$	0.60
AN526C832R8	S/S SCREW	3.00	Each	0.120	0.120	\$	0.36
MS21044C08	SELF LOCKING NUT	1.00	Each	0.740	0.740	\$	0.74
CTM4	Cable Mounts	1.00	Each	0.960	0.960	\$	0.96
A6195-8Z1D	TINNERMAN	4.00	Each	0.950	0.950	\$	3.80
AN525-10R8	Washer Hd Mac Scrw	3.00	Each	0.220	0.220	\$	0.66
AN960-10	WASHER	3.00	Each	0.100	0.100	\$	0.30
MS21044N3	SELF LOCKING NUT	3.00	Each	0.240	0.240	\$	0.72
AN525-832R8	Screw	3.00	Each	0.180	0.180	\$	0.54
MS24665-134	COTTER PIN	1.00	Each	0.120	0.120	\$	0.12
4425	CHAFE STRIP	2.00	Each	8.820	8.820	\$	17.64
6099	Bracket, Roll Servo	1.00	Each	21.520	21.520	\$	21.52
206062-3	CPC CABLE CLAMP, SIZE 11	2.00	Each	5.620	5.620	\$	11.24
206485-1	HD CPC CONN, 9-PIN FEMALE PL	1.00	Each	0.520	0.520	\$	0.52
206486-2	HD CPC CONN, 9-PIN MALE FREE	1.00	Each	0.580	0.580	\$	0.58
205089-1	Male DB Pins	5.00	Each	0.480	0.480	\$	2.40
205090-1	Female DB Pins	5.00	Each	0.480	0.480	\$	2.40
H-M-3	SOLDER SLEEVE, SUMITOMO	2.00	Each	1.100	1.100	\$	2.20
MS21919WDG3	CLAMP SHELF LIFE 96 MTHS	2.00	Each	1.270	1.270	\$	2.54
8RX 1/2THB S/S	SCREW	4.00	Each	0.150	0.150	\$	0.60
AN960-6L	WASHER	5.00	Each		0.100	\$	0.50
2650-10	Fire Sleeve	18.00	Inches		0.840	\$	15.12
MS21083N06	LOW HGT SELF LKG NUT	5.00	Each		0.250	\$	1.25
AN526-632R6	TRUSS HEAD SCREW	1.00	Each		0.100	\$	0.10
MS35333-38	LOCK WASHER	6.00	Each		0.080	\$	0.48
NAS74A3-005P	Bushing	4.00	Each		4.720	\$	18.88



Hagerstown Aircraft Services, Inc.

14235 Oak Springs Road

Hagerstown MD 21742

Phone 301 733 7604 Fax 301 739 0527

FAA CRS H5GRO500 www.hgrair.com

MS21919WDG2	CLAMP SHELF LIFE 96 MTHS	1.00 Each	1.150 \$	1.15
S3429-2A	Nutplate	1.00 Each	6.840 \$	6.84
203618-1	MALE JACK SCREW	2.00 Each	9.320 \$	18.64
S10233-3B	Tinnerman Clip 6-32	4.00 Each	0.430 \$	1.72
66105-4	Amp 24/20 Femal CPC Pin	1.00 Each	0.750 \$	0.75
31894	22-16G 1/4" Red Ring Terminal	1.00 Each	0.300 \$	0.30
60618-4	AMP 24/18g Pin, Mate-N-Lok	3.00 Each	0.550 \$	1.65
60617-4	AMP 24/18g Socket, Mate-N-Lok	3.00 Each	0.450 \$	1.35
1-480303-0	3 Pin Female Mate-N-Lok Connec	1.00 Each	0.990 \$	0.99
1-480305-0	3 Pin Male Mate-N-Lock Connect	1.00 Each	0.990 \$	0.99
303-6	Hose	1.00 FOOT	7.680 \$	7.68
JS241	Fire Sleeve Clamp	4.00 Each	1.890 \$	7.56
JS2429	Band It Clamp	2.00 Each	1.730 \$	3.46
303-3	HOSE	2.00 FOOT	5.870 \$	11.74
491-3	HOSE FITTING	2.00 Each	22.550 \$	45.10
491-6	HOSE FITTING	2.00 Each	21.760 \$	43.52
2650-9	Fire Sleeve	14.00 Inch	0.770 \$	10.78
1221119-1	Fillet Wing Aft	1.00 Each	75.000 \$	75.00
1221119-4	Fillet Wing Aft	1.00 Each	75.000 \$	75.00
1752096-1	Bracket Lower Cowl	1.00 Each	20.000 \$	20.00
1752096-2	Bracket Lower Cowl	1.00 Each	20.000 \$	20.00
0543089-1	Bracket Nose Pant	1.00 Each	15.000 \$	15.00
0543089-2	Bracket Nose Pant	1.00 Each	17.000 \$	17.00
100LL	100LL AvGas, From Truck	17.10 Gallon	6.350 \$	108.58

Summary:

Total Parts:	\$	3,591.90	Total Fuel:	\$	309.83
Total Oil:	\$	8.90	Total Freight:	\$	248.10
Total Labor - 419.50 Hours:	\$	32,721.00	Total Flat-Rate Labor:	\$	250.00

Totals:

SubTotal:	\$	37,129.73
Total Charges:	\$	37,129.73
Paid-Check 11028	\$	8,654.61
Paid-Check 11187	\$	9,963.13
Paid-Check 11451	\$	18,511.99
Amount Remaining:	\$	0.00

Customer Signature :

N# 778RD

C6

PART'S LIST

WO# 0802052

QTY	PART NUMBER	DESCRIPTION	P.O. #	MECH.	DESC#	UNIT PRICE	TOTAL PRICE
1	BE4509	lamp	Sh06-0534	Ad	1		
16"	306-6	hose	Sh07-0471A	Ad	4		
2	AN7-45A	bolt	Sh03-0576	Ad	5		
1	M\$21919WD616	clamp		Ad	19		
1	M\$21919WD611	clamp		Ad	19		
4	6504	clamp	Sh07-0295	Ad	41		
2	M\$21919WD612	clamp		Ad	28		
10	M\$25171-1\$	nipple	Sh07-0545	Ad	33		
2	M\$25171-3\$	nipple	Sh07-0332	Ad	33		
2	M\$21919WD67	clamp			37		
4	M\$21919WD66	clamp	Sh08-0014	Ad	37		
2	W06 M\$21919WD68	clamp		Ad	37		
4	AN74206	clamp	Sh03-0509	Ad	36		
6	AN74203	clamp	Sh04-0515	Ad	36		
20	M\$21045L3	nut		Ad	36		
1	M\$25171-4\$	nipple	Sh06-0328	Ad	40		
1	M\$25171-4\$	clamp	Sh06-0328	Ad	40		
1	A-A59178-2	nipple	Sh07-0545	Ad	40		
4	NA\$1329A08-100	Rivnut	Sh07-0332	Ad	39		
4	8RX3/8 PHB S/S	screw	9.932253	Ad	39		
4	M\$24693C50	screw	Sh06-0505	Ad	39		
10	AN526C832R8	screw	Sh07-0248	Ad	39		
2	0450272-202	fastener	Sh08-0041	Ad	5		
2	0450277-210	fastener	Sh08-0011	Ad	5		
12	AN14-10A	Bolt	Sh07-0243	Ad	41		
12	AN960-416L	washer	Sh07-093	Ad	41		
2	1752091/13	cowl flap hinge	Sh08-0067	Ad	17		
16	1750042-1	shim	Sh08-0071	Ad	41		
1	MCC299505-030	Throttle cable		Ad	27		
2	\$1450-3-10-032	rod end washer	Sh06-0126	Ad	27		

N# 118KD.

PART'S LIST

WO# 0802052

QTY	PART NUMBER	DESCRIPTION	P.O. #	MECH.	DESC#	UNIT PRICE	TOTAL PRICE
2	M\$21045-3	LOCKNUT	\$407-0259	11/10	85		
1	M\$21919W0612	ADEL CLAMP	\$407-0470	11/10	85		
1	M\$21919W06H	ADEL CLAMP	\$408-0023	11/10	85		
1	M\$21045-3	LOCKNUT	\$407-0259	11/10	89		
1	AN526C1032R10	SCREW	9815	11/10	89		
1	H280014	SCROMMET	\$404-0161	11/10	89		
1	M\$21919W069	ADEL CLAMP	\$403-0215	11/10	89		
1	M\$21044N3	LOCKNUT	\$407-0061	11/10			
1	AN525-1DR7	SCREW	\$405-0368	11/10	90		
1	AN960-10	WASHER	\$405-0247	11/10	90		
3	NAS1149FN832P	WASHER	\$407-0313	11/10	90		
2	AN960-6	WASHER	\$403-0426	11/10	90		
4	M\$21256-1	RETAINING CLIP	\$407-0227	11/10	90		
5	M\$24665-134	COTTER PIN	\$407-0349	11/10	90		
3	120555-005	SPIN WASHER	0080AV1	11/10	90		
6	1253-1	WASHER, TENSION	AV07-0039	11/10	90		
3	AN526C832RB	SCREW	\$408-0184	11/10	91		
1	M\$21044C08	SS NUT	0215852	11/10	91		
1	CTN14	CABLE TIE MOUNT	\$406-0039	11/10	91		
4	AB195-821D	TINNERMAN	\$407-0054	11/10	92		
3	AN525-1DR8	SCREW, WASHER	\$403-0215	11/10	90		
3	AN960-10	WASHER	\$403-0426	11/10	90		
3	M\$21044N3	LOCK NUT	\$407-0061	11/10	90		
3	AN525-832RB	SCREW, WASHER	\$405-0261	11/10	90		
1	M\$24665-134	COTTER PIN	\$407-0349	11/10	90		
2	4425	CHAFE STRIP	AN08-0039	11/10	90		
	1101C440-16	SCREW	AN08-0039	11/10	90		
2	1406C632A	NUT	AN08-0039	11/10	90		
1	6099	BACKET, BALL SWIV	AN08-0039	11/10	90		
2	1102C632-2A	SCREW	AN08-0039	11/10	90		
1	4431	STAND OFF	AN08-0039	11/10	90		

N# 778 RD

PART'S LIST

WO# 0802052

[illegible]

67

1066

LABOR RECORD					TOTALS				
EMP. NAME	ITEM No.	ELAPSED TIME	TIME CLOCK		EMP. NAME	ITEM No.	ELAPSED TIME	TIME CLOCK	
ADL	1	2/15/08	OFF		ADL	42	2/27/08	NO 8.0	
ADL	2	2/15/08	ON 5.0		ADL	27	2/26/08	OFF 2.0	
ADL	3	2/15/08	OFF		ADL	26	2/26/08	ON 1.0	
ADL	4	2/18/08	ON 2.0		ADL	41	2/24/08	OFF .5	
ADL	5	2/18/08	OFF 2.5		ADL	13	2/24/08	ON .25	
ADL	13	2/18/08	ON 3.0		ADL	40	2/26/08	OFF .75	
ADL	10	2/20/08	OFF .5		ADL	35	2/26/08	ON .5	
ADL	18	2/20/08	ON 1.0		ADL	35	2/25/08	OFF .50	
ADL	22	2/20/08	OFF 1.0		ADL	20	2/25/08	ON 1.0	
ADL	22	2/20/08	ON 1.0		ADL	20	2/25/08	OFF .25	
ADL	22	2/20/08	OFF .50		ADL	36	2/25/08	ON 3.0	
ADL	23	2/20/08	ON 1.0		ADL	37	2/24/08	OFF 4.0	
ADL	22	2/20/08	OFF 1.0		ADL	3	2/24/08	ON .50	
ADL	19	2/21/08	OFF 1.0		ADL	14	2/22/08	ON .50	
ADL	23	2/21/08	ON 5.0		ADL	20	2/23/08	OFF 2.0	
ADL	28	2/21/08	ON 5.0		ADL	35	2/21/08	ON 1.0	
ADL	24	2/21/08	OFF 2.0		ADL	34	2/21/08	ON 6.0	
ADL	25	2/21/08	ON 1.0						
ADL	30	2/21/08	OFF 2.0						
ADL	30	2/21/08	ON 2.0						

LABOR RECORD					TOTALS				
EMP. NAME	ITEM No.	ELAPSED TIME	TIME CLOCK		EMP. NAME	ITEM No.	ELAPSED TIME	TIME CLOCK	
ADL	1	2/15/08	OFF		ADL	42	2/27/08	NO 8.0	
ADL	2	2/15/08	ON 5.0		ADL	27	2/26/08	OFF 2.0	
ADL	3	2/15/08	OFF		ADL	26	2/26/08	ON 1.0	
ADL	4	2/18/08	ON 2.0		ADL	41	2/24/08	OFF .5	
ADL	5	2/18/08	OFF 2.5		ADL	13	2/24/08	ON .25	
ADL	13	2/18/08	ON 3.0		ADL	40	2/26/08	OFF .75	
ADL	10	2/20/08	OFF .5		ADL	35	2/26/08	ON .5	
ADL	18	2/20/08	ON 1.0		ADL	35	2/25/08	OFF .50	
ADL	22	2/20/08	OFF 1.0		ADL	20	2/25/08	ON 1.0	
ADL	22	2/20/08	ON 1.0		ADL	20	2/25/08	OFF .25	
ADL	22	2/20/08	OFF .50		ADL	36	2/25/08	ON 3.0	
ADL	23	2/20/08	ON 1.0		ADL	37	2/24/08	OFF 4.0	
ADL	22	2/20/08	OFF 1.0		ADL	3	2/24/08	ON .50	
ADL	19	2/21/08	OFF 1.0		ADL	14	2/22/08	ON .50	
ADL	23	2/21/08	ON 5.0		ADL	20	2/23/08	OFF 2.0	
ADL	28	2/21/08	ON 5.0		ADL	35	2/21/08	ON 1.0	
ADL	24	2/21/08	OFF 2.0		ADL	34	2/21/08	ON 6.0	
ADL	25	2/21/08	ON 1.0						
ADL	30	2/21/08	OFF 2.0						
ADL	30	2/21/08	ON 2.0						

20 Feb

LABOR RECORD				
EMP NAME	ITEM No.		ELAPSED TIME	TIME CLOCK
Langb	25			OFF 4.0
				ON 2/27/08
Adl	43	2/28/08		OFF
				ON .30
Adl	16	2/28/08		OFF
				ON 2.0
Adl	42	2/28/08		OFF
				ON 2.0
Adl	43	2/29/08		OFF
				ON 1.0
Adl	16	2/29/08		OFF
				ON 3.0
Adl	45	2/29/08		OFF
				ON .50
Adl	42	2/29/08		OFF
				ON 4.0
Adl	50	3/3/08		OFF
				ON .25
Adl	52	3/3/08		OFF
				ON 1.25
Adl	53	3/3/08		OFF
				ON 1.25
Adl	42	3/3/08		OFF
				ON 3.0
Adl	38	3/3/08		OFF
				ON .65
Adl	54	3/3/08		OFF
				ON 1.25
Adl	17	3/5/08		OFF
				ON 1.75
Adl	13	3/5/08		OFF
				ON 2.0
Adl	55	3/6/08		OFF
				ON 1.5
Adl	17	3/6/08		OFF
				ON .75
TOTALS				

LABOR RECORD				
EMP NAME	ITEM NO.	ELAPSED TIME	TIME CLOC	
8	NO			
OFF				
0.0	NO			
OFF				
1.5	NO			
OFF				
5.5	NO			
OFF				
2.5	NO			
OFF				
3.8	NO			
OFF				
0.0	NO			
OFF				
1.2	NO			
OFF				
5	NO			
OFF				
1.5	NO			
OFF				
5.0	NO			
OFF				
0.1	NO			
OFF				
8	NO			
OFF				
1.3	NO			
OFF				
0.0	NO			
OFF				
4.7	NO			
OFF				
5.9	NO			
OFF				
5.4	NO			
OFF				
TOTALS				

LABOR RECORD				
EMP NAME	ITEM NO.	ELAPSED TIME	TIME CLOC	
JAY	11	3/24/08	OFF	
			ON 2 HR	
JAY	12	3/24/08	OFF	
			ON 6.0	
MATT	13	3/24/08	OFF	
			ON 6.0	
ADL	62	3/24/08	OFF	
			ON 1.0	
ADL	42	3/24/08	OFF	
			ON 4.0	
ADL	7	3/24/08	OFF	
			ON 3.5	
ADL	9	3/26/08	OFF	
			ON 1.50	
ADL	11	3/26/08	OFF	
			ON .50	
ADL	34	3/24/08	OFF	
			ON 8.0	
Don	34		OFF	
			ON 2.5	
Don	15		OFF	
			ON 1.0	
Don	7		OFF	
			ON 1.5	
S.S.	9	3/24/08	OFF	
			ON 2 hrs	
ADL	6	3/24/08	OFF	
			ON .05	
ADL	48	3/24/08	OFF	
			ON 1.0	
ADL	49	3/24/08	OFF	
			ON 128	
ADL	50	3/24/08	OFF	
			ON 125	
ADL	56	3/24/08	OFF	
			ON 3.5	
TOTALS				

N778RD

WO# 0802052

(4) of 6

LABOR RECORD			
EMP NAME	ITEM No.	ELAPSED TIME	TIME CLOCK
NO	110		OFF
NO	103		ON 1.0
OFF			OFF
NO	102	3.1 hr	ON 1.0
OFF			OFF
NO	100	6-2-08	ON 1.0
OFF			OFF
NO	101	3.1 hr	ON 3.75 hr
OFF			OFF
NO	99	6-3-08	ON .5 hr
OFF			OFF
NO	99	6-2-08	ON .50
OFF			OFF 5.75 hr
NO	99	5-30-08	ON
OFF			OFF
NO	98	5-30-08	ON 1.5 hr
OFF			OFF
NO	97	5-30-08	ON 1.5
OFF			OFF
NO	96	3.1 hr	ON 1.0 hr
OFF			OFF
NO	95	2.1 hr	ON 7.0
OFF			OFF
NO	94		ON 6.0 hr
OFF			OFF
NO	93		ON 1.0 hr
OFF			OFF
NO	90	2.1 hr	ON 1.2
OFF			OFF
NO	90	3.0 hr	ON 3.2
OFF			OFF
NO	90		ON 6.0 hr
OFF			OFF
TOTALS			

LABOR RECORD			
EMP NAME	ITEM No.	ELAPSED TIME	TIME CLOCK
Don	74	5/9/08	OFF
			ON 1.0
↓	75	↓	OFF
			ON 1.0
Chad	85	20/MAY/08	OFF
			ON 3.75 hr
Chad	86	20/MAY/08	OFF
			ON .5 hr
Chad	87	21/MAY/08	OFF
			ON .50
Chad	88	21/MAY/08	OFF
			ON 5.75 hr
Chad	89	21/MAY/08	OFF
			ON 1.5 hr
Chad	88	22/MAY/08	OFF
			ON 1.5
Chad	89	22/MAY/08	OFF
			ON 5.0 hr
Chad	90	22/MAY/08	OFF
			ON 1.0 hr
Chad	111	23/MAY/08	OFF
			ON 7.0
Chad	90	27/MAY/08	OFF
			ON 6.0 hr
Chad	91	28/MAY/08	OFF
			ON 1.0 hr
Don	81	5/29/08	OFF
			ON .8
	69		OFF
			ON 1.6
	64		OFF
			ON 1.2
	92	↓	OFF
			ON 3.2
Chad	90	29/MAY/08	OFF
			ON 6.0 hr
TOTALS			

N 77820

440 0802052

(5) OF 6

LABOR RECORD				TOTALS			
EMP. NAME	ITEM No.	ELAPSED TIME	TIME CLOCK	EMP. NAME	ITEM No.	ELAPSED TIME	TIME CLOCK
John	64	5/30/08	OFF	C. Camp	83	28 May 08	NO 1.0
John	92	6/2/08	ON 3.5	C. Camp	77	02 June 08	OFF 2.0
John	104	6/3/08	OFF	C. Camp	77	29 May 08	ON 2.0
	63		ON 2.5	C. Camp	76	02 June 08	OFF 2.0
	66		ON .5	C. Camp	76	29 May 08	ON 2.0
	67		ON .5	C. Camp	71	02 May 08	ON 3.0
	68		ON .5		69		ON 3.0
	69		ON .5		109		ON 2.5
	72		ON .5		83		ON .5
	73		ON .5		79		ON .5
	74		ON .5		78		ON .5
	75		ON .5		77		ON .5
	106		ON 1.0		76		ON .5
	107		ON .7		71		ON .5
GINA	79		ON 1.0	John	70		ON .5
John	79		ON 1.0	John	106		ON 1.5
CHIEF	106	3 June 08	ON 1.5 hr	John	106	6/5/08	ON 1.5
CHIEF			ON 4.0 hr	CHIEF	105	4 June 08	ON 6.75 hr
TOTALS							

LABOR RECORD				
EMP. NAME	ITEM No.	ELAPSED TIME	TIME CLOCK	
John	64	5/30/08	OFF	
John	92	6/2/08	ON 3.5	
John	104	6/3/08	OFF	
	63		ON 2.5	
	66		ON .5	
	67		ON .5	
	68		ON .5	
	69		ON .5	
	72		ON .5	
	73		ON .5	
	74		ON .5	
	75		ON .5	
	106		ON 1.0	
	107		ON .7	
GINA	79		ON 1.0	
John	79		ON 1.0	
CHIEF	106	3 June 08	ON 1.5 hr	
CHIEF			ON 4.0 hr	
TOTALS				

NTTBRD WO#: 080205260F6

wo#: 080205260F6

[illegible]

LABOR RECORD				
EMP. NAME	ITEM No.		ELAPSED TIME	TIME CLOCK
C. Cawf	83	02 June 08		OFF
				ON 2.0
C. Cawf	84	03 June 08		OFF
				ON 2.0
C. Cawf	84	04 June 08		OFF
				ON 2.0
Chis	106	5 June 08		OFF
				ON 1.5 hr
Chis	105			OFF
				ON 4.5 hr
Chis	110			OFF
				ON 2.5 hr
Chis	105	6 June 08		OFF
				ON 2.5 hr
Chis	112			OFF CLEAN-UP PERM
				ON 5.5 hr
Chis	112	9 June 08		OFF
				ON 1.5 hr
C. Cawf	115	06 June 08		OFF
				ON 2.0
Joe	113	6/2/08		OFF
				ON 1.3
Joe	114	6/6/08		OFF
				ON 3.5
Joe	115	6/6/08		OFF
				ON 2.5
Joe	65	6/3/08		OFF
				ON .4
↓	82	↓		OFF
				ON 2.0
↓	108	↓		OFF
				ON 1.0
				OFF
				ON
				OFF
				ON
TOTALS.				

WORK ORDER # 0802052

PAGE 1 OF 20 PAGES

TACH TIME 19.8 Hobs DATE 2/14/08

7178 RD SERIAL # 17102550

OWNER A.O.R.A.

PHONE # 301-695-2373

MAKE Cessna MODEL 177B

HAS

Hagerstown Aircraft Services Inc

14235 Oak Springs Road • Hagerstown, Maryland 21742 • Telephone 800 314 4350 • Fax 301 739 0527

EXHIBIT

C8

FNL

CLS

MECH.	INSP.	HOURS
1. RH landing light inop		
CORRECTIVE ACTION: Installed new lamp P/N 6E4509. OPIs check ok. Work done TAW Cessna M/n	AD	MKG
2. Manifold pressure gauge inop		
CORRECTIVE ACTION: Inspection found line not attached at firewall. Resecured. Checked manifold gauge & found to function correctly. Work done TAW MKG M/n	AD	MKG
3. Engine installation inspection		
CORRECTIVE ACTION: Inspected engine installation & noted disc.	AD	MKG
4. Suction reads low		
CORRECTIVE ACTION: Inspection found various vacuum hoses not secured or improper size hose. Installed new hose P/n 303-6 & secured lines with clamps P/n 6504. Secured instrument filter. A/Keds n/w AD 7/18/08. Performed	AD	MKG
CORRECTIVE ACTION: engine run-up. Leaks and ops checked OK. All work 1/10/08 MKG M/n.		
5. Cowling to engine alignment not centered		
CORRECTIVE ACTION: Shimmed bottom engine mount rubbers 2/19/08. INSTALLED L&R LWR OUTB COWL DRALKEO #175-2096-1 & -2 FABRI. FROM 1040" 2024-T3 ALUM SH06-0183. TAW AC43.13-1D CH.4 SEC.4. Installed new skidboot Erection	AD	MKG
X see disc 21. All work 1/10/08 AC43.13-1A CH4 sec 4 and MKG M/n		
CORRECTIVE ACTION:		
6. Interior panel loose @ AFT. doorframe		
CORRECTIVE ACTION: Resecured panel with existing hardware 1/10/08 MKG M/n	AD	MKG

ADDITIONAL WORK SHEET PAGE(S)

WORK ORDER # 0802052

PAGE 2 OF 20 PAGES

			FNL CLS	
7	Cabin doors difficult to lock. (Stainless latch plates on order)	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Adjusted RH & LH doors. Fitted installed supplied latch plates. Work done TAW MFG 7/1		AOL	<input checked="" type="checkbox"/>	
			MKG	
8	Reposition glare shield trim to cover wiring	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Removed glare shield trim to glue trim on to glare shield using 1300L. All work was done TAW MFG maint manual			<input checked="" type="checkbox"/>	
			MKG	
9	Paint chipped on instrument panel near transponder	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Removed panel for paint. Reinstalled panel. Reattached Jacks. OPs check ok. Work done TAW MFG 7/1		AOL	<input checked="" type="checkbox"/>	
			MKG	
10	Baggage door seal loose on fwd. edge.	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Attached w/1300L TAW MFG MTC Manual			<input checked="" type="checkbox"/>	
			MKG	
11	Repair paint blisters on MFG strut fairings	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Removed for paint. Painted strut cuffs. Reinstalled on aircraft. Work done TAW Cessna 7/1		AM	<input checked="" type="checkbox"/>	
			MKG	
12	Repair chipped paint on nose gear fairing (wheel pant)	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Removed for paint. INSTALLED BRACKET & DOOR LATCH 2543089-1 & 2 AT TOP MOUNTING HOLE (AWAC4713-11) CHY SEC. 4. Repainted wheel pant top and new brackets. Reinstalled wheel pant. All work done TAW MFG MTC Manual.			<input checked="" type="checkbox"/>	
			MKG	
13	RH wing tip cracked (check on replacement)	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Removed RH wing tips for replacement. Fitted wing tip 1723005-12 painted & reinstalled. OPs of lights ok. Work done TAW Cessna 7/1.		AOL	<input checked="" type="checkbox"/>	
			MKG	
14	Prop governor not cycling correctly	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Removed McCauley governor, C290D3-K/T12, S/N 760261 & sent to American Propeller for adjustments & change to (K/T11) model. Engine Model, Lxc 0-360A1F6. (See Disc. #56)		AOL	<input checked="" type="checkbox"/>	
			MKG	
15	Engine runs Hot @ All Altitudes	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Installed previously installed Inver baffling retainers 0450277-202 & 0450277-210. Sealed openings in baffling with RTV. Need test flight. Test flow and noted temperatures to be normal. All work performed TAW MFG maint manual.		AOL	<input checked="" type="checkbox"/>	
			MKG	

ADDITIONAL WORK SHEET PAGE(S)

ORDER# 0802052

PAGE 3 OF 20 PAGES

FNL
CLS

16	Fuel system burn/gtz. Unseen from each tank	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Inspected fuel vent system & found ok. Removed fuel senders to verify operation & found ok. Inspected tank interior & found ok. Work done IAW MFG MTC		ADL	<input checked="" type="checkbox"/>	
17	Cowl Flap hinges worn	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Installed 2 hinge assy on RIT & LH cowl flaps. P/N 1752071-13 & secured IAW AC43,13-16		ADL	<input checked="" type="checkbox"/>	
18	Battery cover not secure	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Latched on both sides & secured w/ Cassia Pins IAW MFG MTC Manual		ADL	<input checked="" type="checkbox"/>	
19	Engine Preheater plug not accessible thru oil door	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Repositioned plug to oil fill tube & secured with clamps. Resecured wires. Work done IAW MFG Instructions		ADL	<input checked="" type="checkbox"/>	
20	Wiring not secure behind instrument panel	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Rerouted wires as needed to clear moving parts. Secured wires as needed IAW AC43,13-1B		ADL	<input checked="" type="checkbox"/>	
21	Sky Bolt cowl mounts worn	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Removed mounts. Installed skybolt fastener for firewall P/N SK203C177P-FW4 & following. Work done IAW Skybolt Instructions		ADL	<input checked="" type="checkbox"/>	
22	Resecure velcro on baggage compartment aft. panel	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Resecured w/ 1300h IAW MFG MTC Manual		ADL	<input checked="" type="checkbox"/>	
23	Check Firewall to engine mount bolt torque	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Torqued checked engine mount bolts. Adjusted as needed. Work done IAW MFG MTC		ADL	<input checked="" type="checkbox"/>	
24	Primer lines Not Secured	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Repositioned back clamp & installed correct front clamp IAW MFG MTC Manual		ADL	<input checked="" type="checkbox"/>	

ADDITIONAL WORK SHEET PAGE(S)

WORK ORDER # 0802052

PAGE 4 OF 20 PAGES

			FNL CLS	
25	R.H. front baffling cracked on engine	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Removed for repair. Repaired baffling with patches & retd. into place. All work performed IAW AC 43.13-1B Chapt 4 Sec 4. Reinstalled after piece was mfg maint manual.		ADL	MKS	
26	Exhaust riser pipes cracked on #1 & #3 cyls.	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Removed for repair. IAW Mfg MTC Manual. Installed repaired exhaust using original gaskets & torqued IAW power flow instructions PFS-13751-00-REV D		ADL	MKS	
X		MECH.	INSP.	HOURS
CORRECTIVE ACTION:				
27	Throttle control bent & carb. attachment	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Removed cable 2/20/08. Installed new cable P/N MCC299505-0301 & secured. OPB's check OK. Work done IAW mfg m/n		ADL	MKS	
28	Oil cooler hoses not secured to prevent chaffing	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Secured oil cooler hoses to engine mount & firewall with clamps as needed IAW Mfg Maint Manual.		ADL	MKS	
29	Prop governor control bracket cracked	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Removed for repair 2/20/08. Installed welded bracket. Painted & secured. Work done IAW Mfg m/n		ADL	MKS	
30	Standby vacuum plate not secured to intake pipe	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Aligned w/ intake surface, sealed w/ Hi Temp RTV & re-clamped IAW MFG MTC Manual		ADL	MKS	
31	Oil leak near rear of engine	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Removed oil cooler fitting at accessory case. Cleaned & reinstalled with thread sealant. Leak check OK. Work done IAW mfg m/n		ADL	MKS	
32	Engine controls misrigged	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Rigged engine controls to match each other & contact stops. Work done IAW mfg m/n		ADL	MKS	

ADDITIONAL WORK SHEET PAGE(S)

WORK ORDER # 0802051

PAGE 5

OF 20

PAGES

FNL
CLS

33. Various bare power wire terminals exposed.	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Installed boots on RH & LT P-leads, alternator wires, APU, oil pressure switch & noise filter. OPPs check ok. Work done IAW Cessna 77	AA	mk8	
34. Inspect engine for cause of excessive vibration	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Inspection found propeller improperly indexed per Cessna 177 77 Figure 13-2. Removed propeller & found crankshaft flange bushings installed incorrectly per Lycoming SI No. 1098 G	ADL	mk8	LYC. war.
2 Figure 1. Work done IAW mfg 77 see disc. 35. & 54	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Checked engine for proper clearance with cowling, engine mount, and other components. Test flew aircraft. All work IAW mfg merit manual.			
35. Replacement of improperly located crankshaft bushings	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Removed flange bushings per SI 1098 G, installed bushing P/N 75657-6, 72155-6 & 2 P/N 75656-6 IAW Lycoming SI 1098 G.	AA	mk8	LYC. war.
6 Various control cables not secured & improperly routed.	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Inspection found cabin air/heat, defrost & prop gov. cables improperly routed. Rerouted & secured. secured mixture & cowl flap cables to appropriate brackets. Work done IAW mfg 77 OPPs checked	AA	mk8	
37. Secure engine wires & hoses	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Rerouted wires as needed, secured hoses & wires as needed with clamps & tie straps. Work done IAW AC 43.13-16 & mfg 77	AA	mk8	
38. Rudder trim cable stops hitting Aileron cables behind panel	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Inspected cables for damage & found ok. Adjusted angle of stop. OPPs check ok. Work done IAW mfg 77	AA	mk8	
39. Screws loose in tail cone	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Inspection found improper size & style screws installed. Installed 6 mounts P/N NAB1329A08-120. secured fwd tail cone & side fairings with new screws IAW mfg 77	AA	mk8	
40. Wires not secured at battery box & tail section	MECH.	INSP.	HOURS
CORRECTIVE ACTION: secured wiring to clear cables & pulleys. Installed boots on battery solenoid. Work done IAW mfg 77	AA	mk8	

ADDITIONAL WORK SHEET PAGE(S)

WORK ORDER # 0802052

PAGE 6 OF 20 PAGES

		CLS	FNL	
		MECH.	INSP.	HOURS
41. Reindex spinner bulkhead to ring gear				
ORRECTIVE ACTION: Installed not previously shims at 6 P/N 1750042-1, bolts P/N AN14-10A & washers P/N AN1960-466 & torque torqued. Work done IAW Cessna M/N	Aa	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
42. Annual inspection				
ORRECTIVE ACTION: Performed annual inspection IAW MFG Maint manual using H.A.S.E. annual inspection form as a guide.	ADL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
X Replace spark plug gaskets				
ORRECTIVE ACTION: Cleaned, gapped & inspected plugs. Installed 7 new gaskets P/N M674 & torqued. Work done IAW MFG M/N	Aa	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
X Oil & Filter change				
ORRECTIVE ACTION: changed oil with 8qt customer requested no oil or filter change.	Du	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
43 FAR 91.207(d) EH inspection				
ORRECTIVE ACTION: Inspected AirTex EIT M/N ME406 S/N 03082 found airworthy at this time. Battery due May 2012	ADL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
44. RH wing fuel cap plate seeping fuel				
ORRECTIVE ACTION: Removed plate & cleaned flange. Refit fuel cap plate & resealed with PR-1422-B 1/2. Work done IAW MFG Instructions.	Aa	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
45. Control RH aileron-Rudder interconnect cable chaffing heat duct				
ORRECTIVE ACTION: Enlarged hole in duct to allow no contact movement of cable. Inspected cable & found no damage. Inspected routing for proper alignment. Work done IAW MFG M/N	Aa	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
46. Arb TCAIP, gauge light inop				
ORRECTIVE ACTION: Removed gauge. Found broken wire at light ring. Resoldered wires OOPS check ok. Work done IAW AC43.13-15	Aa	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
47. Floorboard Rivets not properly securing seat rails				
ORRECTIVE ACTION: REPLACED RIVETS AS NECESSARY NECESSARY IAW AC43.13-10 CH.4 SEC.4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

ADDITIONAL WORK SHEET PAGE(S)

ORDER # 0802052

PAGE 7 OF 20 PAGES

11778RD

		FNL		
		CLS		
MECH.	INSP.	HOURS		
48	Secure wiring RH & LH wings			
CORRECTIVE ACTION: Secured wires to existing brackets with zip ties.		ADL	<input checked="" type="checkbox"/>	
		MKS		
49	C/W AD 87-20-03 R2 Seat tracks			
CORRECTIVE ACTION: C/W AD by visual inspection of seat tracks & seat rollers & found to be airworthy at this time. Work done IAW AD 87-20-03R2		ADL	<input checked="" type="checkbox"/>	
		MKS		
50	C/W AD 84-26-02 Paper induction air filter			
CORRECTIVE ACTION: C/W AD by visual inspection of filter & found airworthy at this time. Replacement due Tech 500hr		ADL	<input checked="" type="checkbox"/>	
		MKS		
51	Elevator & Rudder static wicks not fully secured			
CORRECTIVE ACTION: Removed loose rivets. Installed new rivets IAW AC43.13-1b		ADL	<input checked="" type="checkbox"/>	
		MKS		
52	RH & LH fuel drain valves not secured			
CORRECTIVE ACTION: Secured RH wing fuel valve bracket, saftied RH & LH wing fuel drain valves IAW AC43.13-1b		ADL	<input checked="" type="checkbox"/>	
		MKS		
53	Flap indicator cable not properly secured LH wing			
CORRECTIVE ACTION: Removed improper size clamps. Installed 2 clamps 1/4 AN74206 & secured. Checked indicator & operation found ok. Work done IAW Cessna 7/1		ADL	<input checked="" type="checkbox"/>	
		MKS		
54	Install propeller			
CORRECTIVE ACTION: Installed McCauley Prop with new orig 1/4 A1633-11. Torqued & saftied. Work done IAW Cessna 7/1		ADL	<input checked="" type="checkbox"/>	
		MKS		
55	LH wing tip improperly fitt			
CORRECTIVE ACTION: Adjusted wing tip to align with screw holes & reinstalled. Work done IAW MKS 7/1		ADL	<input checked="" type="checkbox"/>	
		MKS		
56	Installation of repaired Prop gov.			
CORRECTIVE ACTION: Installed repaired McCauley gov 1/4 C29003-K/TW & secured. Work done IAW MKS 7/1 5/1 760261		ADL	<input checked="" type="checkbox"/>	
		MKS		
American Propeller Service W.O. # 8627-03-2008				

ADDITIONAL WORK SHEET PAGE(S)

WORK ORDER # 0802052 PAGE 8. OF 20 PAGES

X778RD

FNL
CLS

57	L&R AFT FILLETS - WINGS	MECH.	INSP.	HOURS
CORRECTIVE ACTION: FABRI. L&R FILLETS ¹²²¹¹⁹⁻¹⁸⁻⁴ FROM .020" 2024-T3 ALUM. S#07-0329 - IAW AC43.13-1B CH.4			<input checked="" type="checkbox"/>	
REG 4			MKS	
58	Paint	MECH.	INSP.	HOURS
CORRECTIVE ACTION:				
59	Glareshield repair (remake)	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Remove glareshield brow make repairs to brow by gluing wetting using 1300L to secure wetting in place. All work was done IAW mfg maint manual			<input checked="" type="checkbox"/>	
		AR	MKS	
60	Glareshield Vent covers	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Fabric two vent cover on glare shield from .020 2024-T3 Alum and painted. All work was done IAW AC 43.13-1B Ch.4 Section 4			<input checked="" type="checkbox"/>	
		AR	MKS	
61	Installed glare shield brow	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Install glare shield brow, ops check light - OK All work was done IAW mfg maint manual.			<input checked="" type="checkbox"/>	
		AR	MKS	
62	Alternator Contacting engine baffling.	MECH.	INSP.	HOURS
CORRECTIVE ACTION: Removed Plane Power alt P/n AL12-F60 In 2F-64549, Installed o/h ^{Form} Aerotech Alt P/n Doff 103COJ S/n A504054 secured, OPS check ok, work done IAW mfg unit was overhauled by Aerotech of Louisville, Inc (w/o		Ad	<input checked="" type="checkbox"/>	
CORRECTIVE ACTION: 89143).			MKS	
		N/A		
63	NO DOCUMENTATION FOR PILOT DOOR WINDOW SLIDING VENT	MECH.	INSP.	HOURS
CORRECTIVE ACTION: INSPECTED PILOT DOOR WINDOW TO VERIFY THAT SLIDING VENT MOD THAT WAS PREVIOUSLY INSTALLED UNDER 337 FORM DATED 5/21/86 ^(GEO APPROVAL) HAD BEEN REMOVED BY PERSONS UNKNOWN. ^{GENERATED} SEE 337 DATED 6/3/88			<input checked="" type="checkbox"/>	
		Jon	CC	
64	RESEARCH AIRCRAFT RECORDS FOR MISSING DOCUMENTS	MECH.	INSP.	HOURS
CORRECTIVE ACTION: RESEARCHED AIRCRAFT RECORDS FOR MISSING 337 DOCUMENTS AND FOR 337 DOCUMENTS INCOMPLETELY FILLED OUT.			<input checked="" type="checkbox"/>	
		Jon	CC	

ADDITIONAL WORK SHEET PAGE(S)

WORK ORDER # 0802052

PAGE 9 OF 20 PAGES

		FNL		
		CLS		
		MECH.	INSP.	HOURS
65	NO DOCUMENTATION OF REMOVAL OF NARCO DME 890			
CORRECTIVE ACTION: INSPECTED AIRCRAFT AND FOUND NARCO DME 890 RECEIVED WITH ANTENNA AV-22 (PREVIOUSLY INSTALLED ON J37 FORM DATED 11/5/98) WAS REMOVED BY PERSONS UNKNOWN.)		Jm	CC	
66	NO DOCUMENTATION FOR INSTALLATION OF ZEPHTRONICS ALTERNATOR			
CORRECTIVE ACTION: CONTROL UNIT / DUE TO IMPROPER OR MISSING DOCUMENTATION, A CONFORMITY INSPECTION WAS PERFORMED AS FOLLOWS: FOUND THE ORIGINAL TYPE ALTERNATOR CONTROL UNIT WAS REMOVED. FOUND A ZEPHTRONICS AN R15VCO		Jm	CC	
X	VOLTAGE REGULATOR/ALTERNATOR CONTROL UNIT WAS INSTALLED 11/11/04			
CORRECTIVE ACTION: GROUP, INC dba ZEPHTRONICS STC SA 8031SW AND THEIR DRAWING 300100 REV A DATED 01/04. ^{GENERATED} SEE 337 FORM DATED 6/3/08.			N/A	
67	NO DOCUMENTATION FOR INSTALLATION OF SKYBOLT COWL FASTENERS			
CORRECTIVE ACTION: DUE TO IMPROPER OR MISSING DOCUMENTATION, A CONFORMITY INSPECTION WAS PERFORMED AS FOLLOWS: FOUND THE ORIGINAL TYPE COWLING AND FIREWALL FASTENERS WERE REMOVED. FOUND SKYBOLT AEROMOTIVE CORPORATION COWLING		Jm	CC	
X	AND FIREWALL FASTENERS WERE INSTALLED 11/11/04 THEIR STC SA 328680			
CORRECTIVE ACTION: AND THEIR MASTER DRAWING LIST-C177, SKMDL177, XLS, REV 002 DATED 4/25/01, THEIR INSTALLATION INSTRUCTIONS SK 4177 PM, DOC. REV 012 DATED 9/28/07, AND AC 43.13-18 CH 4 SEC 4. ^{GENERATED} SEE 337 FORM DATED 6/3/08.			N/A	
68	NO DOCUMENTATION FOR INSTALLATION OF PRECISE FLIGHT PULSELIGHT			
CORRECTIVE ACTION: DUE TO IMPROPER OR MISSING DOCUMENTATION, A ^{CONTROL SYSTEM} CONFORMITY INSPECTION WAS PERFORMED AS FOLLOWS: FOUND A PRECISE FLIGHT, INC. PULSELIGHT CONTROL SYSTEM WAS INSTALLED 11/11/04 THEIR STC SA 4805NM AND THEIR INSTALLATION		Jm	CC	
X	REPORT # 08076 DEC. NO. 025PMAND001 REV D AND AC 43.13-18, INSERTED			
CORRECTIVE ACTION: FMS # DEC. NO. 000PMAND001 REV A INTO POH. ^{GENERATED} SEE 337 FORM DATED 6/3/08.			N/A	
69	NO DOCUMENTATION FOR INSTALLATION OF AIRFRAME PART OF			
CORRECTIVE ACTION: PRECISE FLIGHT STANDBY-VACUUM SYSTEM /				
DUE TO IMPROPER OR MISSING DOCUMENTATION, A CONFORMITY INSPECTION WAS PERFORMED AS FOLLOWS: FOUND A PRECISE FLIGHT, INC SVS SE STANDBY-VACUUM		Jm	CC	
X	SYSTEM WAS INSTALLED 11/11/04 THEIR STC SA 2162NM, INSTALLED AN FMS			
CORRECTIVE ACTION: IN THE POH. ^{GENERATED} 337 DATED 6/3/08.			N/A	

ADDITIONAL WORK SHEET PAGE(S)

WORK ORDER # 0802052

PAGE 10 OF 20 PAGES

		FNL		
		CLS		
70	NO DOCUMENTATION FOR INSTALLATION OF AVIONICS RACKS	MECH.	INS.	HOURS
CORRECTIVE ACTION: DUE TO IMPROPER OR MISSING DOCUMENTATION, A CONFIRMITY INSPECTION WAS PERFORMED AS FOLLOWS: FOUND A LHERH AVIONICS EQUIPMENT RACK STALLED IN THE FORWARD AREA OF THE EMPENNAGE I/A/W STRONG AERO		CELL	INS	
X	ENGINEERING (DER) REPORT NO. NTTRD-WONOI DATED 6/5/07 AND	MECH.	INS.	HOURS
CORRECTIVE ACTION: FORM 8110-3 DATED 6/5/07. EXCEPT FOR WRONG, 2E ALUMINUM WAS USED CALLED FOR .040 AND 1000 732 WAS USED. SEE ITEM # 99.		N/A		
71	NO DOCUMENTATION FOR INSTALLATION OF ESS BUS	MECH.	INS.	HOURS
CORRECTIVE ACTION: DUE TO IMPROPER OR MISSING DOCUMENTATION, A CONFIRMITY INSPECTION WAS PERFORMED AS FOLLOWS: FOUND A 14VDC ESS BUS MOD TO THE AIRCRAFT ELECTRICAL SYSTEM I/A/W DC AEROSPACE, LLC 14VDC ESS BUS ^{DER} DRAWING NO.		CELL	INS	
Y	8K-2892 DATED 12/03/07, FORM 8110-3 DATED 12/3/07 BY	MECH.	INS.	HOURS
CORRECTIVE ACTION: DAVID M. CHADWICK DERT-911013-CE AND AC43.13-18. SEE FIELD APPROVAL 337 FORM DATED 5/1/08, FMA WAS GENERATED FOR THE WITHIN AND FMA FIELD APPROVED. COMPLETED.		N/A		
72	NO DOCUMENTATION FOR INSTALLATION OF JPI EDM 800	MECH.	INS.	HOURS
CORRECTIVE ACTION: DUE TO IMPROPER OR MISSING DOCUMENTATION, A CONFIRMITY INSPECTION WAS PERFORMED AS FOLLOWS: FOUND A JPI EGT-701 ENGINE TEMP INDICATING SYSTEM INSTALLED I/A/W THEIR STC SA 2586NM AND THEIR INSTALLATION		INS	CELL	
X	MANUAL #103 REV C, INSTALLED FMS NO.1 IN POH, GENERATE	MECH.	INS.	HOURS
CORRECTIVE ACTION: 337 FORM DATED 6/3/08. SEE ITEMS # PS, 101, & 110 OR CORRECTIONS OF PROBLEMS FOUND.		N/A		
73	NO DOCUMENTATION FOR INSTALLATION OF JPI FUEL FLOW TRANSDUCER	MECH.	INS.	HOURS
CORRECTIVE ACTION: DUE TO IMPROPER OR MISSING DOCUMENTATION, A CONFIRMITY INSPECTION WAS PERFORMED AS FOLLOWS: FOUND A JPI FUEL FLOW TRANSDUCER INSTALLED I/A/W THEIR STC SA 004328E AND THEIR		CELL	INS	
X	FUEL FLOW INSTALLATION MANUAL REPORT NO. 503 REV B, GENERATE	MECH.	INS.	HOURS
CORRECTIVE ACTION: A 337 FORM DATED 6/3/08. SEE ITEM #105 FOR CORRECTIONS OF PROBLEMS FOUND.		N/A		
X		MECH.	INS.	HOURS
CORRECTIVE ACTION:		N/A		

ADDITIONAL WORK SHEET PAGE(S)

WORK ORDER # 0802052

PAGE 11 OF 20 PAGES

		FNL		
		CLS		
74	NO DOCUMENTATION FOR INSTALLATION OF MONARCH FUEL CAPS	MECH.	INSR.	HOURS
CORRECTIVE ACTION: DUE TO IMPROPER OR MISSING DOCUMENTATION, A CONFORMITY INSPECTION WAS PERFORMED AS FOLLOWS: FOUND A WILLIAM BARTON (MONARCH AIR AND DEVELOPMENT, INC) FUEL CAPS AND FUEL NECKS KIT WERE		Don	CLS	
X	INSTALLED 1/16W MR. WILLIAM BARTON STC SA 2376CE AND	MECH.	INSR.	HOURS
CORRECTIVE ACTION: MONARCH INSTALLATION DRAWING NO. FC-100 REV B, GENERATED 337 FORM DATED 6/3/08.			CLS	
75	NO DOCUMENTATION FOR INSTALLATION OF LP AERO EXTRA THICK	MECH.	INSR.	HOURS
CORRECTIVE ACTION: (WINDSHIELD) DUE TO IMPROPER OR MISSING DOCUMENTATION, A CONFORMITY INSPECTION WAS PERFORMED AS FOLLOWS: FOUND A LP AEROPLASTICS, INC EXTRA THICK (.250") WINDSHIELD WAS		Don	CLS	
X	INSTALLED 1/16W THEIR STC SA 00382 NV AND THEIR HEAVY	MECH.	INSR.	HOURS
CORRECTIVE ACTION: GLASS WINDSHIELD INSTALLATION AND INSTALLATION DRAWING LIST REPORT NO 329/CON. GENERATED 337 FORM DATED 6/3/08.			CLS	
76	NO DOCUMENTATION FOR INSTALLATION OF S-TEC AUTOPILOT	MECH.	INSR.	HOURS
CORRECTIVE ACTION: DUE TO MISSING OR IMPROPER DOCUMENTATION, A CONFORMITY INSPECTION WAS PERFORMED AS FOLLOWS: FOUND A S-TEC CORPORATION SYSTEM 55X TWO-AXIS AUTOPILOT INSTALLED 1/16W THEIR STC SA 09125 AC-D, INSTALLATION			CLS	
X	INCLUDED AN OPTIONAL AUTO TRAIN KIT P/N TK-608 AND IS INTERFACED	MECH.	INSR.	HOURS
CORRECTIVE ACTION: WITH THE H1 GNS430W NAV SYSTEM. GENERATED 337 FORM DATED 6/6/08. See Item #90 For Correction of problems found with Installation			CLS	
77	NO DOCUMENTATION FOR INSTALLATION OF GPS GARMIN 430W	MECH.	INSR.	HOURS
CORRECTIVE ACTION: DUE TO MISSING OR IMPROPER DOCUMENTATION, A CONFORMITY INSPECTION WAS PERFORMED AS FOLLOWS: FOUND (2) GARMIN AT GNS430W GPS/NAV/COM UNIT P/N 011-01060-00 INSTALLED 1/16W THEIR STC SA 01933LA.		Don	CLS	
X	ALSO FOUND (2) GARMIN AT GAGE GPS ANTENNAS INSTALLED 1/16W	MECH.	INSR.	HOURS
CORRECTIVE ACTION: THEIR STC SA 016958E. SYSTEM WAS INTERFERED WITH GPM 200 MED, B/K KIS25A NAV INDICATOR, HSI, AND GDL90. GENERATED 337 FORM DATED 6/17/08 See Item #88			CLS	
X	FOR CORRECTION OF PROBLEMS FOUND WITH INSTALLATION	MECH.	INSR.	HOURS
CORRECTIVE ACTION:			CLS	

ADDITIONAL WORK SHEET PAGE(S)

ORDER # 0802052

PAGE 12

OF 20

PAGES

		FNL		
		CLS		
78	INCOMPLETE DOCUMENTATION FOR INSTALLATION OF VORTEX GENERATORS	MECH.	INSP.	HOURS
CORRECTIVE ACTION: AOPA COPY OF 337 FORM WAS NOT RETURNED TO SERVICE OR MAILED TO FAA, PERFORMED CONFORMITY INSPECTION				
FOUND A SET OF MICRO AERODYNAMICS, INC VORTEX GENERATORS INSTALLED ON WING AND TAIL				
FACES 11/16/08 THEIR STC SA 010339E, SIGNED RTH ROCK #7 AND DATED 6/3/09.				
79	INCOMPLETE DOCUMENTATION FOR INSTALLATION OF TAILCONE FAIRING	MECH.	INSP.	HOURS
CORRECTIVE ACTION: DUE TO IMPROPER OR MISSING DOCUMENTATION A CONFORMITY INSPECTION				
WAS PERFORMED AS FOLLOWS: FOUND A MAPLE LEAF AVIATION LIMITED / R.S. DEBENT				
REGLOSS UPPER TAILCONE P/N TFL-001 AND LOWER TAILCONE P/N TFL-002 WERE				
X	INSTALLED 11/16/08 BY ROY CORBUCK DRAWING AND THEIR INSTALLATION	MECH.	INSP.	HOURS
CORRECTIVE ACTION: INSTRUCTIONS P/N T.F. 177 INSTR. SEE FIELD APPROVAL				
37	DATED 6/3/08			
80	INCOMPLETE DOCUMENTATION OF ENGINE PART OF PRECISE FLIGHT STBY	MECH.	INSP.	HOURS
CORRECTIVE ACTION: FOUND NO ENGINE INFORMATION WAS PROVIDED ON				
PREVIOUSLY SUBMITTED 337 FORM FOR PRECISE FLIGHT, INC				
STANDBY VACUUM SYSTEM ALTERATION TO ENGINE 11/16/08 THEIR				
STC SE 1779NM. FILLED INFORMATION IN ON CUSTOMER COPY		MECH.	INSP.	HOURS
CORRECTIVE ACTION: OF 337 FORM THEN RESUBMITTED CORRECTED FORM				
TO FAA IN OKLAHOMA CITY WITH A COVER LETTER OF EXPLANATION.				
81	FAA COPY OF POWERFLOW EXHAUST 337 HAS NO SIGNATURES	MECH.	INSP.	HOURS
CORRECTIVE ACTION: PHOTOCOPIED AOPA COPY OF THIS 337 WITH ITS SIGNATURES AND				
MAILED TO FAA OKLAHOMA CITY WITH COVER LETTER ASKING CLERK TO SUBSTITUTE				
THIS COPY IN THE PLACE OF THE ONE THEY PREVIOUSLY HAD RECEIVED.				
82	NO DOCUMENTATION FOUND FOR REMOVAL OF IL MORROW GPS	MECH.	INSP.	HOURS
CORRECTIVE ACTION: DUE TO MISSING DOCUMENTATION, PERFORMED CONFORMITY INSPECTION				
TO VERIFY THAT THE "VER ONLY" STANDALONE IL MORROW GPS 360 AND THEIR A-33 ANTENNA				
THAT WAS PREVIOUSLY INSTALLED 11/16/08 FIELD APPROVAL DATED 11/16/08 HAD BEEN REMOVED. SEE 337 FORM DATED 6/3/09				
37	NO DOCUMENTATION FOUND FOR INSTALLATION OF GIMK200 MOVING MAP	MECH.	INSP.	HOURS
CORRECTIVE ACTION: DUE TO MISSING OR IMPROPER DOCUMENTATION, PERFORMED A CONFORMITY				
INSPECTION AS FOLLOWS: FOUND A GARMIN AT, INC GIMK200 MULTIFUNCTION DISPLAY				
INSTALLED 11/16/08 THEIR STC SA 01692 SE. IT WAS FOUND TO BE INTERFERED WITH				
X	#1 GNG430W AND GARMIN GDL90. 337 FORM DATED	MECH.	INSP.	HOURS
CORRECTIVE ACTION: 6/3/09.				

