

THE **adlog**TM AIRCRAFT
MAINTENANCE
RECORDKEEPING
SYSTEM

**AVIONICS
MAINTENANCE
RECORDS**

AVIONICS MAINTENANCE RECORDS

(Including transponder biennial checks)

Log No. _____

Aircraft Registration No. N44YP

Aircraft Manufacturer Cirrus

Model SR20

Serial No. 1169

EQUIPMENT LISTING

List all installed avionics, autopilot and flight director equipment.

	Mfg.	Model	Serial No.
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____
7.	_____	_____	_____
8.	_____	_____	_____
9.	_____	_____	_____
10.	_____	_____	_____
11.	_____	_____	_____
12.	_____	_____	_____
13.	_____	_____	_____
14.	_____	_____	_____
15.	_____	_____	_____
16.	_____	_____	_____
17.	_____	_____	_____
18.	_____	_____	_____
19.	_____	_____	_____
20.	_____	_____	_____



AEROTECH PUBLICATIONS INC.

LANCASTER AVIONICS, INC. 500-U AIRPORT ROAD LITITZ, PA 17543 CRS# LN7R261N
LOG ID# 1049 22-June-2007 WO# 12701
N44YP S/N 1169 CIRRUS DESIGN CORP. SR20

Pg 1/2

**** ITEM # 12701-1 REPAIR MFD ****

DISCREPANCY: REPORTED: MFD DIMMER CONTROL INOP. DISPLAY NOT BRIGHT ENOUGH DURING THE DAY.
ACTION: REMOVED AVIDYNE EX5000 MFD P/N 700-00004-002 S/N 1058 AND SENT TO FACTORY FOR REPAIR.
REINSTALLED FACTORY REPAIRED UNIT. OSP CHECKED GOOD.

**** ITEM # 12701-2 C/W WAAS UPGRADES ****

DISCREPANCY: C/W WAAS UPGRADES.

ACTION: Validated that the previous installation of a Garmin GNS430 was installed IAW with Garmin instructions and approved Original Cirrus Type Certification on date 1/8/2002. Verified this aircraft and all interfaced equipment are covered under the AML for STC# SA01933LA and Garmin 400w/500w Series Upgrade Manual p/n 190-00357-06 Rev B (or later) per TSO-C146a. Summary of modifications done to the aircraft: Removed Garmin GA56 antenna p/n 011-00134-00 and installed new Garmin GA35 GPS/WAAS antenna p/n 013-00235-00 s/n 18992 as a direct replacement antenna (mounting configurations are unchanged). Removed Garmin GNS430 p/n 011-00280-10 s/n 97106214 and installed upgraded unit (same) GNS430W new p/n 011-01060-40 new s/n 97106214 using previously approved provisions from the removed GNS430. Removed previously approved Flight Manual Supplement for the GNS430 and inserted new GNS430W Flight Manual Supplement p/n 190-00356-63 FAA Approved date 12/21/2006 into Aircraft Flight Manual. Updated the aircraft Equipment List. Weight and Balance change negligible. Inserted Garmin supplied instructions for Continued Airworthiness p/n 190-00356-65 in the aircraft records.

Validated that the previous installation of a Garmin GNS430 was installed IAW with Garmin instructions and approved Original Cirrus Certification on date 1/8/2002. Verified this aircraft and all interfaced equipment are covered under the AML for STC# SA01933LA and Garmin 400w/500w Series

LANCASTER AVIONICS, INC. 500-U AIRPORT ROAD LITITZ, PA 17543 CRS# LN7R261N
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Pg 2/2