ADDITIONAL WORK SHEET PAGE(S)

ORDER # 0802052

PAGE 13

OF 20

PAGES

		DATA LINK	FNL	CLS	
			MECH.	INSP.	HOURS
84	NO DOCUMENTATION FOUND FOR INSTALLATION OF GDL 90 TANK LEVEL				
CORRECTIVE ACTION: Due to improper or missing documentation a Conformity Inspection was performed. Found a GARMIN GDL90 System installed with a A33 GPS ANT and 2 EA AHD Antennas. in Intercom, X with FAHMAN EMX 200, MFD and A/C Enclosure Alternately.					
CORRECTIVE ACTION: Capstone Feature Disabled Found this failed IAW STC SA02217AK Documentation Generated FRA 337 Form Dated 03 June 2018.					
85	EDM-800 ^{CHT EMT} PROBE WIRES INSTALLED IMPROPERLY				
CORRECTIVE ACTION: FOUND THE ^{CHT EMT} PROBE WIRES HAD NO SUPPORT AND THE PROBE WIRES HAD EXCESSIVE BENDS EXITING PROBE. CUT HARNESS LOOSE TO REROUTED HARNESS HIGHER AND INSTALLED CLAMPS. INSTALLED LOOPS ON THE EIGHT PROBE WIRES TO ALLEVATE TENSION. ALL WORK DONE IAW					
CORRECTIVE ACTION: MANUFACTURERS INSTALLATION MANUAL. FUNCTION CHECK (ENGINE NOT RUNNING), FUNCTION CHECK SATISFACTORY.					
86	EMPTY/ NON-SEALED HOLES IN FIREWALL				
CORRECTIVE ACTION: SEALED AROUND ENGINE HARNESS ON THE FIREWALL. SEALED THE EMPTY SREW HOLES ON FIREWALL.					
87	THROTTLE CABLE CHAFING AGAINST PROP GUY BRACKET				
CORRECTIVE ACTION: WRAPPED THROTTLE CABLE IN SPIRAL WRAP AND INSTALLED RAILROAD TRACK MATERIAL ON PROP GUY BRACKET. IAW AC 43.13-1B					
88	GPS ANT DOUBLERS. NOT RIVETED				
CORRECTIVE ACTION: BOTH GPS ANTENNA DOUBLERS WERE LET RIVETED TO SKIN AS PER INSTALLATION. REMOVED REAR HEADLINER AND TRIM AROUND BOTH REAR WINDOWS. REMOVED BOTH ANTENNAS AND ANT. DOUBLERS. DRILLED DOUBLERS FOR HD RIVETS. INSTALLED DOUBLERS & CLEANED SKIN. TOUCHED UP PAINT.					
CORRECTIVE ACTION: INSTALLED A SEALANT ANTENNA WITH PRC. ALL WORK DONE IAW GARMIN GNS530W SERIES INSTALLATION MANUAL PN: 190-00356-02, MAR. 2009, REV E					
89	LOOSE/ CHAFING WIRES IN HEADLINE				
CORRECTIVE ACTION: INSTALLED ADEL CLAMP, TIGHTENED LOOSE ADEL CLAMP AND INSTALLED SPIRAL WRAP OVER EXPOSED WIRES. ADEL TIED-UP WIRES WITH ZIP TIES. REROUTE LEFT GPS ANT. CABLE TO ADJACENT COMPARTMENT. RE-INSTALLED					

ADDITIONAL WORK SHEET PAGE(S)

ORDER # 0802052

PAGE 14 OF 20 PAGES

		FNL		
		CLS		
		MECH.	INSP.	HOURS
99	CONT'D			
CORRECTIVE ACTION: INTERIOR. ALL WORK DONE TAW AC43.13-1B SEC. 11412.				
0	STEC IMPROPERLY INSTALLED/MISSING PARTS			
CORRECTIVE ACTION: DURING THE AVIONICS CONFORMITY CHL, THE AUTOPILOT SERVO'S WERE FOUND TO BE MISSING PARTS AND WERE IMPROPERLY INSTALLED. ALL FREE SERVO INSTALLATIONS (ROLL, PITCH & TRIM) HAD PROBLEMS. THE				
71	NAV ANT COMBINER LOOSE IN VERT.			
CORRECTIVE ACTION: UPON REMOVING VERTICAL STAB. FERRING, I FOUND THE NAV ANT. COMBINER LOOSE INSIDE OF THE VERT. STAB. FERRING. I INSTALLED TWO NUTS AND MOUNTED THE ANT. FERRING. I ALSO INSTALLED ANTI-CHAFF SPIRAL WRAP AND SECURED ANT. CABLE.				
CORRECTIVE ACTION: ALL WORK DONE TAW AC 43.13-1B SEC. 11412.				
92	CREATE BINDER FOR FLIGHT MANUAL SUPPLEMENTS			
CORRECTIVE ACTION: CREATED/SET UP A SMALL 3-RING BINDER TO HOLD THE NUMEROUS FLIGHT MANUAL SUPPLEMENTS FOR INSTALLED EQUIPMENT.				
93	FLUX VALVE BRACKET INSTALLED IMPROPERLY			
CORRECTIVE ACTION: REATTACHED BRACKET TO TOP SKIN TAW AC43.13-1B CH. 4 SEC. 4 FOUND THE FLUX VALVE BRACKET TO BE INSTALLED IMPROPERLY. THE BRACKET WAS MOUNTED TO A FLUX VALVE NOT -PLATES AND WAS ATTACHED BY THE VERTICAL PIN. I REMOVED THE BRACKET AND REATTACHED IT TO THE FLUX VALVE PLATES.				
CORRECTIVE ACTION: WERE REMOVED AND BRACKET WAS REATTACHED TO FLUX VALVE PLATES. SWAGING WAS REQUIRED SINCE FLUX VALVE WAS BENT. ALL WORK DONE TAW AC 43.13-1B CH. 4 SEC. 4.				
94	WIRE GND HAS TINNED MAN INSTEAD OF NUT			
CORRECTIVE ACTION: REMOVED GND AND TINNED MAN CLIP, REINSTALLED GND TAW AC 43.13-1B.				
95	FOUR SPREADS FROM CABIN HEAT VALVE HAS NO NUTS			
CORRECTIVE ACTION: INSTALLED WASHERS & LOCKNUTS. ALL WORK DONE TAW MANUFACTURER MAINT MANUAL.				

ADDITIONAL WORK SHEET PAGE(S)

WORK ORDER # 0802052

PAGE 15 OF 20 PAGES

			FNL CLS	
96	MAG LEAD (LEFT) GND BROKEN	MECH.	INSP.	HOURS
CORRECTIVE ACTION: FOUND THE LEFT MAG LEAD GND BROKEN. REMOVED MAG LEAD AND BAD GND. REPAIRED MAG LEAD AND REINSTALLED MAG LEAD & GND. MAGS CHECK DURING RUNUP-ALL CHECKS SATISFACTORY. ^{ALL WORK DONE IN ACCORDANCE WITH} MIN. MAINT. MANUAL.		<i>[Signature]</i>	<i>[Signature]</i>	
97	LANDING/TAXI LIGHTS LOOSE (NO STARWASHERS/LOCKWASHERS)	MECH.	INSP.	HOURS
CORRECTIVE ACTION: FOUND THE LANDING/TAXI LIGHT LEADS LOOSE, THERE WERE NO LOCKWASHERS OR STARWASHERS INSTALLED. REMOVED LEADS AND INSTALLED STARWASHERS. ALL CHECKS SATISFACTORY. ALL WORK DONE IN ACCORDANCE WITH MIN. MAINT. MANUAL.		<i>[Signature]</i>	<i>[Signature]</i>	
98	ELE TRIM SERVOS - BAD RIVETS IN BRACKETS	MECH.	INSP.	HOURS
CORRECTIVE ACTION: REPLACED RIVETS 1AW AC43.13-1B, CH.4, SEC.4		<i>[Signature]</i>	<i>[Signature]</i>	
99	LH & RH RADIO RACKS AT BAT. STA. - IMPROPER	MECH.	INSP.	HOURS
CORRECTIVE ACTION: MADE FROM WRONG GAGE METAL, REMOVED REMOVED & INSTALLED NEW RACKS FABRI. FROM 040" 2024-T3 ALUM. 5406-0187. 1AW AC43.13-1B, CH.4 SEC.4 + 8110-3 Dated 12/3/07		<i>[Signature]</i>	<i>[Signature]</i>	
100	RH WING LWR OUTB. INSP. PLATE - NUTPLATE BAD	MECH.	INSP.	HOURS
CORRECTIVE ACTION: R & R NUTPLATE # 53429-2A 1AW AC43.13-1B CH.4 SEC.4		<i>[Signature]</i>	<i>[Signature]</i>	
101	EDM-800 OIL TEMP PROBE NOT HOOKED-UP	MECH.	INSP.	HOURS
CORRECTIVE ACTION: FOUND EDM-800 OIL TEMP PROBE WIRE LOOSE BEHIND INSTRUMENT PANEL. REMOVED TAPE FROM PINS AND INSTALLED PROBE WIRE INTO J1. FUNCTION CHECK - CHECK SATISFACTORY. ALL WORK DONE IN ACCORDANCE WITH MANUFACTURERS INSTALLATION MANUAL.		<i>[Signature]</i>	<i>[Signature]</i>	
CORRECTIVE ACTION:		<i>[Signature]</i>	<i>[Signature]</i>	
102	GND BLOCKS MISSING 1 THUMBSCREW EACH.	MECH.	INSP.	HOURS
CORRECTIVE ACTION: INSTALLED THUMB SCREWS ON BOTH GND BLOCKS. ALL WORK DONE IN ACCORDANCE WITH MAN. SPECS.		<i>[Signature]</i>	<i>[Signature]</i>	
103	Co-PILOT PIT INOP	MECH.	INSP.	HOURS
CORRECTIVE ACTION: DURING ENG/AVIONICS OPS CHKS, THE CO-PILOT PIT WAS FOUND TO BE INOP. REPAIRED CUT WIRE THAT WAS FOUND. FUNCTION CHECK - CHECK SATISFACTORY. ALL WORK DONE IN ACCORDANCE WITH AC43.13-1B.		<i>[Signature]</i>	<i>[Signature]</i>	

ADDITIONAL WORK SHEET PAGE(S)

< ORDER # 0802052

PAGE 16 OF 20 PAGES

			FNL CLS	
04	CREATE BINDER FOR "INSTRUCTIONS FOR CONTINUED AIRWORTHINESS"	MECH.	INSP.	HOURS
CORRECTIVE ACTION: <u>DOCUMENTS</u> <u>CREATED BINDER FOR</u>				
<u>GA DOCUMENTS ASSOCIATED WITH VARIOUS STC INSTALLED ITEMS</u>		<u>ADL</u>	<u>CEL</u>	
05	VPI FUEL FLOW READINGS INACCURATE	MECH.	INSP.	HOURS
CORRECTIVE ACTION: <u>REMOVED IMPROPERLY INSTALLED SYSTEM LEAD AND RELOCATED TO</u>				
<u>PLUMBING</u>				
<u>THE ENGINE RECONFIGURED FUEL FLOW CONFIGURATION DUE TO THE INACCURATE</u>		<u>ADL</u>	<u>CEL</u>	
<u>READINGS, THE SYSTEM PLUMBING ALLOWED FUEL TO RECYCLE BACK (CONT'D)</u>				
06	SWING HSI FLOW GATE	MECH.	INSP.	HOURS
CORRECTIVE ACTION: <u>PERFORMED COMPLETE SWING FOR THE HSI DUE TO WORK</u>				
<u>ON THE FLOW VALVE BRACKET REPAIR. HSI SYSTEM WAS CALIBRATED TO WITHIN</u>		<u>ADL</u>	<u>CEL</u>	
<u>(±2°). ALL WORK DONE IN ACCORDANCE WITH INSTALL MANUAL PART 006-0011-001, APRIL 2007</u>				
07	OIL PRESSURE FIREWALL FITTING LEAKING OIL	MECH.	INSP.	HOURS
CORRECTIVE ACTION: <u>REMOVED OIL PRESSURE FIREWALL FITTING, RESEALED</u>				
<u>PIPE-THREADED FITTING THEN REINSTALLED. LEAK CHECKED OK.</u>		<u>ADL</u>	<u>CEL</u>	
<u>ALL WORK I/A/W MEE MAINT MANUAL.</u>				
08	337 FOR ENGINE PART OF STANDBY VACUUM SYSTEM IMPROPERLY	MECH.	INSP.	HOURS
CORRECTIVE ACTION: <u>FILLED OUT</u>				
<u>FOUND NO ENGINE INFORMATION ON THE 337 FORM FOR THE</u>		<u>ADL</u>	<u>CEL</u>	
<u>PRECISE FLIGHT STANDBY VACUUM SYSTEM ENGINE STC</u>				
<u>SE177NM DATED 6/18/07. FILLED IN ENGINE INFORMATION</u>		MECH.	INSP.	HOURS
CORRECTIVE ACTION: <u>ON CUSTOMER COPY OF 337 THEN MAILED A COPY</u>				
<u>TO FAA IN OKLAHOMA CITY WITH COVER LETTER OF EXPLANATION.</u>		<u>N/A</u>		
109	337 FOR VORTEX GENERATORS HAS NO SIGN-OFF FOR	MECH.	INSP.	HOURS
CORRECTIVE ACTION: <u>BLOCK 7 "RETURN TO SERVICE" NOT EVER MAILED TO FAA</u>				
<u>PERFORMED CONFORMITY INSPECTION AS FOLLOWS: FOUND A MICRO</u>		<u>ADL</u>	<u>CEL</u>	
<u>AERODYNAMICS, INC SET OF VORTEX GENERATORS INSTALLED ON TOP OF</u>				
<u>THE WINGS AND ON THE TAIL SURFACES I/A/W THEIR STC SA010338E</u>		MECH.	INSP.	HOURS
CORRECTIVE ACTION: <u>FINISHED FILLING OUT 337 FORM PREVIOUSLY</u>				
<u>STARTED THEN MAILED TO FAA DATING IS 6/3/08.</u>		<u>N/A</u>		
110	EDM-800 OIL TEMP PROBE NOT INSTALLED	MECH.	INSP.	HOURS
CORRECTIVE ACTION: <u>WHEN Tying UP WIRES BEHIND PANEL THE OIL TEMP</u>				
<u>PROBE WIRES WERE FOUND UNINSTALLED AND CAPPED WITH TAPE. REMOVED</u>		<u>ADL</u>	<u>CEL</u>	
<u>TAPE AND INSTALL PROBE WIRE INTO CONNECTOR. OIL TEMP LAB'S SATISFACTORY (AND</u>				

ADDITIONAL WORK SHEET PAGE(S)

WORK ORDER # 0802052

PAGE 17 OF 20 PAGES

	FNL CLS	MECH.	INSP.	HOURS
#90 CONTD				
CORRECTIVE ACTION: PITCH SERVO WAS FOUND TO BE MISSING A WASHER BETWEEN THE IDLER PULLEY AND SERVO BRACKET. THE BRIDLE CABLE TENSION WAS LOW-VERY LOOSE. THE BRIDLE CABLE WAS WRAP TOO MANY TIMES ON THE CAPSTAN. THE ANTI-CHAFE STRIPS WERE POSITIONED IMPROPERLY.				
CORRECTIVE ACTION: THEY WERE PULLING ON THE UPPER ELEVATOR & RIGHT RUDDER CABLE.				
THE PITCH SERVO WAS REMOVED TO CHECK THE BRIDLE CABLE LOAD ON THE CAPSTAN. AFTER REMOVAL THE PITCH SERVO WAS				
CORRECTIVE ACTION: COVER & STANDOFFS WERE REMOVED AND THE PITCH TORQUE WAS CHECKED DUE TO INADEQUACIES WITH THE SERVO (RUSH, ROLL, TRIM) INSTALLATIONS. THE TORQUE WAS FOUND TO BE TOO HIGH, SET AT 47 IN/LBS. PROPER TORQUE FOR THE INSTALLATION OF THE PITCH				
CORRECTIVE ACTION: SERVO IS 34 IN/LBS. \pm 2 IN/LBS. THE TORQUE WAS RESET TO 33-34 IN/LBS WITH THE INSTALLATION OF PROPER WASHERS & SHIM AS PER - INSTALLATION MANUAL. THE BRIDLE CABLE WAS THEN WRAPPED AS PER INSTALLATION DRAWING AND REINSTALLED THE CAPSTAN COVER & STANDOFFS.				
CORRECTIVE ACTION: REINSTALLED SERVO INTO A/C. SET CABLE TENSION TO 15 LBS \pm 2 AS PER DRAWING. REINSTALLED ALL ADDITION PARTS IF PER INSTALL. MANUAL. ADJUSTED ANTI-CHAFE STRIPS AS PER INSTALLATION MANUAL.				
A DECISION WAS MADE TO REMOVE THE ROLL & TRIM				
CORRECTIVE ACTION: SERVO'S TO VERIFY THE CLUTCH WAS SET AS PER				
THE TRIM TRAVE WAS 14 INCHES. A DECISION WAS MADE TO REMOVE THE TRIM PULLEY & REINSTALL THE IDLER PULLEY WAS POSITIONED IMPROPERLY. THE ANTI-CHAFE ASSEMBLY FOR THE INBOARD TRIM CABLE				
CORRECTIVE ACTION: WAS MISSING. TRIM CABLE RUBBING IDLER PULLEY STANDOFF. THE SERVO TOP BRACKET AND BOLTS THAT WERE NOT INSTALLED PROPERLY AND THE TRIM SERVO HARNESS HAD NO STRAIN RELIEF.				
THE SERVO WAS REMOVED FROM THE AIRCRAFT AND THE				
CORRECTIVE ACTION: THE CLUTCH TORQUE WAS CHECKED AND FOUND TO BE UNSATISFACTORY. THE CLUTCH TORQUE WAS SET AT 16 IN/LBS. THE CLUTCH WAS RESET WITH PROPER WASHERS NOT SET TO 33 IN/LBS. PROPER TORQUE - 13-32 IN/LBS AS PER INSTALL. MANUAL.				
CORRECTIVE ACTION: THE VERTICAL FILING WAS REMOVED AND THE TRIM CABLE WAS REINSTALLED. THE END BOLTS WERE REMOVED/REBOLTED.				

ADDITIONAL WORK SHEET PAGE(S)

ORDER # 0802052

PAGE 18

OF 20

PAGES

	MECH.	INSP.	HOURS	FNL
				CLS
20 Cont'd				
RECTIVE ACTION: THE TRIM SERVO WAS REINSTALLED INTO THE BRACKET, CRISTAN COVER & STANDOFFS REINSTALLED. IDLER PULLEY ASSEMBLY REINSTALLED. INSTALLED ANTICHAFF STRIP OVER TIE ROD BRACKET FOR THE INBOARD TRIM CABLE. TRIM CABLE EXTENSION REINSTALLED		Continued		
RECTIVE ACTION: AND TENSION SET TO AIRCRAFT MANUFACTURER'S RECS. THE ROLL SERVO INSTALLATION WAS CHECKED AND FOUND TO BE UNSATISFACTORY. THE MOUNTING PARTS INSTALLED FOR THE SERVO ACCOUNTED FOR MISSING/INCOMPLETE PARTS ON TOP BRACKET		N/A		
RECTIVE ACTION: BRACKET, BRIDLE CABLE PULLEY AND IDLER PULLEY MISSING PARTS.		N/A		
REMOVED ROLL SERVO FROM BRACKET AND REINSTALLED TOP BRACKET TO BE DRILLED INTO BRACKET. REINSTALLED		N/A		
RECTIVE ACTION: IN BRACKET AND SERVO		N/A		
REMOVED CRISTAN COVER & STANDOFFS. CHECKED TIE ROD AND FOUND THERE TO BE 43 INCHES. LEFT TIE ROD & STANDOFFS AND CRISTAN COVER. REQUIRED TO GET A NEW TIE ROD OF 39-40 INCHES		N/A		
RECTIVE ACTION: ORDERED NEW TIE ROD. REWRAPPED BRIDLE CABLE AND REINSTALLED CRISTAN COVER & STANDOFFS. INSTALLED ROLL SERVO AND NEW TOP BRACKET. THE BRACKET WAS DRILLED TO 40 INCHES DEEP DUE TO THE TOP SKIN BEING DRILLED TO 39 INCHES DEEP		N/A		
RECTIVE ACTION: NEW TIE ROD WAS ORDERED. INSTALLED BRIDLE CABLE AND MISSING/INCOMPLETE PARTS. REWRAPPED BRIDLE CABLE PULLEY. RESET BRIDLE CABLE TO 15 INCHES ± 2 INCHES AS PER INSTALLATION MANUAL.		N/A		
RECTIVE ACTION:		N/A		
FABRICATED TRIM PULLEY FOR THE INBOARD TRIM CABLE		N/A		
TRIM RELIEF.		N/A		
INSTALL TRIM CABLE STRIP TIE ROD ASSEMBLY.		N/A		
RECTIVE ACTION: REWIRED TRIM DISCUSS WITH THE AIRCRAFT MANUFACTURER. TRIM CABLE WAS SET TO 15 INCHES ± 2 INCHES		N/A		
RECTIVE ACTION:		N/A		
SATISFACTORY		N/A		
STEC (CORRECTION) FOR THE STC		N/A		
SAC9125AD-D AND STEC CORRECTION FOR THE STC		N/A		

ADDITIONAL WORK SHEET PAGE(S)

WORK ORDER # 0802052

PAGE 19 OF 20 PAGES

		MECH.	INSPECTION	HOURS
#90 CONT'D				
CORRECTIVE ACTION: STL SA09125AC-D, CESSNA MANUFACTURER MAINTENANCE				
MANUAL AND AC 43.13-1B.				
GROUND CHK'D SYSTEM - SYSTEM CHK'S				
SATISFACTORY.				
CORRECTIVE ACTION:				
105 CONT'D				
CORRECTIVE ACTION: THROUGH THE BOOST PUMP CONNECTIONS AND THE FF				
TRANSDUCERS ORIENTATION WAS INSTALLED IMPROPERLY. THE ENGLAS				
RUNUP AND ALL CHKS SATISFACTORY. ALL WORK DONE IN ACC. WITH MAN. INSTAL. MANUAL.				
110 CONT'D				
CORRECTIVE ACTION: ALL WORK DONE IN ACC. WITH MAN. INSTALLATION MANUAL.				
111 AVIONICS CONFORMITY CHECK				
CORRECTIVE ACTION: DUE TO MISSING/IMPROPER DOCUMENTATION, PERFORMED				
AVIONICS INSPECTION IN ACC. WITH MANUFACTURER INSTALLATION MANUALS				
FOR INSTALLED EQUIPMENT IN A/C. ALL DISCREPANCIES FOUND				
WERE NOTED IN WORKORDER AND WERE CORRECTED.				
CORRECTIVE ACTION:				
112 PAPERWORK & CLEAN-UP				
CORRECTIVE ACTION: Completed work sheet pages signed				
and verified all documents completed and cleared				
for aircraft.				
113 REWEIGH A/C				
CORRECTIVE ACTION: REWEIGHED A/C I/B/W MFG MAINT MANUAL: NOSE 461,				
LM 799, RM 829, NEW E.W.: 1729 C.G.: 105.97"				
114 REVISE A/C EQUIPMENT LIST				
CORRECTIVE ACTION: REVISED A/C EQUIPMENT LIST TO REFLECT CHANGES				
VERIFIED TO HAVE BEEN MADE PREVIOUSLY				

ADDITIONAL WORK SHEET PAGE(S)

'K ORDER # 0P02052

PAGE 20 OF 20 PAGES

[illegible]



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 N778RD	Serial No. 17702550	
	Make CESSNA	Model 177B	Series
2. Owner	Name (As shown on registration certificate) CHASE BRUCE A	Address (As shown on registration certificate) Address 47 QUIDA CIRCLE	
		City LONGVIEW State TX Zip 75603 Country USA	

3. For FAA Use Only

"The technical data identified herein has been found to comply with the applicable airworthiness requirements and is hereby approved for use only on the above described aircraft, subject to conformity inspection by a person in §43.7."

6/03/08
Date

Anthony N. Serio
Signature of FAA Inspector, AEA-P3DO-01

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

6. Conformity Statement

A. Agency's Name and Address		B. Kind of Agency	
Name HAGERSTOWN AIRCRAFT SERVICES INC		<input type="checkbox"/> U. S. Certificated Mechanic	<input type="checkbox"/> Manufacturer
Address 14235 OAK SPRINGS RD		<input type="checkbox"/> Foreign Certificated Mechanic	C. Certificate No.
City HAGERSTOWN State MD		<input checked="" type="checkbox"/> Certificated Repair Station	H5GRO500
Zip 21742 Country		<input type="checkbox"/> Certificated Maintenance Organization	

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

Extended range fuel per 14 CFR Part 43 App. B <input type="checkbox"/>	Signature/Date of Authorized Individual June 2, 2008 CLARENCE CANNON
--	---

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	<input type="checkbox"/>	Manufacturer	<input type="checkbox"/>	Maintenance Organization	Persons Approved by Canadian Department of Transport
	FAA Designee	<input checked="" type="checkbox"/>	Repair Station	<input type="checkbox"/>	Inspection Authorization	

Certificate or Designation No. H5GRO500	Signature/Date of Authorized Individual June 2, 2008 CLARENCE CANNON
---	---

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.)

N778RD

06/02/2008

Nationality and Registration Mark

Date

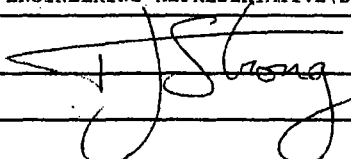
THIS FAA 337 FORM IS FOR A CONFORMITY INSPECTION OF THE INSTALLATION OF THE FOLLOWING ITEM WHICH WAS NOT PROPERLY DOCUMENTED. THE INSTALLATION OF AVIONICS EQUIPMENT RACKS IN TAIL SECTION OF AIRCRAFT.

1. A EQUIPMENT RACK FOR FOR THE INSTALLATION OF A L3 WX500 REMOTE STORMSCOPE PROCESSOR UNIT WAS FABRICATED IN TAIL SECTION OF AIRCRAFT ON LEFTHAND SIDE OF AIRCRAFT BETWEEN FS 189.5 AND FS 203.5. OF .040 AL2024-T3, RIVITED TO AIRFRAME. A EQUIPMENT RACK FOR THE INSTALLATION OF A GARMIN GDL 90 ADS-B RECEIVER ON TOP SHELF AND B/K KG102A GYRO, ON BOTTOM SHELF, WAS FABRICATED IN TAIL SECTION OF AIRCRAFT BETWEEN FS 176.5 AND FS 189.5, OF .040 AL2024-T3, ATTACHED TO AIRFRAME WITH MACHINE SCREWS AND FIBER LOCKNUTS.

2. ALL WORK WAS DONE IN ACCORDANCE WITH STRONG AERO ENGINEERING REPORT NO. N778RD-WQN01 REV N/C DATED 06-05-07, REFERENCE FAA FORM 8110-3 DATED 06-05-07 BY TREVOR J. STRONG, DERT605818NM, AND GUIDELINES FROM FAA AC43-13-1B CH4, SEC 1, 4, CH 7, SEC 1,2,3,4,5. AIRCRAFT WAS WEIGHED 09-30-2007, TO REFLECT CHANGES IN AIRCRAFT WEIGHT AND BALANCE.

3. INSTRUCTIONS FOR CONTINUED AIRWORTHINESS, ON CONDITION, TREAT AS NORMAL AIRFRAME PART, INSPECT FOR LOOSENESS OF FASTENERS, CORROSION, CRACKS AND DEFORMATION OF EQUIPMENT RACKS AT EACH ANNUAL INSPECTION. RELACE WITH SAME OR EQUIVALENT PARTS AS REQUIRED.

☒ Additional Sheets Are Attached

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION STATEMENT OF COMPLIANCE WITH THE FEDERAL AVIATION REGULATIONS		DATE 06/05/07	
AIRCRAFT OR AIRCRAFT COMPONENT IDENTIFICATION			
MAKE CESSNA	MODEL NO. 177B	TYPE (Airplane, Radio, Helicopter, etc.) AIRPLANE	NAME OF APPLICANT SARASOTA AVIONICS, INC.
LIST OF DATA			
IDENTIFICATION	TITLE		
REPORT REF; N778RD-WQN01 REV N/C 06/05/07	"INSTALLATION OF AVIONIC EQUIPMENT RACKS" Including; - A rack on the L/H side for the L3 WX500 Stormscope Unit - A rack on the R/H side for the Garmin GDL 90 ADS- B receiver (top shelf) and a Honeywell KG102A Gyro (lower shelf) APPROVAL IS FOR ONE AIRCRAFT, S/N 17702550, T/N N778RD <u>Notes:</u> This approval is for engineering design data only and is not an installation approval. It indicates the data listed above demonstrates compliance only with the regulations specified by paragraph and subparagraph listed below as 'APPLICABLE REQUIREMENTS'. (Compliance with additional regulations not listed here may be required).		
PURPOSE OF DATA IN SUPPORT OF A MAJOR ALTERATION TO SHOW COMPLIANCE WITH THE FOLLOWING REGULATIONS			
APPLICABLE REQUIREMENTS (List specific sections) CFR 14 FAR Part 23.301(a) (b) (d), Amdt 23-48; .303, Amdt 23-0; .305(a) (b), Amdt 23-45; .307(a), Amdt 23-0; .561(a) (b3), Amdt 23-48; .601, Amdt 23-0; .603(a) (b), Amdt 23-23; .605(a), Amdt 23-23; .607(a) (b), Amdt 23-0; .609(a), Amdt 23-0; .611, Amdt 23-0; .613(a) -(e), Amdt 23-45; .625(a), Amdt 23-7			
CERTIFICATION - Under authority vested by direction of the Administrator and in accordance with conditions and limitations of appointment under Part 183 of the Federal Aviation Regulations, data listed above and on attached sheets numbered <u>N/A</u> have been examined in accordance with established procedures and found to comply with applicable requirements of the Federal Aviation Regulations. <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Recommend approval of these data <input checked="" type="checkbox"/> Approve these data </div> <div> I <u>Two</u> Therefore </div> </div>			
SIGNATURE(S) OF DESIGNATED ENGINEERING REPRESENTATIVE(S) TREVOR J. STRONG 	DESIGNATION NUMBER(S) DERT605818NM	CLASSIFICATION(S) STRUCTURES (A1, A4, P1, P4)	

1941

1942

1943

1944

1945

1946

1947

1948

1949

1950

1951



STRONG Aero Engineering
9640 Paso Robles Ave., Northridge, CA 91325
Ph: (818) 885-0240 Cel: (310) 497-2831

No. N778RD-WQN01 Rev N/C

Date: 06/05/07 Sheet 1 of 14

Work Query Note (WQN)

A/C Make: Cessna Model: 177B S/N: 17702550 T/N: N778RD
Operator or Maintenance Center: Sarasota Avionics, Inc. Drawing Ref: N/A
Contact Name: Dave Clarke Tel: (941) 360 6877 Fax: (941) 360 6705

DESCRIPTION OF DISCREPANCY

"Installation of Avionic Equipment Racks"

As part of an upgrade to the above referenced airplane, two new racks were installed on the L/H and R/H side of the airplane to hold additional avionic equipment as described overleaf. Please advise.

QC SIGNATURE / DATE: pp *Dave Clarke* 4th June '07

ACTION

CAUSE: Upgrade to the Avionics System

CORRECTIVE ACTION: STRUCTURALLY ACCEPTABLE to add the two racks as shown on the following pages.

SIGNATURE / DATE:

5th June '07

WQN DISPOSITION

Copilot's (RH) side rack

For the Garmin GDL 90 ADS-B receiver (top shelf) and Honeywell KG102A Gyro (Lower Shelf) under the applied ULTIMATE load case conditions margins of safety are high for the local attachment of the units to the shelves and rack to the airframe.

Pilot's (LH) side rack

Similarly, for the L3 WX500 Stormscope under the applied ULTIMATE load case conditions margins of safety are high for the local attachment of the unit to the rack and rack to the airframe.



STRONG Aero Engineering
9640 Paso Robles Ave, Northridge, CA 91325
Ph: (818) 885-0240 Cel: (310) 497-2831

No. N778RD-WQN01 Rev N/C

Date: 06/05/07 Sheet 2 of 14

Work-Query Note (WQN)

CONTINUED DESCRIPTION OF DISCREPANCY/DISPOSITION

"Installation of Avionic Equipment Racks"

INTRODUCTION

There are two new racks installed in the airplane as a result of the avionics upgrade:

Pilot's (LH) side rack:

This rack, between FS 189.5 and 203.5 is fabricated from one piece of .040" AL2024-T3, $t = .040"$. It is formed into a shelf, with support structure underneath. The rack is 8.5" high, 3.66" wide, 14" long.

The rack is riveted together and to the airframe, with the same rivets used in aircraft structure at these stations, (MS20426AD4 typically).

The rack holds the L3 WX500 Stormscope - Weight = 1.56 lbs

Copilot's (RH) side rack:

Mounted between FS 176.5 and 189.5, this rack consists of two shelves, 7 inches apart in height, each shelf measures 6.5 inches by 13 inches. The rack structure is held together by 16 6-32 stainless steel machine screws, with #4 washers and fiberlocks. The shelves are held to the structure with 8 x 6-32 stainless steel machine screws, #4 washers, and fiberlocks.

The top shelf holds the Garmin GDL 90 ADS-B receiver - Weight = 6.4 lbs with mounting tray and connectors. The bottom rack holds the Honeywell KG102A Gyro - Weight = 4.3 lbs with mounting tray and connector.

All racks are fabricated from AL 2024-T3, $t = .040"$. Formed "L" angles are 5/8" x 5/8".

SIGNATURE / DATE:

06/05/07



STRONG Aero Engineering
9640 Paso Robles Ave, Northridge, CA 91325
Ph: (818) 885-0240 Cel: (310) 497-2831

No. N778RD-WQN01 Rev N/C

Date: 06/05/07 Sheet 3 of 14

Work Query Note (WQN)

CONTINUED DESCRIPTION OF DISCREPANCY/DISPOSITION

"Installation of Avionic Equipment Racks"

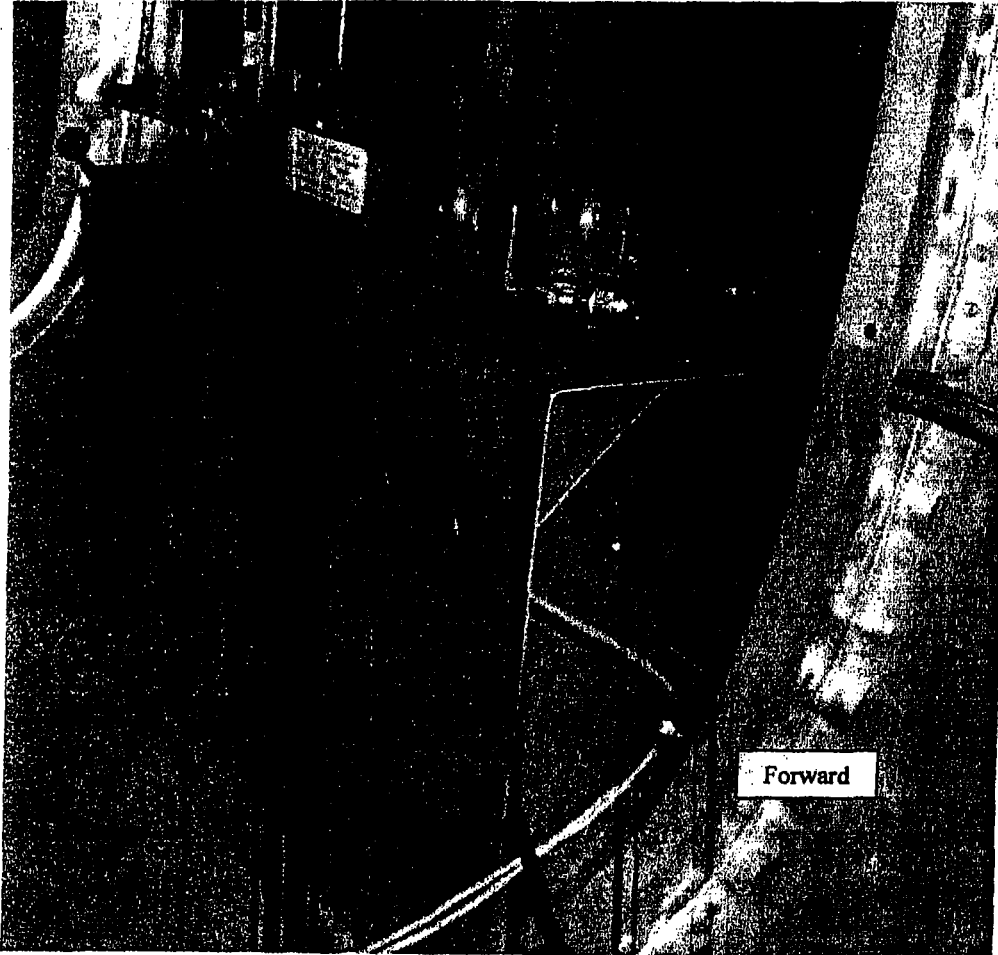


Fig 1 – The Pilot (LH) side Rack

SIGNATURE / DATE:

J Strong

06/05/07



STRONG Aero Engineering
9640 Paso Robles Ave, Northridge, CA 91325
Ph: (818) 885-0240 Cel: (310) 497-2831

No. N778RD-WQN01 Rev N/C

Date: 06/05/07 Sheet 4 of 14

Work Query Note (WQN)

CONTINUED DESCRIPTION OF DISCREPANCY/DISPOSITION

"Installation of Avionic Equipment Racks"

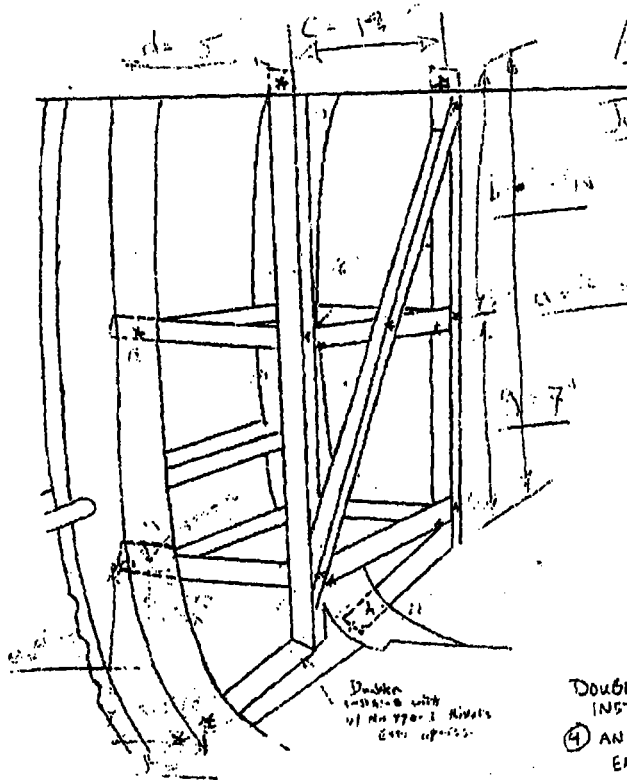


Fig 2 – The Copilot's (RH) side Rack

Fig 3 – Sketch of the rack structure

Rack Geometry:

Overall Height = 14"

Distance Between Upper Shelf and Upper Attachment = 7.25"

Length of Rack = 12.5"

Width of Rack = 5"

Vertical Distance Between Lower Shelf and Lower Attachments = 5.0"

Horizontal Distance Between Lower Shelf Outboard Attachment and Lower Attachments = 3.5"

Distance Between Shelves = 7"

SIGNATURE / DATE:

J Strong

06/05/07



STRONG Aero Engineering
9840 Paso Robles Ave, Northridge, CA 91325
Ph: (818) 885-0240 Cel: (310) 497-2831

No. N778RD-WQN01 Rev N/C

Date: 06/05/07 Sheet 5 of 14

Work Query Note (WQN)

CONTINUED DESCRIPTION OF DISCREPANCY/DISPOSITION

"Installation of Avionic Equipment Racks"

FAA COMPLIANCE CHECKLIST

This report analyzes for, and shows compliance with, the following FAA certification basis:
- 14 CFR Part 23 effective February 1, 1965, including Amendments 25-1 through 25-34.

FAR & Paragraph/s	Title
23.301(a)(b)(d)	Loads
23.303	Factor of Safety
23.305(a)(b)	Strength and deformation
23.307(a)	Proof of structure
23.561	Emergency Landing Conditions
23.601	Design & Construction - General
23.603(a)(b)	Materials
23.605(a)	Fabrication methods
23.607(a)(b)	Fasteners
23.609(a)	Protection of structure
23.611	Accessibility Provisions
23.613(a)-(e)	Material strength properties and design values
23.625(a)-(d)	Fitting factors

SIGNATURE / DATE:

J Strong

06/05/07



STRONG Aero Engineering
9640 Paso Robles Ave, Northridge, CA 91325
Ph: (818) 885-0240 Cel: (310) 497-2831

No: N778RD-WQN01 Rev N/C

Date: 06/05/07 Sheet 6 of 14

Work Query Note (WQN)

CONTINUED DESCRIPTION OF DISCREPANCY/DISPOSITION

"Installation of Avionic Equipment Racks"

The load factors for the Cessna 177B are as follows, ref CFR 14 Part 23.561

Upward = 3.0g (ULTIMATE)
Forward = 18.0g (ULTIMATE)
Sideward = 4.5g (ULTIMATE)
Downward = 6.0g (ULTIMATE)

ULTIMATE Loading;

For the Pilot L/H Shelf:

WX500 Stormscope - Weight = 1.56 lbs x 1.15 fitting factor = 2.0 lbs (approx)

Upward = 6.0 Forward = 36.0 Sideward = 9.0 Downward = 12.0 lbs.

For the Co-Pilot R/H Shelf:

Rack = 3lbs (Assume 1.5 lbs into the GDL90 and 1.5 lbs into the KG102)

Garmin GDL 90 = 7.9 lbs x 1.15 fitting factor = 9.1lbs @1g

Honeywell KG102A Gyro = 5.8 lbs x 1.15 = 6.7 lbs @1g

	GDL 90 (lbs)	KG102A (lbs)	Total (lbs)
Upward =	27.3	17.4	44.7
Forward =	163.5	104.4	267.9 - CRITICAL
Sideward =	40.9	26.1	67.0
Downward =	54.5	34.8	89.3

SIGNATURE / DATE:

06/05/07



STRONG Aero Engineering
9640 Paso Robles Ave, Northridge, CA 91325
Ph: (818) 885-0240 Cel: (310) 497-2831

No. N778RD-WQN01 Rev N/C

Date: 06/05/07 Sheet 7 of 14

Work Query Note (WQN)

CONTINUED DESCRIPTION OF DISCREPANCY/DISPOSITION

"Installation of Avionic Equipment Racks"

Structural Substantiation for the Pilot L/H Shelf:

For the applied loading on the shelf under the ULTIMATE load case conditions, the reactions in the unit to shelf attachments and rack to airframe attachments are small. (For example for the 18g forward load case the shear per unit attachment fastener is $36 \text{ lbs} / 4 = 8 \text{ lbs}$). Margins of safety are HIGH. No further analysis is required.

Structural Substantiation for the Co-Pilot R/H Shelf:

To determine the reactions on this shelf, a simple 3D model was created and the critical load cases applied. The idealization of the rack is provided overleaf.

SIGNATURE / DATE:

J Strong

06/05/07



STRONG Aero Engineering
9840 Paso Robles Ave, Northridge, CA 91325
Ph: (818) 885-0240 Cel: (310) 497-2831

No: N778RD-WQN01 Rev N/C

Date: 06/05/07 Sheet 8 of 14

Work Query Note (WQN)

CONTINUED DESCRIPTION OF DISCREPANCY/DISPOSITION

"Installation of Avionic Equipment Racks"

Based on the dimensions and equipment weights on the previous pages, the co-pilot rack has been idealized as shown below:

Joint Boundary Conditions				
1	Joint Label	X (lb/in)	Y (lb/in)	Z (lb/in)
1	N1	Reaction	Reaction	Reaction
2	N2	Reaction	Reaction	Reaction
3	N5	Reaction	Reaction	Reaction
4	N6	Reaction	Reaction	Reaction
5	N9	Reaction	Reaction	Reaction
6	N10	Reaction	Reaction	Reaction
7	N11	Reaction	Reaction	Reaction
8	N12	Reaction	Reaction	Reaction

Joint Coordinates and Temperatures				
1	Label	X (in)	Y (in)	Z (in)
1	N1	0	0	0
2	N2	0	0	-12.5
3	N3	5	0	-12.5
4	N4	5	0	0
5	N5	0	7	0
6	N6	0	7	-12.5
7	N7	5	7	-12.5
8	N8	5	7	0
9	N9	5	14	0
10	N10	5	14	-12.5
11	N11	3.5	-4.75	0
12	N12	3.5	-4.75	-12.5
13	P1	2.5	3	-8.25
14	P2	2.5	10	-6.25

Member Primary Data			
Primary	Advanced	Hot Rolled	Cold Formed
1	Label	I Joint	J Joint
1	M1	N1	N2
2	M2	N2	N3
3	M3	N3	N4
4	M4	N4	N1
5	M5	N5	N6
6	M6	N6	N7
7	M7	N7	N8
8	M8	N8	N5
9	M9	N9	N8
10	M10	N9	N4
11	M11	N10	N7
12	M12	N7	N3
13	M13	N4	N11
14	M14	N3	N12
15	M15	N10	N4
16	M16	P1	N1
17	M17	P1	N2
18	M18	P1	N3
19	M19	P1	N4
20	M20	P2	N5
21	M21	P2	N6
22	M22	P2	N7
23	M23	P2	N8

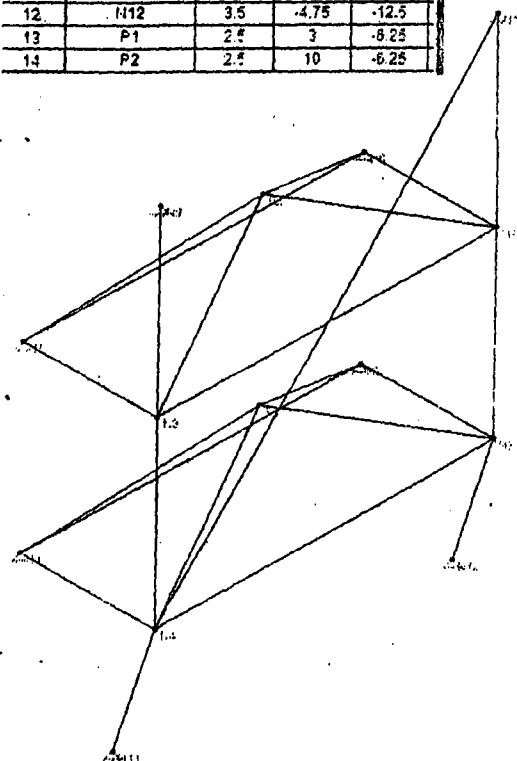


Fig 4 - Idealization of the Co-Pilot Rack

SIGNATURE / DATE:

T. Strong

06/05/07



STRONG Aero Engineering
9640 Paso Robles Ave, Northridge, CA 91325
Ph: (818) 885-0240 Cel: (310) 497-2831

No. N778RD-WQN01 Rev N/C

Date: 06/05/07 Sheet 9 of 14

Work Query Note (WQN)

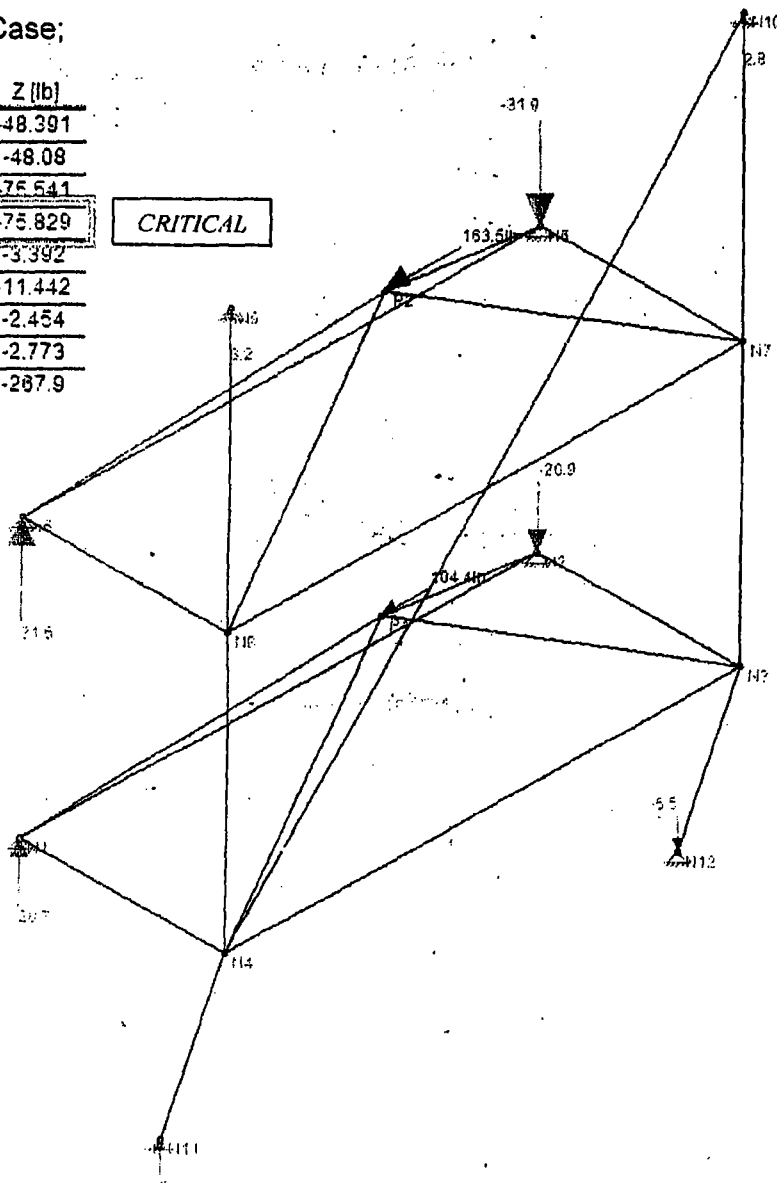
CONTINUED DESCRIPTION OF DISCREPANCY/DISPOSITION

"Installation of Avionic Equipment Racks"

For the 18g Forward Load Case;

Joint Label	X [lb]	Y [lb]	Z [lb]
N1	18.234	20.725	-48.391
N2	-16.585	-20.852	-48.08
N5	28.082	31.594	-75.541
N6	-27.969	-31.932	-75.829
N9	.068	3.187	-3.392
N10	.009	2.788	-11.442
N11	-.201	.955	-2.454
N12	-1.637	-6.465	-2.773
Totals:	0	0	-287.9

CRITICAL



SIGNATURE / DATE:

J Strong 06/05/07



STRONG Aero Engineering
9840 Paso Robles Ave, Northridge, CA 91325
Ph: (818) 885-0240 Cel: (310) 497-2831

No. N778RD-WQN01 Rev N/C

Date: 06/05/07 Sheet 10 of 14

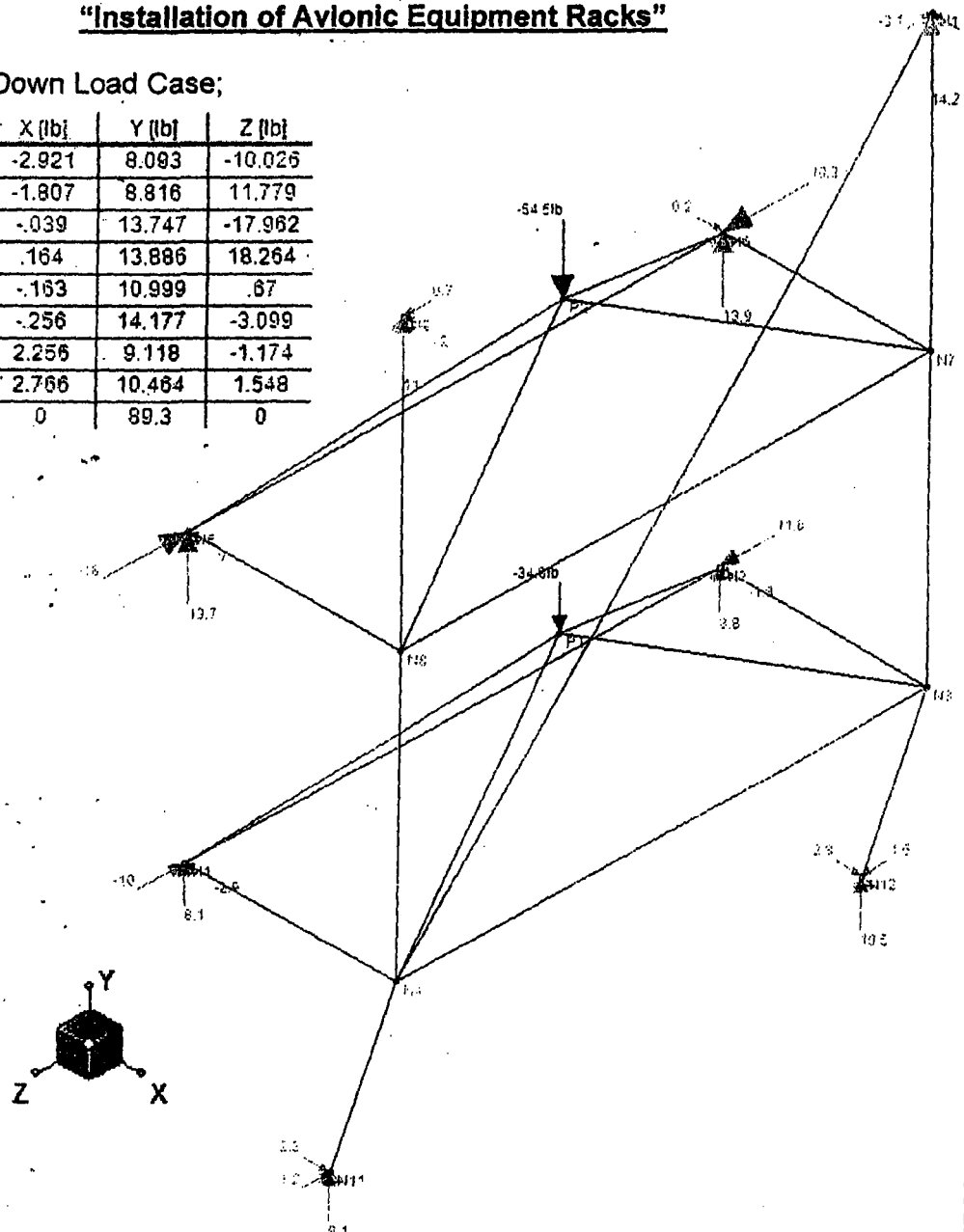
Work Query Note (WQN)

CONTINUED DESCRIPTION OF DISCREPANCY/DISPOSITION

"Installation of Avionic Equipment Racks"

For the 6g Down Load Case;

Joint Label	X [lb]	Y [lb]	Z [lb]
N1	-2.921	8.093	-10.026
N2	-1.807	8.816	11.779
N5	-.039	13.747	-17.962
N6	.164	13.886	18.264
N9	-.163	10.999	.67
N10	-.256	14.177	-3.099
N11	2.256	9.118	-1.174
N12	2.766	10.464	1.548
Totals:	0	89.3	0



SIGNATURE / DATE:

J Strong

06/05/07



STRONG Aero Engineering
9640 Paso Robles Ave, Northridge, CA 91325
Ph: (818) 885-0240 Cel: (310) 497-2831

No. N778RD-WQN01 Rev N/C

Date: 06/05/07 Sheet 11 of 14

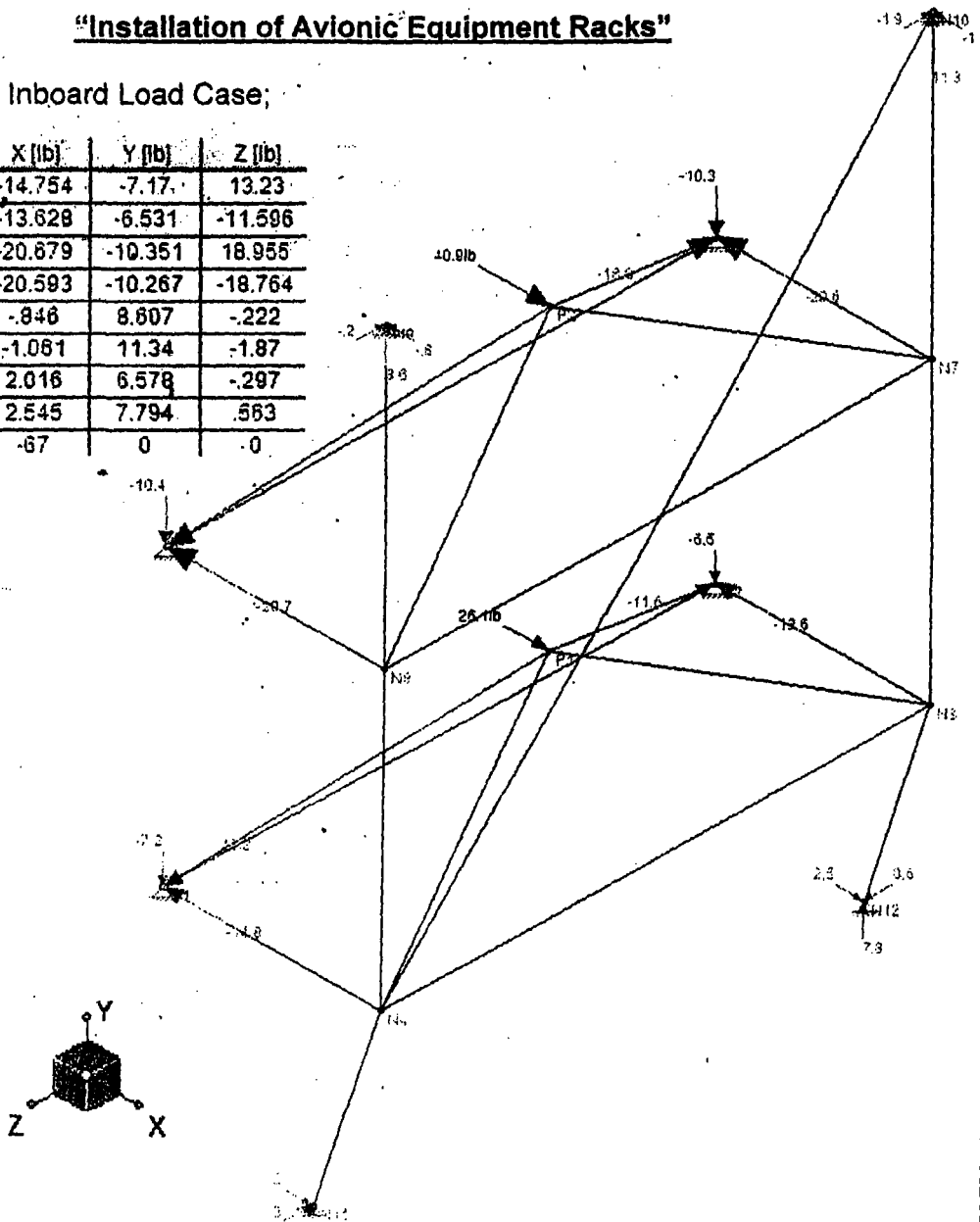
Work Query Note (WQN)

CONTINUED DESCRIPTION OF DISCREPANCY/DISPOSITION

"Installation of Avionic Equipment Racks"

For the 4.5g Inboard Load Case;

Joint Label	X [lb]	Y [lb]	Z [lb]
N1	-14.754	-7.17	13.23
N2	-13.628	-6.531	-11.596
N5	-20.879	-10.351	18.955
N8	-20.593	-10.267	-18.764
N9	-8.46	8.807	-222
N10	-1.081	11.34	-1.87
N11	2.016	6.578	-297
N12	2.545	7.794	.563
Totals:	-67	0	-0



SIGNATURE / DATE:

[Handwritten Signature]

06/05/07



STRONG Aero Engineering
9640 Paso Robles Ave, Northridge, CA 91325
Ph: (818) 885-0240 Cel: (310) 497-2831

No. N778RD-WQN01 Rev N/C

Date: 06/05/07 Sheet 12 of 14

Work Query Note (WQN)

CONTINUED DESCRIPTION OF DISCREPANCY/DISPOSITION

"Installation of Avionic Equipment Racks"

STRUCTURAL SUBSTANTIATION OF THE CO-PILOT RACK INSTALLATION

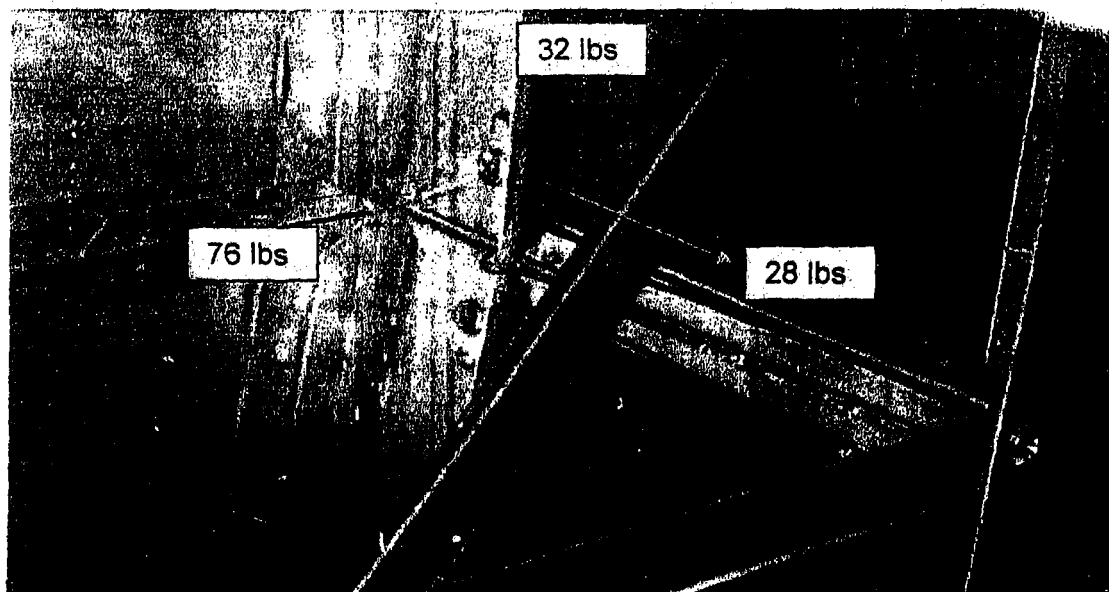


Fig 5 – Critical Loading Location & Reactions (Node 6)

Attachment of the rack to the frame:

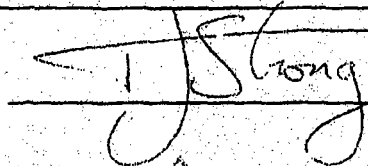
Max Shear Load = $(32^2 + 28^2)^{1/2} = 42.5$ lbs

Max Tensile Load = 76 lbs

Bearing Allowable of the .032" frame = $d.t.F_{brv} = .13 \times .032 \times 129000 = 536$ lbs

M.S. Rack fastener in bearing > HIGH

SIGNATURE / DATE:

 06/05/07



STRONG Aero Engineering
9640 Paso Robles Ave, Northridge, CA 91325
Ph: (818) 885-0240 Cel: (310) 497-2831

No. N778RD-WQN01 Rev N/C

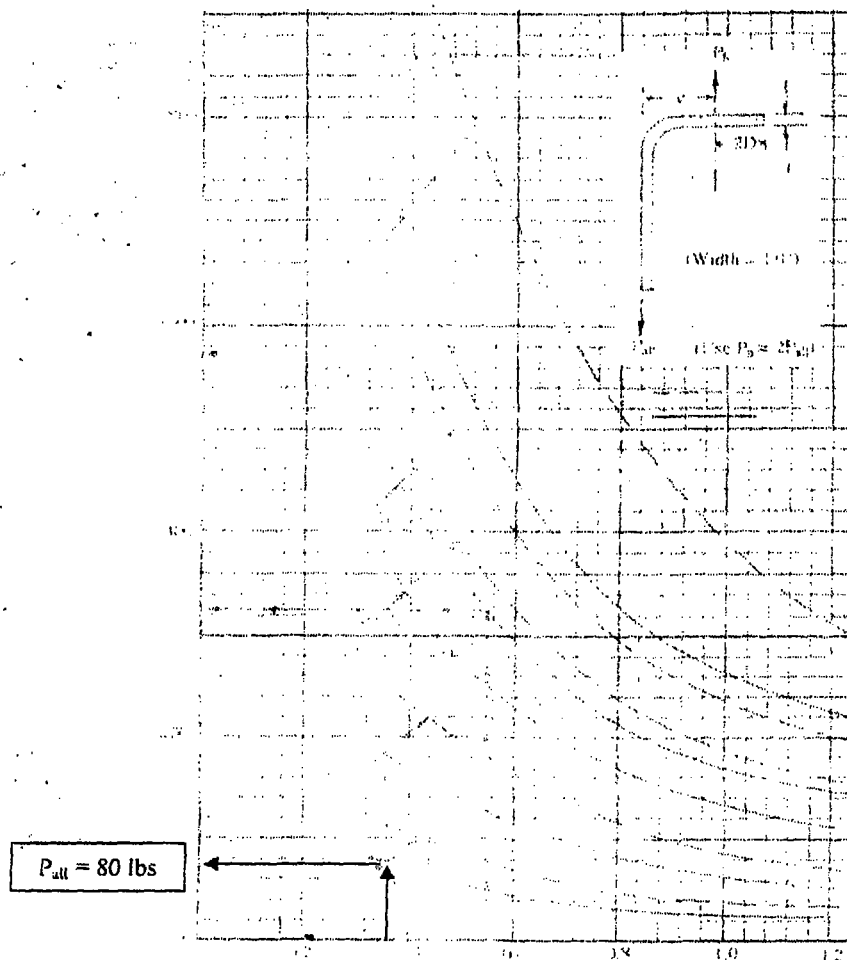
Date: 06/05/07 Sheet 13 of 14

Work Query Note (WQN)

CONTINUED DESCRIPTION OF DISCREPANCY/DISPOSITION

"Installation of Avionic Equipment Racks"

STRUCTURAL SUBSTANTIATION OF THE CO-PILOT RACK INSTALLATION



FORMED SHEET ANGLE TENSILE ALLOWABLE LOAD
(Ref, Airframe Stress Analysis and Sizing M.C. Niu, Fig. 9.10.4)

Allowable tensile load of the frame flange / skin attachment = 85 lbs (approx)

$$\text{M.S. Rack frame in tension} \geq 85 / 42.5 - 1 = 1.00$$

SIGNATURE / DATE:

J Strong

06/05/07



STRONG Aero Engineering
9640 Paso Robles Ave, Northridge, CA 91325
Ph: (818) 885-0240 Cel: (310) 497-2831

No. N778RD-WQN01 Rev N/C

Date: 06/05/07 Sheet 14 of 14

Work Query Note (WQN)

CONTINUED DESCRIPTION OF DISCREPANCY/DISPOSITION

"Installation of Avionic Equipment Racks"

STRUCTURAL SUBSTANTIATION OF THE CO-PILOT RACK INSTALLATION

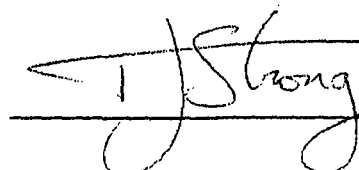
Attachment of the frame to aircraft side of body;

Forward Load = 76 lbs

Shear allowable of an MS20470AD4 rivet = 254 lbs (*Ref Lockheed Stress Memo 65c, Page 27*)

M.S. Frame to Skin fastener in shear > HIGH

SIGNATURE / DATE:



06/05/07

Hagerstown Aircraft Services, Inc.
Certified Repair Station: CRS H56R0500
14235 Oak Springs Road, Hagerstown, MD 21742 (301) 733-7604

tailcone fairing p/n TEL-002 I/A/W a field approval, JP Instruments EGT-701 engine temp indicating system with EDM 800 panel unit installed I/A/W their STC SA2586NM, a JP Instruments fuel flow transducer installed I/A/W their STC SA00432SE, a set of Monarch fuel caps and filler necks installed I/A/W Mr. William Barton STC SA2376CE, an LP Aeroplastics, Inc extra thick (.250") windshield installed I/A/W their STC SA00382NY, a set of Micro Aerodynamics, Inc vortex generators on the wings and tail surfaces installed I/A/W their STC SA01033SE, an S-TEC 55X autopilot system installed I/A/W their STC SA09125AC-D, two Garmin AT GPS430W NAV/COM/GPS systems installed I/A/W their STC SA01933LA, two Garmin AT GA35 GPS antennas installed I/A/W their STC SA01695SE, a Garmin AT GMX200 Multi Function Display installed I/A/W their STC SA01695SE, and a Garmin AT GDL 90 data link transceiver system including (2) A40 antennas installed I/A/W their STC SA02217AK. Generated FAA 337 forms dated 6/3/08 for above items. Checked balance of control surfaces due to previous repainting of aircraft. Reweighed A/C using Intercomp electronic scales. C/W FAR 91.207(d) by insp and ops check of ELT. Next due 6/09. Batt exp 5/12. C/W ADR7-20-03R2 by visual and dimensional inspection of seat tracks and seat attach mechanism. Next due 6/09. I certify this aircraft has been inspected I/A/W an annual inspection and has been determined to be in airworthy condition and is approved for return to service. All work was performed I/A/W manufacturer's maintenance manuals and current federal aviation regulations. See above work order for further details.

Signed: *[Signature]*
 Hagerstown Aircraft Services, Inc Hagerstown, MD 21742
 FAA Approved Repair Station H56R0500

EXHIBIT

C10

Hagerstown Aircraft Services, Inc.
Certified Repair Station: CRS H56R0500
14235 Oak Springs Road, Hagerstown, MD 21742 (301) 733-7604

DATE 6/6/08 PAGE 16.4 A/E IT 4506.2 W/Q# 0802052
 RE 778RD NAME Cessna MODEL 177B S/N 17702550

Removed all access covers. Cleaned, inspected, and lubed as req. Installed new RH landing light bulb p/n GE4509, RH wing tip p/n 1723805-12, (2) coal flap hinges p/n 1752091-13, and throttle cable p/n MCC299503-0301. Removed prop then reinstalled after re-indexing crank flange prop attach nuts/bushings I/A/W Lycoming SI-1098C. Removed McCauley prop governor p/n C290D3-K/T12 s/n 760261 then reinstalled same unit after it was set up as p/n C290D3-K/T11. Removed Plane Power alternator p/n AL12-F50 s/n 2F-64549. Installed Ford alternator p/n D0FF10300J s/n A504054 overhauled by Aerotech of Louisville, Inc (W/O 89143). Due to improper or missing documentation, a conformity inspection was performed of the previous removal of the following items: a sliding window alteration to the pilot's window previously installed I/A/W field approval dated 5/21/86, a "VR only" stand alone IIMorrow GPS 360 and IIMorrow A-33 antenna previously installed I/A/W field approval dated 1/10/00, and a Narco DME 890 receiver with AV-22 antenna previously installed I/A/W 337 form dated 1/5/98. Due to improper or missing documentation, a conformity inspection was performed and corrections made as required to the previous installation of the following items: found a Zephtronics p/n R15V00 voltage regulator/alternator control unit installed I/A/W Toyota Group, Inc dba Zephtronics STC SA8031SW, Skybolt Automotive Corp cooling and firewall fasteners installed I/A/W their STC SA2286SO, a Precise Flight, Inc pulselight control system installed I/A/W their STC SA4005NM, a Precise Flight, Inc SWS V standby vacuum system installed I/A/W their STC SA2162NM, empennage LH and RH avionics equipment mounting racks installed I/A/W Strong Aero Engineering DER report No. N778RD-WQND1 dated 6/5/07 and his form 8110-3 dated same date and a field approval, a 14VDC Essential Equipment Bus system installed I/A/W DC Aerospace, LLC 14VDC ESS bus DER Drawing No. SK-2892 dated 12/3/07 and their form 8110-3 dated same date and a field approval, a Maple Leaf Aviation limited/A.S. Designs fiberglass upper tailcone fairing p/n TFU-001 and lower

Drew,

On June 19, 2007 I performed an annual inspection on N778RD. The annual inspection was performed in accordance with the checklist in the Cessna service manual. The aircraft was determined to be in airworthy condition and a return to service sticker was provided to Mr. Dan Gryder to be installed in the aircraft logbook.


Todd Thaxton

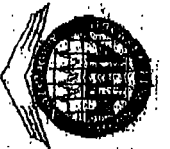


EXHIBIT

C 11

Work Order Number: 102004

 SRL Avionics 8191 North Tamiami Trail HGR B-2 Sarasota, FL 34243 Phone: (941) 360-6877 Fax: (941) 359-2465		Date of Order: 1/2/07 Type Aircraft: N- 778RD Sales Person: 1793 Job Type: install Phone: PO Number:	Date Completed:																																										
Name: A.O.P.A. Address: 421 Aviation Way City, State, Zip: Frederick, MD 21701		Terms: <input type="checkbox"/> Cash <input type="checkbox"/> Charge <input type="checkbox"/> Warranty																																											
I hereby authorize the above repair work to be done along with the necessary material and hereby grant you under your employees permission to operate the airplane described for the purpose of testing and/or inspection. An express acknowledgment is hereby acknowledged to above airplane to secure the amount of repair thereon. In cases where electronic components have been delivered personally to this service facility for repair, I understand that proper operation is warranted only until such components are reclaimed at this facility, unless indicated and functionally test by employees of this facility.																																													
Authorized By: _____ Technician: _____		Date: _____																																											
<table border="1"> <thead> <tr> <th>Qty</th> <th>Material</th> <th>Each</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>011-01271-00</td> <td>GMA-340</td> <td>1</td> <td>1</td> </tr> <tr> <td>011-010100-00</td> <td>GNS-150</td> <td>1</td> <td>1</td> </tr> <tr> <td>011-010100-00</td> <td>GNS-150</td> <td>1</td> <td>1</td> </tr> <tr> <td>011-0015500</td> <td>GTX-330</td> <td>1</td> <td>1</td> </tr> <tr> <td>011-004010</td> <td>GMA-340</td> <td>1</td> <td>1</td> </tr> <tr> <td></td> <td>GDL-90</td> <td></td> <td></td> </tr> <tr> <td></td> <td>WX-500</td> <td></td> <td></td> </tr> <tr> <td>013-000490</td> <td>G1-100A</td> <td>1</td> <td>1</td> </tr> </tbody> </table>				Qty	Material	Each	Total	011-01271-00	GMA-340	1	1	011-010100-00	GNS-150	1	1	011-010100-00	GNS-150	1	1	011-0015500	GTX-330	1	1	011-004010	GMA-340	1	1		GDL-90				WX-500			013-000490	G1-100A	1	1						
Qty	Material	Each	Total																																										
011-01271-00	GMA-340	1	1																																										
011-010100-00	GNS-150	1	1																																										
011-010100-00	GNS-150	1	1																																										
011-0015500	GTX-330	1	1																																										
011-004010	GMA-340	1	1																																										
	GDL-90																																												
	WX-500																																												
013-000490	G1-100A	1	1																																										
<table border="1"> <thead> <tr> <th colspan="2">Description of Work Performed</th> <th>Hours</th> <th>Amount</th> </tr> </thead> <tbody> <tr> <td colspan="2">A-40 UAT antenna installed IAW GDL-90 UAT STC Master Data List P/N 540-0218-01 Rev D, Sept 20, 2007 + antenna. Installation P/N 500-0253-00 Rev B Sept. 2007 WX-500 installed IAW field approval dated May, 19601.</td> <td></td> <td></td> </tr> <tr> <td colspan="2">STEC 55X installed partially IAW STC SA88965W-D. Autopilot's servo not installed. Brackets for trim & pitch were installed however not for roll servo. Installation was done IAW acceptable techniques & methods & tail applicable FAK's. Power on checks were performed. Aircraft left on trailer with no wings or tail, not returned to service.</td> <td></td> <td></td> </tr> <tr> <td colspan="2">This Aircraft and/or component identified above was repaired and inspected with respect to the work performed in accordance with current regulations of the Federal Aviation Administration and was found airworthy for return to service.</td> <td></td> <td></td> </tr> <tr> <td colspan="2"> Final Inspection: _____ Date: _____ For Repair Station Number: over87X </td> <td></td> <td></td> </tr> <tr> <td colspan="2"> <table border="1"> <thead> <tr> <th colspan="2">Total Parts</th> </tr> </thead> <tbody> <tr> <td>Parts</td> <td></td> </tr> <tr> <td>Sublet</td> <td></td> </tr> <tr> <td>Subtotal</td> <td></td> </tr> <tr> <td>Sales Tax</td> <td></td> </tr> <tr> <td>Shipping (in)</td> <td></td> </tr> <tr> <td>Shipping (out)</td> <td></td> </tr> <tr> <td>Thank You!</td> <td></td> </tr> <tr> <td>Pay This Amount</td> <td></td> </tr> </tbody> </table> </td> <td></td> <td></td> </tr> </tbody> </table>				Description of Work Performed		Hours	Amount	A-40 UAT antenna installed IAW GDL-90 UAT STC Master Data List P/N 540-0218-01 Rev D, Sept 20, 2007 + antenna. Installation P/N 500-0253-00 Rev B Sept. 2007 WX-500 installed IAW field approval dated May, 19601.				STEC 55X installed partially IAW STC SA88965W-D. Autopilot's servo not installed. Brackets for trim & pitch were installed however not for roll servo. Installation was done IAW acceptable techniques & methods & tail applicable FAK's. Power on checks were performed. Aircraft left on trailer with no wings or tail, not returned to service.				This Aircraft and/or component identified above was repaired and inspected with respect to the work performed in accordance with current regulations of the Federal Aviation Administration and was found airworthy for return to service.				Final Inspection: _____ Date: _____ For Repair Station Number: over87X				<table border="1"> <thead> <tr> <th colspan="2">Total Parts</th> </tr> </thead> <tbody> <tr> <td>Parts</td> <td></td> </tr> <tr> <td>Sublet</td> <td></td> </tr> <tr> <td>Subtotal</td> <td></td> </tr> <tr> <td>Sales Tax</td> <td></td> </tr> <tr> <td>Shipping (in)</td> <td></td> </tr> <tr> <td>Shipping (out)</td> <td></td> </tr> <tr> <td>Thank You!</td> <td></td> </tr> <tr> <td>Pay This Amount</td> <td></td> </tr> </tbody> </table>		Total Parts		Parts		Sublet		Subtotal		Sales Tax		Shipping (in)		Shipping (out)		Thank You!		Pay This Amount			
Description of Work Performed		Hours	Amount																																										
A-40 UAT antenna installed IAW GDL-90 UAT STC Master Data List P/N 540-0218-01 Rev D, Sept 20, 2007 + antenna. Installation P/N 500-0253-00 Rev B Sept. 2007 WX-500 installed IAW field approval dated May, 19601.																																													
STEC 55X installed partially IAW STC SA88965W-D. Autopilot's servo not installed. Brackets for trim & pitch were installed however not for roll servo. Installation was done IAW acceptable techniques & methods & tail applicable FAK's. Power on checks were performed. Aircraft left on trailer with no wings or tail, not returned to service.																																													
This Aircraft and/or component identified above was repaired and inspected with respect to the work performed in accordance with current regulations of the Federal Aviation Administration and was found airworthy for return to service.																																													
Final Inspection: _____ Date: _____ For Repair Station Number: over87X																																													
<table border="1"> <thead> <tr> <th colspan="2">Total Parts</th> </tr> </thead> <tbody> <tr> <td>Parts</td> <td></td> </tr> <tr> <td>Sublet</td> <td></td> </tr> <tr> <td>Subtotal</td> <td></td> </tr> <tr> <td>Sales Tax</td> <td></td> </tr> <tr> <td>Shipping (in)</td> <td></td> </tr> <tr> <td>Shipping (out)</td> <td></td> </tr> <tr> <td>Thank You!</td> <td></td> </tr> <tr> <td>Pay This Amount</td> <td></td> </tr> </tbody> </table>		Total Parts		Parts		Sublet		Subtotal		Sales Tax		Shipping (in)		Shipping (out)		Thank You!		Pay This Amount																											
Total Parts																																													
Parts																																													
Sublet																																													
Subtotal																																													
Sales Tax																																													
Shipping (in)																																													
Shipping (out)																																													
Thank You!																																													
Pay This Amount																																													



6A2 Griffin Spalding
Airport

PRECISION AVIONICS SPECIALIST, INC.
101 SKY HARBOR WAY
GRIFFIN, GEORGIA 30224
(770) 946-8555 FAX (770) 946-5358

INVOICE NO. 10473

Name

AOPA

Date

12/22/07

Address

City

State

Zip

421 Aviation Way Frederick, MD 21701

Trail Make and Model

N Number

Phone

Cardinal

MATERIALS AND ACCESSORIES

QTY	PART NO. AND DESCRIPTION	AMOUNT
1	3" Nite	39.75
1	Compass Fuel bracket	37.95
10	UG 88 cone	65.00
4	Phone Jacks	13.75
4	MC Jacks	13.75
2	Music Jacks	6.75
1	Alt. meter	89.50
4	Annua. Box & shells	72.00
12	Annua. Blobs 12v	15.00
1	Power Port (Cig lighter)	4.85
PAID		
112808 16828		
TOTAL MATERIALS		562.70
TOTAL LABOR		2780.00
TAX		—
TOTAL		3312.70

TERMS: NET CASH

PAY THIS AMOUNT

OPERATIONS PERFORMANCE

MECH.

Removed & Re-installed Instrument Panel

Wired all Panel lighting

Wired Annua. lights

Revised & Re-programmed GNL 90

Installed Power Port

50 HRS @ \$55 =

2780.00

I CERTIFY THAT THIS IS
A TRUE AND ACCURATE
COPY OF THE ORIGINAL
DOCUMENT
Signed: *[Signature]*

ITEM OF PROOF NO. 5

OUTSIDE REPAIRS

MAINTENANCE RELEASE

This aircraft and/or component identified above was repaired and inspected in accordance with
current Federal Air Regulations and was found airworthy for return to service.

Signed: *[Signature]*

for

Date

10-11-07

REPAIR STATION NUMBER: 24812-800



Precision Avionics Specialist 101 SKY H...
LOG ID# 50 19-January-2008 REF# 6473
N778RD S/N 17702550 CESSNA 177B

WAY GRIFFIN, GA 30224 PAOR-302K

Pg 1/1

*****IFR CERTIFICATION*****

ACTION: PERFORMED ALTIMETER CERTIFICATION, STATIC LEAK CHECK, TRANSPONDER CERTIFICATION, AND ALTITUDE REPORTING TEST PER FAR 91.411 AND 91.413 REQUIREMENTS, CALIBRAIED ALTIMETER TO 20,000 FEET.

ALTIMETER: MODE M5644 S/N M5644
TRANSPONDER: MODEL GTX-330 S/N 84124934

SCOTT COLLINS

Date



I CERTIFY THAT THIS IS
A TRUE AND ACCURATE
COPY OF THE ORIGINAL
DOCUMENT.
SIGNED *Scott Collins*

ITEM OF PROOF NO. 9



PRECISION AVIONICS SPECIALIST

101 SKY HARBOR WAY
GRIFFIN, GA 30224
6A2 Griffin Spalding Airport.
Phone 770-946-8555 • FAX 770-946-5359
F.A.A. Repair Station #PAOR392K



EXHIBIT

C 15

June 5, 2008

Attn. Mr. Drew McKee
RE: N778RD

In April of 2007 we were contacted by Dan Gryder who was the project manager of the AOPA's Catch- a- Cardinal Sweepstakes. Mr. Gryder informed us that during the Sun-N-Fun airshow, that he and Julie Boatman of AOPA had a somewhat of a "disagreement" with Sarasota Avionics, the avionics shop that was installing all the avionics in the Cardinal, about the panel, and wanted to know if we would be willing to help rewire and troubleshoot some things.

When the airplane came to us, all the racks were installed, all wiring was done for the avionics. We mounted the NAV/COM antennas, programmed all the avionics that needed programming, corrected wiring issues with the annunciators and the GDL-90. Also, we corrected some panel lighting issues, and finished the music, mic, and phone jacks after the interior was installed. We then removed and replaced a 3rd panel supplied to us by Dan Gryder. Replumbed the pitot static system, replaced the altimeter with a new one with 20ft. increments. We also performed an IFR certification and the paperwork concerning that was given to Dan as well. We were instructed by Dan that all 337's were in the process of being completed and was not Precision Avionics responsibility.

If you have any other questions concerning the above mentioned work, please feel free to contact me at (770) 946-8555 or on my cell at (678) 776-1793.


Respectfully,


Scott Collins

AOPA

EXHIBIT

C16



Airplane

- Project Updates
- Photo Gallery
- Travel Itinerary
- AOPA Pilot Articles

Sweepstakes

- Join or Renew to Win
- Previous Aircraft
- Member Benefits
- Official Rules

Equipment

- Contributors
- Featured Contributors
- Archive

Join or Renew Now

May 3

Assembly of Parts

We start putting the Cardinal back together



All of the pieces are coming together on your sweepstakes airplane — literally.



When we launched the project to refurbish the 1977 Cessna Cardinal for this year's giveaway, we started taking the airplane apart in November 2006. It seems so long ago that often we found ourselves squinting at the airplane's fuselage as if to try and recall what an intact Cardinal looked like.



We got that mental image back when we put the airplane on display at the Sun 'n Fun Fly-In a couple of weeks ago in Lakeland, Florida. We trailered and flew the airplane's components down to the show, and assembled them on site — but then had to take the wings and control surfaces and fairings off again to ship them back to Griffin, Georgia, to continue the work on the airplane. It was a letdown to see it in pieces again, but now we knew that it wouldn't be long before the airplane would be back together for good.



And we had a beautiful picture in mind to hold while the airplane goes through its final

reassembly.

What comes first?



FEATURED CONTRIBUTOR

Air Wrench

With 20 years of service as a technician and maintenance supervisor for a major airline under his belt, Earl Clements incorporated Air Wrench in 2003 to formalize his affinity for general aviation airplanes. Now with five top-notch, commercial-airline-trained A&Ps working at his shop in Griffin, Georgia, Clements is building a reputation for quality work done by quality people.

Air Wrench specializes in twin Cessnas, having recently performed several spar strap ADs (airworthiness directives) on various models — but the crew can handle

So much work has been done to the Cardinal in the past six months: We started with airframe disassembly and the ordering (and eventual replacement) of worn and lackluster-looking parts, followed by electrical system overhaul and new avionics installation, then complete stripping of the airplane and painting each part separately.

We had engine expert Jeff Swords from Don's Dream Machines hang the factory-fresh overhauled Lycoming O-360 engine on the freshly painted, Kosofa-rejuvenated mount prior to our trip to Lakeland, so that everyone could see the airplane's powerplant up close and personal. The engine went on permanently, as did the new American Propeller Services McCauley prop and overhauled governor. But all other accessories will come off and be reinstalled as the final firewall forward process comes together in the next couple of weeks.

Before we can launch into the engine work, though, we need to get the airframe ready to accept it. Once we caught our collective breaths after the show, field project manager Dan Gryder and I sat down at the conference table in Dan's hangar office to figure out the process. This table has seen many summit meetings over the course of my acquaintance with it for this project — so many great ideas, big challenges, and incredible roadblocks have been addressed with Gryder on one side of the table and me on the other. But our meetings of the minds had so far produced some fairly impressive results, so we tackled the next phase of the Cardinal project with anticipation.

First, we would roll the airplane over to Earl Clements' facility, Air Wrench, where his team could rivet in the forward floorboard and secure permanently the rest of the floorboards we'd removed during the disassembly. That first floorboard had been signed by literally hundreds of pilots — AOPA members — at Sun 'n Fun, each now a part of the airplane for good.

After securing the floorboards, the brand new Cessna seat tracks would go in next, in preparation for the newly reupholstered pilot and co-pilot's seats and rear passenger bench seat that Janelle and Lisa Hammer at our interior shop, Aerodesigns, of Sylvania, Georgia, have been diligently working on during the past month.

Next, we'd work on installing the recently overhauled and powder-coated rudder pedals and other flight-control assemblies, as our chief inspector, Danny Rexroad, re-established control continuity and systems integration through the airplane. Along with this would come final work on the pitot-static system from Scott Collins and his folks at Precision Avionics.

everything from engine swaps to belly-skin repair, annuals to oil changes. Says Clements, "This little airport [Griffin] flourishes with business and talent," and Air Wrench is no exception. Contact Clements at 678/770-0850 or visit the Web site.

Before we'd put the wings back on, we'd seal the fuel tanks and caps in preparation for reconnecting the fuel system. We'd need the juice to make the first runs of the engine in its new installation on the front end of the Cardinal as soon as Swords had the Lyc operational.

The saga of the airbox

Gryder's main task at this point was orchestrating all the players during this highly concerted effort to a flying finish. Meanwhile, my primary job was to secure the last of the parts that would go into the airplane. There are a few that take a while to track down, for a number of reasons.

The carburetor airbox takes a lot of abuse, and in the Cardinal it often needs attention. Sometimes, as was in the case of our carb airbox, a little too much "attention" has been applied, and the resulting welds and fixes have outlived their utility. Upon examining the airbox when he took it off the engine in December, Rexroad determined it needed replacement. Some parts seem to exist between two worlds: The airbox assembly is technically an airframe part, yet it seems to the average pilot (me) to be a critical part of the engine. Go figure.

The Cardinal model series uses one of three different airboxes, depending on the year and serial number of the airplane. Ours was part number 1752088-5; calls to parts suppliers and engineering firms across the country and into Canada turned up -3s and -1s, but no -5s to be found. After a couple weeks of searching and nearly losing faith that I would find us a good airbox for your Cardinal, I found an outfit that would send us an overhauled -5, at a hefty sum. Luckily, with the incredible support we've had from shops and contributors across the rest of the project, I easily had the budget to accommodate this important purchase. It turned up shiny and freshly refurbished, looking much to me like a part off of the beloved Tin Man. And it will go back on your airplane in the next week.

So, a note to the future winner (and current Cardinal owners): Treasure your airbox!

—Julie K. Boatman

E-mail the author at julie.boatman@aopa.org.



© Aircraft Owners and Pilots Association 421 Aviation Way Frederick MD 21701 Phone 800/872-2672 Fax 301/695-

June 21

Let It Hunt

The first flight of the Catch-A-Cardinal

EXHIBIT

C17

In any big project, there's a point at which all the pieces come together to face the first real test.

For an aircraft restoration, that test is the first flight.

You can check each fitting for snugness, each control cable and how it's rigged, each instrument for proper ground function. You can run the engine and perform high-speed taxi tests. And you can preflight one more time, making sure all your documents are in order, and no steps have been missed.

But there are certain things you cannot find out about the airplane until you take flight. The aerodynamic loads induced by flight are different from those on the ground, and you cannot achieve the same power settings and proper airflow through the engine compartment until that engine and prop are pulling the airframe through the air.

After seven and a half months of maintenance and refurbishment, this return-to-service flight of the 1977 Cessna Cardinal — with its overhauled engine, new prop, new avionics and electrical system, many new Cessna parts, and new hardware and rigging — was a big deal.

Final items

We had one more piece of paperwork to acquire prior to the first flight: We sought a field approval on the Maple Leaf Aviation tailcone as part of our thorough approach to the documentation on the airplane.

In the meantime, we conducted engine runs and taxi tests.

Finally, we got the long-awaited visit from the Atlanta FSDO representative earlier this week. Field Project Manager Dan Gryder and I walked him through the more than 10 binders of paperwork on the project and made quite an impression. The procedures surrounding all the paperwork processes are convoluted and, well, not the most intuitive. We'll talk more about these hurdles in later updates.

With this last box checked, and a fresh annual inspection, we were legally ready to fly.

Flight test

We prepared a flight test plan using Textron Lycoming Service Instruction 1427B for engine break-in.

I CERTIFY THAT THIS IS
A TRUE AND ACCURATE
COPY OF THE ORIGINAL
DOCUMENT.

Quinn S. Webb

ITEM OF PROOF NO. 10

After starting the engine, a normal preflight run-up was performed, with the Cardinal's nose pointed into the northerly wind at the Griffin-Spalding Airport in Georgia. During takeoff at full power (as recommended), Gryder monitored closely the engine parameters: oil temperature, oil pressure, fuel pressure, and cylinder head temperatures.

As soon as possible, the power came back to a reasonable climb setting, given the relatively cool morning, and the Cardinal climbed at a purposefully shallow angle to 1,000 feet agl for the first portion of the test.

For the first hour, Gryder set the power at 75 percent, and noted as oil temperature and pressure settings stabilized. Circling around the airport, with me on the ground com and him in the airplane, we stayed in contact throughout, and he dictated engine parameters to me from the J.P. Instruments EDM-800 engine analyzer. Earl Clements, from Air Wrench, Jeff Swords, from Don's Dream Machines, and Tony Dias, from Advanced Aircraft Refinishers all stayed close by and in contact throughout the flight, while Precision Avionics owner Scotty Collins watched the test flight from his post a couple of miles away at the Griffin Fire Department (he's a hardworking member of the local fire detail).

An important aside — these core folks represent the heart of the team that saw us through these last three weeks prior to the first flight. Collins came in several nights following ball practice with his daughters to work out the last of the avionics chores to get us airborne. Dias stayed over the weekend to shoot the red and gold stripes on the cowl once we had it mounted and masked off. Tom Holt, of Freeman's Just Plane Hardware, was on the scene or a phone call away if we needed a bolt or pin or fitting. And Clements and his team of techs at Air Wrench burned away many evening, weekend, and holiday hours to get the Cardinal into flying condition. We can't thank them enough for all their efforts.

For the second hour, Gryder had climbed to 4,000 feet msl, and he alternated the power settings between 65 and 75 percent, per the service instruction. Temperatures stabilized and the engine ran smoothly throughout those first 2.5 hours in the air. After the second hour elapsed, he moved the power settings up to full power and watched for any changes. Full-power pressures on newly attached fittings and junctions can wreak havoc if they aren't properly secured, but all felt good to go.

Flying a power-on descent, Gryder landed out of the first flight with a squeak of new tires on asphalt — a success! On the ground, Swords uncowed the airplane and unsafetied the oil filter for testing. He observed nothing of note, and minimal oil consumption to boot. We had a clean bill of health to continue flying.

Let it hunt

With the recommended testing complete, we launched for the Cardinal's first appearance, at the Eastern Cardinal Flyers Online Convention in Batavia, Ohio. The CFO has been a great help throughout the project so far — and since the airplane requires extensive flight at normal cruise power settings to break in the engine, it made sense to make the journey to debut the airplane to this dedicated type club.

The flight took Gryder and I through gorgeous skies (but a frustrating headwind left over from the passing cold front) from Griffin to Batavia, home of Sporty's Pilot Shop, who will be contributing a

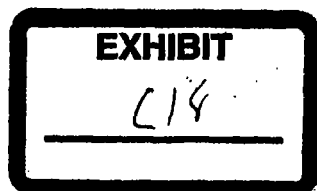
VHF transceiver to the sweepstakes winner — along with the use of their hangar at the CFO convention.

The good news? Even without all the speed fairings (and taking into consideration we're in the heart of the engine break-in period) we saw true airspeeds between 119 and 124 knots at 8,500 feet. We expect that to improve further in the coming weeks. Stay tuned for more reports from the road, and look forward to seeing your Cardinal live at EAA AirVenture from July 23 through 29.

—Julie K. Boatman

E-mail the author at julie.boatman@aopa.org.

AOPA



August 2007 Volume 50 / Number 8

AOPA's Catch-A-Cardinal Sweepstakes: Flight Test

Getting ready for first flight

By Julie K. Boatman

With past AOPA sweepstakes project airplanes, we've taken a flying airplane around the country to various shops for upgrades. Each point on the journey was like adding a bead to a necklace; over the course of the year we'd end up with a string of results that created a show airplane to give away.

For the 2007 sweepstakes, the 1977 Cessna Cardinal we're refurbishing has been disassembled and then brought back together in stages: first avionics and new wiring, then paint, then an overhauled engine added to the airframe.

The last stage before we fly again?

A concert of effort by all our shops on the airport at Griffin, Georgia, tying together firewall forward, airframe, paint, and avionics work to put the Catch-a-Cardinal back into the air.

COUNTDOWN TO TEST FLIGHT

Several areas come together in order to ready an airplane for a major return-to-service flight.

Airframe. The fuel systems, engine controls, cowlings, and control rigging take top priority on the airframe side.

Avionics. A solid check of the electrical system is critical not only to ensure that juice is available for engine start, but also to prevent fire.

Engine. The first time an engine is flown on an airframe tests the hoses and fittings to the utmost, so everything is checked over again for snugness.

Paperwork. All signoffs — including an annual inspection, and ELT and transponder checks — must be entered into the logs before the airplane can legally fly.

Flight plan. The maintenance manual on the airplane should be consulted in concert with any service instructions from the engine and prop manufacturers in creating a test flight plan.