Upgrade Manual p/n 190-00357-06 Rev B (or later) per TSO-C146a with the following exceptions (to be considered a minor deviation to the STC): Installation does not comply with "Acceptable View" requirements for WAAS operations because required annunciators were not installed. #2 GNS430W GPS operations are not approved for precision approaches IAW FSAW 94-32c. Panel placarded "#2 GPS NOT APPROVED FOR PRECISION APPROACHES". Summary of modifications done to the aircraft: Removed Garmin GA56 antenna p/n 011-00134-00 and installed new Garmin GA35 GPS/WAAS antenna p/n 013-00235-00 s/n 19803 as a direct replacement antenna (mounting configurations are unchanged). Removed Garmin GNS430 p/n 011-00280-10 s/n 97106236 and installed upgraded unit (same) GNS430W new p/n 011-01060-40 new s/n 97106236 using previously approved provisions from the removed GNS430. Removed previously approved Flight Manual Supplement for the GNS430 and inserted new GNS430W Flight Manual Supplement (FAA Field Approved) into Aircraft Flight Manual. Updated the aircraft Equipment List. Weight and Balance change negligible. Inserted Garmin supplied Instructions for Continued Airworthiness p/n 190-00356-65 in the aircraft records.

 6/22/07
CRS# LN7R261N Date

MAKE: Cirrus
MODEL: SR20
S/N: 20-1169
REG NO: 44YP
WORK ORDER:
9366-07-2007



Cirrus Design Factory Service Center

Repair Station No. YD5R855Y
4515 Taylor Circle
Duluth, MN 55811
Phone: 218- 788-3101

DATE 7/1/2007
A/C TSN 1043 6
HOBBS 1043 6

Airframe Entries

(1) Removed MFD p/n 14750-011, s/n 1058, installed MFD p/n 14750-011S, s/n 23254514 and accomplished setups IAW SR20 AMM 31-60. Functional check satisfactory.

I have reviewed the file on this aircraft and the accompanying discrepancy forms. The aircraft, airframe, aircraft engine, propeller, or appliance identified was repaired/inspected in accordance with current requirements of the Federal Aviation Administration and is approved for return to service. Pertinent details of repair are on file at this Certified Repair Station CRS YD5R855Y.

DATE: 7/1/2007

SIGNED:


Joseph Sullivan
Certified Repair Station No. YD5R855Y

Work Order: 9366-07-2007

Printed by EBis 3 (datcomedia.com)

DATE	AIRFRAME TIME IN SERVICE	AVIONICS TIME IN SERVICE	DESCRIPTION OF WORK PERFORMED— SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK																												
<p>LANCASTER AVIONICS, INC. 500-U AIRPORT ROAD LITITZ, PA 17543 CRS# LN7R261N LOG ID# 1289 26-December-2007 WO# 13287 N44YP S/N 1169 CIRRUS DESIGN CORP. SR20</p>			Pg 1 / 1																												
<p>**** ITEM # 13287-1 C/W WAAS SOFTWARE UPGRADE **** DISCREPANCY: REPORTED: C/W WAAS SOFTWARE UPGRADE. ACTION: Upgraded Garmin 400W Series unit s/n 97106214 Main software to version 3.00 and GPS software to version 3.0 in accordance with Garmin Service Bulletin #0740 Rev A. Removed Garmin 400W Series FMS and inserted new FMS p/n 190-00356-03 in POH/AFM. Ops checked good.</p> <p>Upgraded Garmin 400W Series unit s/n 97106236 Main software to version 3.00 and GPS software to version 3.0 in accordance with Garmin Service Bulletin #0740 Rev A. Retained Garmin 400W Series FAA Field Approved FMS approved for IFR Enroute, Terminal, Non-Precision Approach Approval.</p>																															
<p><i>[Signature]</i> 12/26/07 CRS# LN7R261N Date</p>																															
<p>PANEL PLACARDED: ALTIMETER CERTIFIED TO 18,000F.</p> <table border="0"> <tr> <td> <p>LANCASTER AVIONICS INC. CRS # LN7R261N</p> <p>I CERTIFY THAT THE ALTIMETER, ENCODER AND STATIC SYSTEM TESTS REQUIRED BY FAR 91.411 HAVE BEEN PERFORMED IAW FAR 43 APPENDIX E</p> <table border="0"> <tr> <td>UNIT</td> <td>TYPE</td> <td>TESTED TO</td> </tr> <tr> <td>#1 ALTIMETER</td> <td>UNITED</td> <td>18,000FT</td> </tr> <tr> <td>#2 ALTIMETER</td> <td></td> <td></td> </tr> <tr> <td>ENCODER(S)</td> <td>ACK A-30</td> <td>18,000FT</td> </tr> <tr> <td>STATIC SYSTEM TEST DATE</td> <td colspan="2">3-19-08</td> </tr> <tr> <td>SIGN <i>Richard A. Staller</i></td> <td colspan="2">DATE 3-19-08</td> </tr> </table> <p>HOBBBS TIME: 665.9</p> </td> <td> <p>LANCASTER AVIONICS INC CRS # LN7R261N</p> <p>CERTIFY THAT THE TRANSPONDER (S) TEST REQUIRED BY FAR 91.413 HAS BEEN PERFORMED IAW FAR 43 APPENDIX F</p> <table border="0"> <tr> <td>UNIT</td> <td>TYPE</td> </tr> <tr> <td>#1 TRANSP</td> <td>GTX 327</td> </tr> <tr> <td>#2 TRANSP</td> <td></td> </tr> <tr> <td>SIGN <i>Richard A. Staller</i></td> <td>DATE 3-19-08</td> </tr> </table> </td> </tr> </table>				<p>LANCASTER AVIONICS INC. CRS # LN7R261N</p> <p>I CERTIFY THAT THE ALTIMETER, ENCODER AND STATIC SYSTEM TESTS REQUIRED BY FAR 91.411 HAVE BEEN PERFORMED IAW FAR 43 APPENDIX E</p> <table border="0"> <tr> <td>UNIT</td> <td>TYPE</td> <td>TESTED TO</td> </tr> <tr> <td>#1 ALTIMETER</td> <td>UNITED</td> <td>18,000FT</td> </tr> <tr> <td>#2 ALTIMETER</td> <td></td> <td></td> </tr> <tr> <td>ENCODER(S)</td> <td>ACK A-30</td> <td>18,000FT</td> </tr> <tr> <td>STATIC SYSTEM TEST DATE</td> <td colspan="2">3-19-08</td> </tr> <tr> <td>SIGN <i>Richard A. Staller</i></td> <td colspan="2">DATE 3-19-08</td> </tr> </table> <p>HOBBBS TIME: 665.9</p>	UNIT	TYPE	TESTED TO	#1 ALTIMETER	UNITED	18,000FT	#2 ALTIMETER			ENCODER(S)	ACK A-30	18,000FT	STATIC SYSTEM TEST DATE	3-19-08		SIGN <i>Richard A. Staller</i>	DATE 3-19-08		<p>LANCASTER AVIONICS INC CRS # LN7R261N</p> <p>CERTIFY THAT THE TRANSPONDER (S) TEST REQUIRED BY FAR 91.413 HAS BEEN PERFORMED IAW FAR 43 APPENDIX F</p> <table border="0"> <tr> <td>UNIT</td> <td>TYPE</td> </tr> <tr> <td>#1 TRANSP</td> <td>GTX 327</td> </tr> <tr> <td>#2 TRANSP</td> <td></td> </tr> <tr> <td>SIGN <i>Richard A. Staller</i></td> <td>DATE 3-19-08</td> </tr> </table>	UNIT	TYPE	#1 TRANSP	GTX 327	#2 TRANSP		SIGN <i>Richard A. Staller</i>	DATE 3-19-08
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7-14-08	<i>Hobbs 1170.1 / 687.5</i>	<p>Removed Scndel SN3308 EHSI ^{→ Ser No 3900} and installed loamer scndel EHSI, Ser No 2056. Setup Config pages & calibrated Compass Card. All ops chks OK; Details on file. W- O. Ref 13858 <i>(OK)</i> Also upgraded main & GPS SW to BOTH GNS 430W units from 3.00 / 3.0 to 3.11 / 3.1, respectively. ops chks OK <i>(OK)</i></p>	<p>LANCASTER AVIONICS INC LANCASTER AIRPORT LITITZ, PA 17543 DATE 7-14-08 CERTIFICATE NO. LN7R261N SIGNED <i>[Signature]</i></p>
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O&N AIRCRAFT MODIFICATIONS, INC. SEAMANS AIRPORT 210 WINDSOCK LANE FACTORYVILLE, PA
LOG ID# 4495 23-April-2009 WO# 14616/1 AC TT 1298.6
N44YP S/N 1169 CIRRUS DESIGN CORP. SR20