Safety equipment. Depending on the depth of maintenance or restoration performed, onboard equipment can include fire extinguishers, a parachute, and Nomex flight gear — plus a hot Thermos of coffee for pilot emergencies.

It takes a team

At times during the weeks of reassembly, we've had five people working at the same time on various parts of the airplane. Picture this: Scott Collins, owner of Precision Avionics, sits in the pilot seat placing the instruments back in with the panel. A pair of technicians from Air Wrench, Earl Clements and Brian Hubbard, work on rigging the flight controls. Another A&P, Troy Fordham, makes adjustments to the stabilator. Jeff Swords, from Don's Dream Machines, stands at firewall forward, attaching tubing to the carburetor airbox.

Certain tasks can only happen in close coordination with others. For example, the engine installation must be complete and the cowl mounts in place before the upper and lower cowls can be fitted to the airframe. And the cowl must be fitted correctly before the stripes can be masked on for paint. Therefore, Tony Dias, of Advanced Aircraft Refinishers, didn't shoot the cowl's red and gold highlights until the weekend prior to our first flight.

Any owner overseeing maintenance on his airplane should appreciate this: The Catch-A-Cardinal rolled from shop to shop on the field as necessary, with technicians working on it wherever it landed, regardless of their actual shop affiliation. The teamwork this required — and the setting aside of egos and "we've always done it this way" — was incredible, and we can't thank our shops enough for going the extra mile to make it happen.

It takes a mountain of paper

In the meantime, Dan Gryder, of the AvNet (and our field project manager for the airplane this year), and I had to make sense of the reams of paper that came with the airplane: the 8130s or airworthiness tags, the supplemental type certificates, the 8110-3s or designated engineering representative's release forms, and the FAA Form 337s and field approvals.

FEATURED CONTRIBUTORS

LP Aero Plastics

For more than 50 years, LP Aero Plastics has manufactured high-quality windshields and windows for general aviation aircraft. The company holds more than 1,600 PMAs (parts manufacturing approvals) for 500 aircraft, which it provides wholesale to aircraft maintenance and service providers, and parts suppliers. All acrylic produced by LP Aero for certified aircraft is cell-cast, rather than extruded, for less distortion.

Jeff Pfister, marketing director for LP Aero, has preached the acrylic-care gospel for many years, and is happy to help customers achieve long-lasting clarity in their aircraft windows. What makes him cringe? Use of any paper products or ammonia-based cleaners — those are the big no-nos. You can bet that none will ever touch the new "glass" on your Catch-A-Cardinal. Call 800/957-2376 or visit the Web site.

Flight1 Technologies

Jim Rhoads of Flight1 Technologies leads a hard-working team of developers in producing a variety of flight simulator software for desktop PC applications, including Microsoft Flight Simulator. Recently the company made its first foray into instructional simulation software with the release of the Avidyne Student Simulator, an application that allows students and pilots new to the Avidyne Entegra integrated flight deck to practice procedures on their PCs.

Rhoads' team spends months building the aircraft add-ons for Microsoft Flight Simulator that have replicated each of the sweepstakes aircraft over the past three years. This year's Catch-A-Cardinal model debuted at Sun 'n Fun with an early version; the full version will be available for download and your entertainment at EAA AirVenture in Oshkosh in late July. Call 877/727-4568 or visit the Web site.

We developed a system of binders to organize the paperwork, then we set to work on the biggest job: a master squawk list detailing every aspect of work completed on the airplane: Every new part FedEx'ed in from Cessna or Aircraft Spruce & Specialty, every new piece of hardware from Freeman's, every PMAed part we swapped out, every repair made to the airframe

— the squawks total more than 300 items.

We also decided on a way to make sure that everyone's work had at least two other sets of eyes on it — both for our own peace of mind in a restoration this deep, but also for the future winner. So the technician performing the work signed the squawk sheet, then that tech's supervising shop IA (A&P with inspection authority) signed, then our overseeing IA, Todd Thaxton, looked over the project a final time. This three-tiered system was way more than the regs require, but we're going the extra mile to make sure everything is in its place.

It takes a test flight

With the airframe, systems, and avionics ready for initial flight testing, we turned back to the engine for its moment in the sun. The first run of an engine on a given airframe is like a pop quiz before the final exam of test flight. Both generally go well if you're prepared, and we followed Textron Lycoming's Service Instruction 1427B for both.

Swords preoiled the engine, and we fueled the airplane for the first time in seven and a half months for a leak test. Then Jeff's father, Don, added the nine quarts of Phillips 66 mineral oil, donated by local distributor Young Petroleum, to the sump of the Lycoming O-360-A1F6.

WHO'S BEHIND US? AIR WRENCH'S EARL CLEMENTS

With 20 years of service as a technician and maintenance supervisor for a major airline under his belt, Earl Clements incorporated Air Wrench in 2003 to formalize his affinity for general aviation airplanes. Now with five top-notch, commercial-airline-trained A&Ps working at his shop in Griffin, Georgia, Clements is building a reputation for quality work done by quality people.

Air Wrench specializes in twin Cessnas, having recently performed several spar strap ADs (airworthiness directives) on various models — but the crew can handle everything from engine swaps to belly-skin repair, annuals to oil changes.

Says Clements, "This little airport [Griffin] flourishes with business and talent," and Air Wrench is no exception. Contact Clements at 678/770-0850 or visit the Web site.

We rolled the airplane out onto the ramp, and cleared the area for the first start. That Lyc fired right up. Swords ran through the prescribed checks on oil pressure, magneto drop, cylinder head temperature, and prop governor function. After a five-minute run, he shut it down and checked for leaks. Everything had hung on tight during the shock and undulation of the initial run.

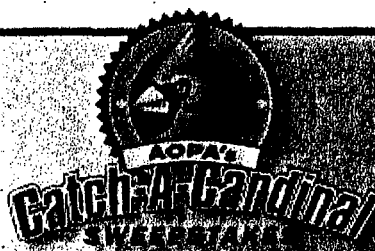
But during a compression check, Don noted that something was not right with the prop: It was clocking incorrectly, stopping at a different position on the clock (corresponding to a point in the compression cycle) than it should. So we called McCauley, Lycoming, and American Propeller, and soon we discovered the cause: The prop flange bushings were set incorrectly, a problem addressed by Lycoming Service Instruction 1098. This catch will save an incredible amount of wear and heartache down the road.

With all systems go, the time came for the first flight of your red, white, and gold bird. As the low scud cleared early one June morning, Gryder started up the engine, felt the controls become positive in his hands, and launched into the air. A crowd of folks who had made that moment happen stood watching — rightfully proud, and not a little relieved.

Time to let it hunt.

E-mail the author at julie.boatman@aopa.org.





Airplane

Project Updates
Photo Gallery
Travel Itinerary
AOPA Pilot Articles

Sweepstakes

Join or Renew to Win
Previous Aircraft
Member Benefits
Official Rules

Equipment

Contributors
Featured Contributors
Archive

Join or Renew Now

June 28

In the Air Again

The Cardinal's first cross-country trip



With a successful return-to-service flight of the 1977 Cessna Cardinal all wrapped up, Field Project Manager Dan Gryder and I packed up the airplane we'd spent the past seven and a half months tearing apart and putting back together, and we took off for Batavia, Ohio.



Why the trip? Because we'd promised to show off the airplane for the Eastern Convention of the Cardinal Flyers Online, taking place last weekend (June 21 through 23) at Batavia's Sporty's/Clermont County Airport. As the name implies, 169 is the home of Sporty's Pilot Shop, founded by Hal Shevers — the Cabella's of the general aviation world and a must-stop for pilots.



The weekend of the CFO convention, hosted by Sporty's, was also a special one for Shevers and his crew: The company has offered free hot dogs for any fly-in visitors on summer Saturdays for years, and this Saturday they estimated they'd serve their 150,000th hot dog. The proud aviator scheduled to dine on said dog? None other than AOPA President Phil Boyer, who planned to speak at the CFO banquet on Saturday night about his experiences as a new private pilot in the late 1960s — flying a brand-new Cessna Cardinal. More on that in a moment.



So how was the trip?

With bungees to secure our cargo, and a stash of drinks and snacks in the cooler, I taxied the Cardinal out from the fuel pumps at Griffin-Spalding County Airport. We'd checked the oil after things up front had cooled down: no significant oil consumption after the first 2.5 hours of our test flying. A good sign.

I lined up on Runway 14, thinking of all the work that had gone into getting the airplane ready for this trip. I didn't want to think too much about the possibility of

EXHIBIT

C19

I CERTIFY THAT THIS IS
A TRUE AND ACCURATE
COPY OF THE ORIGINAL
DOCUMENT.
SIGNED And S. [Signature]

ITEM OF PROOF NO. 13

components in the airplane, and hundreds of new parts and pieces of hardware on the airframe. As aviators, we have to think about how we would handle these things — but we also balance those thoughts with trust in the efforts of our mechanics and our manufacturers, or we'd never leave the ground. Faith in everyone's efforts, and confidence in our abilities as pilots — the combination of the two took us back into the air around 3 p.m. that afternoon. And, as expected, it all worked just fine.

The stabilator felt responsive but heavy, like that of a much larger airplane, as I rotated from the pavement and entered a shallow climb to keep temperatures cool on the hot afternoon. Let's face it — I was as edgy as a cat in a room full of rockers. Gryder's voice, calmly reminding me of a litany of things I knew, helped still all the emotion. I turned back over the field, gaining altitude before rolling out to the north.

We stayed at 2,000 feet to duck under the Atlanta Class B, and we passed to the east of Peachtree-DeKalb airport with a quick call to its tower for traffic. In that lowest layer of air, the Cardinal's groundspeed edged up to 88, then 90 knots, with higher-than-desired temperatures and fuel consumption. Ugh. As soon as we broke out from under the cake, we climbed, first to 4,500 feet msl, then to 6,500 feet, then finally to 8,500 feet over the southern end of the Appalachian mountain chain. Ah — groundspeeds above 100 knots! And cool air! The Cardinal had to paddle hard on its first time out.

With each increase in altitude, we carefully reset mixture and adjusted prop and throttle for the best numbers on the J.P. Instruments EDM 800. I've been flying with an EDM 700 in our Globe Swift, and it's a godsend for keeping track of precise engine parameters. For the Cardinal's break-in regime, we paid close attention to exhaust gas temperatures (EGTs), and cylinder head temperatures (CHTs), as well as oil temperature and pressure, which stayed locked on 185 degrees F and 72 psi. The recommendation from Don Swords, at Don's Dream Machines, was to keep the EGTs close to 1325 degrees F, and the CHTs below 400 degrees F if possible. Because of the EDM 800, I could watch the temperatures on each cylinder fluctuate and settle, in a kind of dance.

We're keeping track of those numbers, plus fuel flows, true airspeeds, and other details in a flight log that I'll update as I fly the Cardinal around the country through 2007.

The arrival

I landed following a long, powered descent on Runway 4 at Batavia around 7 p.m. that evening, after 3.9 tach hours in the air. Shevers and Mark Wiesenbahn and several members of the Sporty's contingent greeted us, and your Cardinal was soon tucked away into a hangar for the night.

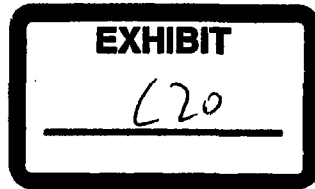
On Saturday, I taxied the Cardinal over to the main ramp at Sporty's, where it shared rock-star parking with the 2007 Sporty's Sweepstakes airplane, a 2007 Cessna 172, and the 2004 AOPA Sweepstakes airplane, the Win A Twin

with the couple hundred folks who flew in for the festivities, and answered a lot of questions about the airplane.

After the banquet Saturday night (during which Boyer related his experiences strapping his own young children into the backseat of a 1968 Cardinal), well fed and well rested, we celebrated the successful debut of the airplane. And early Sunday morning, the Cardinal headed back to Griffin, where more work remains to be completed before its next appearance, at EAA AirVenture at Oshkosh on July 23 through 29.

—Julie K. Boatman

E-mail the author at julie.boatman@aopa.org.



ITEM OF PROOF NO. 11

I CERTIFY THAT THIS IS
A TRUE AND ACCURATE
COPY OF THE ORIGINAL
DOCUMENT.

SIGNED Chad S. [signature]

AOPA's Catch-A-Cardinal Sweepstakes: Time in Type

The Cardinal's first cross-country to greet the flock

By Julie K. Boatman

There are things you just won't know about an airplane until you fly it. When we launched the 1977 Cessna Cardinal we're refurbishing for this year's AOPA sweepstakes on its initial test flight, we made sure every square had been checked. And we followed the instructions Lycoming produces for engine break-in, which called for an initial test flight lasting 2.5 hours. The results would tell the tale.

During that flight, we closely tracked exhaust gas temperatures (EGTs) and cylinder head temperatures (CHTs) on the J.P. Instruments EDM-800, as well as oil pressure and temperature and other system parameters. With the engine running straight mineral oil and so early in the engine's life, we expected temps to fluctuate and perhaps be on the high side, and that played out. But for the most part, with careful mixture and altitude management, we kept EGTs as close as possible to the recommended 1,325 degrees Fahrenheit and CHTs below 400 degrees F.

After an hour at 65-percent power, and the next one running between 65- and 75-percent power, Dan Gryder of The AvNet ran the engine up to full power for the last segment. Upon landing, he taxied over to the hangar, and Jeff Swords of Don's Dream Machines pulled the filter and cut it, in search of metal. Nothing significant. A thorough postflight revealed no anomalies, and we called the flight a success. All the hard work from our shops in Griffin, Georgia — including quality avionics work from Precision Avionics Specialists, Air Wrench's airframe expertise, and Advanced Aircraft Refinishers's final paint touch-ups — had paid off.

At that point, with a healthy local flight, we commenced the next portion of flight testing and engine break-in: cross-country flight at best power cruise. These hours would serve several purposes. First and most important, flight in the cross-country regime is ideal for engine break-in, as it keeps pressures within the cylinders appropriately high for proper seating of the piston rings. Second, we could spend quality time with the new avionics and systems. And last, but not least, we could take the airplane to its public flying debut.

TOOLS FROM THE TRENCHES

5 ways to leverage type club resources

- 1. Get specific.** Find out the best fit for your airplane, and your kind of flying. Do you own one airplane and fly it exclusively? Do you rent other aircraft as well? Although some aircraft have a single type club, there are a few that offer options; the Internet can help you find the choices out there. See the listing of type clubs on AOPA Online.
- 2. Find your parts.** Type clubs are often the best places to go for specialty maintenance advice on a make and model, and many offer parts — they'll link you to parts suppliers or perhaps they manufacture some under parts manufacturer approval.
- 3. Participate in the forums.** Most type clubs offer forums, whether via e-mail or the Web, that allow members to exchange information directly. Along with make and model information, fellow members can offer tips on the best mechanics, shops, and retailers — as well as flying tips, destinations, and other tidbits. Just take any advice with a grain of salt — and consider the source.
- 4. Fly in for a good time.** One of the best things about type clubs is the ability to gather with pilots who own and fly your type or model airplane. The flavor of fly-ins varies widely based on the folks who gather — and you'll often find new friends in the process. You already have something in common, right?

5. Join. You can't reap the benefits if you don't join up! — JKB

So?

First, I'll answer the burning question in your mind: "How does it fly?" Since we started flying the airplane again, that is, hands down, the most frequent question I field from members.

Support from Freeman's Just Plane Hardware allowed us to change out all the hardware in the control systems, and we completely re-rigged them. As a result, the controls feel noticeably tighter than when I flew the airplane last fall. I felt this during my before-takeoff checks, but it became most apparent when rotating on takeoff. I lifted the nosewheel around 65 knots and let it settle into a climb at 90 to 95 knots, keeping a nice low profile for better engine cooling. The stabilator is substantial, and on the whole makes the Cardinal fly like a much larger airplane. The ailerons induce roll like they're on bearings, with a feel more akin to that of a 210 than a 172.

Once settled into cruise, the Cardinal trims out precisely and flies hands-off. The only times I went off course were usually caused by my looking out the side window too long and unwittingly pulling the airplane with me.

FEATURED CONTRIBUTORS

Power Flow Systems

Power Flow Systems, the brainchild of Robin Thomas, branched out from Laminar Flow Systems, an airplane speed-mod company, in 1997. PFS, of Daytona Beach, Florida, creates tuned exhaust systems for light airplanes, starting with the Cessna 172 with an O-320 engine — a mod that increased power by 23.75 horsepower over airplanes equipped with the stock exhaust.

Now the PFS line includes many singles with Lycoming O-320 and O-360 engines. The exhaust system on the Catch-A-Cardinal is a great example, with stainless-steel components and slip joints for improved durability. The distinctive external exhaust stack comes standard; most systems also can be fitted with the "Short Stack" for a smaller external exhaust profile. The PFS is standard equipment on the Diamond DA40; development continues on systems for the Cessna 177RG and aircraft with larger Continental engines, such as the Beechcraft Bonanza. PFS has shipped more than 3,000 systems to date. Call 386/253-8833 or visit the Web site.

J.P. Instruments

J.P. Instruments began in 1986 in Huntington Beach, California. The first product, the Scanner (still available), was an answer to imprecise engine instrumentation found on light aircraft, and it cycled through exhaust gas temperatures and cylinder head temperatures on a simple light-emitting diode display. Next came the EDM-500, predecessor to the EDM-700 series, a multiprobe engine data management system, and fuel flow gauges.

J.P. Instruments has delved into total engine instrumentation with the EDM-930, installed in the Win a Six Piper Cherokee Six (see "A Six to Go," December 2006 *Pilot*). For the Cardinal's cockpit, we chose the EDM-800, with fuel flow indications, and the corresponding EZ Trends engine analysis software and dedicated data port — making it easy for the winner to keep tabs on the Cardinal's engine health for years to come. Call 800/345-4574 or visit the Web site. — JKB

More on climb performance with the new tuned exhaust from Power Flow Systems when we're out of "baby the engine" mode — with high power settings on the agenda for the entire flight, for the sake of cooling we kept climbs shallow.

In cruise at 5,500 feet, at 71-percent power (a power setting of 23 inches manifold pressure and 2,300 rpm), we saw 121 KTAS at 10.9 gallons per hour (we're running well rich of peak, also for cooling purposes). Up at 8,500 feet, and 67-percent power (21 inches mp and 2,400 rpm), we eked out a couple more knots, and even bested book speed: 124 KTAS.

Upon landing, the effect of the Micro AeroDynamics vortex generators was clear. Carefully applied to the tops of the wings, each side of the vertical stabilizer, and bottom of the stabilator, the VGs helped me maintain greater control during my first Cardinal approach and landing in more than seven months. We'll do more testing of the airplane's slow-flight characteristics once the engine's signed off for low-power duty and report on them online and in these pages.

Greeting the flock

Our first cross-country trip took us from Griffin up to Batavia, Ohio, for the Cardinal Flyers Online Eastern Convention, hosted by Sporty's Pilot

Shop: The CFO has worked right alongside us during the reassembly process, providing seemingly endless insight into the Cessna Cardinal, and the minds of Cardinal owners.

WHO'S BEHIND US?

Cardinal Flyer's Online's Paul Millner and Keith and Debbie Peterson

Paul Millner's first airplane was a Cessna Cardinal — a fixed-gear model like our sweeps airplane — and now he flies an RG. Millner sent out an e-mail digest to other Cardinal pilots in 1997, and now he and webmasters Keith and Debbie Peterson not only send out a digest most days of the year, but they also manage the most comprehensive Cardinal information site on the Internet.

Combined, Millner and the Petersons have nearly 45 years of Cardinal experience between them, and it shows. With many photos to illustrate common concerns, sources for parts and maintenance, and forums for members to share ideas and experiences, the CFO is a rich resource for Cardinal pilots — or wannabes. The CFO also hosts several fly-ins across the country and in conjunction with airshows. Visit the Web site for more information.

The CFO fly-in also, as luck would have it, coincided with a major event at Sporty's: The now-famous weekly hot-dog feed at the Sporty's ramp would serve its 150,000th hot dog. And the lucky pilot to receive this special dog? AOPA President Phil Boyer, who flew in to visit the CFO and share his experiences flying a Cardinal as a new pilot in the late 1960s and early 1970s.

The winner of the Cardinal will have several organizations to call upon for assistance, technical help, and camaraderie. All three have donated memberships to the winner of the Catch-A-Cardinal. The CFO membership includes its lively and well-edited e-mail digest and access to its online compendium of ownership information, as well as several fly-ins across the country each year.

The Cessna Pilots Association, started in 1984, has a full-time staff including Executive Director John Frank and four technical specialists — all maintenance technicians, pilots, and aircraft owners. Its online forums see between 200 and 400 posts a day on all things Cessna, and the CPA boasts the largest Cessna technical publications library outside of the factory. The CPA hosts seminars around the country for pilots and maintenance technicians.

The Cessna Owner Organization, which is run by the same folks who operate the Piper Owners Society, has been in the business of owner assistance for more than 33 years. Its magazine, *Cessna Owner*, carries sharp photography and feature articles directed at the Cessna owner. Its annual fly-in, Gateway to Oshkosh, offers the opportunity for Cessna pilots to go head to head with Piper pilots in a golf tournament, among many other special events and seminars.

With so much information at his or her fingertips, and so many good folks to call upon for advice, the winner of the Catch-A-Cardinal will never lack for support through that first year of ownership.

I'm jealous of that lucky pilot already — this is one nice-flying airplane.

E-mail the author at julie.boatman@aopa.org.



© Aircraft Owners and Pilots Association 421 Aviation Way Frederick, MD 21701 Phone 800/872-2672 Fax 301/696-2375

July 12

Coupled

A new approach into Griffin

EXHIBIT

C21

The motto "Developing Aviation Commerce" heads the official airport stationery for Griffin-Spalding County Airport, in Griffin, Georgia.

It's an airport like so many others across the country — a 3,700-foot paved runway with sections of parallel taxiway running almost its full length; a few rows of T-hangars and larger commercial hangars clustered on the northeast side; a self-serve fuel farm on one ramp and the FBO and airport office on the other — and a wide open ramp waiting for airplanes and pilots to stop and stay, whether for business or pleasure.

True to its tagline, the Griffin airport hosts many thriving businesses — some, such as Ron Alexander's Alexander Technical Center that specializes in experimental aircraft builder assistance, attract a nationwide clientele for their talents. But in the past eight months, Griffin's steady hum has grown to a buzz with the activity surrounding this year's AOPA sweepstakes airplane, the 1977 Cessna Cardinal we're refurbishing this time around.

And Griffin has been my home away from home for these months as the people and shops there have transformed the airplane from a moth to a butterfly.

Out of the chrysalis

We launched the airplane a few weeks ago to begin engine break in and avionics and systems wring-out following the long reassembly and upgrade process. Now that we have a flying airplane, we're refining it, bringing the full complement of systems and avionics up to speed and talking to each other like they should be.

One of our primary panel components is the S-Tec Fifty Five X autopilot. Another critical pair of avionics are the dual Garmin GNS 430Ws — state-of-the-art GPS/VHF navigators with WAAS (Wide Area Augmentation System) capability.

After finishing up the installation of the autopilot's servos and electric trim package, Scotty Collins of Precision Avionics called for an operational test flight. It's standard practice following any major avionics work.

This flight would ensure that the Fifty Five X adequately received input from the 430s, including GPSS roll steering — a feature that imports the GPS navigation track from the primary 430 and drives the autopilot in nav mode through any heading changes in the flight plan (such as enroute waypoints, doglegs in airways, procedure-turn entries, and turns onto final approach courses). Without GPSS, you have to physically manipulate the heading bug when the course changes. Seem like a minor thing? Maybe, but it sure feels like magic — and it reduces workload. Anything that reduces workload (especially in a cockpit likely to host single-pilot IFR operations) is a good thing in my book.

I CERTIFY THAT THIS IS
A TRUE AND ACCURATE
COPY OF THE ORIGINAL
DOCUMENT.
SIGNED Chris S. Vign

ITEM OF PROOF NO. 16

Another approach

Griffin lies on the outskirts of the Atlanta metro area, but it feels like a world away from the bustle of the city. I've really enjoyed the small-town atmosphere, and life at the community airport.

But like so many small airports, Griffin's has been challenged by some limitations to its further development — primarily the constrained runway length and lack of an ILS. An NDB approach has served the airport since the decades past when it hosted a busy regional freight airline, which ran Douglas DC-3s (and even a DC-4 Carvair — a monster of an airplane!) in round-the-clock operations. Several DC-3s still call Griffin home — there are four of them parked in various spots around the airport, with plenty more room to spare.

A little more than 10 years ago, the first of two GPS approaches went in, and those have served local pilots and transients well, bringing minimums on the GPS 32 approach down to 304 feet above the airport elevation. It's tough, though, to get corporations to base their aircraft or conduct business flights to an airport without a 5,000-foot runway and a precision approach. We're on the cusp, however, of something great when you throw WAAS into the equation.

All of a sudden, an airport like Griffin has approaches to either runway end with WAAS-generated glideslopes. With a couple of attainable airport improvements, 6A2 could get an LPV (localizer performance with vertical guidance) approach, which would bring precision approach minimums to the airport, getting pilots 100 feet lower — a boon in the early-morning foggy conditions that often persist while this Georgia town still sleeps. Given the fact that many turboprop aircraft can utilize the current runway length (and new very light jets are on the horizon), you now have an equation for perpetuating commerce, and bringing more success into places like Griffin.

Proof in the procedure

We could, however, see the first benefits of WAAS in our test flight of the Fifty Five X and 430Ws. On Thursday afternoon, Dan Gryder, our field project manager for the Catch-A-Cardinal, who has worked tirelessly throughout the project coordinating the efforts at Griffin, conducted the flight. Gryder sent me text messages keeping me posted on their progress, capped with one final assessment: "Perfect."

"We took off this afternoon and performed some initial autopilot test functions in the local Griffin area, testing roll rates, hook-ups, disconnects, elevator trim — the entire Garmin/S-Tec package," said Gryder. "This aircraft is a dream come true to fly; this package is something that you just have to see to believe."

"In approach mode, your well endowed Cardinal captured the WAAS-based pseudo glideslope at about 8 miles out, and Scotty Collins and I watched the elevator trim wheel start moving all on its own. This is kind of exciting as this portion of the flight was flown completely hands off. The airplane had already captured the GPS inbound course and locked on to it. The only functions we had to perform were setting the flaps to the approach setting, reducing the power to maintain 90 KIAS, and running the before landing checklist."

"Collins, also a local fireman, was with me for this ride, and we were both wide-eyed, watching the magic. This simple Cessna 177B shot what looks for all the world like a hands-off ILS to a small town airport in America that has no ILS. It's not like there's free money out there to install an ILS everyday. But our approach worked. Now if we could do it, anyone could do it just the same."

"The airplane really could have flown on the autopilot almost all the way to touchdown, but for safety reasons we disconnected it at about 50 feet, still right on course, and exactly centered above the numbers of Runway 32."

Just like the GPS signal hides a WAAS-colored gem in this pseudo glideslope, an airport can look sleepy on the outside yet buzz with potential. At Griffin, that buzz comes from shops like Precision Avionics, Don's Dream Machines, Air Wrench, and Freeman's Just Plane Hardware, and people like Danny Rexroad, Tony Dias of Advanced Aircraft Refinishers, Ron Powers of Atlanta Air Recovery & Storage, airport manager Robert Mohl, and city manager Kenny Smith — really all the folks at 6A2 that have come together to help develop aviation commerce, and entice more pilots and business owners to make their own approach into Griffin — and keep them there.

—Julie K. Boatman

E-mail the author at julie.boatman@aopa.org.

August 9

On Tour**The Cardinal flies through the heartland**

After the big summer airshow at Oshkosh, our next goal with the 2007 sweepstakes airplane was to make it as beautiful on the inside as it is on the outside. We'd been flying the 1977 Cessna Cardinal with only a basic interior — the required front seats — and frankly, it's a little noisy that way. I've been thankful for my Bose X headsets, four of which will come with the airplane for the lucky winner.

The place where we'd get the interior restored? Vantage Plane Plastics and Aerodesigns, out in Alva, Oklahoma. Field Project Manager Dan Gryder of The AvNet and I looked at the charts and realized that we could really show off the airplane along the way from Wisconsin to north central Oklahoma if we made a few extra stops along the way.

Get out the map

In fact, Gryder and I both hail from the central states — we know all the jokes, have had our home states confused with Ohio and Idaho, and grew up eating a lot less corn than you'd think. Okay, well, it's good corn.

We know that a lot of good people and active pilots who live in the wilds of Illinois, Iowa, Missouri, and Kansas treasure their uncrowded skies and healthy grass strips. We also know not everyone can make it to an airshow, so we decided to take the airplane to them, stopping along the way to say hello for an hour or two.

Departure to Rock Falls

We packed up the Cardinal from its temporary digs at Casa de Aero, a private airpark between Chicago and Rockford, Illinois, at the home of Keith and Debbie Peterson of the Cardinal Flyers Online. Keith had actually polished up the airplane a bit, ridding it of some show dust, and Debbie sent us off with home-baked muffins. We can't thank them enough for providing shelter for the airplane's short vacation.

Thunderstorms had blazed through the area just hours before, leaving mist and some patchy scud at 800 feet agl, but the sun shone through, fighting to break it all up. The moment it succeeded in producing good VFR, we launched southwestward on the first leg of our journey, 55 nm away to Whiteside County Airport, in Rock Falls, Illinois. It was my leg — and a memorable one for me, since my long cross-country flight in preparation for my instrument rating back in 1989 included a stop at Whiteside County. I wouldn't have to shoot an approach this time.

At M & M Aviation, which provides FBO services and a home for Airport Manager Mike Dowell, we parked and ordered up fuel. And we were soon joined by members of the local "old pilot's association," a group of regulars who come out to a member's hangar every Sunday morning to swap stories. This Sunday, they swarmed around the airplane before adjourning to the air conditioning.

I CERTIFY THAT THIS IS
A TRUE AND ACCURATE
COPY OF THE ORIGINAL
DOCUMENT.
SIGNED Andy S. Smith

ITEM OF PROOF NO. 18

We also had the first of our celebrity visits for the day — Gryder's parents, Jim and Doreen, came down from Sterling to see the airplane. Throughout the course of the project, I have never once questioned Dan's parentage, but it sure was nice to meet the people responsible.

Rock Falls to Iowa City

With full tanks, coffee, and a doughnut or two, we taxied out to Runway 25. Gryder took this leg, making an historic takeoff — Whiteside County was the airport at which he'd taken his introductory flight back in the early 70s, and made his first solo flight in 1979.

After a quick circle over town, we headed for the Mississippi river. Using the Garmin GNS 430W navigators in the panel to their best advantage, we pointed the airplane downriver for a moment to join the state line, in order to fly with one wing in Illinois and one wing in Iowa. The hardest part of this exercise was timing the digital picture to capture the moment when the airplane bisected the line.

Inbound to Iowa City, Gryder loaded the GPS approach to Runway 25 and followed it in at traffic pattern altitude before circling to enter downwind for the runway. From this vantage point, I could pick out the old United hangar — Iowa City is home to one of the last historic "taxi-through" hangars used by the early airlines in the open-cockpit days. At least for a while. This structure is scheduled for removal, since technically it will lie in the clear zone for Runway 25 once the runway extension underway is complete. The price of progress. Efforts to save it have met with financial obstacles (it isn't cheap to move a hangar).

We pulled up onto the ramp in front of the terminal building (where the Jet Air FBO is located) to a small crowd, including Airport Support Network volunteer Jay Honeck, and his wife, Mary. The Honecks own and operate the Alexis Park Inn, an aviation theme hotel adjacent to the airport. As kids carefully crawled in and out of the airplane, we caught up on the latest local news, and talked with a reporter from the Iowa City Press-Citizen. We also took the opportunity to visit the University of Iowa's Operator Performance Laboratory (OPL) aviation facility, which is currently hosting simulators and equipment for several studies to improve the pilot and flight control and management system interface.

Iowa City to Green Castle

After another doughnut (there's a theme here), we piled back into the airplane for a short trip over to Oxford, Iowa, to visit a very special club.

Green Castle Aero Club lives at a private airport just outside the surface area of the Cedar Rapids Class C airspace, and it's thriving with about 200 members. I learned to fly here in the late 1980s, taking my intro flight here on June 15, 1987 — yes, 20 years ago — and soloing here in October that year. My first instructor, Don Nelson, celebrates his 80th birthday later this year, having soloed more than 650 students in his career. Since it was nearly on the way, I hope no one minds that I stopped in with the Catch-A-Cardinal to pay my respects.

About 20 pilots and AOPA members (along with several members of my family) had gathered on this Sunday afternoon to greet the Cardinal and check it out. No one had been able to get away in order to see the airplane at Oshkosh, so the visit was very much appreciated.

The stop also allowed me a concrete check of the Cardinal's performance: The runway at Green Castle measures 2,600 feet (paved — there's another 1,400 feet of grass). On takeoff, with 10 degrees of flaps, I rotated around 65 knots after a roll of about 1,200 feet. We easily cleared the trees on the far end. Not bad for a hot summer afternoon, only a couple hundred pounds shy of maximum gross weight.

Iowa City to Bloomfield

The late afternoon could have been hotter, and could have been bumpier, given that it was August in Iowa. We still faced headwinds — the entire trip, in fact, was into the wind — so we stayed low, crossing the countryside at 1,000 feet agl. The Chicago sectional chart stayed out, and we compared its roster of obstacles to those shown on the Garmin GMX 200 and the 430s. The obstacle warning flashed from time to time, alerting us to upcoming obstructions less than 1,000 feet (yellow) and 100 feet (red) from our altitude and flight path. With two sets of eyeballs looking out the windows plus all the technology (and the trusty chart), it really would have been my own darned fault if I hit anything. Truly this is the best altitude, though, at which to view the land. Judging by the green, we determined it was a good year for the corn and beans.

Gryder loaded the RNAV (GPS) approach to Runway 36 at Bloomfield, Iowa, for a test of the airplane's awesome capability to navigate and track a "glideslope" to nearly any spot of pavement on the map. The Bloomfield Municipal Airport bases about 15 airplanes, and fuel sales are few and far between — though Heartland Aviation (641/664-1255) does a decent maintenance business. Yet for minimal cost, because of its GPS approach and the new capability of WAAS-enabled GPS navigators, we set up the approach and the S-Tec Fifty Five X captured the course and then the box-generated glideslope. With a notch of flaps and some power adjustment, I had the Cardinal locked onto a stabilized approach to this 3,400-foot-long, 50-foot-wide strip just 10 miles north of the Missouri state line — no ILS required.

Bloomfield to Olathe

The next morning, Duke Ball fueled up the Cardinal's long-range tanks at a special hometown rate, and Gryder and I headed southwest once more. A peppering of thunderstorms littered the direct route, which we avoided by using our eyes, and backing up that information with the XM WX datalink weather shown on the Garmin GPSMap 496 we kept handy for the trip. The Cardinal has ADS-B (automatic dependent surveillance-broadcast), but in this part of the country the flight information service isn't yet available.

We crossed over the Missouri river, and over Kansas City. The Cardinal took on a brave aspect as it flew past Kauffman Stadium, home of the Kansas City Royals baseball team (the cardinal on the airplane's tail reminds me of the St. Louis Cardinals mascot, Fredbird), and I recalled the "I-70" World Series in 1985, which pitted the two teams in a cross-state rivalry.

Landing at Olathe's New Century Aircenter, we were greeted by more local pilots and families, who once again had not been able to make it to the big show, and were so pleased to see the airplane in person. Scott Smith and Dave Brown from Garmin also came out to meet us and take us for some Kansas City barbeque. I don't normally eat a big lunch while flying in the heat, but I made an exception for these ribs. Executive Beechcraft handled the airplane arrangements nicely as well.

We took a quick tour of the Garmin facilities — they manufacture the aviation panel-mount systems at the Olathe facility, and the production line is fascinating. We hope to give you an

inside look at this plant in the future. I can honestly say that I felt really good about the boxes I'm flying behind in your Cardinal after seeing the quality control in place at Garmin.

Olathe to Wichita

Once more, we took off into headwinds, and chose the low route for our leg to Wichita, following Interstate 35 for a good bit of the way. Bumping along at about 95 knots over the ground (and 107 knots true airspeed at 22 inches and 2350 rpm at 2,500 feet msl, about 66 percent power, with the cowl flaps wide open) gave us plenty of time to contemplate the homecoming we were about to witness.

A little more than 30 years ago, N18729, serial number 17702550, now AOPA's Cardinal 177B, left Cessna's Pawnee manufacturing facility in Wichita. After landing on Runway 19R at Mid-Continent Airport, I taxied the Cardinal, now N778RD, toward Cessna's Citation Service Center, a building now known as "The Hex," a building that was built in the midst of the Cardinal decade at Cessna (1968 to 1978). We had an audience — a proud contingent of Cessna employees greeted us and welcomed the airplane as soon as I shut down.

Retired engineer Joe Latas worked on the Cardinal's aerodynamics back in the late 1960s. Latas walked us through the changes to the horizontal stabilator, including the addition of the slots to rid the airplane of the undesirable pitch over it experienced during landings when first produced. To prove how loyal Cessna employees tend to be, Latas retired with more than **50 years** at the company under his new gold watch. Current engineers on Cessna's Next Generation Piston project were also on hand to comment on the similarities — and substantial differences — between the Cardinal and its future kin.

Many thanks to the people at Cessna who made this homecoming possible — including Pia Bergqvist, Robert Stangarone, and Lori Lucion, not to mention Cessna President, Chairman, and CEO Jack Pelton, without whom our refurbishment would not have been possible. It was particularly gratifying to bring the Cardinal back to its original roost.

Once the last of the Cessnans returned to the job, we taxied the airplane over to Yingling Aviation, another Wichita institution with long historical ties to the Cardinal. With 60 years in operation, Yingling has sold and serviced Cessnas for a long time with care and attention to detail. President Lynn Nichols personally attended to our accommodations at the FBO for the night — and he had a special event in mind. The Air Safety Foundation hosts safety seminars across the country, and one just happened to be on the books for that night. So the Catch-A-Cardinal was the backdrop for the seminar, attended by about 200 local pilots.

Wichita to Alva

One last leg left for the next morning, Tuesday, August 7. For this short leg, Gryder went on home to Atlanta, and I was accompanied by my husband and favorite co-pilot, Mike Filucci. Being an airline captain, Mike doesn't get to see the country at 1,000 feet agl as much as he'd like to, so he grabs any opportunity he can to join me on trips.

On departure from Wichita, the controller recognized the bird. "Is that the AOPA sweepstakes Cardinal?" he asked. "You can just turn around and leave that right here!" I thought about it for a second, thinking I might get priority handling, but I decided to head on to the interior shop. Besides, it wouldn't be fair to all of the rest of the AOPA members, right?

Yes, we fought headwinds again, but still covered the 80 nm from Wichita to Alva in about 45 minutes with judicious altitude selection. The approach into Alva offered up the first real crosswind of the trip, which I thoroughly enjoyed. The Cardinal handles so nicely that slips and crabs feel even more fantastic than usual.

The assembly greeting us at Alva included the local press, and a contingent of local pilots, plus key people from Vantage Plane Plastics and Aerodesigns. Jim Curtiss and Tyson Tucker, of Plane Plastics, and Janelle and Lisa Hammer, of Aerodesigns, stopped long enough for a picture in front of the airplane, and then hosted us on a tour of the plant and installation facilities.

Stay tuned...this Cardinal is going to undergo quite a transformation in the next few weeks.

—Julie K. Boatman

E-mail the author at julie.boatman@aopa.org.

November 1

South Once More

We begin finishing touches on the Cardinal

A year ago—November 3, actually—we started tearing into the 1977 Cessna Cardinal that we're refurbishing for this year's sweepstakes.

And now the airplane is back in Griffin, Georgia, where the work began.

A laundry list of final items to complete, our team is still working hard on this project, and that's a testament to its dedication. So what is there left to do? If you saw the airplane at AOPA Expo last month, you might not have noticed much left. But we want this airplane to be as perfect as possible for our winner—that could be you.

The trip south

After a week's rest following the show, Dan Gryder, of the AvNet and our field project manager, came up to fly the airplane back down to Griffin. We've been watching closely the airplane's performance since the wheel pants were installed just before the show, and between us, Gryder has had the best luck—okay, well, we had a dynamic balance performed on the propeller along the way—and the result is paying off. Cruising at 4,500 to 5,500 feet, the Cardinal turns in 128 to 130 KTAS at 75-percent power. Not bad! That's a 6-knot increase over the top true airspeed at that altitude we saw on the ferry flight last year in the pre-refurbishment airplane.

A lot of the time, when an airplane gets a new paint application, it picks up speed just from the drag reduction fresh, smooth paint brings. In addition to the new paint, Advanced Aircraft Refinishers also used the same lap sealing process it does on its regular jet customers—another drag reduction step.

As for other modifications to the airplane that helped bring up the speed, we installed the tuned exhaust from Power Flow Systems, and a tailcone fairing from Maple Leaf Aviation/RS Designs. Some say that the Micro AeroDynamics vortex generators can take off a knot—but we'll never know for sure, since all of these modifications were performed prior to our first flight with the souped-up airplane in June.

All we know for sure is that we came out with a faster airplane.

The project continues

So now that the airplane's back in Georgia for the final time, we have a list of items to address before we consider it ready to deliver to the lucky winner.

We started with the airplane back at Don's Dream Machines, where Jeff Swords uncowed the airplane and took a close look at all the firewall-forward connections to ensure everything was hanging together well. With a little more than 65 hours on the airplane since the refurbishment, and four hours since the dynamic balance, the powerplant is humming along.

ITEM OF PROOF NO. 21

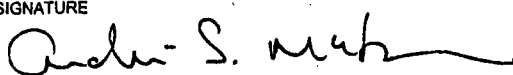
Next, we have moved the airplane over to Air Wrench for airframe touch-ups, after which it will go to Precision Avionics for final avionics items and final hookup of the essential bus. David Chadwick, of DC Aerospace, is the designated engineering representative (DER) heading up the engineering and paperwork effort for us. More on the process behind getting the blessing on the essential bus in next week's update.

—Julie K. Boatman

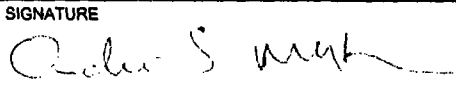
E-mail the author at julie.boatman@aopa.org.




Dan Gryder at the controls of the Cardinal, enjoying the nearly finished airplane, the product of a lot of his efforts.


RECORD OF <input type="checkbox"/> VISIT <input type="checkbox"/> CONFERENCE OR <input checked="" type="checkbox"/> TELEPHONE CALL		TIME 11:00 AM	DATE 05/05/2008				
NAME (S) OF PERSON (S) CONTACTED OR IN CONFERENCE AND LOCATION Tracey Potter @ HAS		ROUTING <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">SYMBOL</td> <td style="width:50%;">INITIALS</td> </tr> <tr> <td> </td> <td> </td> </tr> </table>		SYMBOL	INITIALS		
SYMBOL	INITIALS						
SUBJECT AOPA CE-177 Issues (N778RD)		<div style="border: 2px solid black; padding: 5px; text-align: center;"> EXHIBIT <u>2</u> C25 </div>					
DIGEST Tracey Potter call to inform me of his meeting with Mr. Steve Harris of AOPA scheduled for 05/06/08. He stated that the AOPA is aware of their mistakes in handling the paperwork with N778RD (formerly N18729) and he hopes to educate them a bit on how things should be handled. He also told me they (HAS) have a \$22K (and counting) bill for the AOPA in order to fix all the problems found with the aircraft. Some of the major problems are outlined as follows:							
<ol style="list-style-type: none"> 1. Approximately 8 missing 337s (Field Approvals and STCs) 2. Missing rivets in the floor boards 3. Wrong prop governor installed 4. Aircraft out-of-annual 							
CONCLUSION, ACTION TAKEN, OR REQUIRED							
ITEM OF PROOF NO. <u>2</u>							
DATE 05/05/2008	TITLE ASI, BAL-R500	SIGNATURE 					


RECORD OF <input type="checkbox"/> VISIT <input type="checkbox"/> CONFERENCE OR <input checked="" type="checkbox"/> TELEPHONE CALL		TIME 9:55 AM	DATE 05/19/2008												
NAME (S) OF PERSON (S) CONTACTED OR IN CONFERENCE AND LOCATION Dan Gryder		ROUTING <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%; padding: 2px;">SYMBOL</th> <th style="width: 50%; padding: 2px;">INITIALS</th> </tr> <tr><td style="height: 20px;"></td><td></td></tr> <tr><td style="height: 20px;"></td><td></td></tr> <tr><td style="height: 20px;"></td><td></td></tr> <tr><td style="height: 20px;"></td><td></td></tr> <tr><td style="height: 20px;"></td><td></td></tr> </table>		SYMBOL	INITIALS										
SYMBOL	INITIALS														
SUBJECT N778RD															
DIGEST I spoke with Mr. Gryder to determine what maintenance records he may still have in his possession. Mr. Gryder was extremely uncooperative and refused to answer any questions regarding N778RD. I asked if he knew what maintenance was performed by which shops and he replied, "Yes, but I don't have three days to tell you all about it." After several other attempts to gain information, I thanked him for his time and advised him I would have to contact my regional office with that information.															
<div style="position: relative; width: 100%; height: 100%;"> <div style="position: absolute; top: 10px; right: 10px; border: 2px solid black; padding: 5px; text-align: center;"> EXHIBIT <u>26</u> </div> </div>															
CONCLUSION, ACTION TAKEN, OR REQUIRED															
<div style="position: relative; width: 100%; height: 100%;"> <div style="position: absolute; bottom: 10px; right: 10px; font-size: 1.2em;"> ITEM OF PROOF NO. <u>5</u> </div> </div>															
DATE 05/19/2008	TITLE ACT	SIGNATURE 													

RECORD OF <input type="checkbox"/> VISIT <input type="checkbox"/> CONFERENCE OR <input checked="" type="checkbox"/> TELEPHONE CALL		TIME 11:00 AM	DATE 05/19/2008												
NAME (S) OF PERSON (S) CONTACTED OR IN CONFERENCE AND LOCATION Earl Clements (Airwrench)		ROUTING <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%; padding: 2px;">SYMBOL</th> <th style="width: 50%; padding: 2px;">INITIALS</th> </tr> <tr><td style="height: 20px;"></td><td></td></tr> <tr><td style="height: 20px;"></td><td></td></tr> <tr><td style="height: 20px;"></td><td></td></tr> <tr><td style="height: 20px;"></td><td></td></tr> <tr><td style="height: 20px;"></td><td></td></tr> </table>		SYMBOL	INITIALS										
SYMBOL	INITIALS														
SUBJECT N778RD															
DIGEST I spoke to Mr. Earl Clements. He admitted his shop changed the windows, removed and replaced the floor boards and performed other airframe maintenance. He also stated that he raised concerns with Mr. Dan Gryder regarding the log books and sign-offs. He claims Mr. Gryder told him that another IA was completing all the paper work for the project, to include: sign-offs, 337's, field approvals, etc.... Mr. Clements also stated that Mr. Gryder did bring some pages to him for signatures and he did in fact sign them. Further, Mr. Clements stated that this entire project was a mistake and he was just trying to help out the AOPA with some free labor and didn't want to get phone calls from FSDOs regarding his work.....etc..... Mr. Clements was very cooperative and offered to sign off any work they accomplished if the aircraft was returned to Griffin and he could look things over prior to signing.															
<div style="border: 2px solid black; padding: 5px; display: inline-block;"> EXHIBIT <u>627</u> </div>															
CONCLUSION, ACTION TAKEN, OR REQUIRED															
ITEM OF PROOF NO. <u>6</u>															
DATE 05/19/2008	TITLE ASJ	SIGNATURE 													

RECORD OF <input type="checkbox"/> VISIT <input type="checkbox"/> CONFERENCE OR <input checked="" type="checkbox"/> TELEPHONE CALL		TIME 4:00 PM	DATE 05/19/2008												
NAME (S) OF PERSON (S) CONTACTED OR IN CONFERENCE AND LOCATION Julie Filucci		ROUTING <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width:50%;">SYMBOL</th> <th style="width:50%;">INITIALS</th> </tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>		SYMBOL	INITIALS										
SYMBOL	INITIALS														
SUBJECT N778RD															
DIGEST I spoke with Ms. Julie Filucci. She admitted that both she and Dan Gryder flew the aircraft on several occasions: June 21-23, 2007, July 23-39, 2007, August 5-7, 2007. During the flights, she was under the impression that the aircraft was both in annual and had all the maintenance properly documented. She confirmed Jeff Swords' account of his sticky which contained all his maintenance entries and that it was turned over to Dan Gryder. She also stated the following work was performed by the following shops: Sarasota: Complete rewire, antenna installation, pulse light installation, aft avionics rack fab and install. Precision Avionics: All panel avionics installations Don's Dream Machines: All Engine, Prop and exhaust work. Airwrench: completely reassembled the aircraft, landing gear, wings, etc..., reinstalled the interior. Dan Rexroad: completely disassembled the aircraft. Todd Thaxton: annual inspection. Julie also stated that it was her understanding that the maintenance personnel were told that they would be provided a book containing all the maintenance performed and they would then sign all their individual items. However, that never happened and Mr. Thaxton signed for everyone's work (which he denies). She also stated that she was unfamiliar with the required paperwork involved with completing an STC or field approval and in so much never requested the 337 for any STCed installations.															
CONCLUSION, ACTION TAKEN, OR REQUIRED		<div style="border: 2px solid black; padding: 5px; text-align: center;"> EXHIBIT 628 </div>													
ITEM OF PROOF NO. <u>7</u>															
DATE 05/19/2008	TITLE FSI	SIGNATURE 													

RECORD OF		<input type="checkbox"/> VISIT	<input type="checkbox"/> CONFERENCE OR	<input checked="" type="checkbox"/> TELEPHONE CALL	TIME 10:00 AM	DATE 06/12/2008	
NAME (S) OF PERSON (S) CONTACTED OR IN CONFERENCE AND LOCATION Jeff Swords						ROUTING	
						SYMBOL	INITIALS
SUBJECT N778RD							
DIGEST I spoke with Mr. Jeff Swords concerning the LOI he received regarding N778RD. Mr. Swords informed me that he had prepared a written statement in response to the LOI and would be mailing it today. I questioned Mr. Swords as to whether he had ever flown the aircraft during the refurbishment process. He responded that Mr. Dan Gryder had taken him for a ride in the aircraft after he (Mr. Swords) had preformed an oil change. I requested that Mr. Swords include a statement detailing the event in his letter responding to the LOI.							
CONCLUSION, ACTION TAKEN, OR REQUIRED							
DATE 06/13/2008						TITLE ASI	
						SIGNATURE John S. [Signature]	

RECORD OF		<input type="checkbox"/> VISIT	<input type="checkbox"/> CONFERENCE OR	<input checked="" type="checkbox"/> TELEPHONE CALL	TIME 11:20 AM	DATE 05/19/2008	
NAME (S) OF PERSON (S) CONTACTED OR IN CONFERENCE AND LOCATION Todd Thaxton						ROUTING	
						SYMBOL	INITIALS
SUBJECT N778RD							
DIGEST I spoke with Mr. Todd Thaxton. He informed me that his sole responsibility for N778RD was to perform and annual inspection. Further, he stated that he did perform the annual and provided Mr. Dan Gryder with a sticky which detailed his work.							
<div style="border: 2px solid black; padding: 5px; text-align: center;">EXHIBIT C31</div>							
CONCLUSION, ACTION TAKEN, OR REQUIRED							
DATE 05/19/2008	TITLE ASI				SIGNATURE 		

RECORD OF <input type="checkbox"/> VISIT <input type="checkbox"/> CONFERENCE OR <input checked="" type="checkbox"/> TELEPHONE CALL		TIME 10:15 AM	DATE 06/10/2008
NAME (S) OF PERSON (S) CONTACTED OR IN CONFERENCE AND LOCATION Kirk @ Sarasota Avionics (SRQ)		ROUTING	
941-360-6877		SYMBOL	INITIALS
SUBJECT N778RD			
<div style="border: 2px solid black; padding: 5px; display: inline-block; transform: rotate(-2deg);">EXHIBIT C32</div>			
DIGEST I spoke with Kirk regarding the work SRQ performed on N778RD. He stated that they did not do a log book entry or complete any 337's for their work. In addition, he admitted that SRQ did install the DER approved avionics racks in the rear of the aircraft and forgot to document that work. According to Kirk, Mr. Dan Gryder requested that SRQ wait and do it all the 337's and log book entries at one time so everything was uniform and neat.			
CONCLUSION, ACTION TAKEN, OR REQUIRED			
ITEM OF PROOF NO. <u>7</u>			
DATE 06/10/2008	TITLE AST	SIGNATURE 	

EXHIBITC33**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

A13CE
Revision 26
Cessna
177
177A
177B
October 24, 2007

TYPE CERTIFICATE DATA SHEET NO. A13CE

"WARNING: Use of alcohol-based fuels can cause serious performance degradation and Fuel system component damage, and is therefore prohibited on Cessna airplanes

This data sheet which is part of Type Certificate No. A13CE prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder Cessna Aircraft Company
P O Box 7704
Wichita KS 67277

I. Model 177, Cardinal, 4 PCLM (Normal Category), approved February 16, 1967
2 PCLM (Utility Category), approved August 8, 1967

Engine Lycoming O-320-E2D

*Fuel 80/87 minimum grade aviation gasoline

*Engine limits For all operations, 2700 rpm (150 hp)

Propeller and
propeller limits McCauley 1C172/TM
Diameter: not over 76 in., not under 74 in.
Static rpm at maximum permissible throttle setting:
not over 2360, not under 2260
No additional tolerance permitted.