Pg 1 / 1

**** ITEM # 14616-1 Install CMAX software on EX5000. ****
ACTION: Installed CMAX Software on Avidyne EX5000 per Avidyne Document no. 601-00004-080. All functional tests satisfactory.

William L. Miller
ONFR798K William L. Miller

4-23-2009
Date

The Altimeter System & Altitude Reporting
Equipment tests & Inspections Required by
F.A.R. Part 91.411 & 413 have been performed
The Altimeter has been tested to:

20,000 FT Date 4/6/10

Signed *W.A.A.*

Keystone Instruments Inc.

F.A.A. Repair Station No: BX1R050K

Instrument Class 1,2,3, and 4

Specialized services

Complies with FAR

Part 43, Appendix E

Calibrated To 20,000

Date 4/6/10

P.O. NO. _____ WORK NO. **10-0399**
 CUSTOMER _____ DATE REC. _____
 ADDRESS _____ DATE REQ. _____
 DATE INVOICED **4/6/2010** INVOICE NO. **0497**
 INST. **Alt. Trans. Static Encoder** SERIAL NO. **NH 4861P**
 MFG. NO. **UNITED BARROW, A-K** TYPE **20000**
 TEST ONLY ☒ CALIB/REPAIR ONLY _____ OVERHAUL _____ REWORK _____

F.A.R.
 PART 43
 Appendix E

	DATE	MECH	INSP	START	STOP
1. DISASSEMBLY & INSP.					
2. OVERHAUL & REPAIR					
3. OUT OF CASE CALIB.					
4. INSPECTION					
5. FINAL ASSEMBLY					
6. CASE CALIB.					
7. PAINTING & DECAL	4/6/10	10			
8. FINAL INSP.	4/6/10	10			

CODE#	DESCRIPTION	QUANT.	PRICE

REMARKS

tested & Cal
Alt. Trans. Encoder Static
Alt. off 140' Reset Lock not engaged
Encoder off 200' Reset to spec

THE AIRCRAFT, AIRFRAME, AIRCRAFT ENGINE, PROPELLER OR APPLIANCE IDENTIFIED ABOVE WAS REPAIRED AND INSPECTED IN ACCORDANCE WITH CURRENT REGULATIONS OF THE FEDERAL AVIATION AGENCY AND IS APPROVED FOR RETURN TO SERVICE. PERTINENT DETAILS OF THE REPAIR ARE ON FILE AT THIS AGENCY UNDER WORK ORDER# **10-0399**

DATE **4/6/10** SIGNED *[Signature]*

KEYSTONE INSTRUMENTS SERVICES INC.

WM T. PIPER MEMORIAL AIRPORT

P.O. BOX 2 • 353 PROCTOR STREET

LOCK HAVEN, PA 17745

TEL. (570) 748-7083 FAX (570) 748-4439

REPAIR STATION # BX1RO5OK

INSTRUMENT CLASS 1,2,3,4

AND SPECIALIZED SERVICES.

FORM 100 A

CLASS 1,2,3, & 4 AND SPECIALIZED SERVICES

KEYSTONE INSTRUMENTS INC.

P.O. BOX 2

320 PROCTOR STREET

LOCK HAVEN PA. 17745

TELE: 570-748-7083

FAX: 570-748-4439

Table I	alt	scale error	fi
	-1000	-990	
	0	0	
	500	490	
	1000	990	
	1500	1500	
	2000	1995	
	2500	2500	
	3000	2980	
	4000	2990	
	5000	4980	
	6000	5990	
	8000	7980	
	10000	9970	
	12000	11960	
	14000	13950	
	15000	14970	
	16000	15960	
	18000	17990	
	20000	19990	
	22000		
	25000		
	30000		
	35000		
	40000		
	45000		
	50000		
	60000		
	70000		
	80000		

Table I

alt	scale error	friction error	up encoder	down encoder
-1000	-990			
0	0			
500	490			
1000	990	40		
1500	1500			
2000	1995	40		
2500	2500			
3000	2980	40		
4000	3990			
5000	4980	40		
6000	5990			
8000	7980			
10000	9970	40		
12000	11960			
14000	13950			
15000	14970	40		
16000	15960			
18000	17990			
20000	19990	40		
22000				
25000				
30000				
35000				
40000				
45000				
50000				
60000				
70000				

Table IV

baro scale error		baro scale millibars
28.10	-1725	951.6
28.50	-1340	965.1
29.00	-860	982.0
29.50	-400	999.0
29.92	0	1013.2
30.50	+530	1032.8
30.90	+890	1036.4
30.99	+980	1049.4

Table II

	ALT	hysieresis up	down
40%	8,000	7.98	7.990
50%	10,000	8.970	9.980
After Case	Effect	30 ft	0
	Leak	100ft	0
	Serial No:		
	Calibration		20000

TESTED IN COMPLIANCE WITH F.A.R. 43
APPENDIX E PAR. A-B-C

I.F.R.
TEST BOX
OTHERS
WORK ORDER #

V.F.R.

DATE

F.A.A.

INSTRUMENT REPAIR STATION #

BX1RO50K

CLASS 1,2,3,& 4 AND SPECIALIZED SERVICES

KEYSTONE INSTRUMENTS INC.

P.O.BOX 2

320 PROCTOR STREET

LOCK HAVEN PA. 17745

TELE: 570-748-7083

FAX: 570-748-4439

F.A.R.

PART 43

Appendix

PART A1. REPLY FREQUENCY 1090 +/- 3 MHZ: 1.82. RECEIVER SENSITIVITY - 73 +/- 4DBM 03. SUPPRESSION: INTERROGATIONS @ RATE OF 235
+/- 5 IPS IN MODE 3/AA. REPLIES TO NO MORE THAN 1% IPS OR LESS 0B. REPLIES TO AT LEAST 90% IPS WHEN
P2 IS 9DB < P1 99C. DIFFERENCE IN MODE 3/A & MODE C
RECEIVER SENSITIVITY DOES NOT
EXCEED 1 DB. 04. RF OUTPUT POWERCLASS AA & 2A ATCRBS TRANSPONDERS,
VERIFY PEAK OUTPUT POWER IS BETWEEN 251
125-500 WATTSPART B
TEST
ALTITUDE
IN FEETENCODER
TOLERANCE
+/- 125 FT.

-1000	- 1020
0	0
500	500
1,000	930
1,500	1430
2,000	1930
3,000	2930
4,000	3930
6,000	5930
8,000	7930
10,000	9930
12,000	11,930
14,000	13,930
16,000	15,930
18,000	17,930
20,000	19,960
22,000	
25,000	
30,000	
35,000	
40,000	
45,000	
50,000	

NOTE: THE ENCODER MUST TRANSMIT ALTITUDE DATA
CORRESPONDING TO WITHIN +/- 125 FT. OF THE
INDICATED OR CALIBRATED DATUM OF THE PILOTS
ALTIMETER.PART CALTIMETER: United MODEL 5934 S/N -ENCODER: ACK MODEL - S/N -TRANSPONDER: Garmin MODEL GTX327 S/N -IN ACCORDANCE WITH THE REQUIREMENTS OF F.A.R. 91.413
THE ATC TRANSPONDER AND / OR INTERIGATED ALTITUDE DATA
CORRESPONDENCE SYSTEM HAS BEEN INSPECTED / TESTED TO
COMPLY WITH APPENDIX F OF PART 43 AND PARAGRAPH (C)
OF APPENDIX E.TESTED BY: [Signature] DATE: 4/6/10W. O. # 10-0399 N# 444PAIRCRAFT MAKE CIRRUS MODEL 338CEREPLY CODES
PULSE CHECK