*Airspeed limits
(CAS) Never exceed 185 mph (160 knots)
Maximum structural cruising 145 mph (125 knots)
Maneuvering 113 mph (98 knots)
Flaps extended 105 mph (91 knots)

C.G. range Normal category:
(+101.0) to (+114.5) at 2000 lbs. or less
(+105.5) to (+114.5) at 2350 lbs.
Straight line variation between points given.
Utility category:
(+101.0) to (+109.9) at 2000 lbs. or less
(+103.6) to (+109.0) at 2200 lbs.

Empty weight C.G. range None

*Maximum weight Normal category: 2350 lbs.
Utility category: 2200 lbs.

Number of seats 4 (2 at sta. +93.0, 2 at sta. +134.0)

Maximum baggage 120 lbs. (+162.0)

Fuel capacity 49 gal. (two 24.5 gal. fuel bays in wing at sta. +112, 48 gal. usable)
See Note 1 for data on system fuel.

Page No.	1	2	3	4	5	6	7	8	9	10	11
Rev. No.	26	22	26	23	20	20	20	25	21	23	24

I. Model 177, Cardinal. 4 PCLM (Normal Category), 2 PCLM (Utility Category) (cont'd)

Oil capacity	8 qt. (+44) (2 qt. unusable) <i>See Note 1 for data on undrainable oil.</i>		
Control surface movements	Wing flaps		Down $30^{\circ} \pm 2^{\circ}$
	Aileron	Up $20^{\circ} \pm 2^{\circ}$	Down $15^{\circ} \pm 2^{\circ}$
	Stabilator	Up $20^{\circ} \pm 1^{\circ}$	Down $5^{\circ} \pm 1^{\circ}$
	Stabilator tab	Up $2^{\circ} \pm 1^{\circ}$	Down $7^{\circ} \pm 1^{\circ}$
	Rudder (measured perpendicularly to hinge line)	Right $24^{\circ} \pm 1^{\circ}$	Left $24^{\circ} \pm 1^{\circ}$
Serial numbers eligible	661, 17700001 and 17700003 through 17701164		

**II. Model 177A, Cardinal. 4 PCLM (Normal Category), approved June 22, 1968
2 PCLM (Utility Category), approved June 28, 1968**

Engine	Lycoming O-360-A2F		
*Fuel	100/130 minimum grade aviation gasoline		
*Engine limits	For all operations, 2700 rpm (180 hp)		
Propeller and propeller limits	McCauley 1A170/EFA Diameter: not over 76 in., not under 74 in. Static rpm, at maximum permissible throttle setting: not over 2460, not under 2360 No additional tolerance permitted		
*Airspeed limits (CAS)	Never exceed	185 mph (160 knots)	
	Maximum structural cruising	150 mph (130 knots)	
	Maneuvering	117 mph (101 knots)	
	Flaps extended	105 mph (91 knots)	
C.G. range	Normal category: (+101.0) to (+114.5) at 2000 lbs. or less (+107.4) to (+114.5) at 2500 lbs. Straight line variation between points given Utility category: (+101.0) to (+109.0) at 2000 lbs. or less (+103.6) to (+109.0) at 2200 lbs.		
Empty weight C.G. range	None		
*Maximum weight	Normal category	2500 lbs.	
	Utility category	2200 lbs.	
Number of seats	4 (2 at sta. +93.0, 2 at sta. +134.0)		
Maximum baggage	120 lbs. (+162.0)		
Fuel capacity	40 gal. (two 24.5 gal.) fuel bays in wing at sta. +112; 48 gal. usable) See Note 1 for data on system fuel.		
Oil capacity	8 qt. (+44) (2 qt. unusable) See Note 1 for data on undrainable oil.		

II. Model 177A, Cardinal, 4 PCLM (Normal Category), 2 PCLM (Utility Category) (cont'd)

Control surface movements	Wing flaps			Down	30° ± 2°	
	Aileron	Up	20° ± 2°	Down	15° ± 2°	
		Up	20° ± 1°	Down	5° ± 1°	
	Stabilator		Up	6° + 2°, -0°	Down	12° + 0°, -2°
	Stabilator tab		Up	6° + 2°, -0°	Down	12° + 0°, -2°
	Rudder (measured perpendicularly to hinge line)		Right	24° ± 1°	Left	24° ± 1°

Serial numbers eligible 17701165 through 17701370

III. Model 177B, Cardinal, 4 PCLM (Normal Category), approved July 28, 1969
2 PCLM (Utility Category), approved July 28, 1969

Engine	Lycoming O-360-A1F6 or O-360-A1F6D	
*Fuel	91/96 or 100/130 grade aviation gasoline (S/N 17701371 through 17702522) 100LL/100 grade aviation gasoline (S/N 17702523 and on)	
*Engine limits	For all operations, 2700 rpm (180 hp)	
Propeller and propeller limits	(1) (a) McCauley 2D34C202/82PA-6 Diameter: not over 76 in., not under 75 in. Pitch setting at 30 in. sta.: low 12.1°, high 26.0° No additional tolerance permitted.	
	(b) Cessna spinner 0752637	
	(c) McCauley hydraulic governor C290D2/T11 or C290D3/T11	
	(d) Woodward hydraulic governor C210460	
	(2) (a) McCauley B2D34C206/78TA-0 Diameter: not over 78 in., not under 74 in. Pitch setting at 30 in. sta.: low 11.6°, high 27.5° No additional tolerance permitted.	
	(b) Cessna spinner 0752637	
	(c) McCauley hydraulic governor C290D2/T11 or C290D3/T11	
	(d) Woodward hydraulic governor C210460	
	(3) (a) McCauley B2D34C208/82PA-6 or B2D34C211/82 PCA-6 Diameter: not over 76 in., not under 75 in. Pitch setting at 30 in. sta.: low 12.1°, high 26.0° No additional tolerance permitted.	
	(b) Cessna spinner 0752637	
	(c) McCauley hydraulic governor C290D2/T11, C290D3/T11 (O-360-A1F6) or C290D2/T12, C290D3/T12 (O-360-A1F6D)	
	(d) Woodward hydraulic governor C210460 (O-360-A1F6 only)	
	*Airspeed limits (CAS)	<u>17701371 through 17702313</u> Never exceed 185 mph (160 knots) Maximum structural cruising 155 mph (135 knots) Maneuvering 117 mph (101 knots) Flaps extended 105 mph (91 knots)
	(IAS) (See Note 4 on use of IAS)	<u>17702314 and up</u> Never exceed 167 knots Maximum structural cruising 138 knots Maneuvering 102 knots Flaps extended 90 knots
	C.G. range	Normal category: (+101.0) to (+114.5) at 2000 lbs. or less (+102.2) to (+114.5) at 2250 lbs. (+105.7) to (+114.5) at 2500 lbs. Straight line variation between points given

III. Model 177B, Cardinal, 4 PCLM (Normal Category), 2 PCLM (Utility Category) (cont'd)

	Utility category: (+101.0) to (+109.0) at 2000 lbs. or less (+102.0) to (+109.0) at 2200 lbs.		
Empty weight C.G. range	None		
*Maximum weight	Normal category	2500 lbs.	
	Utility category	2200 lbs.	
Number of seats	4 (2 at sta. +93.0), 2 at sta. +135.0)		
Maximum baggage	120 lbs. (+162.0)		
Fuel capacity	50 gal. (two 25 gal. fuel bays in wing at sta. +112; 49 gal. usable) <i>See Note 1 for data on unusable fuel.</i>		
Oil capacity	8 qt. (+44) (1 at. (+45) with oil filter) (3 qt. unusable - 2 qt. in sump plus 1 qt. in oil filter) <i>See Note 1 for data on undrainable oil.</i>		
Control surface movements	Wing flaps		Down 30° ± 2°, -0°
	Aileron	Up 20° ± 1°	Down 15° ± 2°
	Stabilator	Up 20° ± 1°	Down 5° ± 1°
	Stabilator tab	Up 5° ± 1°	Down 13° ± 1°
	Rudder (measured perpendicularly to hinge line)	Right 24° ± 1°	Left 24° ± 1°
	Serial numbers eligible	17701371 through 17701530, except 17701472 (1970) 17700002, 17701531 through 17701633 (1971) 17701634 through 17701773 (1972) 17701774 through 17701973 (1973) 17701974 through 17702123 (1974) 17701472, 17702124 through 17702313 (1975) 17702314 through 17702522 (1976) 17702523 through 17702672 (1977) 17702673 through 17702752 (1978)	

Data Pertinent to All Models

Datum	54.0 forward of front face of lower portion of firewall
Leveling means	Jig located nut plates and screws at sta. +213.0 and sta. +238.0 on left of tail cone
Certification basis	Part 23 of the Federal Aviation Regulations effective February 1, 1965, as amended by 23-1, 23-2 and 23-3. Application for Type Certificate dated June 20, 1966. Type Certificate No. A13CE issued February 16, 1967, obtained by the manufacturer under delegation option procedures.
	<u>Equivalent Safety Items</u>
	Airspeed Indicator 17702314 and on FAR 23.1545 (see Note 4 on use of IAS)
	Airspeed Limitations FAR 23.1583(a)(1)
Production basis	Production Certificate No. 4. Delegation Option Manufacturer No. CE-1 authorized to issue airworthiness certificates under delegation option procedures of Part 21 of the Federal Aviation Regulations.

Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. In addition, the following items of equipment are required:

1. Stall Warning Indicator, Cessna Dwg. 1706014.

NOTE 1.

Current weight and balance report including list of equipment included in certificated empty weight, and loading instructions when necessary, must be provided for each aircraft at the time of original certification.

Serial No. 17700001 through 17702313

The certificated empty weight and corresponding center of gravity location must include undrainable oil of 0.0 lb. at 44.0 and unusable fuel of 6 lb. at 100.0.

Serial No. 17702314 and on

The certificated empty weight and corresponding center of gravity locations must include oil of 17 lbs. at 45.0 and unusable fuel of 6 lb. at 100.0.

NOTE 2.

The following placards must be displayed as indicated:

- A. Applicable to Model 177 (S/N 661, 17700001 & 17700003 through 17701164)

1. In full view of the pilot:

"This airplane must be operated in compliance with the operating limitations as stated in the form of placards, markings and manuals.

MAXIMUMS

	<u>Normal Category</u>		<u>Utility Category</u>	
Maneuvering speed	113 mph	(CAS)	113 mph	(CAS)
Design weight		2350		2200
Load factor	Flaps up	+3.8	+4.4	-1.76
	Flaps down	+3.5	+3.5	
Altitude loss in stall recovery		110 ft.		110 ft.

Normal category No acrobatic maneuvers including spins approved

Utility category Baggage compartment and rear seat must not be occupied.

No acrobatic maneuvers approved except those listed below:

<u>Maneuver</u>	<u>Maximum Entry Speed</u>	<u>Maneuver</u>	<u>Maximum Entry Speed</u>
Chandelles	113 mph (98 knots)	Spins	Slow deceleration
Lazy Eights	113 mph (98 knots)	Stalls (except	Slow deceleration
Steep turns	113 mph (98 knots)	whip stalls)	

Spin Recovery - Opposite rudder - Neutral elevator - Slow deceleration
Intentional spins with flaps extended prohibited.

Airplane is controllable in 16 knots crosswind. Known icing conditions to be avoided.

This airplane is certificated for the following flight operations as of date of original airworthiness certificate.

(IFR - VFR - DAY - NIGHT)" (as applicable)

2. On control lock: "Control lock - remove before starting engine."
3. On fuel shutoff control (at appropriate location): "Fuel shutoff - pull off."
4. On fuel selector valve (at appropriate locations):
 - a. "Both 48 gal."
 - b. "Left 24 gal."
 - c. "Right 24 gal."
 - d. "Both on for takeoff and landing."
5. On fuel tank cap: "Service this airplane with 80/87 minimum grade aviation gasoline."
"Total capacity 24.5 gal." "Capacity to white line on indicator, 21.0 gal."

6. In baggage compartment:
 - a. "120 lb. maximum baggage and/or auxiliary seat passenger."
 - b. "For additional loading instructions see weight and balance data."
7. Next to door ventilation windows: "Do not open window above 120 mph."
8. On airspeed indicator (CAS)
 - a. Radial red line 185 mph
 - b. Yellow arc 145-185 mph
 - c. Green arc 64-145 mph
 - d. White arc 53-105 mph
9. On oil temperature gauge
 - a. Red line at 245° F.
 - b. Green arc at 100° to 245° F.
10. On oil temperature gauge
 - a. Red line at 25 psi
 - b. Green arc 60 psi to 90 psi
 - c. Red line at 100 psi
11. Tachometer

(S.L.)	2200 rpm - 2500 rpm	(inner green arc)
(5000 ft.)	2200 rpm - 2600 rpm	(middle green arc)
(10000 ft)	2200 rpm - 2700 rpm	(outer green arc)
(Maximum allowable)	- 2700 rpm	(red line)
12. On fuel pressure gauge
 - a. Red lines at 2 psi and 8.0 psi.
 - b. Green arc at 2 psi to 8.0 psi.
13. On flap control and indicator
 - a. Up to 1/4 - T.O. (Takeoff range with blue color code and 130 mph callout, also mechanical detent at 1/4)
 - b. 1/4 - 1/2 - 3/4 - Down (indices at these positions with white color code and 105 mph callout)
 - c. "Avoid slips with flaps extended."

B. Applicable to 177A (S/N 17701165 through 17701370)

1. In full view of the pilot:

"This airplane must be operated in compliance with the operating limitations as stated in the form of placards, markings and manuals.

MAXIMUMS

	<u>Normal Category</u>		<u>Utility Category</u>	
Maneuvering speed	113 mph	(CAS)	113 mph	(CAS)
Design weight		2500		2200
Load factor	Flaps up	+3.8	+4.4	-1.76
	Flaps down	+3.5	+3.5	
Altitude loss in stall recovery		180 ft.		110 ft.
Normal category	No acrobatic maneuvers including spins approved			
Utility category	Baggage compartment and rear seat must not be occupied.			
No acrobatic maneuvers approved except those listed below:				

<u>Maneuver</u>	<u>Maximum Entry Speed</u>	<u>Maneuver</u>	<u>Maximum Entry Speed</u>
Chandelles	117 mph (101 knots)	Spins	Slow deceleration
Lazy Eights	117 mph (101 knots)	Stalls (except	Slow deceleration
Steep turns	117 mph (101 knots)	whip stalls)	
Slip Recovery -	Opposite Rudder	- Neutral Elevator -	Slow deceleration

Intentional spins with flaps extended prohibited.

Airplane is controllable in 16 knots crosswind. Known icing conditions to be avoided.

This airplane is certificated for the following flight operations as of date of original airworthiness certificate.

(IFR - VFR - DAY - NIGHT)" (as applicable)

2. On control lock: "Control lock - remove before starting engine."
3. On fuel shutoff control (at appropriate location): "Fuel shutoff - pull off."
4. On fuel selector valve (at appropriate locations):
 - a. "Both 48 gal."
 - b. "Left 24 gal."
 - c. "Right 24 gal."
 - d. "Both on for takeoff and landing."
5. On fuel tank cap: "Service this airplane with 100/130 minimum grade aviation gasoline." "Total capacity 24.5 gal." "Capacity to line of holes on indicator, 21.0 gal."
6. In baggage compartment:
 - a. "120 lb. maximum baggage and/or auxiliary seat passenger."
 - b. "For additional loading instructions see weight and balance data."
7. Next to door ventilation windows: "Do not open window above 120 mph."
8. On airspeed indicator (CAS)
 - a. Radial red line 185 mph
 - b. Yellow arc 150-185 mph
 - c. Green arc 66-150 mph
 - d. White arc 56-105 mph
9. On oil temperature gauge
 - a. Red line at 245° F.
 - b. Green arc 100° to 245° F.
10. On oil pressure gauge
 - a. Red line at 25 psi.
 - b. Green arc 60 psi, to 90 psi.
 - c. Red line at 100 psi.
11. Tachometer

(S.L.)	2200 rpm - 2500 rpm	(inner green arc)
(5000 ft.)	2200 rpm - 2600 rpm	(middle green arc)
(10000 ft)	2200 rpm - 2700 rpm	(outer green arc)
(Maximum allowable)	- 2700 rpm	(red line)
12. On fuel pressure gauge
 - a. Red lines at 2 psi, and 8.0 psi.
 - b. Green arc at 2 psi, to 8.0 psi.
13. On flap control and indicator
 - a. 0° to 10° - T.O. (Takeoff range with blue color code and 130 mph callout, also mechanical detent at 10°).
 - b. 10° -20° -30° (Indices at these positions with white color code and 105 mph callout; also, mechanical detent at 20°).

C. Applicable to 177B

1. In full view of the pilot:

a. 17701371 through 17702313

"This airplane must be operated in compliance with the operating limitations as stated in the form of placards, markings, and manuals."

<u>MAXIMUMS</u>					
<u>Normal Category</u>				<u>Utility Category</u>	
Maneuvering speed		117 mph	(CAS)	117 mph	(CAS)
Gross weight		2500		2200	
Load factor	Flaps up	+3.8	-1.52	+4.4	-1.76
	Flaps down	+3.5		+3.5	
Altitude loss in stall recovery			180 ft.	110 ft.	
Normal category		No acrobatic maneuvers including spins approved			
Utility category		Baggage compartment and rear seat must not be occupied.			
No acrobatic maneuvers approved except those listed below:					

<u>Maneuver</u>	<u>Maximum Entry Speed</u>	<u>Maneuver</u>	<u>Maximum Entry Speed</u>
Chandelles	117 mph (101 knots)	Spins	Slow deceleration
Lazy Eights	117 mph (101 knots)	Stalls (except	Slow deceleration
Steep turns	117 mph (101 knots)	whip stalls)	
Slip Recovery -	Full Opposite Rudder -	Stabilator to Neutral Position -	
Ailerons Neutral - Recover from Dive.			

Intentional spins with flaps extended prohibited.

Airplane is controllable in 16 knots crosswind. Known icing conditions to be avoided.

This airplane is certificated for the following flight operations as of date of original airworthiness certificate.

(IFR - VFR - DAY - NIGHT)" (if applicable)

b. 17702314 and up

"This airplane must be operated in compliance with the operating limitations as stated in the form of placards, markings and manuals.

<u>MAXIMUMS</u>					
<u>Normal Category</u>			<u>Utility Category</u>		
Maneuvering speed	102 knots		102 knots		
Gross weight	2500 lb.		2200 lb.		
Load factor	Flaps up	+3.8	+4.4	-1.76	
	Flaps down	+3.5	+3.5		

Normal category No acrobatic maneuvers including spins approved

Utility category Baggage compartment and rear seat must not be occupied.

NO ACROBATIC MANEUVERS APPROVED EXCEPT THOSE LISTED BELOW:

<u>Maneuver</u>	<u>Recom. Entry Speed</u>	<u>Maneuver</u>	<u>Recom. Entry Speed</u>
Chandelles	100 knots	Spins	Slow deceleration
Lazy Eights	100 knots	Stalls (except	Slow deceleration
Steep turns	100 knots	whip stalls)	

Altitude loss in stall recovery - 180 ft.

Abrupt use of the controls prohibited above 102 knots

Spin recovery - opposite rudder - forward stabilizer - neutralize controls.

Intentional spins with flaps extended are prohibited. Flight into known icing conditions prohibited. This airplane is certified for the following flight operations as of date of original airworthiness certificate.

DAY - NIGHT - VFR - IFR" (as applicable)

2. On control lock: "Control lock - remove before starting engine."

3. On fuel shutoff control (at appropriate location): "Fuel shutoff - pull off."

4. On fuel selector valve (at appropriate locations)
 - a. "Both 49 gal."
 - b. "Left 24.5 gal."
 - c. "Right 24.5 gal."
 - d. "Both on for takeoff and landing."
5. Aft of fuel tank cap:
 - a. S/N 17701371 through 17702672
"Service this airplane with 91/96 minimum or 100/130 grade aviation gasoline."
"Total capacity 25.0 gal." "Capacity to line of holes inside filter neck - 22 gal."
 - b. S/N 17702673 and on
"Service this airplane with 100LL or 100 aviation grade gasoline." "Total capacity 25.0 gal." "Capacity to line of holes inside filler neck - 22 gal."
6. In baggage compartment
 - a. Without hat shelf in baggage wall
(Through S/N 17702123)
"120 lb. maximum baggage and/or auxiliary seat passenger."
"For additional loading instructions see weight and balance data."
 - b. With hat shelf in baggage wall
(S/N 17702124 through 17702672)
"120 lb. maximum baggage and/or auxiliary seat passenger including 25 lb. maximum in baggage wall hat shelf."
"For additional loading instructions see weight and balance data."
 - c. (S/N 17702673 and on)
"120 lb. maximum baggage, including 12 lbs. maximum in baggage wall hat shelf."
"For additional loading instructions see weight and balance data."
7. Next to door ventilation windows:
 - a. 17701371 through 17702313
"Do not open window above 120 mph or when using alternate static source."
 - b. 17702314 and up
"Do not open window above 105 knots or when using alternate static source."
8. On airspeed indicator
 - a. 17701371 through 17702313 (CAS)

Radial red line	185 mph
Yellow arc	155-185 mph
Green arc	66-155 mph
White arc	56-105 mph
 - b. 17702314 and up (IAS)

Radial red line	167 knots
Yellow arc	138-167 knots
Green arc	54-138 knots
White arc	45- 90 knots
9. On oil temperature gauge:
 - a. Red line at 245° F.
 - b. Green arc 100° to 245° F.
10. On oil pressure gauge:
 - a. Red line at 25 psi
 - b. Green arc 60 psi to 90 psi
 - c. Red line at 100 psi

11. Tachometer
 - a. When using 2D34C202/82PA-6 or B2D34C208/82PA-6 propeller:

Normal operating	2100-2500 rpm	(green arc)
Caution	1700-1900 rpm	(yellow arc)
Maximum allowable	2700 rpm	(red line)
 - b. When using B2D34C206/78TA-0 propeller:

Normal operating	2100-2500 rpm	(green arc)
Caution	1400-1750 rpm	(yellow arc)
Maximum allowable	2700 rpm	(red line)
 - c. When using B2D34C211/82PCA-6 propeller:

Normal operating	2100-2500 rpm	(inner green arc)
	2100-2700 rpm	(outer green arc)
Caution	1700-1900 rpm	(yellow arc)
Maximum allowable	2700 rpm	(red line)
12. On fuel pressure gauge:
 - a. Red lines at 2 psi and 8.0 psi.
 - b. Green arc at 2 psi to 8.0 psi.
13. On flap control and indicator
 - a. 17701371 through 17702313

0 to 10°	(Blue color code and 130 mph callout, also, mechanical detent at 10°)
10° - 20° - 30°	(Indices at these positions with white color code and 105 mph callout; also, mechanical detent at 20°).
 - b. 17702314 and up

0° to 10°	(Blue color code and 115 knots callout; also, mechanical detent at 10°)
10° - 20° - 30°	(Indices at these positions with white color code and 90 knots callout; also, mechanical detent at 20°).
14. On manifold pressure gauge:
 - a. When using 2D34C202/82PA-6, B2D34C208/82PA-6 or B2D34C211/82PCA-6 propeller:

15 to 24 in. Hg. (green arc)
*With less than 10" manifold pressure, avoid continuous operation between 1700-1900 rpm."
 - b. When using B2D34C206/78TA-0 propeller:

15 to 24 in. Hg. (green arc)
"With less than 10" manifold pressure, avoid continuous operation between 1400-1750 rpm."
15. On cylinder head temperature gauge:
 - a. Red line at 500° F.
 - b. Green arc 200° to 500° F.
16. On instrument panel:
 - a. "Do not turn off alternator in flight except in emergency."
(1970 and 1971 models only)

NOTE 3. The cylinder head probe location for the Model 177B is No. 3 cylinder.

NOTE 4. The marking of the airspeed indicator with IAS provides an equivalent level of safety to FAR 23.1545 when approved airspeed calibration data presented in Section V of the Pilot's Operating Handbooks listed below is available to the pilot:

177B, Cessna P/N D1058-13 (S/N 17702314 through 17702522)
 177B, Cessna P/N D1084-13 (S/N 17702523 through 17702672)
 177B, Cessna P/N D1111-13 (S/N 17702673 through 17702752)

NOTE 5. 14-volt electrical system
(177 series through S/N 17702672)

28-volt electrical system
(177 series, S/N 17702673 and on)

In addition to the placards specified above, the prescribed operating limitations indicated by an asterisk (*) under Sections I, II, and III of this data sheet must also be displayed by permanent markings.

....END.....

MSAT-A Home

AIDS

EIS

NPTRS

Airman Info

MYFAA
Employee Site

MyFAA Home

<< Previous Page

New Airman Search

Airmen Information Reported

User: This page produced 6/13/2008 7:40:03 AM By: AVS\AEA207AM

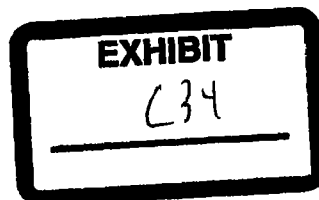
GRYDER, DANIEL WAYNE					Airman file Request				
AIRMEN INFORMATION									
Name		Suffix	SSN	Gender	DOB	Hair Color	Eye Color	Height	Weight
GRYDER, DANIEL WAYNE			999541354	Male	08/11/1961	BROWN	BLUE	69 in.	185 lbs.
POB City	POB State	POB Country	Citizenship Country	Address1	Address2	City, State, Zip	Country	Address Date	District Office
SPRINGFIELD	IL		USA	474 PATES LAKE CT		HAMPTON, GA 30228-2792		03/19/2008	SO11
FLIGHT HRS - Civilian									
10000									
Medical ID			Class Code			Medical Date			
2000 3737485			First (ATP)			02/14/2008			
No Medical Restrictions are reported for this Airman.									
Seal Code		Certificate Num							
Gold		2731811 FLIGHT INSTRUCTOR							
Black		2731811 GROUND INSTRUCTOR							
Blue		2731811 AIRLINE TRANSPORT PILOT							
PREVIOUS CERTIFICATE INFORMATION									
Certificate Number									
324544987- FLIGHT INSTRUCTOR									
324544987- AIRLINE TRANSPORT PILOT									

For Question/Comments contact AVS Support Central at
1-405-954-7272 or send an email to mail to:
9-AMC-AVS-Support-Central@faa.gov



Links: [FAA Employee Home](#) | [FAA Internet](#) | [DOT Intranet](#) | [Contact Info](#) | [Help](#)

Readers & Viewers:



I CERTIFY THAT THIS IS
A TRUE AND ACCURATE
COPY OF THE ORIGINAL
DOCUMENT.
SIGNED *Quinn S. Smith*

ITEM OF PROOF NO. 8

Aviation Solutions

For Aviation Situations

The Catch-a-Cardinal Network for Aviators!

NAV

Training

Expert

Tailwheel

DC-3

Quick Links

Downloads

COMM

Estimate It

7700

Expert Credentials

See Our Logbook

Sign Up Today

EXHIBIT

C35

YOU MIGHT AS WELL MEET THE BOSS If you haven't met her yet, you will. She's got brains, guts, and a warped sense of humor. "Marginal at best" is how we more traditional southern bluegrass players would rate her bluegrass instrument skills, but so far that hasn't been a factor. Julie K. Boatman is the technical editor of AOPA's PILOT magazine, and my boss for the next 12 months as our two respective organizations work together to meet these three core goals for the AOPA membership:



- 1) We want the most thorough, and the safest aircraft refurbishment of a production single that is possible.
- 2) We want to complete all target appearance objectives on or ahead of schedule.
- 3) We want to complete the entire project significantly below the projected budget.

YOU GUYS LET A GIRL BUILD AN AIRPLANE? Now you've already thought it, and I've already been asked, so let's just get this out of the way up front: This is a massive highly complicated project involving thousands of moving parts, and numerous individuals and organizations. "Can a female take on this extensive of a super high visibility project, to include all highly technical aspects of engine, paint, avionics, electrical, parts, complete the required test flights as a solo test pilot, and personally deliver the aircraft around the country according to a demanding schedule?" The answer is yes, she can. And I say let her fly, boys. She knows more about GA avionics than you and me combined, she knows how ALL the parts of an engine work, she knows about riveting, structure, paint, and panels, and propellers, so why not? Heck it may work.

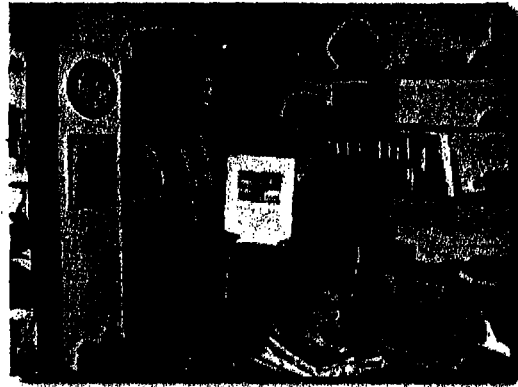
SO HOW DOES THIS WORK One of the core principles that have already built success and excitement into this year's sweeps plane, is the amazingly extensive organized disassembly of the airplane. This is Julie's brainchild and we have agreed to electronically network multiple authorities on each and every aspect of the project so that no one person or shop operates outside of the group think concept, and each aspect of the project has independent unbiased inspection requirements. We also agreed to build an all star talent base for the completion of all work. This extraordinary care and organization caused some 90 hour work weeks for both of us in the beginning, but I for one am just beginning to see the writing on the wall, and it looks like that effort will pay off nicely in the end. Just the airframe and engine team alone is now comprised of 13 hand picked aviation specialists, 7 of which are IA qualified. My job is to monitor and coordinate those individuals and all of the processes along the way. Her job is to manage contacts, contributor relations, parts procurement, and the supply requests as the needs are generated from in the field. I don't get involved in who gets featured when, or her occasional misuse of a well intended but obviously misplaced adverb in an article, which she tends to do, and she leaves us to do what we do best, fix airplanes!

Will it work? I think it will. But watch the site and check your mailbox, you're going to see some amazing pictures of some things you haven't seen before, and probably won't ever see again. As we prepare for re-assembly, each and every piece on the airplane will be hand stripped, prepped, and individually painted gloss white: one piece at a time! When all the pieces are done and all the new hardware is in, we will slowly and meticulously reassemble the craft one piece at a time. Imagine all new stainless hardware holding all new Cessna pieces in place on all new high gloss white paint. This isn't going to be an airplane, this is a work of art! Our very solid hats off team salute and my personal thanks to Cessna CEO Jack Pelton and the Cessna team that he assembled to locate genuine Cessna parts and send them to us about as fast as we hung up the phone.

I CERTIFY THAT THIS IS
A TRUE AND ACCURATE
COPY OF THE ORIGINAL
DOCUMENT.
SIGNED *Julie K. Boatman*

All parts a donation from Cessna to AOPA. That aspect in of itself made the Cardinal project a real pleasure to work on. As CEO, Jack is also a very GA connected head guy. He is not only typed in most of the Cessna Jets, he owns a variety of small single engine GA aircraft and stays very current in those as well. I always think its great to have somebody running these big companies that really likes aviation. www.cessna.com

A FAMILY PROJECT The Cessna is mid range single in the Cessna family. Although it is now 30 years old, we found the Cardinal to be very clean, no corrosion, very easy to work, and very virtually original to when it left the factory 30 years and 4000 flight hours ago. It's the 80th anniversary of the rock solid Cessna family this year, and most all the siblings are alive and well. To put it back together, we're going to use the family of shops and individuals that each have their own individual families. Watch this page for future updates as we add pictures of the husbands, wives, kids, and grandkids of the families that will make this Cardinal fly again.



A big welcome to you from all of us at AOPA, and especially from AOPA's 2007 Catch-A-Cardinal Sweepstakes team! We won't be able to thank Dan Gryder and the AvNet enough for their extraordinary efforts to make this project the best yet--but we are going to try. Be sure to visit [AOPA Online's sweeps page](#) for all the latest updates on the project. I look forward to hearing from you about the project. Feel free to send me an e-mail (julie.boatman@aopa.org) with any of your questions, comments, or suggestions. Come join us at Sun n Fun Fly-In in April, and at airshows throughout 2007!"

--Julie K. Boatman, Technical Editor, AOPA Pilot, and 2007 sweepstakes project manager

[Home Page](#) | [Training](#) | [Expert](#) | [Parents](#) | [Tailwheel](#)
[DC-3](#) | [Quick Links](#) | [Downloads](#) | [Contact Us](#)
[Estimate It](#) | [7700](#) | [Expert Credentials](#)
[See Our Logbook](#) | [Sign Our Logbook](#)

The AV NET
147 Sky Harbor Way
Griffin, Ga 30223
678-688-7069
Email: contact@TheAviatorNetwork.com
Website: www.TheAviatorNetwork.com

Copyright ©2007 Gryder Networks. All Rights Reserved.
Website Design & Hosting by [Griffin Web Design](#).



ITEM OF PROOF NO. 9

Aviation Solutions

For Aviation Situations

The Catch-a-Cardinal Network for Aviators!

NAV

Training

Expert

Tailwheel

DC-3

Quick Links

Downloads

COMM

Estimate It

7700

Expert Credentials

See Our Logbook

Sign On! Log On!

YOU MIGHT AS WELL MEET THE BOSS If you haven't met her yet, you will. She's got brains, guts, and a warped sense of humor. "Marginal at best" is how more traditional southern bluegrass players would rate her bluegrass instrument skills, but so far that hasn't been a factor. Julie K. Boatman is the technical editor of AOPA's PILOT magazine, and my boss for the next 12 months as our two respective organizations work together to meet these three core goals for the AOPA membership:

- 1) We want the most thorough, and the safest aircraft refurbishment of a production single that is possible.
- 2) We want to complete all target appearance objectives on or ahead of schedule.
- 3) We want to complete the entire project significantly below the projected budget.

YOU GUYS LET A GIRL BUILD AN AIRPLANE? Now you've already thought it, and I've already been asked, so let's just get this out of the way up front: This is a massive highly complicated project involving thousands of moving parts, and numerous individuals and organizations. "Can a female take on this extensive of a super high visibility project, to include all highly technical aspects of engine, paint, avionics, electrical, parts, complete the required test flights as a solo test pilot, and personally deliver the aircraft around the country according to a demanding schedule?" The answer is yes, she can. And I say let her fly, boys. She knows more about GA avionics than you and me combined, she knows how ALL the parts of an engine work, she knows about riveting, structure, paint, and panels, and propellers, so why not? Heck it may work.

SO HOW DOES THIS WORK One of the core principles that have already built success and excitement into this year's sweeps plane, is the amazingly extensive organized disassembly of the airplane. This is Julie's brainchild and we have agreed to electronically network multiple authorities on each and every aspect of the project so that no one person or shop operates outside of the group think concept, and each aspect of the project has independent unbiased inspection requirements. We also agreed to build an all star talent base for the completion of all work. This extraordinary care and organization caused some 90 hour work weeks for both of us in the beginning, but I for one am just beginning to see the writing on the wall, and it looks like that effort will pay off nicely in the end. Just the airframe and engine team alone is now comprised of 13 hand picked aviation specialists, 7 of which are IA qualified. My job is to monitor and coordinate those individuals and all of the processes along the way. Her job is to manage contacts, contributor relations, parts procurement, and the supply requests as the needs are generated from in the field. I don't get involved in who gets featured when, or her occasional misuse of a well intended but obviously misplaced adverb in an article, which she tends to do, and she leaves us to do what we do best, fix airplanes!

Will it work? I think it will. But watch the site and check your mailbox, you're going to see some amazing pictures of some things you haven't seen before, and probably won't ever see again. As we prepare for re-assembly, each and every piece on the airplane will be hand stripped, prepped, and individually painted gloss white: one piece at a time! When all the pieces are done and all the new hardware is in, we will slowly and meticulously reassemble the craft one piece at a time. Imagine all new stainless hardware holding all new Cessna pieces in place on all new high gloss white paint. This isn't going to be an airplane, this is a work of art! Our very solid hats off team salute and my personal thanks to Cessna CEO Jack Pelton and the Cessna team that he assembled to locate genuine Cessna parts and send them to us about as fast as we hung up the phone.

I CERTIFY THAT THIS IS
A TRUE AND ACCURATE
COPY OF THE ORIGINAL
DOCUMENT.
SIGNED *Julie K. Boatman*

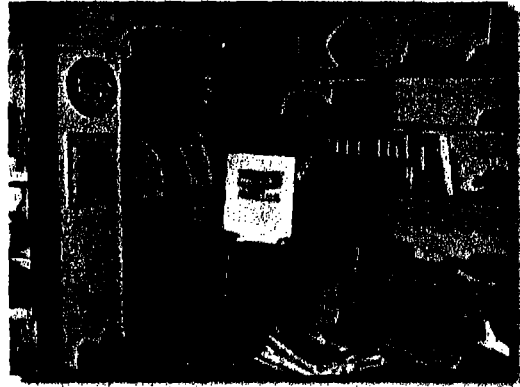
EXHIBIT

C36



All parts a donation from Cessna to AOPA. That aspect in of itself made the Cardinal project a real pleasure to work on. As CEO, Jack is also a very GA connected head guy. He is not only typed in most of the Cessna Jets, he owns a variety of small single engine GA aircraft and stays very current in those as well. I always think its great to have somebody running these big companies that really likes aviation. www.cessna.com

A FAMILY PROJECT The Cessna is mid range single in the Cessna family. Although it is now 30 years old, we found the Cardinal to be very clean, no corrosion, very easy to work, and very virtually original to when it left the factory 30 years and 4000 flight hours ago. It's the 80th anniversary of the rock solid Cessna family this year, and most all the siblings are alive and well. To put it back together, we're going to use the family of shops and individuals that each have their own individual families. Watch this page for future updates as we add pictures of the husbands, wives, kids, and grandkids of the families that will make this Cardinal fly again.



A big welcome to you from all of us at AOPA, and especially from AOPA's 2007 Catch-A-Cardinal Sweepstakes team! We won't be able to thank Dan Gryder and the AvNet enough for their extraordinary efforts to make this project the best yet--but we are going to try. Be sure to visit [AOPA Online's sweeps page](#) for all the latest updates on the project. I look forward to hearing from you about the project. Feel free to send me an e-mail (julle.boatman@aopa.org) with any of your questions, comments, or suggestions. Come join us at Sun n Fun Fly-In in April, and at airshows throughout 2007!"

--Julie K. Boatman, Technical Editor, AOPA Pilot, and 2007 sweepstakes project manager

[Home Page](#) | [Training](#) | [Expert](#) | [Parents](#) | [Tailwheel](#)
[DC-3](#) | [Quick Links](#) | [Downloads](#) | [Contact Us](#)
[Estimate It](#) | [7700](#) | [Expert Credentials](#)
[See Our Logbook](#) | [Sign Our Logbook](#)

The AV NET
147 Sky Harbor Way
Griffin, Ga 30223
678-688-7069
Email: contact@TheAviatorNetwork.com
Website: www.TheAviatorNetwork.com

Copyright ©2007 Gryder Networks. All Rights Reserved.
Website Design & Hosting by [Griffin Web Design](#).



"Lewers, Jim"
<jlewers@lowacity.gannett.co
m>

06/13/2008 10:39 AM

To Andrew S McKee/AEA/FAA@FAA

cc

bcc

Subject archived story

- Monday, August 6, 2007

City:
State:
Section: Local
Page: 3
From:
Source: Staff
Edition:
Publication: Iowa City Press-Citizen

High flying, adored

Locals catch a look at 1977 Cessna Cardinal

By Rachel Gallegos

Iowa City Press-Citizen

It didn't take long for Devon Eberl, 9, and his brother Colin, 5, to go from standing on a picnic table to watch the 1977 Cessna 177 Cardinal fly in and land, to being the first ones to sit in it.

The fact that they are familiar with the plane might have helped. That's because their dad, Dan, owns a 1978 version of the same plane.

The one they sat in Sunday at the Iowa City Airport, however, is unique. It is in the midst of a complete overhaul, from the paint to the engine to the fabric on the seats.

This 30-year-old Cessna Cardinal is the grand prize in the Aircraft Owners and Pilots Association Catch-A-Cardinal Sweepstakes.

"It's still a work in progress, but it's a beautiful work in progress," Dan Eberl said. "I'd love to win it. I'm an AOPA member, so I do have a chance."

In early 2008, AOPA will draw one member's name and surprise the lucky winner by delivering the plane to them.

"This would be nice," said Mary Honeck of Iowa City, who owns a Piper Pathfinder plane with her husband, Jay. "If somebody gave it to me, I'd learn to fly it. A couple hours with an instructor and I'd be good to go."

The outside of the Cardinal is now complete, with the head of a cardinal painted on the tail of the plane. AOPA Pilot magazine technical editor Julie Boatman, an Iowa City native, and Dan Gryder, an

I CERTIFY THAT THIS IS
A TRUE AND ACCURATE
COPY OF THE ORIGINAL
DOCUMENT.

SIGNED Andrew S. McKee

ITEM OF PROOF NO. **20**

independent contractor from Atlanta leading the plane refurbishment, stopped in Iowa City and Oxford on Sunday as part of their airplane airport tour from the EAA AirVenture convention in Oshkosh, Wis., to Alva, Okla., where the interior improvements will be done.

The Iowa City and Oxford stops were a homecoming of sorts for Boatman, giving her an opportunity to stop in her hometown and at the airport where she learned to fly.

This is AOPA's 14th plane giveaway sweepstakes, Boatman said, and so far has been the most popular yet.

"This airplane represents a neat point in Cessna's history," Boatman said, because in the late '60s Cessna decided to upgrade its 172 model, and the 177 model was the result.

Because of changes such as the lack of wing struts, the plane rides bumps in the air better, giving the rider the feel of being in a much bigger airplane, she said.

"We took this thing totally apart," Gryder said, leaving them at one point with only a large metal tube. "We started all over with brand new everything."

Gryder said he thinks this project has been popular with AOPA members, who can check the weekly progress on the association's Web site, because of the extent of the work they have done and the fact that the plane would be a good fit for almost any pilot.

Cardinal owner Dan Eberl agreed.

"Pretty much any pilot, if they win it, can sit in it and go," Eberl said.

A 1977 Cardinal would normally sell for about \$150,000, but this plane now has about \$400,000 in materials and labor in it as well, Gryder said.

"The restoration we did is far more than you ever, ever see," he said.

"It's been a tremendous amount of work so I'll be glad to give it away," Gryder said.

Caption: Colin Eberl, 5, of Iowa City explores the inside of the 1977 Cessna 177 Cardinal, which is going to be given away in a sweepstakes by the Aircraft Owners and Pilots Association, on Saturday as his older brother, Devon, 9, plays at piloting it. The Cardinal landed at the Iowa City Airport for locals to check out. Press-Citizen / Hannah van Zutphen-Kann.

Element: Local story

Graphic:

Image:

Resale: Yes

Keywords: High, flying, look, 1977, plane, Cessna, Cardinal

Subkeys: NEWS01

Subject:

Day:

Book: A

Byline: Rachel Gallegos

Freekey: It didn't take long for Devon Eberl

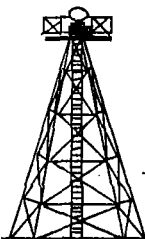
Country:

DC3 Id:

Jim Lewers
Managing editor
Iowa City Press-Citizen
(319) 887-5428

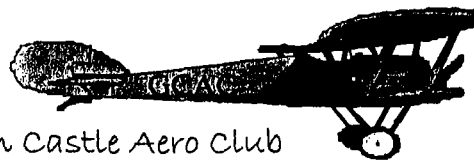
Post your own news at [<http://mypc.press-citizen.com>](http://mypc.press-citizen.com)

Visit a Press-Citizen Web site
m.press-citizen.com
www.press-citizen.com
www.hawkcentral.com
www.goiowacity.com



The BEACON

The Official Newsletter of the Green Castle Aero Club



Summer Edition, 2007

Concert a Success!

The seventh annual Bill Kimble Flight Scholarship Concert was held June 16th at the Aero Club hangar. The crowd was a little smaller than last year. The club took in around \$2400 for the scholarship fund. Thanks to all who made this possible!

Editor's Note

Your Beacon editor was unable to attend the concert because of ill health. Thanks to Jason Martin for the pictures. Unfortunately, not all performers were photographed. Apologies to the artists. No snub of any sort is intended.

Acabella, the bell choir from First United Methodist Church of North Liberty, warmed up the crowd before returning artists **Joshua and Anna Russell** presented their 'Salute to America'. Regrettably, no pictures were available to the Beacon of their performance.

Following Josh and Anna, returning artist soprano **Trisha Dunn** (Bob Dunn's daughter), accompanied by Josh Russell, entertained the crowd with a wide range of opera and show tunes.

Returning artist **Lisa Pulsipher** (Don Nelson's granddaughter) followed Trisha with some pops, old standards and country tunes. (Photo at right).



At intermission, Master of Ceremonies and club President **Rick Trieber** introduced this year's scholarship recipient **Elizabeth Runyan** and last year's recipient **Gabe Lenz**.

Following intermission, the crowd was entertained by the newly-formed 'Green Castle Cello Quartet' consisting of veteran performer **Charles Wendt** and guest artists **Carey Hoyt Bostian II**, **James Ellis** and **Douglas B. Moore**.



The quartet played a wide spectrum of music ranging from 'March Militaire' by Franz Schubert to 'The Stars and Stripes Forever' by John Phillip Sousa.

For the finale, **Charles Wendt**, Cello, and **Joshua Russell**, piano, played 'The Swan', a piece that has become the signature closing performance for the concert.

Elizabeth Passes Check Ride!

To the surprise of hardly anyone except maybe herself, scholarship student **Elizabeth 'Lou' Runyan** passed her practical test on July 26, 2007. Congratulations and best wishes!

Solos and Ratings

Tabrina Sienkeiwicz—Solo 07/30/07

Elizabeth Runyan—Pvt 07/26/07

J. Stohler—Pvt 08/15/07



New Members!

The following people have joined or were reinstated in the Green Castle Aero Club since the last issue of the Beacon. (Memberships include immediate family). Welcome to all!

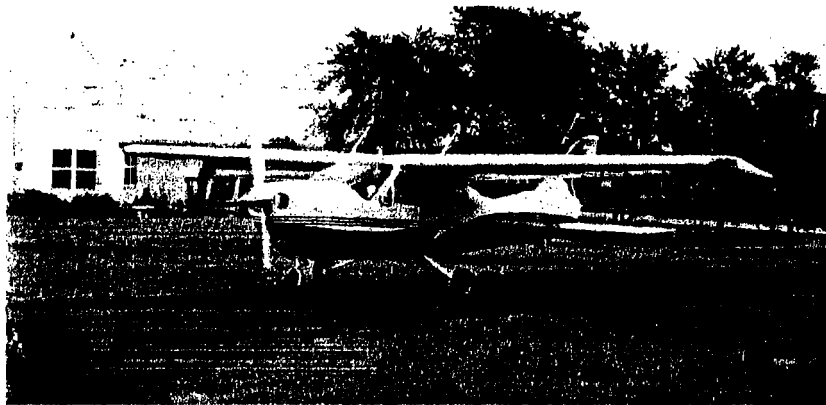
Phil Bell
Glenn Neiger
Charles Stone
Matt Harper
Brian Dugan
Tabrina Sienkiewicz
Harold Anders
Srikanth Chowdary Kamineni
Stridher Kaminani
Joseph Anderson
James Strehler
Mark Pettinger
Jerry Turnbull

Neighborhood Picnic

Calvin Colony decided that the Aero Club should host a pot-luck with the Aero Club providing the hamburgers for members and neighbors of the airport. The result of Calvin's organizing was a great turnout and plenty of food on July 28th!



Catch a Cardinal!



The AOPA 'Catch A Cardinal' sweepstakes airplane arriving at Green Castle on August 5.

AOPA Technical Editor **Julie Boatman** and Field Project Manager **Dan Gryder** paid Green Castle an impromptu visit on August 5th. They flew the AOPA 'Catch A Cardinal' sweepstakes airplane, a better-than-new 1977 Cessna 177.



The airplane was met by many interested people, some of Julie's friends and relatives, and **Don Nelson** who was Julie's primary flight instructor. They remain friends in spite of that.



The **Beacon** is published erratically when there seems to be enough material to make it worthwhile. It has been a long dry spell since anything was contributed for publishing. If the **Beacon** is to continue, there needs to be more interest in submitting material. Possibly the new **Green Castle Blog** is a better way for people to post accounts of trips, other experiences, photos, etc. It is certainly a much quicker way than waiting for the **Beacon** editor to accumulate enough 'stuff' to print. Comments are welcome. Send to: Larry Wood, Beacon Editor (elwood140@aol.com)



Is this the beginning of the Green Castle Sailing Club? Check with Don.