F1	<u>/</u>
C1	<u>/</u>
A1	<u>/</u>
C2	<u>/</u>
A2	<u>/</u>
C4	<u>/</u>
A4	<u>/</u>
B1	<u>/</u>
D1	<u>/</u>
B2	<u>/</u>
D2	<u>/</u>
B4	<u>/</u>
D4	<u>/</u>
F2	<u>/</u>
SP1	<u>/</u>

(FORM 102)

KEYSTONE INSTRUMENTS, INC.
WM. T. PIPER MEMORIAL AIRPORT
320 PROCTOR STREET, P.O. BOX 2
LOCK HAVEN, PA 17745PHONE: 570-748-7083
FAX: 570-748-4439F.A.A. INSTRUMENT REPAIR
STATION NO: BX1R050K
CLASS 1, 2, 3, 4, AND
SPECIALIZED SERVICES

KEYSTONE INSTRUMENTS SERVICES, INC.

Piper Memorial Airport
353 Proctor Street
P.O. Box 2
Lock Haven, PA 17745

INVOICE

0497

Phone: 570-748-7083

Fax: 570-748-4439

DATE <i>April 6 2010</i>	ORDER NO. <i>N 44YP</i>
SHIP TO	

To: *Jet Aero LLC*
971 Heilman Rd
MONTROUSEVILLE, PA 17724
570-435-0064

SALESPERSON	DATE SHIPPED	SHIPPED VIA	F.O.B. POINT	TERMS
QUANTITY	DESCRIPTION	UNIT PRICE	TOTAL	
<i>1ea</i>	<i>Pitot static check -</i>			<i>169 00</i>
	<i>Sales tax</i>			<i>10 14</i>
1% Service charge will be added after 30 days. Annual percentage rate is 12%				

Form #201

Thank You

Reese's Print Shop
748-6528

TOTAL ▶

274

2 1

LANCASTER AVIONICS, INC.
500-U AIRPORT ROAD
LITITZ, PA 17543 USA

JET AERO, LLC
971 HEILMAN RD.
MONTROUSEVILLE, PA 17754-7994 USA

A/L
1
S

DETAILS

WO: 15630 TASK: 1 AV REPAIR SANDEL EHSI START: 07/28/2010 FINISH: 07/28/2010
PART#: SN3308-00-BL MODEL#: SN3308 SER#: 3900
DISCREPANCY: REPLACE DISPLAY LAMP.
ACTION: REPLACED DISPLAY LAMP AND RESET LAMP TIMER. UNIT FINAL CHECKS TO MFG'S SPECS.
HOURS: 0.50 LABOR: \$44.50 PARTS/EQUIP/OTHER: \$214.00 TASK TOTAL: \$258.5

WO: 15630 TASK: 2 NC WAAS SOFTWARE UPGRADE START: 07/28/2010 FINISH: 07/28/2010
MODEL#: 2EA GNS430W SER#: 97106236 & 97106214
DISCREPANCY: WAAS SOFTWARE UPGRADE.
ACTION: Upgraded Garmin 400W Series unit s/n 97106236 & 97106214 Main software to version 3.30 IAW
Service Bulletin #0918A and GPS software to version 3.2 in accordance with Garmin Service Bulletin.
Removed Garmin 400W Series FMS and inserted new FMS p/n 190-00357-03 Rev B in POH/AFM. Ops checked g
HOURS: 0.50 LABOR: \$0.00 PARTS/EQUIP/OTHER: \$0.00 TASK TOTAL: \$0.00