Green Castle Blog

Member **Pete Buffington** has created the Green Castle Blog. Members should have received an e-mail from Pete or from the Green Castle Scheduler telling what user name and password to use to log in to this site. To read current blogs, go to www.greencastle-aeroclub.com and click on Greencastle BLOG.

EXHIBIT

C39

Cardinal Flyers Meet at Sporty's



June 23
Batavia, OH

[Click Here to view slideshow](#)

Cardinal Flyers Online, the organization for Cessna Cardinal owners and those interested in these aircraft, held their annual convention at Clermont County/Sporty's Airport this past weekend, June 21-24, 2007.

More than 40 Cessna Cardinals along with their owners arrived at Sporty's to be part of the gathering. Activities included seminars, an airport tour including a visit to Air Mod and Sporty's and a field trip to Dayton to the National Museum of the United States Air Force.

A popular part of the Cardinal Flyers convention is an opportunity for attendees to look at other Cardinals and the chance to get ideas for their own aircraft. At this convention, AOPA President Phil Boyer flew in with AOPA's Catch-A-Cardinal

airplane which is AOPA's current sweepstakes airplane. Boyer was the speaker at the convention's closing banquet on Saturday night.

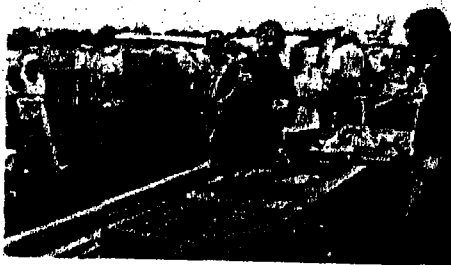
Prior to that, however, lunch was special for Boyer on Saturday. As part of Sporty's program to welcome customers every Saturday all year-round with free hot dogs, Boyer ate Sporty's 150,000th hot dog for his lunch.

"Since Phil ate our 100,00th hot dog as well," said Sporty's President Michael Wolf, "we must have him back to eat #200,000, which should only be a few years away."

Sporty's is a popular meeting spot for small group conventions, having hosted groups from EAA, Cessna Pilots Association, American Bonanza Society and others.

I CERTIFY THAT THIS IS
A TRUE AND ACCURATE
COPY OF THE ORIGINAL
DOCUMENT.
SIGNED Orch - S. Wick

ITEM OF PROOF NO 15



Phil Boyer has dog number One Hundred and Fifty Thousand



Show and Tell



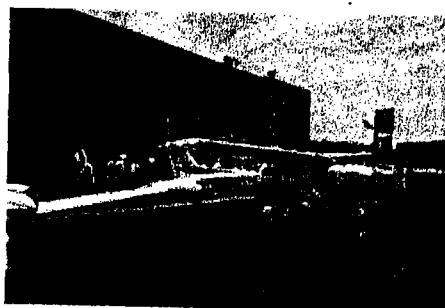
Cardinal Flyers at Air Mod



Tour of Sporty's Operation



AOPA's Catch A Cardinal



Batavia (Sporty's) Eastern Convention

2007

ITEM OF PROOF NO. 14

EXHIBIT

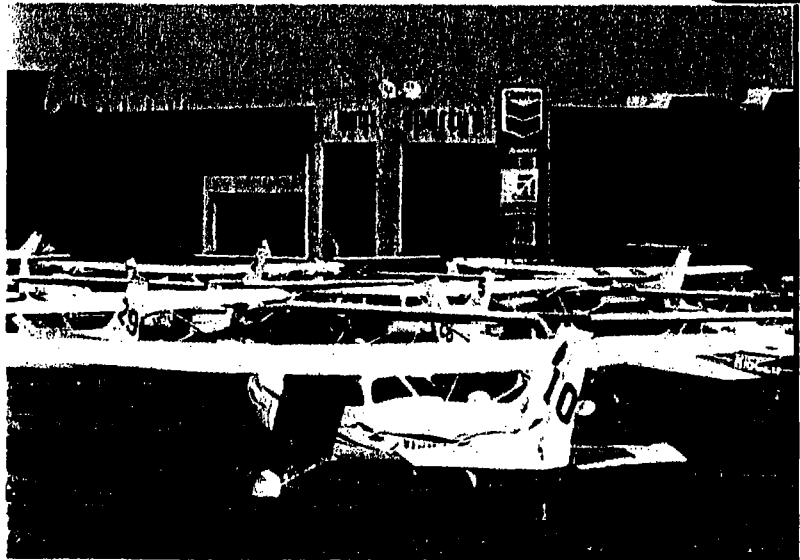
C40

Please note that there are several sections to this report... continue to scroll down to see each section.

Our host for the 2007 convention was **Sporty's Pilot Shop**. They did a bang-up job in all respects, putting everything in place for the largest group they have ever hosted.

It all starts at the top, and Hal Shevers put his full support and substantial personal time into this event. Sporty's gets our vote for the pilot shop who bests support at least our version of general aviation!

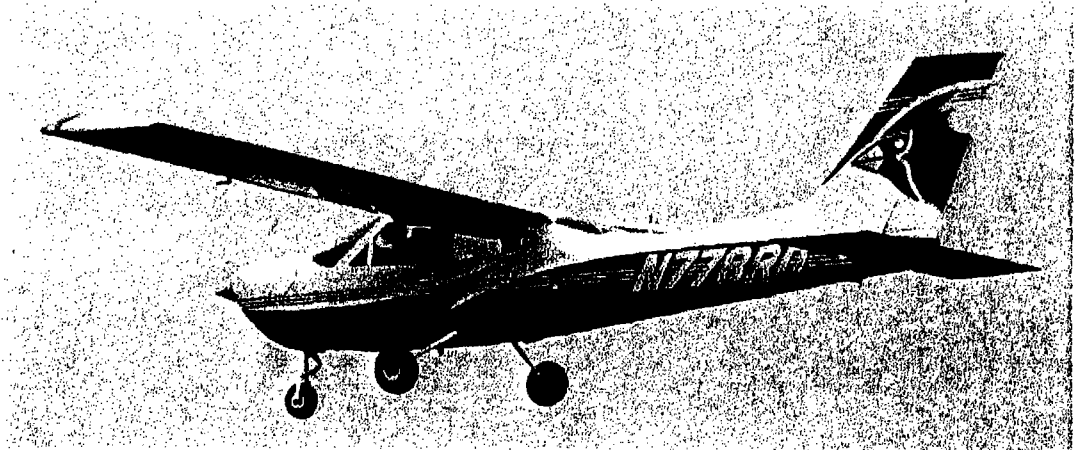
In particular Sporty's President and head of operations, Mike Wolf, put in the long hours before and during the event to make sure everything was prepared and executed to perfection. We really can't thank Mike and his team enough.



There were many others engaged in this effort... Mark and Terry and many others at Sporty's. Thanks to all!

Of course the question everyone was asking was 'Would the Catch a Cardinal be able to attend?' The answer came on Wednesday, when Dan Gryder landed from the first flight in Griffin, GA.

Julie Boatman and Dan Gryder noted that the next step in breaking in the engine was an extended flight, so they filled the tanks and headed to Batavia.



There was quite a stir around the airport when the CAC was reported to be inbound for landing and only 10 miles out!

The Sporty's team rolled into action to guide Julie and Dan to the proper hangar, and the CAC was tucked away for the night. It had clearly been a long day, and the flight team was happy to lay low for a day. (Truth be told, Dan headed to the airport to take a flight for his day job at a major airline.)

I CERTIFY THAT THIS IS
A TRUE AND ACCURATE
COPY OF THE ORIGINAL
DOCUMENT.
SIGNED Andi S. Wey



09/23/2008 14:17 4107878708

FAA BWI

PAGE 02/04

09/12/2008 17:47 3016952151

YODICE ASSOCIATES

PAGE 02

~~1 COPY~~

AIRCRAFT OWNERS & PILOTS ASSOCIATION, 421 Aviation Way, Frederick, MD 21701

10766

MEMBERSHIP PUBLICATIONS, INC.
579

GRYDER NETWORKS, LLC

00000000000012021

12/12/2007

010768

11104

1982 POW5558

11/20/2007

\$12,374.13

\$12,374.13

\$0.00

\$12,374.13

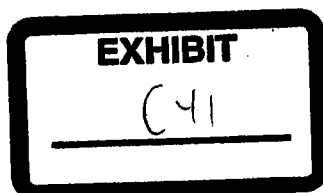
\$12,374.13

\$12,374.13

\$0.00

\$12,374.13

mlb 12-14



I CERTIFY THAT THIS IS
A TRUE AND ACCURATE
COPY OF THE ORIGINAL
DOCUMENT.
SIGNED [Signature]

ITEM OF PROOF NO. 10

09/23/2008 14:17 4107878708
09/12/2008 17:47 3016952151

FAA BWI
YODICE ASSOCIATES

PAGE 03/04
PAGE 03

1 COPY

9657

AIRCRAFT OWNERS & PILOTS ASSOCIATION, 421 Aviation Way, Frederick, MD 21701

MEMBERSHIP PUBLICATIONS, INC.
579

GRYDER NETWORKS, LLC

00000000000009616

2/7/2007

009657

06796	1899 POW 5187	1/16/2007	\$2,672.50	\$2,672.50	\$0.00	\$2,672.50
-------	---------------	-----------	------------	------------	--------	------------

DC3@earthlink.net

DL-30

\$2,672.50

\$2,672.50

\$0.00

\$2,672.50

15046.63-

m/d 2-7

I CERTIFY THAT THIS IS
A TRUE AND ACCURATE
COPY OF THE ORIGINAL
DOCUMENT.
SIGNED Andrew J. W.



U.S. Department
of Transportation
**Federal Aviation
Administration**

EXHIBIT

C42

Baltimore FSDO - AEA07
890 Airport Park Road, Suite 101
Glen Burnie, Maryland 21061-2559
410-787-0040 ext. 206, Fax: 410-787-8708

May 30, 2008

CERTIFIED MAIL—RETURN RECEIPT REQUESTED
File No. 2008EA070047

Daniel Wayne Gryder
474 Pates Lake CT
Hampton, GA 30228-2792

Dear Mr. Gryder:

Personnel of this office are investigating a possible violation which involved the operation of a Cessna 177B aircraft, N778RD, at Griffin-Spalding County Airport at approximately 15:00 on 06/22/2007.

Evidence suggests that N778RD was flown without a proper annual inspection and without proper maintenance documentation. Operations of this type are contrary to Federal Aviation Regulations.

This letter is to inform you that this matter is under investigation by the Federal Aviation Administration (FAA). We would appreciate receiving any evidence or statements you might care to make regarding this matter within 10 days of receipt of this letter. Any discussion or written statements furnished by you will be given consideration in our investigation. If we do not hear from you within the specified time, our report will be processed without the benefit of your statement.

In addition, this office requests that within the aforementioned 10 days, you forward your pilot logbooks for inspection in accordance with 14CFR 61.51(i).

Sincerely,

Andrew S. McKee
Aviation Safety Inspector

I CERTIFY THAT THIS IS
A TRUE AND ACCURATE
COPY OF THE ORIGINAL
DOCUMENT.

SIGNED

ITEM OF PROOF NO. **22**

PRIVACY ACT NOTICE

This Notice is provided in accordance with Section (e)(3) of the Privacy Act, 5 U.S.C. Section 552a(e)(3), and concerns the information requested in the letter or form with which this Notice is enclosed.

- A. Authority: This information is solicited pursuant to the Federal Aviation Act of 1958, 49 U.S.C. Section 1301, et seq., and regulations issued thereunder codified in Part 13 of Title 14 of the Code of Federal Regulations. Submission of information is voluntary. The request for information is intended to provide you with an opportunity to participate in the investigation.
- B. Principal purpose: The requested information will be used to help determine whether or not there has been a violation of the Federal Aviation Regulations, and if so, what, if any, enforcement action should be taken.
- C. Routine uses: Records from this system of records may be disclosed in accordance with the routine uses as they appear in System of Records No. DOT/FAA 847 as published from time to time in the *Federal Register*.
- D. Effect of failure to respond: The FAA cannot impose any penalties upon you in the event that you fail to respond to this enforcement investigation letter. Failure to supply the requested information, however, will result in enforcement determinations without the benefit of your comments on the alleged incident.



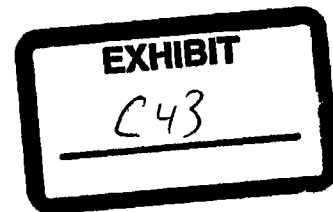
U.S. Department
of Transportation
**Federal Aviation
Administration**

Baltimore FSDO - AEA07
890 Airport Park Road, Suite 101
Glen Burnie, Maryland 21061-2559
410-787-0040 ext. 205, Fax: 410-787-8708

September 18, 2008

CERTIFIED MAIL—RETURN RECEIPT REQUESTED
File No. 2008EA070065

Gryder Networks, LLC
147 Sky Harbor Way
Griffin, Ga 30223
678-688-7069



Sir or Madam:

Personnel of this office are investigating a possible violation which involved the operation of a Cessna 177B aircraft, N778RD, at Griffin-Spalding County Airport at approximately 15:00 on 06/22/2007.

Evidence suggests that N778RD was operated without a proper annual inspection and without proper maintenance documentation. Operations of this type are contrary to Federal Aviation Regulations.

This letter is to inform you that this matter is under investigation by the Federal Aviation Administration (FAA). We would appreciate receiving any evidence or statements you might care to make regarding this matter within 10 days of receipt of this letter. Any discussion or written statements furnished by you will be given consideration in our investigation. If we do not hear from you within the specified time, our report will be processed without the benefit of your statement.

Sincerely,

Andrew S. McKee
Aviation Safety Inspector

ITEM OF PROOF NO. 11

10/01/07

EXHIBIT

C44

2150.3B

Fig. B-2-e. Other provisions applicable to individual certificate holders cont.	Civil Penalty	Certificate Action
(b) Lack of type rating		180-day Suspension to Revocation
(c) Missed proficiency check or line check		30- to 90-day Suspension
(d) Lack of current experience		30- to 90-day Suspension
(e) Failure to have current airman or medical certificate in possession	Minimum to Moderate	
(f) Lack of initial or recurrent training		30- to 90-day Suspension
(g) Operation with known disqualifying disability		Revocation
(i) Operating without valid medical certificate when not medically qualified or application for medical certificate deferred		Revocation

Fig. B-2-f. Other Air Carrier Personnel	Civil Penalty	Certificate Action
(1) Failure to keep manual current	Minimum	30- to 90-day Suspension

3. INDIVIDUALS AND GENERAL AVIATION - OWNERS, PILOTS, REPAIR STATIONS, PILOT SCHOOLS, MAINTENANCE PERSONNEL.

Fig. B-3-a. Owners and Operators Other Than Required Crewmembers	Civil Penalty	Certificate Action
(1) Failure to comply with airworthiness directive	Moderate to Maximum	
(2) Failure to perform or improper performance of maintenance, including required maintenance	Moderate to Maximum	
(3) Failure to make proper entry in aircraft log	Minimum to Moderate	
(4) Operation of aircraft beyond annual, 100-hour, or progressive inspection	Minimum to Moderate	
(5) Operation of unairworthy aircraft	Moderate to Maximum	
(6) Intentionally false or fraudulent entry, reproduction, or alteration in any record or report	Maximum	Revocation

Fig. B-3-b. Repair Stations	Civil Penalty	Certificate Action
(1) Failure to provide required facilities for proper servicing, maintenance, repair, or inspection	Moderate to Maximum	Indefinite Suspension until compliance to Revocation

10/01/07

EXHIBIT

645

2150.3B

Small Business Concern (for violations covered under 49 U.S.C. § 46301(a)(1)(A) or (B) but not under 49 U.S.C. § 46301(a)(5)(A)):

Maximum	\$750-\$1,100
Moderate	\$450-\$749
Minimum	\$250-\$449

(5) VIOLATION COMMITTED BY AIRPORT OPERATOR.

Large Business Concern:

Maximum	\$18,750-\$25,000
Moderate	\$10,000-\$18,749
Minimum	\$2,000-\$9,999

Small Business Concern (for violations covered under 49 U.S.C. § 46301(a)(5)(A)):

Maximum	\$8,250-\$11,000
Moderate	\$4,400-\$8,249
Minimum	\$1,100-\$4,399

Small Business Concern (for violations covered under 49 U.S.C. § 46301(a)(1)(A) or (B) but not under 49 U.S.C. § 46301(a)(5)(A)):

Maximum	\$850-\$1,100
Moderate	\$650-\$849
Minimum	\$500-\$649

(6) LARGE BUSINESS CONCERN -- DOES NOT HOLD CERTIFICATE

Maximum	\$18,750-\$25,000
Moderate	\$10,000-\$18,749
Minimum	\$2,000-\$9,999

(7) SMALL BUSINESS CONCERN -- DOES NOT HOLD CERTIFICATE

For violations covered under 49 U.S.C. § 46301(a)(5)(A):

Maximum	\$4,400-\$11,000
Moderate	\$2,200-\$4,399
Minimum	\$550-\$2,199

Chapter 7. Sanction Guidance Policies

1. **Purpose.** This chapter provides the FAA's policies for determining an appropriate sanction once FAA enforcement personnel decide that legal enforcement action is appropriate. This chapter contains the general policy the FAA intends to apply in selecting the types of sanctions, ranges of sanctions within those types, and specific sanction amounts to impose in legal enforcement actions for typical violations of the FAA's statute and regulations. This guidance covers the parameters both for selecting sanctions and for modifying sanctions during the informal procedures. The guidance in this chapter is applied in adjudications under 49 U.S.C. §§ 44106, 44709, 44710, 44726, 44924, 46111, 46301, and 70115. Hazardous materials sanction guidance and policies are addressed in Appendix C.

2. General Guidelines.

a. Certificate Suspension Action and Civil Penalty Action: Sanctions for Punitive and Deterrent Purposes.

(1) General. If a certificate holder improperly exercises the privileges of a certificate, a natural consequence of that act is to lose the privileges for a period of time commensurate with the violation. Balanced against this principle, however, the FAA considers the adverse impact that a certificate suspension could have on the public. Thus, the agency generally suspends the certificates of individual certificate holders for violations. However, the FAA usually takes civil penalty action against air carriers and airports because such actions do not disrupt service, which may adversely affect the public. Nevertheless, when the FAA determines that safety considerations warrant it, the agency will suspend the certificate of any type of certificate holder. In no case will the FAA take civil penalty action alone when remedial legal action is necessary or appropriate.

(2) Use of both punitive certificate action and civil penalty action for the same violations. The FAA generally does not take civil penalty action and punitive certificate action (that is, certificate suspension for a fixed period of time) against a certificate holder for the same conduct. If unusual circumstances warrant deviation from this practice, legal counsel consult with the Assistant Chief Counsel for Enforcement (AGC-300) before initiating the actions.

(3) Change in type of proposed sanction. The initial enforcement action reflects the agency's best assessment of the appropriate sanction for the violations alleged. After initiating the action, legal counsel ordinarily does not change the type of sanction unless additional facts or circumstances are presented to the FAA that warrant a change. If the action was coordinated under chapter 6, paragraph 3, with AGC-300 before initiation, then legal counsel coordinates any change in the type of sanction with AGC-300 before making the change.

b. Legal Sanctions for Remedial Purposes.

(1) Indefinite certificate suspension pending compliance or demonstration of qualification. Suspension action is appropriate where there is a need temporarily to

suspend the privileges of the certificate or rating pending demonstration of qualification or compliance with statutory or regulatory requirements. FAA generally uses remedial suspension when an individual does not voluntarily surrender his or her certificate pending reexamination. See chapter 5:

(2) Certificate revocation - general. The FAA revokes a certificate when a certificate holder lacks the qualifications to hold the certificate. The certificate holder's continued exercise of the privileges of the certificate in such circumstances would be contrary to safety in air commerce or air transportation and the public interest. Revocation is appropriate whenever a certificate holder's conduct demonstrates a lack of the technical proficiency or a lack of the degree of care, judgment, or responsibility, required of the holder of such a certificate. Orders of revocation are issued on an emergency basis when the certificate holder lacks qualification and is reasonably able as a practical matter to exercise the privileges of the certificate. Legal counsel does not allege a lack of qualifications to avoid dismissal of charges under 49 C.F.R. § 821.33, the NTSB's stale complaint rule.

(3) Certificate revocation - individuals. The FAA generally revokes an individual's certificate or rating whenever he or she demonstrates a lack of willingness or ability to comply consistently with statutory or regulatory requirements. A lack of willingness or ability to comply may be demonstrated by such things as repeated or deliberate violations or by violations that involve grossly careless or reckless conduct. Even a single violation may be sufficient to warrant a conclusion an individual lacks qualifications. The FAA ordinarily revokes all certificates of a person who commits a violation involving intentional falsification.

(4) Certificate revocation - entities. Revocation is normally appropriate when a certificate-holding entity deliberately or flagrantly violates the statute or regulations or falsifies records. Revocation also is generally appropriate when the certificate holder has committed the same or similar violations in the recent past demonstrating a lack of qualification, or when the certificate holder no longer has, and does not obtain in a reasonable time, the personnel or equipment to conduct its operation in full compliance with statutory and regulatory requirements.

(5) Mandatory certificate revocation. Under 49 U.S.C. § 44710, the FAA is required to revoke the certificates of any airman who has been convicted of violating certain federal or state statutes relating to a controlled substance when an airplane was used in the commission of the offense and the airman served as an airman, or was aboard the aircraft, in connection with commission of the offense or the facilitation of the commission of the offense. Even when there has been no conviction, revocation is required when an airman has knowingly carried out an activity punishable under these criminal statutes. The Administrator may waive the revocation if a law enforcement officer requests the waiver and the Administrator decides the waiver will facilitate law enforcement purposes. See 49 U.S.C. § 44710(f). Under 49 U.S.C. § 44106, the FAA also must revoke the registration certificate of any airplane used in the commission of such an offense when the use was permitted by the owner of the aircraft with knowledge that it would be used for such purpose. Under 49 U.S.C. § 44726, the FAA must revoke the certificates of any certificate holder or an individual who has a controlling or ownership interest in the holder who was convicted of a violation of federal law relating to the installation, production, repair, or sale of a counterfeit or fraudulently-represented aviation part or material or knowingly, and with the

intent to defraud, carried out or facilitated an activity punishable under such a law. The Administrator may waive that sanction to facilitate law enforcement purposes or amend, rather than revoke, a certificate under certain circumstances. See 49 U.S.C. §§ 44726(f) and (g).

(6) **Mandatory certificate action for security concerns.** Under 49 U.S.C. § 46111, the Administrator is required to issue an order amending, modifying, suspending, or revoking any FAA-issued certificate if the Administrator is notified by the Under Secretary of Border and Transportation Security (BTS) of the Department of Homeland Security (DHS) that the certificate holder poses, or is suspected of posing, a risk of air piracy or terrorism or a threat to airline or passenger safety. Under 49 U.S.C. § 44924, the Administrator is required, at the request of the Under Secretary of BTS, to suspend or revoke foreign repair station certificates in connection with security audits.

3. Applicability and Exclusions. The sanction guidance table (table) in Appendix B provides types of sanctions and general ranges of sanction amounts for violations of 49 U.S.C. subtitle VII and 14 C.F.R. parts 1-199 and 49 U.S.C. subtitle IX, chapter 701 and 14 C.F.R. chapter III. Once the agency has determined that legal enforcement action is warranted for a violation, FAA enforcement personnel use the table and paragraph 4 of this chapter, as well as any other sanction guidance in this order, to determine a proposed sanction. The matters described in chapter 7, subparagraphs 3a.-d. are some types of agency action that fall outside the scope of paragraph 3 and the table.

a. Decisions to Take Administrative Action (Warning Notices or Letters of Correction). An administrative action does not constitute either a formal adjudication of the incident or a finding of violation. For that reason, FAA investigative personnel do not propose a sanction using the table.

b. The FAA's Exercise of Prosecutorial Discretion. The decision whether to prosecute a particular case is based on a review of the evidence and relevant policy and litigation considerations. The agency exercises broad discretion in both the initial decision to bring a legal enforcement action, and in any later determination to compromise or settle a case based on various considerations. The FAA's discretion in these areas is absolute and presumed to be immune from review. *Heckler v. Cheney*, 470 U.S. 821, 831 (1985).

c. Hazardous Materials Violations. Actions involving violations of the federal hazardous materials transportation law, 49 U.S.C. chapter 51, or the Department of Transportation's Hazardous Materials Regulations, 49 C.F.R. parts 106 through 185. Enforcement sanction guidance for these violations is found in Appendix C.

d. Violations by Members of the U.S. Armed Forces. The FAA is required to forward reports of these violations to the Secretary of the department concerned under 49 U.S.C. § 46101(b), whenever the violator is acting in the performance of official duties. The FAA, however, takes remedial action in addition to referring a report when the violator, whether or not

acting in the performance of official military duties, holds an FAA certificate, and the violator's qualifications are at issue. The FAA may take punitive action against a member of the U.S. Armed Forces for a violation committed when the member is not performing official duties.

4. Mitigating or Aggravating Factors and Elements. The factors in chapter 7, subparagraphs 4.a. through m. have been developed over years of policy making and case adjudication. They have proven useful and appropriate for determining the seriousness of a violation and for selecting an appropriate sanction. Elements for evaluating and weighing each factor are also described. These factors and elements provide a framework for determining sanctions for violations specifically listed in the table as well as those not specifically listed. All the factors and elements, however, may not apply to each violation. Only those factors and elements that are relevant to a violation are considered in determining a sanction for the violation. This list of factors and elements is not intended to be exhaustive; other factors may be relevant as well.

a. Nature of the Violation. Three elements define the nature of a violation: first, whether the violation was operational or non-operational; second, whether the violation involved careless or reckless conduct; and third, whether the violation involved any special aggravating or mitigating factors.

(1) **Individuals.** When an individual who holds a certificate improperly exercises the privileges of that certificate, the natural consequence of that act should be loss of privileges for a period of time commensurate with the violation. The FAA, therefore, primarily uses certificate actions to enforce operational regulations against individuals who hold certificates. The potential adverse impact that certificate action may have on an individual's livelihood does not alter this principle. Non-operational violations may warrant a different type of sanction.

(2) **Entities.** The FAA ordinarily takes civil penalty action against a certificate-holding entity (for example, an air carrier) when it determines there would be a substantial adverse impact on the public interest from disrupted service by that certificate holder and the impact is not outweighed by safety considerations. Even when a substantial adverse impact would occur, when there is a need to prevent continuing violations or other egregious conduct by any certificate holder, when any certificate holder lacks qualification, or there is a reasonable basis to question the qualifications of any certificate holder, the FAA takes remedial action, for example, revocation or indefinite suspension, as necessary.

(3) **Careless or reckless conduct.** Violations that involve careless or reckless conduct in violation of 14 C.F.R. § 91.13 may warrant more severe sanctions. Carelessness connotes conduct that falls below the standard of care or prudence expected of a reasonable person, or holder of the relevant certificate, acting under the same or similar circumstances. Recklessness connotes conduct that demonstrates a gross, or even callous or flagrant, disregard for safety. Aircraft operations that do not otherwise result in a violation of a specific regulation should be evaluated in light of these standards to determine whether they constitute careless or reckless operations in violation of 14 C.F.R. § 91.13. When a person operates an aircraft in violation of a specific regulation other than 14 C.F.R. § 91.13, however, that violation constitutes a careless or reckless operation in and of itself. In these cases, the misconduct may also result in a violation of 14 C.F.R. § 91.13 if it actually or potentially endangers the lives or property of others.

When calculating the amount of sanction based on this factor, a distinction generally is drawn between instances where 14 C.F.R. § 91.13 is an independent violation and those where it is residual to another violation. When a 14 C.F.R. § 91.13 violation is residual only, a higher sanction generally is not warranted unless the conduct is also reckless.

b. Whether the Violation was Inadvertent and Not Deliberate. If a violation is deliberate or not inadvertent, a sanction at the upper end of the range or exceeding the range for that type of violation generally is appropriate. A deliberate violation generally warrants a sanction that is more severe than one that is just not inadvertent.

(1) Not deliberate. This element means a lack of the degree of deliberation found in intentional misconduct. Deliberate or intentional misconduct is an aggravating circumstance and includes deliberate conduct that leads to a violation as well as circumstances indicating intent to commit a violation.

(2) Inadvertence. An act is inadvertent when it is the result of both inattention and lack of purposeful choice. For example, an inadvertent act occurs when a pilot flies at an incorrect altitude because he or she misread the aircraft's instruments; however, it is not an inadvertent act when a pilot flies at an incorrect altitude as a result of choosing not to consult the aircraft's instruments or choosing not to use other available means to verify altitude. The test to be applied is whether the conduct, not the factual or legal consequences, is inadvertent and unintended. *Ferguson v. National Transportation Safety Board*, 678 F.2d 821, 828-829 (9th Cir. 1982).

c. Certificate Holder's Level of Experience.

(1) Level of experience refers primarily to the type of certificate and ratings held (for example, student, private, commercial, airline transport pilot, or certified flight instructor), and the number of hours flown, by the certificate holder. Certificate holders with greater levels of experience may be held to a higher standard. Thus, for example, commercial pilots may be held to a higher standard than private pilots and airline transport pilots may be held to an even higher standard than commercial pilots.

(2) In determining an appropriate sanction, the FAA may consider the extent to which the certificate holder's action deviated from the degree of care and diligence normally expected of a person with the certificate holder's level of experience. A significant deviation from the degree of care and diligence expected of the holder of that certificate may warrant a more aggravated sanction.

d. Attitude of the Violator.

(1) A good compliance attitude is the norm and does not warrant a reduction in sanction. A prior violation history may suggest that a person has a poor compliance disposition, which is an aggravating factor. Furthermore, a person who commits an act or omission contrary to statutory or regulatory requirements after receiving notice through a prior administrative action or counseling that such conduct is in violation of those requirements might well be regarded as having a poor compliance disposition. In evaluating compliance disposition, the FAA does not

view an alleged violator as having a poor attitude because the alleged violator fails to respond to a letter of investigation, chooses to be represented by counsel, or contests the violation.

(2) In assessing the attitude of an alleged violator, the FAA may consider the declaration of an emergency to air traffic control. When an emergency is genuine and not of the person's own making, the emergency is exculpatory under 14 C.F.R. § 91.3(b). However, this situation is distinct from the situation where a declaration of emergency is not exculpatory but is a factor that might be appropriate to consider in determining sanction. In emergency situations, the FAA views declaring an emergency to air traffic control as a sign of good judgment and a constructive attitude. When an emergency is of a person's own making, that person's declaration of an emergency may be considered mitigating in determining the sanction to be imposed for any violations committed, in much the same way it is considered mitigating if a person voluntarily reports a violation.

e. Degree of Hazard.

(1) The degree of hazard may be increased as a result of the interplay of the operational environment (for example, weather conditions, congested vs. sparsely populated areas) and the nature of the threat to safety (to the life or property of another, including those in the aircraft being operated, to other aircraft, or to persons or property on the surface) that the misconduct presents. The safety threat is based on the reasonably foreseeable consequences of the misconduct. For example, operating 500 feet below the minimum altitude poses a greater hazard than operating 100 feet below. Similarly, if an aircraft operator fails to comply with an airworthiness directive by operating 10 hours past a required inspection, the degree of hazard is probably not as great as when the aircraft is operated 100 hours beyond the required. And it is not mitigating when a violation does not result in actual harm; that is simply fortuitous.

(2) The sanction ranges reflect the degree of danger normally inherent in an average violation of a regulation, without aggravating circumstances. As discussed in chapter 7, subparagraph 5.b., an increase in the degree of hazard may form the basis for exceeding the sanction ranges. For example, the range for an unauthorized low flight does not assume extreme departures from required altitudes, for example, flying an airplane over a crowded assembly of persons at 50-feet

f. Action Taken by Employer or Other Authority. This factor ordinarily involves the following elements: whether the alleged violator's employer has taken disciplinary action and whether criminal prosecution is involved.

(1) Employment discipline. Where the violation would normally call for a certain type of enforcement action, the FAA takes that action regardless of any action taken by the violator's employer. Generally, the FAA does not credit an employer's disciplinary action toward a period of suspension the FAA imposes against the violator's certificate because of the different purposes of government-ordered, as contrasted with employer-ordered, actions.

(2) Criminal prosecution. When arising out of the same conduct, local, state, or federal prosecution does not preclude the FAA from taking appropriate remedial enforcement action; nor

does it preclude the FAA from taking appropriate punitive enforcement action. For cases where federal, state, or local authorities prosecute criminally, the FAA generally does take remedial enforcement action if that is warranted despite the criminal prosecution. However, the FAA does not generally take punitive legal enforcement action for the same conduct, unless it believes the criminal sanctions are not sufficient to provide an adequate deterrent for future violations by the violator and others similarly situated, or when the FAA wants to establish a violation history record. If the FAA decides to proceed with a punitive civil enforcement action in addition to the criminal prosecution, it generally considers the criminal penalties incurred in those proceedings in determining the appropriate amount of sanction to be sought in the FAA's punitive enforcement action.

g. Use of a Certificate. This factor relates to the nature or kind of activity or operation involved at the time the violation was committed. Whether the certificate holder was engaged in student, private, commercial, or airline activity bears on the severity of the sanction. Air carriers are held to the highest standard of care. Likewise, personnel engaged in air transportation are held to the highest safety standard.

h. Violation or Incident History.

(1) A violation-free history is the expected norm, not the exception and, therefore, is not a mitigating factor. Sanction ranges in the table generally represent the normal range of sanction for a single, first-time, inadvertent violation. Given the expected norm, a prior violation record can be evidence of a poor compliance disposition or of a pattern of disregard for the FAA's regulations, which are aggravating factors. As a result, a violation history can justify imposing a sanction at the higher end of the normal range or a sanction beyond the normal range. It might also justify revocation rather than suspension if the pattern of violation reflects a lack of qualification. In addition, a violation history might justify a certificate suspension if previously issued civil penalties have not produced the desired deterrent effect. In deciding whether a violation history justifies aggravating the sanction or changing the usual type of sanction, the FAA considers the length of time that has elapsed between violations, whether the violations involved the same or similar regulations, and whether the violations are factually similar.

(2) The following actions constitute violation history when they involve regulatory violations and become final: orders of amendment, modification, suspension, or revocation of an FAA certificate; orders assessing a civil penalty; findings of violation contained in a consent order, order of compliance or denial; and findings of violation made by a federal court. In addition, a party may agree as part of a settlement that the FAA may consider alleged violations as findings of violation for future sanction determinations.

i. Decisional Law. Decisions of the FAA decisionmaker represent the FAA Administrator's position on issues arising in civil penalty assessment actions, including issues regarding sanctions. The policy in this order also represents the Administrator's position on sanctions in legal enforcement actions. To the extent that this document conflicts with FAA decisionmaker decisions published before this document's issuance, the sanction guidance policy in this order supersedes those decisions. However, FAA decisionmaker decisions published after

the issuance of this document that conflict with the policy in this order supersede this document and are controlling.

j. Ability to Absorb Sanction. Sanctions should be deterrent. While punitive sanctions should not be unduly harsh, they should be substantial enough to prevent violators from profiting from their violations, that is, the sanction should be high enough to remove any profit incentive for violations. Penalties should never be permitted to be a cost of doing business. Air carriers, in particular, are required by law to have the financial wherewithal to operate according to established safety standards. While the FAA does not allow financial circumstances to excuse any violation, it does consider a carrier's size and financial strength in choosing the appropriate sanction amount. The difference in the penalties fixed in the law for large and small business concerns recognizes this fact. A civil penalty that may be a mere *cost of doing business* to a major air carrier might compel a small air carrier to go out of business. Therefore, the FAA uses air carrier size as one means of ensuring a relatively equivalent deterrent effect on each air carrier that violates the same FAA regulation. The resulting classification of air carriers by size and ranges of civil penalties are set forth in part one, section A of the table. For all entities and individuals, the FAA considers ability to pay a civil penalty and the effect a civil penalty will have on a person's ability to continue in business to the extent it knows such information.

k. Consistency of Sanction. One of the agency's goals is to achieve relative consistency in imposing similar sanctions for similar violations. The FAA pursues this objective to assure fairness and so the sanction's impact has an equivalent degree of deterrent or disciplinary value to others similarly situated. This goal may not always be achieved, however, because of the inherently subjective nature of the exercise of judgment in setting sanctions.

l. Whether the Violation was Reported Voluntarily.

(1) The FAA has programs that allow persons to report voluntarily apparent violations and receive lesser enforcement action provided certain criteria are met. These programs include the aviation safety reporting program, the voluntary disclosure reporting program, and the aviation safety action program. Besides these programs, the FAA may grant special enforcement consideration under certain circumstances to a person who, incident to his or her report of another's violations, voluntarily discloses his or her own participation in the same or related violations. This special enforcement consideration may range from mitigating the sanction to determining that no enforcement action is required.

(2) If a person is not covered under one of these programs but nonetheless voluntarily reports an apparent violation to the FAA before the FAA discovers it, takes immediate action to correct the noncompliance, and works with the FAA on steps to preclude recurrence of the apparent violation, the FAA may consider such actions in mitigating the sanction for the violation.

m. Corrective Action. The FAA considers corrective action a mitigating factor in determining sanction provided the corrective action exceeds the minimum regulatory or statutory requirements. The amount of credit given in setting a sanction depends on the extent and timing of the corrective action, that is, how extensive was the corrective action and how quickly was it taken. Implementing new procedures that are above those required under the FAA's regulations

to prevent future violations ordinarily is considered a mitigating factor in determining an appropriate sanction. Corrective action taken after the alleged violator first becomes aware of a deficiency but before FAA discovery of the violation ordinarily warrants greater mitigation than corrective action that is taken only after the alleged violator receives notice of the FAA's enforcement action. Corrective action taken by an alleged violator that simply brings that person into compliance with the statutory or regulatory requirements is not considered in mitigation of sanction. To mitigate a sanction based on such corrective action would put at an economic disadvantage competitors who have expended the resources necessary to maintain compliance.

5. Use of the Table of Sanctions.

a. General. Sanction determinations are not accomplished through a strict mathematical formula; rather, sanction determinations result from a judgment of where a case lies along a spectrum of gravity. Ultimately, the circumstances of each case are evaluated in terms of the needs of safety and the public interest.

b. Single, First-time, Inadvertent Violations.

(1) Part II of the table specifies both the normal types of sanction (certificate action, civil penalty action, or other type) and the normal ranges within those types the FAA ordinarily seeks to impose in a legal enforcement action for a single, first-time violation that is generally inadvertent (the table includes ranges of sanctions for several violations that usually are intentional, for example, interference with a crewmember, smoking on an aircraft). In addition, the table generally reflects a presumption that the alleged violator wants to comply with the law and to remedy any noncompliance and that the alleged violator, therefore, has a constructive attitude.

(2) For factors b, d, or h of paragraph 4 (that is, inadvertent and not deliberate conduct, attitude, and violation history), the FAA does not normally deviate from the ranges listed in the table solely based on the inadvertence of the violation or on the alleged violator's good reputation, past public service, violation-free history, or constructive attitude. Any mitigating circumstances are to be found in the facts and circumstances of the violation itself.

(3) Applying ranges within a sanction type. In determining where, within each range, a sanction should be imposed, the FAA generally considers factors a, c, e, f, g, i, j, k, and m of paragraph 4 (that is, nature of the violation, level of experience, degree of hazard, action by employer or other authority, use of certificate, decisional law, ability to absorb sanction, consistency of the sanction with similar cases, corrective action), to the extent they are applicable or relevant. When determining a specific sanction amount within a range, FAA enforcement personnel begin with an amount in the middle of the range and increase that amount toward the higher end of the range for aggravating factors or decrease that amount toward the lower end of the range for mitigating factors.

(4) Deviating from ranges within a sanction type. The FAA might impose sanctions below the normal ranges based on justifiable mitigation under factors j, l, and m of paragraph 4 (that is, the ability to absorb the sanction, voluntary reporting, corrective action). The FAA may

impose sanctions above the normal ranges when the following circumstances, relating to factors b, d, e, and h of paragraph 4 are present: the violation is other than inadvertent⁴, the violator has a violation history, the violation involves a significant degree of hazard, or the violator has a poor compliance disposition. The ranges also may be exceeded when the case involves multiple violations. (See chapter 7, paragraphs 6 and 7).

c. Types of Sanction.

(1) General. The FAA ordinarily does not initiate punitive civil penalty and punitive certificate actions (that is, fixed-period certificate suspensions) against a certificate holder for the same offense. While electing to impose one sanction is not a legal bar to a concurrent proceeding to impose another, pursuing both actions solely for punitive purposes usually is not necessary. The FAA takes remedial and punitive actions in the same case, however, when warranted.

(2) Selecting types of sanctions. Except in exceptional circumstances, the FAA uses the type of sanction recommended in the table. The FAA must impose any sanction mandated by statute (for example, revocation under 49 U.S.C. §§ 44106(b), 44710(b), and 44726(b) unless waived by the Administrator).

6. General Guidance on Multiple Acts or Multiple Violations.

a. Description of Multiple Violations. Enforcement actions often involve multiple violations: multiple violations of a single regulation; a single violation of multiple regulations; or multiple violations of multiple regulations. In addition, under 49 U.S.C. § 46301(a)(2), if a violation is a continuing one, each day the violation continues, or each flight for which the violation was committed, constitutes a separate offense.

b. General Sanction Guidance. Multiple violations ordinarily result in high sanction amounts. Such sanction amounts ordinarily are not determined by simply adding up the individual penalties for multiple violations set forth in the table, however. Simply adding up the individual penalties for each violation could result in compounding a sanction in a disproportionately harsh manner for the conduct involved. Conversely, multiple violations may be so serious in their consequences for safety and the public interest as to require a penalty greater than the sum of the recommended amount of penalty provided for in the table for each violation.

c. Single Act of Noncompliance Resulting in Multiple Violations. When a single instance of noncompliance results in multiple violations of general and specific regulations involving the same or similar conduct, the FAA ordinarily does not compound the sanction to reflect the amount of sanction recommended in the table for each regulatory violation. In calculating the amount of sanction for multiple violations, FAA enforcement personnel consider

⁴ When the violation is one that is generally inherently deliberate (e.g., interference with crewmember or smoking violations), factor b. is not considered in determining whether the sanction should be above the range in the table. The ranges in the table for such violations already have taken into consideration the inherently deliberate nature of the violation.

the totality of circumstances relating to the multiple violations, including the alleged violator's degree of culpability, and whether the alleged violator had taken steps, although unsuccessful, to prevent the violations.

d. Type of Legal Enforcement Action. Where this guidance designates the type of legal enforcement action for a single violation, the FAA ordinarily selects the same type of sanction for multiple violations of a similar nature. The seriousness of multiple violations, however, may require changing what is normally a civil penalty action to a certificate action or, sometimes, a punitive certificate suspension to a remedial revocation action.

7. Special Considerations for Numerous Multiple Violations Resulting From an Initial Act or Omission. To determine penalties for numerous multiple violations that result from an initial act or omission, the FAA applies the special considerations and guidance in chapter 7, subparagraphs 7.a. through e. These cases involve such a high number of multiple violations that if FAA enforcement personnel were simply to add the recommended amounts of penalty for each flight or day that constitutes a separate violation, the resulting sanction amount could be disproportionately harsh for the misconduct involved, in an average case.

a. Determining Proposed Penalty. To determine an appropriate civil penalty in a case involving numerous multiple violations resulting from an initial act or omission (for example, an aircraft operated on a dozen or more flights after being improperly returned to service), FAA enforcement personnel:

(1) Identify each initial act or omission that caused or resulted in the multiple violations (for example, improper maintenance plus improper return to service; failure to maintain a quality control system).

(2) Consult the table in Appendix B and the general guidance in chapter 7, paragraph 4, on aggravating and mitigating factors to determine the amount of penalty appropriate for each initial act or omission that caused or resulted in the multiple violations (for example, in airworthiness cases, a penalty for the act of improper maintenance or inspection; in manufacturing cases, a penalty for the act of failing to maintain a quality control system).

(3) Determine the amount of penalty for the numerous multiple violations by applying the guidance in chapter 7, subparagraphs 7.b. through d. Of particular importance in determining an appropriate sanction for numerous multiple violations is the degree of the alleged violator's culpability for the multiple violations. A lower degree of culpability is present when the alleged violator neither knew nor was likely to discover the continuing violations. For example, once improper maintenance was done there were no signs of it from such things as discrepancies reported by the crew, and no inspections that would have led to its discovery were scheduled. A more significant degree of culpability is present when factors such as the following are present:

- the initial act or omission was entered in records that should have led to immediate detection and correction;
- the initial act or omission remained undetected and continued through required inspections or checks designed to reveal such discrepancies;

- the alleged violator was not following maintenance or inspection procedures the FAA had approved or accepted;
- the level of the alleged violator's organization that was aware of, or involved in the noncompliance included management (for example, management implemented policies that contributed to the violations), although an alleged violator's culpability does not require management involvement;
- the alleged violator has a history of similar violations or a history of systemic deficiencies.

Knowing and willful violations connote the highest degree of culpability.

- (4) Add the penalties arrived at for the initial violation to the penalty for the multiple violations.

b. Limitations on Total Civil Penalty Amounts for Numerous Multiple Violations.

(1) In an average case involving numerous inadvertent, multiple violations resulting from a single act or omission, that is, not one that is covered by chapter 7, subparagraphs 7.c. or 7.d., the total civil penalty for the multiple violations ordinarily falls within the ranges provided in either Figure 7-1 or 7-2. The group classifications are defined in part I of Appendix B.

(2) The term *isolated* in Figures 7-1 and 7-2 typically describes a single instance of an employee's failure to follow a statutory or regulatory requirement, contrary to the company's own practice or procedure. A case may involve a number of isolated and unrelated violations. Each group of the multiple violations resulting from each isolated violation ordinarily is subject to the isolated, inadvertent ranges in Figures 7-1 or 7-2.

(3) Inadvertent failures are considered *systemic* if they are repetitive or otherwise demonstrate an underlying deficiency in the alleged violator's system, practices, or procedures. Systemic failures generally warrant more substantial penalties and indicate a need for corrective action.

(4) The aggravating or mitigating factors and elements in chapter 7, paragraph 4. are considered to determine an appropriate civil penalty within the applicable range in Figure 7-1 or 7-2, for the multiple violations resulting from the initial act or omission. Of particular importance is an evaluation of the seriousness of the potential hazard caused by the violation and the degree of culpability of the alleged violator for the multiple violations.

Figure 7-1. Ranges of Penalties for Air Carriers, Commercial Operators, Part 125 Operators

Type of Violations	Group I Large Business	Group I Small Business	Group II or Part 125 Large Business	Group II or Part 125 Small Business	Group III	Group IV
Inadvertent, Isolated Violations	\$200,000-\$400,000	\$100,000-\$300,000	\$150,000-\$300,000	\$100,000-\$200,000	\$75,000-\$150,000	\$50,000-\$100,000
Inadvertent, Systemic Violations	\$300,000-\$500,000	\$200,000-\$400,000	\$250,000-\$400,000	\$150,000-\$300,000	\$100,000-\$200,000	\$75,000-\$150,000

Figure 7-2. Ranges of Penalties for Air Agencies, Airports, Manufacturers

Type of Violations	Air Agency Large Business	Air Agency Small Business	Airport Operator Large Business	Airport Operator Small Business	Manufacturing Large Business	Manufacturing Small Business	Individual
Inadvertent, Isolated Violations	\$150,000-\$300,000	\$100,000-\$200,000	\$200,000-\$400,000	\$100,000-\$300,000	\$200,000-\$400,000	\$100,000-\$300,000	\$50,000-\$100,000
Inadvertent, Systemic Violations	\$250,000-\$400,000	\$150,000-\$300,000	\$300,000-\$500,000	\$200,000-\$400,000	\$300,000-\$500,000	\$200,000-\$400,000	\$75,000-\$150,000

c. Penalties Outside the Ranges.

(1) Penalties lower than the ranges. It may be appropriate to select a civil penalty amount below the ranges in Figures 7-1 or 7-2 if the degree of culpability is minimal, the degree of potential hazard is extremely low, and there are no other aggravating circumstances.

(2) Penalties higher than the ranges. It may be appropriate to select a civil penalty higher than the ranges, up to the statutory maximums:

- If the alleged violator was significantly culpable in permitting the initial act or omission;
 - If the violations involve significant safety risks;
 - If there was an absence of corrective action by the alleged violator over an extended period of time;
 - Where it is necessary to provide an economic disincentive for regulatory noncompliance;
- or.
- If the alleged violator has a poor compliance disposition or history.

d. Intentional Violations. When there is substantial and reliable evidence that the alleged violator knew of the violations resulting from the initial act or omission and allowed them to

occur, the ranges set forth in Figures 7-1 and 7-2 do not apply. For example, operation of an aircraft when there is evidence the operator knew the aircraft or flight was not in compliance with statutory or regulatory requirements, yet deliberately operated it anyway, is most serious, and apart from civil penalties, requires consideration of remedial certificate action. For multiple violations in these circumstances, any civil penalties sought may be up to the statutory maximum penalty for each violation, regardless of the number of violations.

e. Civil Complaints. The guidance in chapter 7, paragraph 7 does not limit the amount of civil penalties that may be sought in a civil complaint filed in U.S. district court.

8. Modification.

a. Type of Sanction. Except when the FAA exercises its prosecutorial discretion to settle an enforcement action, the FAA generally does not modify orders suspending or revoking a certificate to provide for a civil penalty. The FAA also generally does not modify orders assessing a civil penalty to provide for a certificate action. The FAA modifies the type of sanction only in those cases involving extraordinary circumstances (beyond the normal aggravating or mitigating factors and elements listed in chapter 7, paragraph 4). New facts discovered after the original order has been issued may provide a basis for modifying the amount of sanction, but would not ordinarily provide a basis for modifying the type of sanction. However, if newly discovered facts raise new issues, such as the alleged violator's qualifications to hold a certificate, or if they implicate a statutorily-mandated penalty, the FAA modifies the type of sanction.

b. Amount of Sanction. The FAA does not apply the factors listed in chapter 7, paragraph 4, in a manner that would double their effect. Once the FAA has fairly considered the relevant mitigating and aggravating circumstances, it generally does not modify the amount of sanction. The FAA modifies the amount of sanction normally only when new information indicates the factors or elements were not fairly applied, or when other clear and compelling reasons are articulated.

9. Special Emphasis Enforcement Programs. At times special situations arise that dictate the need for more effective enforcement action through increased sanctions or other measures in a particular regulated area or segment of industry. When these circumstances arise, the FAA may set up a special emphasis enforcement program, designed to focus on a particular area of noncompliance on a national or local geographical basis.

10. Small Entities.

a. General.

(1) Under the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), the FAA is required to have a policy or program to provide for the reduction, and under appropriate circumstances waiver, of civil penalties for statutory or regulatory violations by small entities. Under the law, such a policy is to contain certain conditions. Those suggested by Congress are: requiring the small entity to correct the violation within a reasonable correction period; limiting the applicability to violations discovered through participation in a compliance

assistance or audit program operated or supported by the agency; excluding small entities that have been subject to multiple enforcement actions by the agency; excluding violations involving willful or criminal conduct; excluding violations that pose serious health, safety or environmental threats; and requiring a good faith effort to comply with the law. The SBREFA also provides that under appropriate circumstances, the FAA may consider ability to pay in determining the penalty to assess a small entity.

(2) Congress intended that agencies have the discretion to develop the limits of their enforcement policies for small entities and the specific circumstances under which penalty reductions or waivers would be granted. Because the statute requires an agency, subject to the requirements and limitations of other statutes, to place conditions or exclusions on its enforcement policy under SBREFA, it does not appear Congress intended agencies to reduce or waive penalties solely because an alleged violator is a small entity. Rather, the statute contemplates that certain criteria be met before an agency reduces or waives a penalty against a small entity. Although the SBREFA imposes a requirement on agencies to establish penalty reduction and waiver programs for small entities, Congress recognized that some agencies already have formal or informal policies or programs that would meet this requirement.

b. FAA's Policy under the SBREFA.

(1) The FAA's compliance and enforcement program includes several policies that meet the requirements of, and are consistent with the intent of, SBREFA. Taken together, these policies constitute the FAA's policy mandated by SBREFA.

(2) Under the FAA's compliance and enforcement program, for example, FAA investigative personnel have the discretion to address alleged violations by any person, including small entities, with lesser enforcement action than a civil penalty, that is, administrative action, provided the criteria in chapter 5 are met. There are two forms of administrative action: a warning notice and a letter of correction. A warning notice brings to the attention of the regulated person or entity the facts and circumstances that indicate that a violation has occurred, identifies the regulatory provision at issue, and requests future compliance. A letter of correction is similar but is intended for use when there is an agreement with the regulated party that corrective action acceptable to the FAA has, or within a reasonable period will be, taken. Administrative actions are less onerous than a waiver of penalty in that they neither carry a sanction nor result in a finding of violation.

(3) Under the agency's voluntary disclosure reporting program, the FAA takes administrative action instead of civil penalty action against most regulated entities, including small entities that voluntarily report certain apparent violations to the FAA, complete corrective action satisfactory to the FAA to prevent their recurrence, and meet certain other criteria.

(4) The FAA's sanction policies have historically provided for reductions of civil penalties in appropriate cases based on the mitigating factors listed in chapter 7, subparagraph 4., which include ability to pay and whether a penalty would prevent the entity from continuing in business.

(5) For air carriers and commercial operators, the FAA also takes company size into consideration in determining the appropriate amount of civil penalty. The sanction ranges in Part I. Definitions and Abbreviations of the table for single, inadvertent, first-time violations by U.S. air carriers and U.S. commercial operators differentiate among various sizes of such entities as a means of providing a relatively equivalent deterrent for the same violation against each air carrier and commercial operator. While the FAA has not specified such sanction ranges for other certificate holding entities, it is the FAA's policy to seek penalties generally relative to the size and revenue of the operation for repair stations, manufacturers, airports, and other entities holding certificates.

(6) Although the FAA does not reduce or waive the penalty of an alleged violator solely because it is a small entity, the FAA appropriately reduces a civil penalty, or elects to take administrative action rather than legal enforcement action, against a small entity if appropriate under the policies described in chapter 7, subparagraphs 10.b.(1)-(5).

c. The Small Business Ombudsman.

(1) The Small Business and Agriculture Regulatory Enforcement Ombudsman and 10 Regional Fairness Boards were established to receive comments from small businesses about federal agency enforcement actions. The Ombudsman annually evaluates the enforcement activities and rates each agency's responsiveness to small business.

(2) Each FAA employee who conducts an inspection of a small business concern that is regulated by the FAA provides the small business concern with an information sheet. The information sheet informs that entity that it may submit complaints or comments regarding unfair FAA regulatory enforcement to the National Ombudsman. The information sheet contains the following language:

Our objective is to ensure a fair regulatory enforcement environment. If you feel that you have been treated unfairly or unprofessionally, you may contact the FAA by calling the FAA's Office of Rulemaking at (202)-267-3404 or by mailing your comments or complaints to the Federal Aviation Administration, Office of Rulemaking, 800 Independence Avenue, S.W., Room 808, Washington, D.C., 20591. You also have a right to contact the Small Business Administration's National Ombudsman at 1- 888-REG-FAIR (1-888-734-3247), or www.sba.gov/ombudsman regarding the fairness of the compliance and enforcement activity of the FAA. The FAA strictly forbids retaliatory acts by its employees. As such, you should feel confident that you will not be penalized for expressing your concerns about the FAA's compliance and enforcement activities.

11. Remedial Sanction Guidance Policy.

a. General.

(1) The FAA statute requires the Administrator to promote "safe flight of civil aircraft in air commerce . . ." 49 U.S.C. § 44701(e). As one means of achieving this goal, the statute specifically authorizes the Administrator to issue various certificates. These certificates include

airman certificates, type certificates, production certificates, airworthiness certificates, air carrier operating certificates, airport operating certificates, air agency certificates, and air navigation facility certificates. 49 U.S.C. § 44702(a). For most of these certificates, the statute requires the Administrator to investigate and make appropriate findings regarding qualifications to hold the certificate applied for before the certificate is issued. For example, the Administrator is required to investigate and make findings that persons applying for airman certificates are *qualified* to hold those certificates; that aircraft and aircraft engine parts are properly designed and manufactured, perform properly, and meet the regulations and minimum standards prescribed before issuing a type certificate, and so forth. 49 U.S.C. §§ 44702-44706. Once the Administrator finds the applicant is qualified for the certificate applied for, the Administrator is required to issue the certificate in question.

(2) Because the Administrator's responsibility to promote safety in air commerce and air transportation is constant, the Administrator must also take appropriate action when the Administrator finds, or has reason to believe, the certificate holder no longer possesses the qualifications required to hold a certificate. Thus, the statute provides that the Administrator "may reinspect at any time a civil aircraft, aircraft engine, propeller, appliance, air navigation facility, or air agency or reexamine an airman holding a certificate issued under section 44703 of this title," and that the Administrator "may issue an order amending, modifying, suspending or revoking . . . any part of a certificate issued under [chapter 447 of the statute] if . . . the Administrator decides after conducting a reinspection, reexamination, or other investigation that safety in air commerce or air transportation requires that action." 49 U.S.C. §§ 44709(a) and (b) (1) (A).

(3) Revocation is the appropriate remedy for conduct that demonstrates that a certificate holder lacks either the technical proficiency or the degree of care, judgment, and responsibility, required for the certificate and ratings held. The proper standard for revocation is not whether specific violations demonstrate a failure to exercise the necessary qualifications of a certificate holder, but rather whether the violations demonstrate that the holder has never possessed or no longer possesses such qualifications. Similarly, suspension until demonstration of qualification is appropriate when the agency has reason to believe the certificate holder may lack the required competence to hold a certificate and generally when the certificate holder fails or refuses to be reexamined. In either case, using the factors normally applied to select a sanction in punitive suspension cases is neither required nor appropriate.

b. Misconduct Generally Warranting Revocation.

(1) The FAA has concluded that by their nature, some acts of misconduct are so egregious as to demonstrate the certificate holder never possessed or no longer possesses the qualifications required to hold any airman certificate and other certificates. Therefore, such acts of misconduct warrant revocation of all airman certificates and other certificates held by the certificate holder. Such acts include: making a fraudulent or intentionally false statement; operating an aircraft while under the influence of alcohol or drugs, or with an alcohol concentration of .04 percent or above, or within 8 hours of consuming alcohol, in violation of 14 C.F.R. § 91.17(a); operating a civil aircraft within the United States with knowledge that narcotic drugs, marijuana, and depressant or stimulant drugs or substances as defined in federal

or state statutes are carried in the aircraft, in violation of 14 C.F.R. § 91.19(a); refusing to submit to a drug or alcohol test; and conviction for the violation of any federal or state statute relating to the growing, processing, manufacture, sale, disposition, possession, transportation, or importation of narcotic drugs, marijuana, depressant or stimulant drugs or substances involving the use of an aircraft, the exercise of the privileges of the alleged violator's airman-certificate to further the prohibited conduct, or more than one drug conviction of any kind within the scope of 14 C.F.R. §§ 61.15(a), 63.12(a), or 65.12(a).⁵

(2) Except for cases under 49 U.S.C. §§ 44106, 44710, 44726, and 46111, there may be unique circumstances for which a sanction other than revocation is warranted. Because of the serious implications for aviation safety raised by these cases, however, FAA legal counsel coordinates any decision to seek a sanction other than revocation with the Assistant Chief Counsel for Enforcement. In addition, legal counsel documents the basis for that decision in the case file.

c. Intentionally False or Fraudulent Statements.

(1) In general, the FAA considers the making of intentionally false or fraudulent statements so serious an offense that it results in revocation of all certificates held by the certificate holder. See, for example, *Administrator v. Twomey*, 5 NTSB 1258 (1986), *aff'd* 821 F.2d 63 (1st Cir. 1987) (violation of 14 C.F.R. § 67.20(a)). Falsification has a serious effect on the integrity of the records on which the FAA's safety oversight depends. If the reliability of these records is undermined, the FAA's ability to promote aviation safety is compromised.

(2) The FAA has handled differently one area of intentional falsification - omitting information related to alcohol- or drug-related convictions, and other similar convictions, from applications for airman medical certification. In FAA Order 2150.3A, Compliance and Enforcement (C & E) Bulletin No. 90-2, issued on February 6, 1990, the agency's policy called for the following sanctions: revoking the alleged violator's current medical certificate, if any, and suspending any airman or ground instructor certificates for 60 days when the falsification involved omitting from the application for medical certification information on a single driving while intoxicated or driving under the influence (DUI) conviction; revoking any current medical certificate and suspending any airman or ground instructor certificates for 180 days when the falsification involved omitting information on a single drug conviction for simple possession from the application for medical certification; and revoking any current medical *and* any airman or ground instructor certificates when the falsification involved omitting information on more than one DUI conviction, or a conviction for more than simple possession, or more than two drug convictions of any type.

(3) The FAA has reevaluated the sanction guidance contained in C & E Bulletin

⁵ A drug conviction within the scope of 14 C.F.R. §§ 61.15(a), 63.12(a), or 65.12(a) that does not involve the use of an aircraft or the exercise of the privileges of the alleged violator's certificate also can warrant revocation in some circumstances. Revocation is appropriate where the totality of the circumstances underlying the conviction indicates that the alleged violator lacks the judgment, responsibility, and compliance attitude required of an airman. This determination must be made on a case-by-case basis.

No. 90-2, and has concluded that the sanction guidance for fraudulent or intentional falsification should be the same regardless of the type of case involved. The FAA has determined that falsification in the cases described in C & E Bulletin No. 90-2 has the same potentially adverse consequences for aviation safety as does falsification of any other record. In essence, a person who fraudulently or intentionally falsifies these records demonstrates the same lack of care, judgment, and responsibility as a person who falsifies any other aviation safety-related records. To correct the anomaly created by C & E Bulletin No. 90-2, the FAA rescinds the sanction guidance regarding intentionally false or fraudulent statements in that bulletin and withdraws the Notice of Enforcement Policy found at 54 Fed. Reg. 15144 (1989).

12. General Guidance for Using the Sanction Guidance Table for Unruly Passenger Conduct Under 49 U.S.C. § 46318.

a. General Purpose and Policy.

(1) The table at Appendix B, part III, Q.(2)-(6) provides the suggested sanction ranges for a single act of unruly conduct by a passenger subject to the maximum civil penalty of \$25,000 (\$27,500 for violations after June 15, 2006) under 49 U.S.C. § 46318. See also Crew Interference (Unruly Passengers), chapter 4, paragraph 14. They provide general guidance only about how to apply the agency's civil penalty authority under 49 U.S.C. § 46318. The sanction guidance tables do not supplant the agency's judgment or its prosecutorial discretion in evaluating a particular case for enforcement action.

(2) Whether a particular passenger's unruly act warrants a sanction within or outside the sanction range, or in the exercise of prosecutorial discretion a decision not to proceed with enforcement action depends on the totality of the circumstances in a particular case. Where the mitigating and aggravating factors described in chapter 7, paragraph 4 are also present in a 49 U.S.C. § 46318 case, FAA enforcement personnel applying the sanction ranges at Appendix B, Figure B-3-p consider those factors in selecting an appropriate sanction within or outside the range. The variety of conduct subject to 49 U.S.C. § 46318 and the varied facts and circumstances within which unruly conduct may occur, may also warrant consideration of other mitigating and aggravating factors unique to unruly passenger conduct. Some of these additional factors are set forth in chapter 7, subparagraphs 12.b. and c.

b. Additional Aggravating Factors to Consider. In addition to the factors described in chapter 7, paragraph 4, FAA enforcement personnel consider other potentially aggravating factors in chapter 7, subparagraphs 12.b.(1)-(7) in the selection of an appropriate sanction within or outside the sanction range.

(1) The severity of the unruly conduct. The severity of the conduct may be indicated by several factors, including:

- The physical characteristics of the individual committing the unruly conduct contrasted with those of the victim.
- The nature of the conduct itself.
- The extent of any injury inflicted.

(2) Whether the unruly conduct occurred when the aircraft was in flight or while passengers were boarding or deplaning. Certain unruly conduct that occurs during flight or on a crowded boarded flight may be more aggravating than the same conduct that occurs while passengers are deplaning.

(3) Whether the unruly conduct was directed at a crewmember or a passenger. Because a crewmember has safety duties to perform on a flight, unruly conduct against a crewmember may be more aggravating than the same unruly conduct directed at an individual who does not have any safety duties to perform on the flight.

(4) Whether the unruly passenger provoked the situation that resulted in the unruly conduct. For instance, a passenger who instigates a confrontation, or a passenger who mixes alcohol with prescribed or over-the-counter drugs that the passenger claims precipitated the unruly conduct.

(5) Whether the unruly conduct necessitated that the flight be diverted from its intended destination.

(6) Whether the unruly conduct necessitated that the flight crew call ahead for law enforcement to meet the flight on arrival.

(7) Whether the unruly conduct was inflicted with malice or in anger.

c. Additional Mitigating Factors to Consider. The factors listed in chapter 7, subparagraphs 12.c. (1)-(3) may justify a sanction below the sanction range, or in the agency's prosecutorial discretion, may justify a decision not to prosecute a passenger's unruly conduct.

(1) Whether the unruly passenger has already served a criminal sentence for the same conduct or has already made monetary restitution in the context of a criminal prosecution for the same conduct.

(2) Whether the passenger's unruly conduct was caused by a diagnosed medical or mental condition for which the passenger was receiving medical treatment.

(3) Whether the unruly conduct was a reasonable response to a provocation by another. However, a passenger's use of unreasonable force in response to a provocation by another individual on the aircraft would not constitute a mitigating factor.

d. When to Apply the Sanction Range for Acts Posing an "Imminent Threat" to Safety of the Aircraft or Others on Board the Aircraft.

(1) The sanction range at Appendix B, part III.Q.(6) for an act that poses an imminent threat to safety of aircraft or other individuals on the aircraft applies when there is an *imminent* threat to the safety of the aircraft or to the *collective* safety of others on board the aircraft. For example, a passenger attempting to open an emergency exit door would be an imminent threat to the safety of the aircraft. If the imminent threat to safety is directed to specific individuals on the

aircraft, then the sanction range for physical assault or threatened physical at Appendix B, part III.Q. (2)-(5) applies.

(2) In selecting an appropriate sanction within or outside the sanction range for an act posing an imminent safety threat, FAA enforcement personnel consider whether the resultant imminent threat was the unintended consequence of the passenger's careless or reckless act or whether the passenger intended the consequences. The former would justify a sanction toward the low end of the range, while the latter would justify a sanction toward the maximum range.

e. Applicable Sanction Ranges for Security Officers or Others Assigned a Law Enforcement Function on a Flight (for example, Federal Air Marshals Assigned to the Flight). FAA enforcement personnel apply the sanction range applicable to physical assaults or threatened physical assaults on crewmembers (Appendix B, part III.Q. (2) and (4)).

f. Applying Unruly Passenger Sanction Guidance Tables to Multiple Acts. When applying the table to multiple acts by an unruly passenger, FAA enforcement personnel consider not only the individual unruly acts committed, but also the collective consequences of all the unruly behavior. FAA enforcement personnel do not approach the sanction determination for multiple acts as a mechanical exercise of multiplying the number of separate acts of unruly behavior by a sanction amount in the range for a single act. Instead, they use the guidance in the table and exercise their judgment as to the seriousness of the conduct, given the totality of circumstances, to determine an appropriate sanction amount that will deter future violations by the unruly passenger and others similarly situated.

5. Operation of unairworthy aircraft.

6. Falsification of any record.

B. Repair Stations.

1. Failure to provide adequately for proper servicing, maintenance repairs, and inspection.

2. Failure to provide adequate personnel who can perform, supervise and inspect work for which the station is rated.

3. Failure to have enough qualified personnel to keep up with the volume of work.

4. Failure to maintain records of supervisory and inspection personnel.

5. Failure to maintain performance records and reports.

6. Failure to insure correct calibration of all inspection and test equipment is accomplished at prescribed intervals.

7. Failure to set forth adequate description of work performed.

8. Failure of mechanic to make log entries, records or reports.

9. Failure to sign or complete maintenance release.

10. Inspection of work performed and approval for return to service by other than a qualified inspector.

SANCTION PER VIOLATION

Mod. to max. c.p.

Rev.

Mod. to max. c.p.

Max. c.p. to 7 day sus. and thereafter until adequate personnel are provided.

Max. c.p. to 7 day sus. and thereafter until certificate holder has enough qualified personnel.

Mod. to max. c.p.

Mod. to max. c.p.

Min. to max. c.p.

Min. to mod. c.p.

Mod. to max. c.p.

Min. to mod. c.p.

Max. c.p. to 30 day sus.

EXHIBIT

547

2150.3A
Appendix 4

SANCTION PER VIOLATION

O. Denial of Authorized Entry to Flight Deck.

30 to 60 day sus.

P. Flight and Duty Time Limitations.

15 to 90 day sus.

Q. Operation Without Required Certificate or Rating.

1. Medical certificate.

15 to 60 day sus.

2. Lack of type rating.

180 day sus. to rev.

3. Missed proficiency check.

30 to 90 day sus.

4. Lack of current experience.

30 to 90 day sus.

5. Failure to have current certificate in possession.

Mod. c.p. to 7 day sus.

R. Operation with Known Physical Disability.

Rev.

III. Individuals and General Aviation - Owners, Pilots, Repair Stations, Maintenance Personnel.

A. Owners and Operators Other Than Required Crewmembers.

1. Failure to comply with airworthiness directives.

Mod. to max. c.p.

2. Failure to perform or improper performance of maintenance, including required maintenance.

Mod. to max. c.p.

3. Failure to make proper entries in aircraft logs.

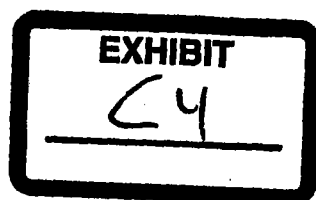
Min. to mod. c.p.

4. Operation of aircraft beyond annual, 100-hour or progressive inspection.

Min. to mod. c.p.

DESCRIPTION	AIRFRAME	ALL
Paint	Airframe	All
Aircraft owner requires new exterior paint refinishing		
Aircraft disassembled and painted by Advanced Aircraft Refinishers, Griffin, Georgia. Colors: Matterhorn White: G8003; Cardinal Gold: F9215; Flight Red: F7232. All work completed I/A/W Model 177 Series 1968 Thru 1978 Service Manual Section 19, FAR 91.417 and AC 43.13(B).		
REFERENCE		

DESCRIPTION	AIRFRAME	EMPELLAGE
Rudder	Airframe	Empennage
Rudder balance required: rudder painted		
Aircraft rudder was balanced I/A/W Model 177 Series 1968 Thru 1978 Service Manual Section 18-4, FAR 91.417, and AC 43.13(B). Acceptable limits: +10.0 - +15.0 Findings: 2.6345238 Lbs x 5.35 In. = +14.09 Results: Rudder balance is within limits.		
REFERENCE		



I CERTIFY THAT THIS IS
A TRUE AND ACCURATE
COPY OF THE ORIGINAL
DOCUMENT.
SIGNED Andre S. meyer

ITEM OF PROOF NO. 4

2

DESCRIPTION	No. 102		
Aileron		Airframe	L/H Wing
Left aileron balance required: aileron painted			
<p>Aircraft left aileron was balanced I/A/W Model 177 Series 1968 Thru 1978 Service Manual Section 18-3, FAR 91.417 and AC 43.13(B)</p> <p>Acceptable limits: +15.55 - +23.59</p> <p>Findings: 3.7787229 Lbs x 5.125 In. = +19.365954</p> <p>Results: Left aileron balance is within limits.</p>			
REFERENCE			

DESCRIPTION	No. 103		
Aileron		Airframe	R/H Wing
Right aileron balance required: Aileron painted			
<p>Aircraft right aileron was balanced I/A/W Model 177 Series 1968 Thru 1978 Service Manual Section 18-3, FAR 91.417 and AC 43.13(B)</p> <p>Acceptable limits: +15.55 - +23.59</p> <p>Findings: 3.7125842 Lbs x 5.125 In. = +19.026994</p> <p>Results: Right aileron balance is within limits.</p>			
REFERENCE			

DESCRIPTION	NO.	DATE	LOCATION
Horizontal stabilator		Airframe	Empennage
Horizontal stabilator balance required: Horizontal stabilator painted			
Aircraft horizontal stabilator was balanced I/A/W Model 177 Series 1968 Thru 1978 Service Manual Section 18-4, FAR 91.417 and AC 43.13(B). Acceptable limits: -5 - +18.0 Findings: (balance beam used) +13.4 Results: Horizontal stabilator balance is within limits.			
REFERENCE			

DESCRIPTION	NO.	DATE	LOCATION
Crankcase breather tube, clamps. NO. 1750024-1		Powerplant	Lower, firewall
Aircraft owner requests cleanup			
Removed, cleaned up, and reinstalled same. Associated hardware: MS21919DG12			
REFERENCE			
CIPC Figure 51A, Items 39, 40			

DESCRIPTION	NO.	AREA	LOCATION
Oil pressure line assembly		Powerplant	Firewall
NO. S1236C30075			
Aircraft owner requests new line assembly.			
Removed and replaced with new.			
REFERENCE			
CIPC Figure 51A, Item 18A			

DESCRIPTION	NO.	AREA	LOCATION
Prop governor cable		Powerplant	Firewall
NO. 9862067-4			
Worn			
Replaced with new Cessna PN: 9862067-4. Ops check normal. Associated new hardware: AN3-12			
REFERENCE			
CIPC Figure 45F, Item 81A; Figure 51A, Items 73G-K			

DESCRIPTION	NO.	AREA	LOCATION
Throttle cable, bracket		Powerplant	Firewall
NO. 9863053-14, 1750018-3			
Worn			
Replaced with new Cessna PN: 9863053-14. Ops check normal. Associated new hardware: AN3-17			
REFERENCE			
CIPC Figure 45F, Item 80A; Figure 51A, Items 67, 68, 69A, 70, 71A, 71B, 72, 73			

DESCRIPTION	NO.	AREA	LOCATION
Mixture cable		Powerplant	Firewall
NO. 9862010-1			
Worn			
Replaced with new Cessna PN: 9862010-1. Ops check normal. Associated new hardware: 0750159-1			
REFERENCE			
CIPC Figure 45F, Item 82A; Figure 51A Items 54, 55, 56, 57, 58, 59, 60, 61			

DESCRIPTION	NO.	AREA	LOCATION
Carb heat control		Powerplant	Firewall
NO. S1230-18			
Worn, cable crimped			
Replaced with new PMA part: 05-13672 Ops check normal.			
REFERENCE			
CIPC Figure 45F, Item 79			

DESCRIPTION	NO.	AREA	LOCATION
Tachometer shaft		Powerplant	Firewall
NO. S1605-2			
Worn			
Replaced with new Cessna PN: S1605-2. Ops check normal.			
REFERENCE			
CIPC Figure 45F, Item 64			

DESCRIPTION		
Propeller	Powerplant	Nose
NO. P2114392-21		
Aircraft owner requests overhaul/replacement		
Replaced with American Propeller Designer*Prop McCauley propeller PN: B2D34C211/82PCA-6; SN: 060911. Ops check normal.		
REFERENCE		
CIPC Figure 48A, Top of page		

DESCRIPTION		
SCAT ram air to cabin heat valve	Powerplant	Nose
NO. S1053E24T		
Worn		
Replaced with new SCAT.		
REFERENCE		
CIPC Figure 57A, Item 10		

DESCRIPTION		
Heat shield to cabin heat valve	Powerplant	Nose
NO. 1750011-7		
Worn		
Replaced with new shield, PN: 1750011-7.		
REFERENCE		
CIPC Figure 51A, Item 99		

DESCRIPTION	NO.	ALT.	LOCATION
SCAT ram air to fuel gascolator		Powerplant	Nose
NO. 1752039-2			
Worn			
Replaced with new SCAT.			
REFERENCE			
CIPC 57, Item 7			

DESCRIPTION	NO.	ALT.	LOCATION
Alternator belt		Powerplant	Nose
NO. S1597-1-37.5			
Worn			
Replaced with new PN: 37A19773-376. Ops check normal.			
REFERENCE			
CIPC Figure 76, Item 30			

DESCRIPTION	NO.	ALT.	LOCATION
Propeller bulkhead assembly		Powerplant	Nose
NO. 1750051-1			
Scoring in bulkhead			
Replaced with new Cessna PN: 1750051-1			
REFERENCE			
CIPC Figure 48A, Item 6			

DESCRIPTION	NO.	AREA	LOCATION
Carburetor air filter		Powerplant	Nose
NO. C294510-0601; 175001-7 (hardware)			
Aircraft owner requests replacement			
Replaced with new Donaldson air filter, PMA, Donaldson PN: AM107635FP (C294510-0601)			
REFERENCE			
CIPC Figure 51A, Item 98F			

DESCRIPTION	NO.	AREA	LOCATION
SCAT carb heat to carburetor		Powerplant	Nose
NO. 1752039-2			
Worn			
Replaced with new SCAT.			
REFERENCE			
CIPC Figure 57, Item 7			

DESCRIPTION	NO.	AREA	LOCATION
SCAT ram air to oil cooler		Powerplant	Nose
NO. S1053K24T			
Worn			
Replaced with new SCAT.			
REFERENCE			
CIPC Figure 51A, Item 34			

DESCRIPTION	AREA	LOCATION
Manifold pressure line to #3 cylinder NO. 1700121-74	Powerplant	Nose
Aircraft owner requests cleanup		
Removed, cleaned up, and reinstalled same. Ops check normal.		
REFERENCE CIPC Figure 45F, Item 63		

DESCRIPTION	AREA	LOCATION
Engine baffles NO. 17555031-6 etc	Powerplant	Nose
Aircraft owner requests cleanup		
Removed, cleaned, painted, and reinstalled same. All work performed I/A/W AC 43.13(b) and Model 177 Series 1968 Thru 1978 Service Manual Para. 11-27. Associated new hardware: AN500-416-10		
REFERENCE CIPC Figure 54B ALL		

DESCRIPTION	AREA	LOCATION
Alternator NO. C611501-0101	Powerplant	Nose
Aircraft owner requests replacement		
Replaced with new Plane-Power alternator I/A/W manufacturer's instructions, PMA, PN: AL12-F60 Ops check normal.		
CIPC figure 52, Item 21		

DESCRIPTION	NO.	AREA	REMARKS
Exhaust system		Powerplant	Nose
NO. 1754001-19			
Aircraft owner requests replacement			
Replaced with new Power Flow Systems exhaust system I/A/W STC SA02674AT on file, PN PFS-13705; SN: 062. FAA Form 337 on file. Ops check normal.			
REFERENCE			
CIPC Figure 53, top of page			

DESCRIPTION	NO.	AREA	REMARKS
Air duct support, air filter to carb airbox		Powerplant	Nose
NO. 1750025-3			
Aircraft owner requests cleanup			
Removed, cleaned up, and reinstalled same. Ops check normal.			
REFERENCE			
CIPC Figure 51A, Item 98C			

DESCRIPTION	NO.	AREA	REMARKS
Carburetor airbox		Powerplant	Nose
NO. 1752088-5			
Worn, bent			
Replaced with overhauled Acorn Engineering airbox, Cessna PN: 1752088-5, SN: 19253; 8130 on file Associated new hardware: MS20074-04-03. Ops check normal.			
CIPC Figure 51A, Items 79, 82			

DESCRIPTION	NO.	LOCATION
Carburetor temperature probe	Powerplant	Nose
NO. 0550209-1		
Worn		
Replaced with new Cessna PN: 0550209-1 Ops check normal.		
REFERENCE		
CIPC Figure 51A, Item 94A		

DESCRIPTION	NO.	LOCATION
Firewall-forward aircraft hoses	Powerplant	Nose
NO. S51-10 etc.		
Aircraft owner requests replacement		
Replaced with new Precision Hose hoses, PNs: 124J001-3CR0270 (S1236C3-0270; oil press); 124J001-6CR0380 (S1167-6-0380; oil cooler); 124J001-6CR0270 (S1167-6-0027; oil cooler); 124J001-3CR0100 (S1236-3-0100; fuel press); 124J001-6CR0100 (S1236-6-0100; eng pump to carb and aux pump to carb); 124J001-6CR0204 (S1236-6-0204; elec pump to eng pump) Ops check normal.		
REFERENCE		
CIPC Figure 74, Item 37; Figure 51A		

DESCRIPTION	NO.	LOCATION
Vacuum pump	Powerplant	Nose
NO. C431002-0102 (RA215CC)		
Aircraft owner requests replacement		
Replaced with new Rapco vacuum pump, PN: RA215CC Ops check normal.		
REFERENCE		
CIPC Figure 52, Item 25		

DESCRIPTION	NO. 22	Powerplant	Nose
Oil quick drain	NO. S1951-5		
Worn			
Replaced with new Cessna PN: S1951-5. Ops check normal.			
REFERENCE			
CIPC Figure 51A, 99K			

DESCRIPTION	NO. 22	Powerplant	Nose
Starter	NO. 76211		
Aircraft owner requests replacement			
Replaced with new Sky-Tec starter I/A/W manufacturer's instructions, PMA, PN: 149-NL; SN: FN-000707. Ops check normal.			
REFERENCE			
CIPC Figure 52, Item 20			

DESCRIPTION	NO. 22	Powerplant	Nose
Engine bonding strap	NO. 0412007-8		
Worn			
Replaced with new Cessna PN: 0412007-8.			
REFERENCE			
CIPC Figure 51A, Item 95			

DESCRIPTION	AMP	LOCATION
Engine-driven fuel pump NO. 75148	Powerplant	Nose
Worn		
Replaced with new Cessna PN: 75148. Ops check normal.		
REFERENCE		
CIPC Figure 52, Item 24		

DESCRIPTION	AMP	LOCATION
Propeller governor bracket NO. 2050017-6	Powerplant	Nose
Aircraft owner requests cleanup		
Stripped, painted, and reinstalled same. Ops check normal. All work performed I/A/W AC 43.13(b) and Cessna Illustrated Parts Catalog Figure 51A.		
REFERENCE		
CIPC Figure 51A, Item 73P		

DESCRIPTION	AMP	LOCATION
Primer lines, clamps NO. 1700121-100, 1700121-15, 71910	Powerplant	Nose
Worn		
Replaced with new Cessna PN 1700121-100 Ops check normal.		
REFERENCE		
CIPC Figure 73, Item 1		

DESCRIPTION	TIME	LOCATION
Propeller governor NO. C290D3A/T12	Powerplant	Nose
Worn		
Replaced with overhauled McCauley governor PN: C290D3-K/T12 U/S from American Propeller. Removed propeller governor cover screws and mounted propeller control bracket to mount bracket and replaced I/A/W Model 177 Series 1968 Thru 1978 Service Manual Para. 13-13. Ops check normal.		
REFERENCE CIPC Figure 52		

DESCRIPTION	TIME	LOCATION
Oil cooler, duct assembly NO. 8406J, 1756001-1	Powerplant	Nose
Worn oil cooler		
Replaced with new PN: 8406R. Removed, cleaned up, and reinstalled 1756001-1. Ops check normal.		
REFERENCE CIPC Figure 51A, Items 20, 32		

DESCRIPTION	TIME	LOCATION
Fuel line, electrical fuel pump to engine NO. S1236-6-0094	Powerplant	Nose
Aircraft owner requests cleanup		
Removed, cleaned up, and reinstalled same. Ops check normal.		
REFERENCE CIPC Figure 69, Item 59		

DESCRIPTION AND NO.		LOCATION
Fuel line electrical fuel pump to gascolator NO. 1700121-83	Powerplant	Nose
Aircraft owner requests replacement		
Installed new PN: 1700121-83. Ops check normal.		
REFERENCE		
CIPC Figure 69, Item 54		

DESCRIPTION AND NO.		LOCATION
Electrical fuel pump NO. 1216012-1	Powerplant	Nose
Worn		
Replaced with new fuel pump, PMA, PN: 476459E Ops check normal.		
REFERENCE		
CIPC Figure 72, Top of page		

DESCRIPTION AND NO.		LOCATION
Engine NO. O-360-A1F6D	Powerplant	Nose
Aircraft owner requests replacement (2,424 hours TTSN)		
Removed and replaced with factory overhauled Lycoming O-360-A1F6 engine I/A/W manufacturer's instructions and Service Instructions 1241 and 1472; SN: L-3700-36E; Ops check normal.		
REFERENCE		
CIPC Figure 52		

16

DESCRIPTION	NO.	DATE	LOCATION
Bendix dual magneto		Powerplant	Nose
NO. D4LN-2021			
Aircraft owner requests replacement			
Replaced with Unison Slick magnetos, PNs: 75896, 75897; SN: 06112370; 66GC255SFNN. Ops check normal.			
REFERENCE			
CIPC Figure 52, Item 19			

DESCRIPTION	NO.	DATE	LOCATION
Firewall		Powerplant	Firewall
NO. 1713150-202; 1713150-203			
Minor cracks and dents noted. Firewall dirty.			
Cleaned and buffed firewall with Nuvite stainless steel polishing compounds F7, G6, S. Repaired firewall cracks I/A/W AC 43.13(b) and Model 177 Series 1968 Thru 1978 Service Manual Para. 18-68.			
REFERENCE			
CIPC Figure 14A, Items 1, 5			

DESCRIPTION	NO.	DATE	LOCATION
Prop cable adel clamp		Powerplant	Firewall
NO. 0450191-3			
Aircraft owner requests replacement			
Removed and replaced adel clamp on prop cable at firewall with new PN: 0450191-3.			
REFERENCE			

Tanis preheater	Powerplant	Firewall
NO. TAS100-01		
Aircraft owner requests installation of preheater system		
Installed Tanis TAS100 preheater system I/A/W manufacturer's instructions. SN: 40335. Ops check normal.		
REFERENCE		

Oil and fuel servicing	Powerplant	Firewall
Aircraft requires oil and fuel		
Aircraft serviced with 10 quarts Phillips 66 M SAE20W50 mineral oil. Aircraft fueled with 10 gallons of fuel.		
REFERENCE		

Ground test	Powerplant	Firewall
Engine requires ground test following installation		
Ground test performed I/A/W Textron Lycoming Service Instruction 1427B Para. A, 1 through 9. Ops check normal.		
REFERENCE		

Prop flange bushings	Powerplant	Firewall
NO.		
Prop appears to be improperly clocked. No compression noted at 10 o'clock position with counterclockwise revolution of blade.		
Researched compression problem. Prop flange bushings E and F found to be installed incorrectly from factory. Interchanged bushings E and F I/A/W Textron Lycoming Service Instruction 1098G. Engine clocking checks normal. Ran engine. Ops check normal.		
REFERENCE		

Valve covers	Powerplant	Firewall
Aircraft owner requests replacement of valve covers		
Removed and replaced valve covers with Lycoming chrome valve cover kit.		
REFERENCE		

Transponder	Avionics	Inst Panel
NO. RT-359A, PN 41420-1114		
Aircraft owner requests replacement		
Removed and replaced with Garmin GTX 330 I/A/W manufacturer's instructions, Garmin PN: 010-00230-01; SN: 84124934. Ops check normal.		
REFERENCE		

19

DESCRIPTION	NO.	AVIONICS	INST. PANEL
Com transmitter		Avionics	Inst Panel
NO. RT-328T, PN 43340-1124			
Aircraft owner requests replacement			
Removed and replaced with two (2) Garmin GNS 430Ws I/A/W manufacturer's instructions, Garmin PN: 010-00412-01; SNs: 23400485, 23400584. Ops check normal.			
REFERENCE			

DESCRIPTION	NO.	AVIONICS	INST. PANEL
Audio panel		Avionics	Inst Panel
[No PN or SN; Cessna part]			
Aircraft owner requests replacement			
Removed and replaced with new Garmin GMA 340 audio panel I/A/W manufacturer's instructions; Garmin PN: 010-00152-03; SN: 96267435. Ops check normal			
REFERENCE			

DESCRIPTION	NO.	AVIONICS	INST. PANEL
Autopilot		Avionics	Inst Panel
NO. CA-395A			
Aircraft owner requests replacement autopilot			
Removed and replaced with new S-Tec Fifty-Five X autopilot with auto trim package, I/A/W manufacturer's instructions and STC SA09125AC-D on file; PN: ST-608-55X, TK-608; SN: 1994. Ops check normal			
REFERENCE			



DESCRIPTION	NO.	LOCATION
EGT gauge		Aircraft electrical
NO. C668501-0211		Inst panel
Aircraft owner requests overhaul		
Removed and replaced with J.P. Instruments EDM-800 I/A/W manufacturer's instructions, PN: EDM-800-4CAFM/R; SN: 24535; STC SA00432SE on file. Ops check normal.		
REFERENCE		
CIPC Figure 45F, Item 62		

DESCRIPTION	NO.	LOCATION
Narco Mk12D		Avionics
NO. MK12D		Inst panel
Aircraft owner requests removal		
Removed.		
REFERENCE		

DESCRIPTION	NO.	LOCATION
Narco DME 890		Avionics
NO. DME 890		Inst panel
Aircraft owner requests removal		
Removed.		
REFERENCE		

DESCRIPTION	117	100/100
Hobbs meter NO. S1711-1, 1713303-1	Avionics	Inst panel
Aircraft owner requests replacement		
Removed and replaced with new Hobbs meter PN: 1713303-1. Ops check normal.		
REFERENCE		
CIPC Figure 51A, Items 99B, 99C		

DESCRIPTION	117	100/100
Transponder antenna NO. AV-22	Avionics	Lower fuselage
Aircraft owner requests replacement		
Replaced with new Comant CI 105-11s I/A/W manufacturer's instructions; SN: 131013-131212, 131908-131923; FAA form 8130 with aircraft records.		
REFERENCE		

DESCRIPTION	117	100/100
Instrument panel cover assemblies—plastic NO. 1713380-1, 1713279-18, 1713839-1	Avionics	Inst panel
Worn, cracks		
Removed and replaced with new metal instrument panel, pilot and co-pilot sides. All work performed I/A/W AC 43.13(b) and Model 177 Series 1968 Thru 1978 Service Manual 15-5.		
CIPC Figure 45F, Items 34, 37, 38		

DISTRIBUTION	NO.	AREA	LOCATION
Electroluminescent subpanels, rheostat (A/C), resistor, knob, inverter (power supply)		Avionics	Inst panel
NO. 1701030-5; S1904-3; S2091-1; S1995-4; C613001-0201			
Aircraft owner requests replacement			
Replaced with new electroluminescent subpanels manufactured by Air Capitol Dial. Installed new PN: S1904-3; C613001-0201. All work performed I/A/W AC 43.13(b) and Model 177 Series 1968 Thru 1978 Service Manual Chapter 15. Ops check normal.			
REFERENCE			
CIPC Figure 45J, Item 1			

DISTRIBUTION	NO.	AREA	LOCATION
Starter and external power relays		Aircraft electrical	L/H fuselage at firewall
NO. 1770001-PA5, 1770001-PC1			
Aircraft owner requests replacement			
Replaced with new Cessna PN: 1770001-PA5, 1770001-PC1. Ops check normal.			
REFERENCE			
CIPC Figure 76, Items 12, 14			

DISTRIBUTION	NO.	AREA	LOCATION
R/F filter		Aircraft electrical	Firewall
NO. 0770038-2			
Old filter			
Replaced with new Cessna PN: 077038-2. Ops check normal.			
REFERENCE			
CIPC Figure 76, Item 32			

DESCRIPTION	NO.	REMARKS
Voltage regulator	Aircraft electrical	Firewall
NO. C611001-0201		
Aircraft owner requests replacement		
Replace with Zeftronics PMA regulator I/A/W manufacturer's instructions; PN: R15100A; SN: A9H137. Ops check normal.		
REFERENCE		
CIPC Figure 76, Item 33		

DESCRIPTION	NO.	REMARKS
External power plug, bracket, and door assembly	Aircraft electrical	L/H fuselage at firewall
NO. MS3506-1, 0553005-2, 0752611-1		
Aircraft owner requests cleanup		
Removed, cleaned, and reinstalled same. Stripped, etched, alodined, primed, painted, and reinstalled door assembly. Ops check normal.		
REFERENCE		
CIPC Figure 76, Items 17, 22		

DESCRIPTION	NO.	REMARKS
Battery contactor and hardware, cables	Aircraft electrical	Empennage
NO. S1579-1, 1770001-PA4, 1770001-PA1, 1770001-PC1		
Aircraft owner requests replacement		
Replaced with new Cessna PNs: 1770001-PA4, 1770001-PA1, 1770001-PC1.		
REFERENCE		
CIPC Figure 76, Item 4		

DESCRIPTION	NO.	AVIONICS	EMPELLAGE
Stormscope	NO. 805-11500-001	Avionics	Empennage
Aircraft owner requests installation			
Installed L-3 Communications Avionics Systems WX-500 Stormscope spherics device, PN: 805-11500-001. SNs: 91162, 91585. Faa form 8130 with aircraft records.			
REFERENCE			

DESCRIPTION	NO.	AVIONICS	EMPELLAGE
ADS-B datalink	NO. 013-00176-01	Avionics	Empennage
Aircraft owner requests installation			
Installed Garmin GDL 90 ADS-B datalink receiver PN: 013-00176-01 I/A/W manufacturer's instructions, SN: 29100878. FAA form 8130 with aircraft records.			
REFERENCE			

DESCRIPTION	NO.	AVIONICS	EMPELLAGE
Remote compass system: HSI, flux valve, gyro mount	NO. 066-03046-0011, 071-01052-0000, 060-00015-0000	Avionics	Empennage
Aircraft owner requests installation			
Installed Bendix/King KCS 55A remote compass system, PNs: 066-03046-0011, 071-01052-0000, 060-00015-0000 I/A/W manufacturer's instructions. SNs: 53313, 96525, 70385. 8130 on file.			
REFERENCE			

DESCRIPTION	NO.	LOCATION
Multifunction display		Avionics
NO. 010-00487-01		Inst panel
Aircraft owner requests installation		
Installed Garmin GMX 200 I/A/W manufacturer's instructions, I/A/W STC/AML SA01692SE on file. PN: 010-00487-01; SN: 38300529. FAA form 8130 with aircraft records. Ops check normal.		
REFERENCE		

DESCRIPTION	NO.	LOCATION
Nav 1 OBS, directional gyro		Avionics
NO.		Inst panel
Aircraft owner requests installation		
Removed and replaced with Honeywell Bendix/King KCS 55A; see 319.		
REFERENCE		

DESCRIPTION	NO.	LOCATION
Nav 2 OBS		Avionics
NO.		Inst panel
Aircraft owner requests replacement		
Removed and replaced with new Garmin GI 106A, I/A/W manufacturer's instructions. Ops check normal.		
REFERENCE		

DESCRIPTION	DATE	LOCATION
Battery box fusebox	Avionics	Inst panel
Aircraft owner requests installation		
Installed fusebox on battery box I/A/W AC 43.13(b).		
REFERENCE		
CIPC Figure 24		

DESCRIPTION	DATE	LOCATION
Bose power jacks	Avionics	Inst panel
NO.		
Aircraft owner requests installation		
Installed I/A/W manufacturer's instructions, PN: 0159999.		
REFERENCE		

DESCRIPTION	DATE	LOCATION
Compass	Avionics	Inst panel
NO. C660501-0101		
Leaking, inop		
Removed and replaced with vertical card compass and mount, PMA, PN: PAI-700, SN: 60537; PACMO-2CN mount.		
REFERENCE		
CIPC Figure 47A		

DESCRIPTION	AREA	LOCATION
Annunciators	Avionics	Inst panel
Aircraft owner requests installation		
Installed annunciators for low oil pressure, low vacuum pressure, low voltage, and ADS-B traffic warning.		
REFERENCE		

DESCRIPTION	AREA	LOCATION
Instrument lighting	Avionics	Inst panel
NO. 1213379-5, -6, -10, -11, -12		
Aircraft owner requests replacement		
Installed Nulites with instruments in panel.		
REFERENCE		
CIPC Figure 45J, Items 2-6		

DESCRIPTION	AREA	LOCATION
Altitude encoder	Avionics	Inst panel
Aircraft requires new altitude encoder		
Installed TransCal Model SSD120 I/A/W manufacturer's instructions. Ops check normal.		