TASK	Qty	Part # \ Serial #	Description	Each
1	1.00	90122-B	LAMP	214.000

Labor:
Parts & Equip:
Sub Total:
PA STATE:

Invoice TOTAL:

[illegible]

LANCASTER AIRPORT
500-U AIRPORT ROAD
LITITZ, PA 17543
69-1953 FAX 717-569-1722

NAME Jet Aero, LLC		REC'D AM PM		DATE 7/28/10	
ADDRESS		PROMISED AM PM		CUSTOMERS ORDER NO. Verbal	
CITY		TERMS COD		ORDER WRITTEN BY MTC	
AIRCRAFT MAKE/MODEL/SERIAL NUMBER/HOBBS			PHONE		REGISTRATION NUMBER
Cirrus 1573.4			570-435-264		N 444P
JOB	INIT'L	REPAIR ORDER INSTRUCTIONS			LABOR CHARGE
1	OK	Repaired backlit lamp in Sandel EHSI, SN 3900 by replacing backlight + lamp (Display) Reset lamp timer. Ops chks OK (me)			
2	OK	U/Garmin SB's 0918A & 0848A by updating Main & GR3 WAAS SW from 3.11/3.1 to 3.30/3.2 Respectively to #1 GNS 430W SN 97106236 and #2 GNS 430W, SN 97106214. All ops chks OK (me) Updated F.M.S. accordingly (me)			
I hereby authorize the above repair work to be done along with the necessary material, and hereby grant you and/or your employees permission to operate and fly the airplane herein described for the purpose of testing and/or inspection. An express mechanic's lien is hereby acknowledged on above airplane to secure the amount of repairs thereto.					
NOT RESPONSIBLE FOR LOSS OR DAMAGE TO PLANE OR ARTICLES LEFT IN PLANE IN CASE OF FIRE, THEFT OR ANY OTHER CAUSE BEYOND OUR CONTROL.					
X _____					
<div style="display: flex; justify-content: space-between;"> <div> <p>*YES* NO N/A</p> <p>Preliminary Inspection Findings <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/></p> <p>Hidden Damage Inspection Findings <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/></p> <p>(**See Attached Prelim./Hidden Damage Insp. Form)</p> </div> <div style="border: 1px solid black; padding: 5px;"> <p>TOTAL LABOR</p> <p>TOTAL PARTS</p> <p>SHIPPING/HANDLING</p> <p>MISC.</p> <p>SUB TOTAL</p> <p>PA SALES TAX</p> <p>TOTAL ►</p> </div> </div>					

The part and/or component identified above was repaired and inspected in accordance with current Federal Air Regulations, was found airworthy, and is approved for return to service.

Date 7-28-10 By Andrew Kromer
LANCASTER AVIONICS, INC. CRS LN7R261N

Type Log Entry Made: Adhesive

WHITE/Customer

CANARY/Shop Copy



LANCASTER AVIONICS, INC

FAR 91.217 - ALTITUDE ENCODER TEST

Date: 12-3-10		
Customer: JET AERO INC.	Aircraft Make: CIRRUS SR20	
Aircraft Model: SR20	Aircraft Reg. Number: N44YP	
Manufacturer	Model	Serial Number
Altimeter: UNITED	59340-3A.249H	22369
Transponder: GARMIN	GTX327	83707608
Encoder: A.C.K.	A-30	75696
Encoder Reading	Altimeter Reading	Alt. Scale Error
0	-45 to 70	0
500	470 to 550	+15
1,000	950 to 1050	+5
3,000	2950 to 3055	+10
6,000	5950 to 6055	0
10,000	9945 to 10050	-25
14,000	13940 to 14035	-15
18,000		
20,000		
25,000		
30,000		
35,000		
PASS: X	Technician: Richard D. Hatten	
FAIL:	Inspector: Richard D. Hatten	