DESCRIPTION NO. 100		
Wingtip	Airframe	L/H wing
NO. 1723005-11		
Cracks, worn condition		
Replaced with new Cessna PN 1723005-11. Associated new hardware: S1021Z8-8 screws		
REFERENCE		
CIPC Figure 3 Item 15		

DESCRIPTION NO. 401		
Wingtip vent line clamp, tee	Airframe	L/H wing
NO. NAS397-12, MS20825-6D		
Worn		
Replaced with new PN: NAS 397-12		
REFERENCE		
CIPC Figure 69A, Items 16, 26		

DESCRIPTION NO. 402		
Strobe light, lens	Airframe	L/H wing
NO. C622006-0102		
Aircraft owner requests replacement		
Removed and replaced with Whelen strobe kit and power supply, PMA parts: Model ACF power supply, PN: 01-0770006-09; A610 tube assembly; A612 glass lens Associated new hardware: AN 507-632R14, AN 705-632R8		
REFERENCE		
CIPC Figure 3, Item 48		

DESCRIPTION NO. 70		
Position light shield NO. 0523566-7	Airframe	L/H wing
Worn		
Removed and replaced with new Cessna PN: 052366-7		
REFERENCE		
CIPC Figure 3, Item 43		

DESCRIPTION NO. 70		
Inspection covers (5) NO. 1221050-6	Airframe	L/H wing R/H wing
Cracks, wear		
Removed and replaced with new Cessna PN: 1221050-6 Associated new hardware: AN507-1032R7		
REFERENCE		
CIPC Figure 3, Items 17-25, 17A-24, 28-69		

DESCRIPTION NO. 70		
Top cowling, nose cap assembly NO. 1752114-5; 1752115-1	Airframe	Nose
Areas of wear in metal and fiberglass nose cap		
Doublers added, fiberglass repaired. Reinstalled same. All work completed I/A/W AC 43.13(b) and Model 177 Series 1968 Thru 1978 Service Manual Para. 18-76, 18-79		
REFERENCE		
CIPC Figure 49C, Items 1 and 12		

DESCRIPTION	NO.	LOCATION
Lower cowling, snubber		Airframe
NO. 1752114-15; 1752115-2, 1752116-1		Nose
Areas of wear in metal and fiberglass nose cap		
Doublers added, fiberglass repaired. Reinstalled same. All work completed I/A/W AC 43.13(b) and Model 177 Series 1968 Thru 1978 Service Manual Para. 18-76, 18-79		
REFERENCE		
CIPC Figure 49C, Items 15, 22, 24		

DESCRIPTION	NO.	LOCATION
Wingtip		Airframe
NO. 1723005-12		R/H wing
Worn, cracks		
Removed and replaced with new Cessna PN: 1723005-12 Associated new hardware: S1021Z8-3 screws		
REFERENCE		
CIPC Figure 3, Item 48		

DESCRIPTION	NO.	LOCATION
Fuel vent line and clamp		Airframe
NO. 1200406-85		R/H wing
Crimp in line		
Removed and replaced with new Cessna PN: 1200406-85 Associated new hardware: NAS 397-12		
REFERENCE		
CIPC Figure 69A, Items 12, 16		

DESCRIPTION	NO.	LOCATION
Strobe light, lens	Airframe	R/H wing
NO. C622006-0102		
Aircraft owner requests replacement		
Removed and replaced with Whelen strobe kit and power supply, PMA parts: Model ACF power supply, PN: 01-0770006-09; A610 tube assembly; A612 glass lens Associated new hardware: AN 507-632R14, AN 705-632R8		
REFERENCE		
CIPC Figure 3, Item 48		

DESCRIPTION	NO.	LOCATION
Position light shield	Airframe	R/H wing
NO. 0523566-7		
Worn		
Removed and replaced with new Cessna PN: 052366-7		
REFERENCE		
CIPC Figure 3, Item 43		

DESCRIPTION	NO.	LOCATION
Stinger assembly--tailcone, and inspection covers	Airframe	Empennage
NO. 1712136-1, 1712072-2, 1712072-1		
Aircraft owner requests replacement with modified stinger assembly		
Removed and replaced with Maple Leaf Aviation tailcone fairing, PN TFL-002 and TFU-KT, installed in accordance with manufacturer's instructions; FAA Form 337 on file. Associated new hardware: S1021Z8-6 screws. Updated equipment list.		
CIPC Figure 23, Items 7, 8, 11, 16		

DESCRIPTION		NO.	Part
Dorsal fin tip	Airframe		Empennage
NO. 0731605-4			
Cracks, UV aging			
Removed and replaced with new Stene Aviation PMA part: SA1731009-4 Associated new hardware: S1021Z8-6 screws			
REFERENCE			
CIPC Figure 9, Items 25, 25A			

DESCRIPTION		NO.	Part
Fuel drains, left, right, and belly	Airframe		L/H wing R/H wing belly
NO. S2020-1			
Worn			
Removed and replaced with new Cessna PN: S2020-1			
REFERENCE			
CIPC Figure 5C, Item 1			

DESCRIPTION		NO.	Part
Button plugs	Airframe		L/H wing R/H wing
NO. CM2692-24-15			
Worn, missing			
Replaced with new PN: CM2692-424-15.			
REFERENCE			
CIPC Figure 3, Item 70			

DISCREPANCY NO. 11	AIRFRAME	NOSE
Cowl flaps, left and right NO. 1752091-1, 1752091-2		
Aircraft owner requests new paint		
Removed, stripped, etched, alodined, primed, painted. Reinstalled same. Ops check normal. Associated new hardware: AN 960-10, AN3-10A, MS2104523		
REFERENCE		
CIPC Figure 49C, Item 5, 6, 7, 30		

DISCREPANCY NO. 11	AIRFRAME	NOSE
Prop spinner NO. 0752637-16		
Aircraft owner requests removal of paint		
Stripped, polished, and reinstalled same. Ops check normal. Associated new hardware: NAS 221-8		
REFERENCE		
CIPC Figure 48A, Items 2, 3		

DISCREPANCY NO. 11	AIRFRAME	INTERIOR
Pilot and co-pilot seat stops NO. 0511242-1		
Worn		
Removed and replaced with new Cessna PN 0511242-1 Associated new hardware: AN 500A8-7 screws		
REFERENCE		
CIPC Figure 42C, Item 1		

DESCRIPTION	NO.	LOCATION
Pilot seat		Airframe Interior
NO. 0514123-18		
Aircraft owner requests reupholstery, new hardware, and paint		
Reconditioned pilot seat frame, installed new seat roller kit, PMA parts: McFarlane P/N SEAT-KT-1; reupholstered seat with new aircraft grade leather. Burn certificates with aircraft records. Reinstalled same. Ops check normal.		
REFERENCE		
CIPC Figure 42C, Item (top of page) usage code E		

DESCRIPTION	NO.	LOCATION
Co-pilot seat		Airframe Interior
NO. 0514123-18		
Aircraft owner requests reupholstery, new hardware, and paint		
Reconditioned co-pilot seat frame, installed new seat roller kit: McFarlane PN SEAT-KT-1, PMA; reupholstered seat with new aircraft grade leather. Burn certificates with aircraft records. Reinstalled same. Ops check normal.		
REFERENCE		
CIPC Figure 42C, Item (top of page) usage code E		

DESCRIPTION	NO.	LOCATION
Fuel selector handle, indicator panel, and placard		Fuel system Interior
NO. 0716623-2, 1716012-3, 1705016-1		
Worn, faded markings		
Removed and replaced with new Cessna PN's: 0716623-2, 1716012-3, 1705016-1		
CIPC Figure 69, Items 28, 32, 33A		

DISCREPANCY REPORT - 1715060-1		
Instrument glareshield NO. 1715060-1	Airframe	Interior
Aircraft owner requests covering with leather		
Removed and covered with aircraft interior leather. Reinstalled same. Burn certificates with aircraft records.		
CIPC Figure 45J, Item 1		

DISCREPANCY REPORT - 1706047-3, 17060541		
Pilot, co-pilot and passenger area air vents and tubing NO. 1706047-3, 17060541	Airframe	Interior
Tubing worn		
Replaced CAT with SCAT, reinstalled vents Associated new hardware: S1021Z8-6C, AN 515-8R8, S1021Z8-8		
CIPC Figure 56A, Items 12, 35		

DISCREPANCY REPORT - 171109-1A, 171109-1G, 171109-C4		
Soundproofing NO. CES1109-1A, CES1109-1G, CES1109-C4	Airframe	Interior
Worn		
Removed and replaced with new soundproofing material, SoundEx PMA part.		
CIPC Figure 40A		

DESCRIPTION	AIRFRAME	EMPENNAGE
Baggage door interior cover, latch mechanism, pins NO. 1715019-24, C253001-0101; 1717001-3, MS20392-1045		
Worn mechanism, worn interior panel, worn door seal		
Removed and replaced latch mechanism with new Cessna PN: C253001-0101. Installed new interior cover. Ops check normal. New seal from Aircraft Door Seals PMA PN: 500-603 Associated new hardware: MS20392-1045		
CIPC Figure 37, Items 1,2, 7, 14A; Figure 40, Item 7		

DESCRIPTION	AIRFRAME	EMPENNAGE
Battery box and pins NO. 0512167-27, 0512167-32		
Cracks		
Removed and replaced with new Cessna PNs: 0512167-27, 0512167-32.		
CIPC Figure 24, Items 1, 4		

DESCRIPTION	AIRFRAME	EMPENNAGE
Battery NO. RG-35AXC		
Aircraft owner requests replacement		
Removed and replaced with new Teledyne Gill battery, Gill PN: G-35; Gill SN: G02314920.		
CIPC Figure 76, Item 1		

Emergency locator transmitter	Airframe	Empennage
NO. SHARC 7		
Aircraft owner requests replacement		
Removed and replaced with Artex ME406 ELT, PN: 455-6605 Rev.F ; SN 03082; FAA form 8130 with aircraft records.		
REFERENCE		

Lower and upper wing fairing and hardware	Airframe	L/H wing
NO. 17170003-10, 1710008-1, AN509-10R8		
Aircraft owner requests new paint and hardware		
Removed, stripped, etched, alodined, primed, and painted. Reinstalled same. Associated new hardware: AN507-832R8, S290D832, AN509-10R8		
REFERENCE		
CIPC Figure 3, Items 59, 63		

Lower and upper wing fairing and hardware	Airframe	R/H wing
NO. 1710008-2, 1710003-9, AN509-10R8		
Aircraft owner requests new paint and hardware		
Removed, stripped, etched, alodined, primed, and painted. Reinstalled same. Associated new hardware: AN507-832R8, S290D832, AN509-10R8		
CIPC Figure 3, Items 59, 63; Figure 12, Items 19, 20		

DESCRIPTION	NO.	LOCATION
Aileron pulley guard pins (4)	Airframe	L/H wing R/H wing
NO. MS24665-134		
Worn		
Removed and replaced with new hardware: MS24665-134		
REFERENCE		
CIPC Figure 62, Item 25B		

DESCRIPTION	NO.	LOCATION
Flap, rods	Airframe	L/H wing
NO. 1221007-11, 1260128-8		
Damage in trailing edge skin, old hardware		
Removed, stripped, etched, alodined, primed, painted. Replaced flap skin with new Cessna PN: 1221007-21. Replaced flap rollers, rods, and hardware with McFarlane PMA kit, PNs: MC0523919, MC523920, MC0523921, MC 1220114-1. Reinstalled same. Ops check normal. Associated new hardware: AN3-10A		
REFERENCE		
CIPC Figure 8, Items 1, 2, 3, 4, 7, 7A, 15		

DESCRIPTION	NO.	LOCATION
Flap, rods	Airframe	R/H wing
NO. 1221007-11, 1260128-8		
Damage in trailing edge skin, old hardware		
Removed, stripped, etched, alodined, primed, painted. Replaced flap skin with new Cessna PN: 1221007-22. Replaced flap rollers and hardware with McFarlane PMA kit, PNs: MC0523919, MC523920, MC0523921, MC 1220114-1. Reinstalled same. Ops check normal. Associated new hardware: AN3-10A		
REFERENCE		
CIPC Figure 8, Items 1, 2, 3, 4, 7, 7A, 15		

DESCRIPTION		
Aileron, rods NO. 1221006-31, 1260128-8	Airframe	L/H wing
Damage in trailing edge, old hardware		
Removed. Replaced aileron skin with new Cessna PN: 1221006-15. Stripped, etched, alodined, primed, and painted. Reinstalled same. Ops check normal. Associated new hardware: AN4-11A, AN960-416		
REFERENCE		
CIPC Figure 7, Items 1, 2		

DESCRIPTION		
Aileron, rods NO. 1221006-32, 1260128-8	Airframe	R/H wing
Missing and worn button plugs		
Removed, stripped, etched, alodined, primed, painted. Replaced button plugs with new Cessna PN: 905-8. Reinstalled same. Ops check normal. Associated new hardware: AN4-11A, AN960-416		
REFERENCE		
CIPC Figure 7, Items 1, 2		

DESCRIPTION		
Stabilator, trim tab, balance weight NO. 1732003-7, 1732036-2	Airframe	Empennage
Aircraft owner requests new hardware		
Removed, stripped, etched, alodined, primed, painted. Reinstalled same. Ops check normal. Associated new hardware: NAS464P5A18, NAS464P4A18, MS24665-283, NAS1306-17D		
REFERENCE		
CIPC Figure 11, Items 1, 2, 2A, 3, 4, 6, 7, 8, 66		

Cabin vents, heating/defrosting NO. 1250503-8, 1250503-7	Airframe	Interior
Check for debris		
Removed and reinstalled same. Ops check normal.		
CIPC Figure 57A, Items 19, 20		

Rudder tip, nav light assembly and lens, beacon NO. 1731009-3, C622001-0401, 751-203	Airframe	Empennage
Cracks in fairing, aircraft owner requests beacon and nav light lens replacement		
Replaced tip with Stene Aviation PMA PN: SA1733009-2; replaced nav lens with PN 751-203. Replaced light assembly, PN: C622001-0401. Installed new Whelen anti-collision light I/A/W manufacturer's instructions, PMA PN: 71055-00. Associated new hardware: S1021Z8-6; AN515-8R8		
CIPC Figure 80, Items 10, 11		

Flap indicator assembly located behind instrument panel, hardware, and rod NO. AN742D6, S1398-1	Airframe	Inst panel L/H wing
Aircraft owner requests new hardware		
Reinstalled same. Ops check normal. Associated new hardware: AN742D6, S1398-1		
CIPC Figure 65, Items 62, 64		

Flap cable ends, control assembly NO. S2126-1, AN155B32S	Airframe	L/H wing R/H wing
Aircraft owner requests new hardware		
Removed and replaced hardware. Reinstalled same. Associated new hardware: AN155B32S		
CIPC Figure 65, Items 27, 63		

Cabin vent tube clamps (4) NO. AN742D32	Airframe	Interior
Aircraft owner requests new hardware		
Replaced hardware: AN742D32		
CIPC Figure 56A, Item 22B		

Stabilator trim rod NO. 1763009-3	Airframe	Empennage
Aircraft owner requests new paint		
Removed, stripped, etched, alodined, primed, painted, and reinstalled same. Ops check normal.		
CIPC Figure 64, Item 55		

Wing closeout panels NO. 1221119-1, 1221119-4	Airframe	L/H wing R/H wing
Aircraft owner requests new paint		
Removed, stripped, etched, alodined, primed, painted, and reinstalled same. Associated new hardware: 1022Z8-8C, AN 509-8R7		
REFERENCE CIPC Figure 3, Item 71		

Rudder and hinge bushings NO. 1733000-1	Airframe	Empennage
Aircraft owner requests new paint		
Removed, stripped, etched, alodined, primed, painted, and reinstalled same. Ops check normal. Associated new hardware: AN4-10A, 0532104		
REFERENCE CIPC Figure 10, top of page		

Stabilator and counterweight NO. 1732003-7, 1732033-2		
Aircraft owner requests new paint		
Removed, stripped, etched, alodined, primed, painted. Reinstalled same. Ops check normal. Associated new hardware: NAS1306-17D (6606-D17), AN310-6, MS24665-283, AN960-616		
REFERENCE CIPC Figure 11, Top of page		

43

Com antennas NO. C598501-0104	Airframe	L/H wing R/H wing
Aircraft owner requests replacement		
Replaced with two (2) new Comant antennas I/A/W manufacturer's instructions: Comant CI-248-5, FAA form 8130 with aircraft records.		
REFERENCE		

ELT antenna NO. C589	Airframe	Empennage
Aircraft owner requests replacement		
Removed and replaced with new Artex antenna, I/A/W manufacturer's instructions, PN 110-773; SN: 03082		
REFERENCE		

Forward wing attach hardware NO. AN8-21A	Airframe	L/H wing R/H wing
Aircraft owner requests replacement		
Replaced hardware: AN8-21A		
CIPC Figure 3, Items 7, 8, 9		

Aft wing attach hardware and dowels NO. AN4-44A, 1710704-1, 1710704-2	Airframe	L/H wing R/H wing
Aircraft owner requests new hardware and dowels		
Replaced hardware and dowels, Cessna PNs: 1710704-1, 1710704-2 Associated new hardware: S1450-4H24-125, AN960-416, MS21042L4, AN8-21A, AN960-816, MS20365-820C		
CIPC Figure 3, Items 1-9		

Main gear wheel fairings NO. 1741005-244, 1741005-243, 1741027-1, 1741027-2, 0741640-1, 0741640-2	Airframe	L/H & R/H main gear
Cracks, worn		
Removed and replaced upper fairings with new Stene Aviation fairings, PNs: SA1741005-43, SA1741005-44 Removed and reinstalled lower fairings. Associated new hardware: AN520-10R12		
CIPC Figure 33, Item 35		

Main gear wheel pants, mounting plates NO. 0541223-31, 0541223-32, 0741049-9, 0741049-10	Airframe	L/H & R/H main gear
Aircraft owner requests new paint and hardware		
Removed, stripped, etched, alodined, primed, painted. Reinstalled same. Associated new hardware: AN515-6R6, AN525-832R6		
CIPC Figure 33, Item 40		

Main gear strut fairings NO. 1741026-1, 1741026-2	Airframe	L/H & R/H main gear
Aircraft owner requests new paint		
Removed from aircraft, stripped, etched, alodined, primed, painted, and reinstalled same.		
CIPC Figure 33, Item 30		

Main gear wheel and brake assemblies NO. C163004-0104, 0741047-2, C163032-0107	Airframe	L/H & R/H main gear
Aircraft owner requests new wheel assemblies		
Replaced with new Cleveland wheel and brake assemblies, PNs: 30-75, 40-113; FAA form 8130 with aircraft records. Ops check normal.		
CIPC Figure 33, Items 2, 45; Figure 34A, Item 18		

Nose wheel assembly, axle, fairing and closeout panel NO. C163005-0201, 0543079-8, 0543003, 0743625-19	Airframe	Nose
Aircraft owner requests new wheel assembly		
Replaced with new Cleveland PN: 1241156-12; FAA form 8130 with aircraft records.		
CIPC Figure 31B, Item 2, Figure 25, Items 18,19,20, 21, 22, 23, 26B, 46,		

Shimmy dampener	Airframe	Nose
NO. 1743020-3		
Aircraft owner requests new paint and servicing		
Removed, stripped, etched, alodined, primed, painted. Serviced and reinstalled same. Ops check normal.		
REFERENCE		
CIPC Figure 32, Top of page		

Upper and lower nose gear strut torque links	Airframe	- Nose
NO. 1743011-1, 1743013-1		
Aircraft owner requests new paint		
Removed, stripped, etched, alodined, primed, painted, and reinstalled same.		
REFERENCE		
CIPC Figure 28, Items 39-47, 52-61		

Landing gear leg assemblies and mounting hardware	Airframe	L/H & R/H main gear
NO. 1741001-5, 1741001-6		
Aircraft owner requests new paint		
Removed, stripped, etched, alodined, primed, painted, and reinstalled same. Associated new hardware: NAS150-62, AN960-1016, MS20365-101BC		
REFERENCE		
CIPC Figure 33, Items 8, 9, 10, 11		

Stabilator tips	Airframe	Empennage
NO. 1732024-1-791		
Cracks, worn		
Removed and replaced with new Cessna PN: 1732024-1-791 Associated new hardware: S1021Z8-8 screws		
CIPC Figure 11, Items 55, 57		

Stabilator close out panels	Airframe	Empennage
NO. 1732055-1		
Aircraft owner requests new paint and hardware		
Removed, stripped, etched, alodined, primed, painted, and reinstalled same. Associated new hardware: AN515-6R10 screws		
CIPC Figure 11, Item 35		

Stabilator trim attach rods	Airframe	Empennage
NO. AN3-11A, AN3-14A, AN4-14A		
Aircraft owner requests new paint and hardware		
Removed, stripped, etched, alodined, primed, painted, and reinstalled same. Ops check normal. Associated new hardware: AN3-11A, AN3-14A, AN4-14A, MS21044N3, MS21042L4		
CIPC Figure 11, Items 20, 21, 22, 23		

Aileron trim tab NO. AN515-8R8	Airframe	L/H wing R/H wing
Aircraft owner requests new paint and hardware		
Removed, stripped, etched, alodined, primed, painted, and reinstalled same. Ops check normal. Associated new hardware: AN515-8R8		
CIPC Figure 7, Item 8		

Pitot tube NO. 0721105-7, 0721105-5	Airframe	L/H wing
Aircraft owner requests removal of paint and new heater assembly		
Stripped, polished, and reinstalled same with new heater assembly, Cessna PN: 0721105-5. Ops check normal. Associated new hardware: AN507-640R4		
CIPC Figure 67A, Items 33; 35		

Wing, long range NO. 1722002-18	Airframe	R/H wing
Aircraft owner requests new paint and hardware		
Removed, stripped, etched, alodined, primed, painted, and reinstalled same. Associated new hardware: AN4-44A, 1710704-1, 1710704-2, S1450-4H24-125		
CIPC Figure 4, top of page; Figure 3, Items 1-4		

49

Wing, long range NO. 1722002-21	Airframe	L/H wing
Aircraft owner requests new paint and hardware		
Removed, stripped, etched, alodined, primed, painted, and reinstalled same. Associated new hardware: AN4-44A, 1710704-1, 1710704-2, S1450-4H24-125		
CIPC Figure 4, top of page; Figure 3, Items 1-4		

Pedestal, panel, hardware, and lens NO. 1713325-201, 0811419-4	Airframe	Interior
Worn, cracks		
Removed. Added plate for ELT remote switch I/A/W AC 43.13(b) and Model 177 Series 1968 Thru 1978 Service Manual Para 18-.		
CIPC Figure 79, Item 23; Figure 40, Items 19, 20; Figure 45F, Item 92		

Flap attach brackets NO. 0523918	Airframe	L/H & R/H wing
Aircraft owner requests new paint and hardware		
Removed, stripped, etched, alodined, primed, painted, and reinstalled same. Ops check normal. Associated new hardware: NAS221-8 screws		
CIPC Figure 8, Item 14		

Wing strobe power supply NO. C622008-0101	Airframe	L/H & R/H wing
Aircraft owner requests replacement		
Replaced with new Whelen strobe power supplies, I/A/W manufacturer's instructions, PMA PN: A490TCCF.		
CIPC Figure 76, Item 52		

Door latch handles NO. 0517006-2	Airframe	Door
Worn action, worn placards		
Replaced with new Cessna PN 0517006-2 and replaced placards with new Cessna PNs: 1705015-1, 1705015-2 Associated new hardware: S1438-15; MS20392-2C49, MS20392-2C50		
CIPC Figure 35, Item 6		

Vent window crank assembly NO. 1717043-2	Airframe	Door
Worn action		
Replaced with new Cessna PN: 1717043-2		
CIPC Figure 35A, Item 11		

51

Door clutch assembly NO. 1712010-1, 1712010-2	Airframe	Door
Worn action		
Replaced with new Cessna PNs: 1712010-1, 1712010-2		
CIPC Figure 17, Item 55		

Vent line assembly—mechanical fuel pump NO. 1700121-61	Airframe	R/H lower engine comprmt
Aircraft owner requests cleanup		
Cleaned and reinstalled same. Ops check normal.		
CIPC Figure 69, Item 73		

Gascolator, fuel line to firewall NO. 0756005-8	Airframe	Firewall
Minor pitting noted		
Replaced gascolator bowl with new Cessna PN: 0756005-8		
CIPC Figure 70, Item 1		

Fuel strainer drain cable NO. S1517-3	Airframe	Upper R/H engine
Aircraft owner requests cleanup		
Cleaned and reinstalled same. Ops check normal.		
CIPC Figure 69, Item 46		

Nose strut assembly NO. 1743000-200, AN3-4A	Airframe	Nose
Aircraft owner requests new paint and hardware		
Removed, stripped, etched, alodined, primed, painted, and reinstalled same. Serviced. Ops check normal. Associated new hardware: AN3-4A		
CIPC Figure 25, Items 1, 3, 4, 7, 8, 9, 9A, 12-16; Figure 16, Item 28		

Firewall closeout shields NO. S1095-2	Airframe	Firewall
Aircraft owner requests new paint and hardware		
Removed, stripped, etched, alodined, primed, painted, and reinstalled same. Associated new hardware: S1021Z8-6 screws, NAS446-4-3, NAS557-4A		
CIPC Figure 16B, Items 1-6		

53

Cowling shock mounts NO. 0453003-1	Airframe	Forward fuselage at firewall
Aircraft owner requests new mounts		
Removed and installed new Skybolt cowl mount and fastener kit I/A/W manufacturer's instructions and STC SA3286SO; Skybolt PN: J7444-36/42.		
CIPC Figure 14A, Item 26		

Door hinge pins NO. MS20392-2C49, MS20392-2C65	Airframe	Door
Worn		
Replaced with new PNs: MS20392-2C49, MS20392-2C65		
CIPC Figure 35A, Items 1, 3		

Pilot and co-pilot control wheels NO. 1767078-3, 1767078-2	Airframe	Inst panel
Worn, pilot side needs modification I/A/W S-Tec autopilot STC		
Removed. Trim panel built for pilot-side wheel I/A/W manufacturer's instructions I/A/W STC SA09125AC-D. Reinstalled same. Added co-pilot push-to-talk switch.		
CIPC Figure 61, Items 53, 54		

Rudder pedals NO. 1767014-2, 1767014-4	Airframe	Inst panel
Aircraft owner requests cleanup		
Removed, cleaned, and reinstalled same. Ops check normal. Associated new hardware: S1674-1, S1708-2		
CIPC Figure 59, Items 19, 21, 22, 24		

Cowl flap cables, rod ends, rods, cowling bumper, control knob NO. S1391-25, S1391-26, 1513768-2, 1752091-13, S1115-29, S1249-2	Airframe	Nose, Inst panel
Worn		
Replaced with new Cessna PNs: S1391-25, S1391-26, S1115-29, S1249-2 Ops check normal.		
CIPC Figure 50A, Items 1, 2, 36		

Landing and taxi light assembly NO. 1752120-1	Airframe	Nose
Aircraft owner requests replacement		
Replaced with Precise Flight Pulselite Control System, installed I/A/W manufacturer's instructions and STC SA4005NM, PNs: KT 4138 AM; SN: LSS00899. Replaced landing light support, Cessna PN 1752021-1. Ops check normal.		
CIPC Figure 49C, Item 39		

SS

DESCRIPTION NO. 49		
Fuel selector valve, cover, and fuselage plug	Airframe	Interior
NO. 0513120-9		
Worn		
Replaced with new Cessna PN: 0513120-9 Reinstalled same. Ops check normal.		
REFERENCE		
CIPC Figure 71, Item 1		

DESCRIPTION NO. 49		
Inspection panel and stud	Airframe	
NO. XX49330K3220		
Aircraft owner requests cleanup		
Removed, cleaned, and reinstalled same.		
REFERENCE		
CIPC Figure 12, Item 13		

DESCRIPTION NO. 49		
Seat rails, shims	Airframe	Interior
NO. 1711015-10, 1711015-8, 1711015-9, 1711015-7, 1712162-2, 1712162-1, 1712001-8, 1712001-7		
Worn		
Replaced with new Cessna PNs: 1711015-10S, 1711015-8, 1711015-9S, 1711015-7 Associated new hardware: AN509-10R8		
REFERENCE		
CIPC Figure 12, Items 6, 7, 19, 20, 28, 29, 32, 33		

DESCRIPTION	NO.	Location
Fillet halves, outer and inner		Airframe
NO. 17111016-3, 17111016-4, 17111016-5, 17111016-6		Interior L/H & R/H
Aircraft owner requests new paint		
Removed, stripped, etched, alodined, primed, painted, and reinstalled same.		
REFERENCE		
CIPC Figure 13, Items 3, 4		

DESCRIPTION	NO.	Location
Seat belt anchors		Airframe
NO. 2011028-1, 2011028-2		Interior
Aircraft owner requests new paint		
Removed, stripped, etched, alodined, primed, painted, and reinstalled same. Associated new hardware: AN525-10R10		
REFERENCE		
CIPC Figure 46A, Item 21		

DESCRIPTION	NO.	Location
Primer lines (5) and fuel pressure line elbows (5)		Airframe
NO. 1700121-93, 1700121-92, 1700121-91, 1700121-99, 1700121-96, AN821-2D, AN837-2D		Firewall
Aircraft owner requests replacement		
Removed, cleaned up, and reinstalled same, PNs: 1700121-93, 1700121-92, 1700121-91, 1700121-99, 1700121-96, AN821-2D, AN837-2D Ops check normal.		
REFERENCE		
CIPC Figure 69, Item 88, 92		

Nose gear supports, stiffeners NO. 1713106-2, 1713286-2, 1713286-1, 1713111-1	Airframe	Firewall
Aircraft owner requests cleanup		
Replaced with new Cessna PN: 1713286-2; reinstalled: 1713106-2, 1713286-1, 1713111-1		
CIPC Figure 16, Items 29, 30, 31		

Fuel gascolator heat shield and cover NO. 1713120-1, 1713121-1	Airframe	Firewall
Aircraft owner requests cleanup		
Removed, cleaned up, and reinstalled same.		
CIPC Figure 69, Items 50, 51		

Floorboards NO. 1711013-1, 1712921-1, 1712022-5, 1712022-2	Airframe	Interior
Aircraft owner requests cleanup		
Removed, stripped, etched, alodined, primed, painted, and reinstalled same.		
CIPC Figure 17, Items 5, 39, 40, 41		

Nose gear steering NO. 1713159-1	Airframe	Firewall
Aircraft owner requests cleanup		
Removed, cleaned up, and reinstalled same. Ops check normal.		
CIPC Figure 16, Item 33		

Heater and defrost housing assembly (airbox) NO. 1713095-3	Airframe	Firewall
Aircraft owner requests cleanup		
Cleaned, painted, and reinstalled same. All work performed I/A/W AC 43.13(b) and Model 177 Series 1968 Thru 1978 Service Manual Section 18.		
CIPC Figure 57A, Item 25		

Pilot, passenger door stops NO. 1717052-1, 1717052-1	Airframe	Fuselage
Aircraft owner requests new paint		
Removed, stripped, etched, alodined, primed, painted, and reinstalled same.		
CIPC Figure 38, Item 3		

OAT gauge NO. C668507-0101	Airframe	Wing root
Aircraft owner requests cleanup		
Removed, cleaned, and reinstalled same.		
REFERENCE CIPC Figure 47A, Item 13		

Nav light assemblies NO. C422001-0201, A1280-2; A1280-3	Airframe	L/H & R/H wing
Aircraft owner requests replacement		
Removed and replaced lenses, new Cessna PNs: A1280-2, A1280-3 Removed assembly, stripped, etched, alodined, primed, painted, and reinstalled same.		
REFERENCE CIPC Figure 3, Item 37		

Tail tie down ring/bolt NO. 0541115-5	Airframe	Empennage
Worn		
Removed and replaced with new Cessna PN: 0541115-5		
REFERENCE CIPC Figure 22, Item 50		

Door post cap NO. 1715058-17, 1715058-18	Airframe	Interior
Aircraft owner requests new paint		
Removed, stripped, etched, alodined, primed, painted, and reinstalled same.		
REFERENCE		

Windshield, windows, and windshield retainers, upper and lower NO. 1713043-5, 1713147-1, 1713147-2	Airframe	Fuselage
Aircraft owner requests replacement		
Removed and replaced with new LP Aero Plastics window kit I/A/W STC SA00382NY. FAA form 8130 with aircraft records.		
CIPC Figure 21, Items 7, 8		

Vent window stiffener NO. 2017004-1	Airframe	Interior
Aircraft owner requests new paint		
Removed, stripped, etched, alodined, primed, painted, and reinstalled same.		
CIPC Figure 35A, Item 60		

Stall horn NO. 0413483-1	Airframe	L/H wing
Aircraft owner requests cleanup		
Removed, cleaned up and reinstalled same.		
CIPC Figure 68, Item 1		

Engine mount, bolts NO. 1751000-21, AN7-44A, AN7-43A	Airframe	Firewall
Worn		
Removed, stripped, cleaned, overhauled by Kosola & Associates I/A/W work order 34186; yellow tag with aircraft records. Reinstalled same. Associated new hardware: AN7-44A, AN7-43A		
CIPC Figure 51A, Items 6, 9, 10, 11, 12		

Fuel tanks NO. 1221041-63, -64; 1722043-11, -12; 1221042-80, -81; 1221042-115, -78; 1722053-5, -6	Airframe	L/H & R/H wing
Inspect fuel tanks, reseal		
Fuel tanks inspected, resealed I/A/W Model 177 Series 1968 Thru 1978 Service Manual Para. 12-14.		
CIPC Figure 5A, Items 21, 22, 26, 27, 28		

Fuel tank lids	Airframe	L/H & R/H wing
NO. 1726041-13; 1726041-12; C156001-0106 (caps), 1221048-2 (access door)		
Not seated properly, aircraft owner requests new paint		
Removed, stripped, inspected and replaced same.		
CIPC Figure 3, Items 19, 21, 22A		

Wing root skin	Airframe	L/H wing
Crack		
Repaired I/A/W AC 43.13(b) and Model 177 Series 1968 Thru 1978 Service Manual Section 18.		
CIPC Figure 4, Item 1		

Nose wheel shock strut assembly	Airframe	Nose
NO. 1743000-200		
Inspect and service		
Inspected and serviced I/A/W Model 177 Series 1968 Thru 1978 Service Manual Para. 2-26. Ops check normal.		
CIPC Figure 28, Top of Page		

63

Parking brake	Airframe	Nose, interior
NO. 0813150-75, 0813156-4, 0510105-232		
Inspect and adjust		
Removed, inspected, and replaced same. Adjusted I/A/W Model 177 Series 1968 Thru 1978 Service Manual Para. 2-28. Ops check normal.		
CIPC Figure 58, Items 45-74		

Instrument panel substructure	Airframe	Inst panel
NO. 1713370-7		
Damage found to pilot's instrument panel substructure at yoke attach point		
Repaired I/A/W AC 43.13(b) Chapter 4, Para. 50. and Model 177 Series 1968 Thru 1978 Service Manual Para. 18-7.		
CIPC Figure 45F, Item 1		

Pitot-static line sump assembly	Airframe	Interior L/H & R/H
NO. S1258-1		
Aircraft owner requests replacement		
Removed and replaced with new PN: S1258-1		
CIPC Figure 67A, Item 31		

Seat belts—pilot, co-pilot	Airframe	Interior
NO. S2275JJ115		
Aircraft owner requests cleanup		
Removed, cleaned, and reinstalled same. Associated new hardware: AN4-4A, NAS43HT4-10, AN960-416, MS21042L4, AN525-10R10		
CIPC Figure 46A, Items 16-22		

Door seals	Airframe	L/H & R/H fuselage
NO. S1817-1, S1815-1, S1453-1, S1082-1		
Worn		
Removed and replaced with new Aircraft Door Seals kit, PMA PN: 500-600; PMA number: PQ1008SW		
CIPC Figure 35A, Items 15-18		

R/H radio rack	Airframe	Empennage
Aircraft owner requests installation		
Fabricated and installed rack for Honeywell KG102A gyro and Garmin GDL 90 receiver. 8110-3 on file, reference number N778RD-WQN01		

L/H radio rack	Airframe	Empennage
Aircraft owner requests installation		
Fabricated and installed rack for L-3 WX500 Stormscope. 8110-3 on file, reference number N778RD-WQN01		

Speaker	Airframe	Interior
NO. C596504-0201		
Aircraft owner requests replacement		
Removed and replaced with new Cessna PN: C596504-0201		
Cessna Electronics Manual		

Vortex generators	Airframe	Wings
Aircraft owner requests installation		
Installed MicroAerodynamics vortex generators. STC with aircraft records.		

1. Inspect spinner.	Propeller
Inspected spinner.	

2. Inspect spinner bulkhead.	Propeller
Inspected spinner bulkhead.	

3. Inspect blades.	Propeller
Inspected blades.	

4. Inspect bolts.	Propeller
Inspected bolts.	

5. Inspect hub.		Propeller
Inspected hub.		

6. Inspect governor and control.		Propeller
Inspected governor and control.		

1. Inspect engine oil, screen, filler cap, dipstick, drain plug, and external filter element.	Engine compartment
Inspected engine oil, screen, filler cap, dipstick, drain plug, and external filter element.	

2. Inspect oil cooler.	Engine compartment
Inspected oil cooler.	

3. Inspect induction air filter.	Engine compartment
Inspected induction air filter.	

4. Inspect induction air box, air valves, doors, and controls.	Engine compartment
Inspected induction air box, air valves, doors, and controls.	

5. Cold and hot air boxes.	Engine compartment
Inspected cold and hot air boxes.	

6. Inspect engine baffles.	Engine compartment
Inspected engine baffles.	

7. Inspect cylinders, rocker box covers, and push rod housings.	Engine compartment
Inspected cylinders, rocker box covers, and push rod housings.	
REFERENCE	

8. Inspect crankcase, oil sump, accessory section, and front crankshaft seal.	Engine compartment
Inspected crankcase, oil sump, accessory section, and front crankshaft seal.	
REFERENCE	

9. Inspect hoses, metal lines, fittings.	Engine compartment
Inspected hoses, metal lines, fittings.	
DIFFERENTIAL	

10. Inspect ignition and exhaust systems.	Engine compartment
Inspected ignition and exhaust systems.	
DIFFERENTIAL	

11. Inspect ignition harness.	Engine compartment
Inspected ignition harness.	

12. Inspect spark plugs.	Engine compartment

13. Perform compression check.	Engine compartment
_Compression check performed.	

14. Inspect crankcase and vacuum system breather lines.	Engine compartment
Inspected crankcase and vacuum system breather lines.	

15. Inspect electrical wiring.	Engine compartment
Inspected electrical wiring.	

16. Inspect vacuum pump and oil separator.	Engine compartment
Inspected vacuum pump and oil separator.	

17. Inspect vacuum relief valve filter (cabin area).	Engine compartment
Inspected vacuum relief valve filter (cabin area).	

18. Inspect engine controls and linkage.	Engine compartment
Inspected engine controls and linkage.	

19. Inspect engine shockmounts, mount structure, and ground straps.	Engine compartment
Inspected engine shockmounts, mount structure, and ground straps.	
REFERENCE	

20. Inspect cabin heat valves, doors, and controls.	Engine compartment
Inspected cabin heat valves, doors, and controls.	
REFERENCE	

21. Inspect starter, solenoid, and connections.	Engine compartment
Inspected starter, solenoid, and connections.	
REMARKS	

22. Inspect starter brushes, brush leads, and commutator.	Engine compartment
Inspected starter brushes, brush leads, and commutator.	
REMARKS	

23. Inspect alternator and electrical connections.	Engine compartment
Inspected alternator and electrical connections.	

24. Inspect alternator brushes, brush leads, commutator, or slip ring.	Engine compartment
Inspected alternator brushes, brush leads, commutator, or slip ring.	

25. Inspect voltage regulator mounting and electrical leads.	Engine compartment
Inspected voltage regulator mounting and electrical leads.	

26. Inspect magnetos (externally) and electrical connections.	Engine compartment
Inspected magnetos (externally) and electrical connections.	

27. Inspect magneto timing.	Engine compartment
Inspected magneto timing.	

28. Inspect carburetor and drain plug.	Engine compartment
Inspected carburetor and drain plug.	

29. Inspect firewall.	Engine compartment
Inspected firewall.	

30. Inspect engine cowl.	Engine compartment
Inspected engine cowl.	

1. Inspect fuel strainer, drain valve and control, bay vents, caps, and placards.	Fuel system
Inspected fuel strainer, drain valve and control, bay vents, caps, and placards.	

2. Inspect fuel strainer screen and bowl.	Fuel system
Inspected fuel strainer screen and bowl.	

3. Inspect fuel reservoir.	Fuel system
Inspected fuel reservoir.	

4. Inspect fuel bays, sump drains, and fuel line drains.	Fuel system
Inspected fuel bays, sump drains, and fuel line drains.	

5. Drain fuel and check bay interior, attachment, and outlet screens.

Engine
compartment

Drained fuel and check bay interior, attachment, and outlet screens.

6. Inspect fuel vent valves.

Engine
compartment

Inspected fuel vent valves.

8;

7. Inspect fuel vent line drain.	Engine compartment
Inspected fuel vent line drain.	

8. Inspect fuel selector valve and placards.	Engine compartment
Inspected fuel selector valve and placards.	

9. Inspect fuel shut-off valve and placards.	Fuel system
Inspected fuel shut-off valve and placards.	

10. Inspect auxiliary fuel pump.	Fuel system
Inspected auxiliary fuel pump.	

11. Inspect engine-driven fuel pump.	Fuel system
Inspected engine-driven fuel pump.	

12. Inspect fuel vent line drain plug.	Fuel system
Inspected fuel vent line drain plug.	

13. Inspect engine primer.	Fuel system
Inspected engine primer.	

1. Inspect main gear wheels and fairings.	Landing gear
Inspected main gear wheels and fairings.	

2. Inspect nose gear wheel, torque links, steering rods, boots, and fairings.	Landing gear
Inspected nose gear wheel, torque links, steering rods, boots, and fairings.	

3. Inspect wheel bearings.	Landing gear
Inspected wheel bearings.	

4. Inspect nose gear strut and shimmy dampener (service as required).	Landing gear
Inspected nose gear strut and shimmy dampener (serviced as required).	

5. Inspect tires.	Landing gear
Inspected tires.	

6. Inspect brake fluid, lines, and hoses, linings, discs, brake assemblies and master cylinders.	Landing gear
Inspected brake fluid, lines, and hoses, linings, discs, brake assemblies and master cylinders.	
REMARKS	

7. Inspect parking brake system.	Landing gear
Inspected parking brake system.	
REMARKS	

8. Inspect main gear springs.	Landing gear
Inspected main gear springs.	

9. Inspect steering arm lubrication.	Landing gear
Inspected steering arm lubrication.	

10. Inspect torque link lubrication.

Landing
gear

Inspected torque link lubrication.

REFERENCE

11. Inspect and perform operational check of park brake and toe brakes.

Landing
gear

Inspected and performed operational check of park brake and toe brakes.

REFERENCE

1. Inspect aircraft exterior.	Airframe
Inspected aircraft exterior.	

2. Inspect aircraft structure.	Airframe
Inspected aircraft structure.	

3. Inspect windows, windshield, doors, and seals.	Airframe
Inspected windows, windshield, doors, and seals.	

4. Inspect seat belts and shoulder harnesses.	Airframe
Inspected seat belts and shoulder harnesses.	

5. Inspect seat stops, seat rails, upholstery, structure, and mounting.	Airframe
Inspected seat stops, seat rails, upholstery, structure, and mounting.	
DEFECTS	

6. Inspect control column bearings, sprockets, pulleys, cables, chains, and turnbuckles.	Airframe
Inspected control column bearings, sprockets, pulleys, cables, chains, and turnbuckles.	
DEFECTS	

7: Inspect control lock, control wheel, and control column mechanism.	Airframe
Inspected control lock, control wheel, and control column mechanism.	

8: Inspect instruments and markings.	Airframe
Inspected instruments and markings.	

9. Inspect gyros central air filter.

Airframe

Inspected gyros central air filter.

10. Inspect magnetic compass compensation.

Airframe

Inspected magnetic compass compensation.

11. Inspect instrument wiring and plumbing.	Airframe
Inspected instrument wiring and plumbing.	

12. Inspect instrument panel, shockmounts, ground straps, cover, decals, and labeling.	Airframe
Inspected instrument panel, shockmounts, ground straps, cover, decals, and labeling.	

13. Inspect defrosting, heating, and ventilating controls.

Airframe

Inspected defrosting, heating, and ventilating controls.

REFERENCE

14. Inspect cabin upholstery, trim, sunvisors, and ashtray.

Airframe

Inspected cabin upholstery, trim, sunvisors, and ashtray.

15. Inspect area beneath floor, lines, hoses, wires, and control cables.	Airframe
Inspected area beneath floor, lines, hoses, wires, and control cables.	

16. Inspect lights, switches, circuit breakers, fuses, and spare fuses.	Airframe
Inspected lights, switches, circuit breakers, fuses, and spare fuses.	

17. Inspect exterior lights.	Airframe
Inspected exterior lights.	
REFLECT	

18. Inspect pitot and static systems.	Airframe
Inspected pitot and static systems.	
REFLECT	

19. Inspect stall warning system.	Airframe
Inspected stall warning system.	

20. Inspect radios, radio controls, avionics, and flight instruments.	Airframe
Inspected radios, radio controls, avionics, and flight instruments.	

21. Inspect antennas and cables.	Airframe
Inspected antennas and cables.	

22. Inspect battery, battery box, and battery cables.	Airframe
Inspected battery, battery box, and battery cables.	

23. Inspect battery electrolyte.	Airframe
Inspected battery electrolyte.	

24. Inspect emergency locator transmitter.	Airframe
Inspected emergency locator transmitter.	

1. Inspect cables, terminals, pulleys, pulley brackets, cable guards, turnbuckles, and fairleads.	Control systems
Inspected cables, terminals, pulleys, pulley brackets, cable guards, turnbuckles, and fairleads.	

2. Inspect chains, terminals, sprockets, and chain guards.	Control systems
Inspected chains, terminals, sprockets, and chain guards.	

3. Inspect trim control wheels, indicators, actuator, and bungee.	Control systems
Inspected trim control wheels, indicators, actuator, and bungee.	

4. Inspect travel stops.	Control systems
Inspected travel stops.	

5. Inspect decals and labeling.	Airframe
Inspected decals and labeling.	

6. Inspect flap control switch, flap rollers and tracks, and flap indicator.	Airframe
Inspected flap control switch, flap rollers and tracks, and flap indicator.	

7. Inspect flap motor, transmission, limit switches, structure, linkage, bellcranks, etc.	Airframe
Inspected flap motor, transmission, limit switches, structure, linkage, bellcranks, etc.	

8. Inspect stabilator trim tab, hinges, and push-pull tube.	Control systems
Inspected stabilator trim tab, hinges, and push-pull tube.	

9. Perform stabilator trim tab actuator lubrication and tab free-play inspection.	Control systems
Performed stabilator trim tab actuator lubrication and tab free-play inspection.	

10. Inspect rudder pedal assemblies and linkage.	Control systems
Inspected rudder pedal assemblies and linkage.	

11. Inspect skins (external) of control surfaces and tabs.	Control systems
Inspected skins (external) of control surfaces and tabs.	
REFERENCE	

12. Inspect internal structure of control surfaces.	Control systems
Inspected internal structure of control surfaces.	
REFERENCE	

13. Inspect balance weight attachment.

Control
systems

Inspected balance weight attachment.

14. Inspect flap actuator jack screw threads.

Control
systems

115

Aircraft requires updated equipment list	
	Airframe
Aircraft equipment list updated I/A/W AC 43.13(b) Chapter 10 Para. 19 & 20.	
Cessna 177B POH SN 17702550 pages 6-16 through 6-25	

Run search for new airworthiness directives on aircraft	
	Airframe
All ADs complied with. Updated AD list I/A/W FAR 91.417(a)(v).	

Aircraft owner requests N-number change to N778RD, which requires new airworthiness certificate	Airframe
Obtained new airworthiness certificate for aircraft, Cessna Cardinal 177B SN: 17702550 Previous N-number N18729; new airworthiness certificate dated R 10-02-76 for N778RD.	

Engine serviced with oil. All oil required to be removed I/A/W Pilot's Operating Handbook Cessna 177B Section 6-3 and 6-4, Aircraft Weighing Procedures.	Powerplant
Ran engine. Drained all engine oil from sump.	

Aircraft serviced with fuel. All fuel required to be removed I/A/W Pilot's Operating Handbook Cessna Model 177B Section 6-3 and 6-4, Aircraft Weighing Procedures.	Airframe
Drained all fuel from aircraft via fuel strainer drain.	
REFERENCE	

Aircraft requires new weight & balance	Airframe
Weight & balance performed I/A/W Pilot's Operating Handbook Cessna Model 177B, Section 6-3 & 6-4 and AC 43-13(b). New empty weight and empty CG noted in aircraft weight & balance record. New basic empty weight: 1,622 pounds. New empty CG: 105.4 inches aft of datum.	
REFERENCE	

Aircraft empty of oil and fuel.	Powerplant
Aircraft serviced with 10 quarts Phillips 66 M SAE20W50 mineral oil. Aircraft fueled with 20 gallons of fuel.	

Aircraft requires updated placards	Airframe
Updated aircraft placards I/A/W FAR 91.9.	

Aircraft requires updated aircraft flight manual (pilot's operating handbook)	Airframe
Amended aircraft flight manual I/A/W FAR 91.9. See additions to AFM(POH) in AFM supplements.	
REFERENCE	

Aircraft requires IFR certification	Airframe
IFR certification performed of required aircraft instruments and equipment I/A/W FAR 91.205 (d) and AC 43.13(b) Chapter 12.	
REFERENCE	

Aircraft requires ELT inspection and test.	Airframe
ELT inspection and operational test performed I/A/W FAR Part 91.409 and FAR 43 Appendix D(i).	
REFERENCE	

Aircraft requires aircraft flight manual supplement for engine monitoring system.	Airframe
Aircraft flight supplement added for J.P. Instruments EDM-800 I/A/W AC 43-210, Standardized Procedures for Approval of Major Alterations and Repairs, Chapter 4.	
REFERENCE	

Aircraft requires aircraft flight manual supplement for tailcone.	Airframe
Aircraft flight manual supplement added for Maple Leaf Aviation tailcone I/A/W AC 43-210, Standardized Procedures for Approval of Major Alterations and Repairs, Chapter 4.	

Aircraft requires aircraft flight manual supplement for landing light switching device.	Airframe
Aircraft flight manual supplement added for Precise Flight PulseLite system I/A/W AC 43-210, Standardized Procedures for Approval of Major Alterations and Repairs, Chapter 4.	

Aircraft requires aircraft flight manual supplement for autopilot.	Airframe
Aircraft flight manual supplement added for S-Tec System Fifty-Five X autopilot with auto trim I/A/WAC 43-210, Standardized Procedures for Approval of Major Alterations and Repairs, Chapter 4.	

Aircraft requires aircraft flight manual supplement for standby vacuum system	Airframe
Aircraft flight manual supplement added for The Vac Source SVS-5 standby vacuum system I/A/W	

Aircraft requires new fuel placards.	Airframe
Installed new fuel placards, Cessna PN: 1200740-9	

Aircraft requires post-maintenance test flight.	Airframe
Post-maintenance test flight performed I/A/W FAR 91.407 and Textron Lycoming Service Instruction 1427B.	

Aircraft owner requests installation of Cole Clarifier	Avionics
Installed Cole Clarifier on altimeter glass face in accordance with FAA approved Loravco Inc. Cole Clarifier Installation Manual LC-24 form LC-25. I certify that this work described above has been inspected and is determined to be in an airworthy condition with respect to the work performed. Pertinent details are on file at this agency under WO# 6252; Loravco Inc. Central IL Reg. Airport Bloomington, IL 61704	
FAA Approved Repair Station #OLKR571L	

Aircraft requires oil change following engine break in	Airframe
Changed oil with 8 quarts of Phillips 20W50 oil. Installed new CH48110-1 oil filter. Cut and inspected old filter. No metal detected.	

Prop rpm runs too high on takeoff	Airframe
Adjusted governor high speed stop. Test run and ops check okay.	
REFERENCE	

Aircraft requires new compass deviation card	Airframe
Compass calibration performed and new deviation card installed.	
REFERENCE	

126

Aircraft requires IFR certification checks	Airframe
<p>Performed altimeter certification, static leak check, transponder certification, and altitude reporting test I/A/W FAR 91.411 and 91.413 requirements. Calibrated altimeter to 20,000 feet.</p> <p>Altimeter: Mode M5644 S/N M5644</p> <p>Transponder: Model GTX-330 S/N 84124934</p>	

Rear seat	Airframe	Interior
NO. 1714098-19		
Aircraft owner requests reupholstery, new hardware, and paint		
Reconditioned seat frame, installed new hardware; reupholstered seat with new aircraft grade leather. Burn certificates on file. Reinstalled same. Ops check normal.		
CIPC Figure 43A, Item (top of page) usage code D		

Seat support covers	Airframe	Interior
NOS. 1714027-5, 1713383-6		
Aircraft owner requests replacement		
Removed and reinstalled new Plane Plastics PMA parts.		
CIPC page xxxii		

Seat back panels	Airframe	Interior
NOS. 1714088-1, 1714088-2, 1714089-1		
Aircraft owner requests replacement		
Removed and replaced with new Plane Plastics PMA parts.		
CIPC xxxii		

Aft trim panels	Airframe	Interior
NO. 1715012-4, 1715056-9		
Aircraft owner requests replacement		
Removed and replaced with Plane Plastics PMA parts.		
CIPC xxxii; Figure 40; Items 1, 5; Usage code AD		

Headliners and headliner access estucheon	Airframe	Interior
NOS. 1715027-7, 1715027-6, 1715013-1		
Aircraft owner requests replacement		
Removed and replaced with Plane Plastics PMA part.		
CIPC xxxii; Figure 39A; Items 1, 3, 5		

Bulkhead cover	Airframe	Interior
NO. 1715017-3		
Aircraft owner requests replacement		
Removed and replaced with Plane Plastics PMA part.		
CIPC xxxii; Figure 40, Item 13		

Trim panel assemblies	Airframe	Interior
NOS. 1715018-5, 1715018-6		
Aircraft owner requests replacement		
Removed and replaced with Plane Plastics-PMA part.		
CIPC xxxii; Figure 40, Item 25		

Headliner retainers	Airframe	Interior
NOS. 1715027-3, 1715027-4		
Aircraft owner requests replacement		
Removed and replaced with Plane Plastics PMA part.		
CIPC xxxii; Figure 39A, Item 2		

Rear window upper mouldings	Airframe	Interior
NOS. 1715041-1, 1715041-2		
Aircraft owner requests replacement		
Removed and replaced with Plane Plastics PMA part.		
CIPC xxxii; Figure 39, Items 11A, 11B		

1715042-23, 1715042-24, 1715042-27		Airframe	Interior
Lower door trim			
NOS. 1715042-23, 1715042-24, 1715042-27			
Aircraft owner requests replacement			
Removed and replaced with Plane Plastics PMA part.			
CIPC xxxii; Figure 38; Item 1			

1715050-1, 1715050-2		Airframe	Interior
Vent window retainer moulding			
NOS. 1715050-1, 1715050-2			
Aircraft owner requests replacement			
Removed and replaced with Plane Plastics PMA part.			
CIPC xxxii			

1715053-1		Airframe	Interior
Aft wall trim panel assembly			
NO. 1715053-1			
Aircraft owner requests replacement			
Removed and replaced with Plane Plastics PMA part.			
CIPC xxxii; Figure 40; Item 10A			

Splices—windlace NOS. 1715075-1, 1715075-2	Airframe	Interior
Aircraft owner requests replacement		
Removed and replaced with Plane Plastics' PMA part.		
CIPC xxxii; Figure 40		

Carpet NO. 1715048-1, 1715048-2	Airframe	Interior
Aircraft owner requests replacement		
Removed and replaced with Aircraft Interior Products carpet. Burn certificate with aircraft records.		
CIPC Figure 40; Items 15A, 16A; Usage code Y		

Armrests NOS. 0514079-1, 0514079-2	Airframe	Interior
Aircraft owner requests new color		
Removed and painted to match new interior. Reinstalled same.		
CIPC Figure 40, Item 6, Usage code AJ		