DATE	AIRFRAME TIME IN SERVICE	AVIONICS TIME IN SERVICE	DESCRIPTION OF WORK PERFORMED— SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK
7-28-10			CIRRUS SR20 N44YP Hobbs 1573.4 Repaired Sandel HSI, SN 3900 by replacing Display Lamp. Reset lamp timer. C/W Garmin SB's 09/8A & 0848A by updating Main & GPS WAAS Software from 3.11/3.1 to 3.30/3.2 respectively to #1 GNS430W SN 97106236 and #2 GNS430W, SN 97106214. All ops chks OK. Updated FMS accordingly. Details on file. W.O. Ref. 15630 <i>(initials)</i> LANCASTER AVIONICS INC LANCASTER AIRPORT LITITZ, PA 17543 DATE 7-28-10 CERTIFICATE NO. LN7R261N SIGNED <i>Richard H. Statler</i>

LANCASTER AVIONICS, INC. 500-U AIRPORT ROAD LITITZ, PA 17543 CRS# LN7R261N
LOG ID# 2324 28-October-2010 WO# 15867/1 AC TT 1634.5 HOBBS 1634.5
N44YP S/N 1169 CIRRUS DESIGN CORP. SR20

Pg 1 / 1

**** ITEM # 15867-1 REPAIR SANDEL HSI ****
DISCREPANCY: SANDEL HSI INTERMITTENTLY HAS 60 - 90 COMPASS CARD ERROR. PROBLEM HAS OCCURED EVER
SINCE THE DISPLAY LAMP WAS REPLACED.
Model: SN3308 Part#: SN308-00-BL
ACTION: OPS CHECKED AND VERIFIED A +25 DEGREE EAST ERROR AND -15 DEGREE WEST ERROR. RESEATED SANDEL
HSI IN RACK. REPOSITIONED AND RECALIBRATED FLUX DETECTOR. SLAVED COMPASS SYSTEM FINAL CHECKS GOOD
WITH A +1.5 NORTH ERROR AND -1.5 DEGREE WEST ERROR.

CRS# LN7R261N

MARK J. FORTH

Date

12-3-10 CIRRUS SR20 N44YP Hobbs = 1673.0

BAROMETRIC SCALE LOCK NOT ENGAGED, PROPERLY ENGAGING
SCREW INTO THREADS OF LOCK CORRECTED THE PROBLEM. ADJUSTED
BARO SCALE WHEN WAS 90' LOW. RETESTED BARO AT ALL REQUIRED
TEST SETTINGS AND FOUND ALL ALTITUDE DIFFERENCES TO BE
WITHIN TOLERANCE. ENCODER DATA CORRESPONDENCE WAS
OUT OF TOLERANCE 140'. ADJUSTED DATA CORRESPONDENCE. SEALED
VSI FITTING TO REPAIR STATIC LEAK. FINAL LEAK ANALYSIS WAS
G.F.M. UNITED ALTIMETER, P/N 5934D-3A, 249H, S/N 22369.
A.C.K ENCODER, P/N A-30, S/N 75696. ALL WORK WAS IAW
THE MANUFACTURERS INSTRUCTIONS. FAR 91.217, 91.411, PART
43 APPENDIX E. + END

LANCASTER AVIONICS INC
LANCASTER AIRPORT
LITITZ, PA 17543

DATE 12-3-10

CERTIFICATE NO. LN7R261N

SIGNED *Richard H. Statler*

DATE

AIRFRAME
TIME
IN
SERVICEAVIONICS
TIME
IN
SERVICE6-6-11 Hobbs 1139.9
SR-20 N44YPRecalib. compass system & sandel
SN 3308-00-BL sh 3900. Ramp test OK
& flight test OK. REF. WLO 16392LANCASTER AVIONICS INC
LANCASTER AIRPORT
LITITZ, PA 17543
DATE 6-6-11
CERTIFICATE NO. LN7R261N
SIGNED James Joo6-8-11 Hobbs 1147.7
SR-20 N44YPRemove SN 3308 sh 3900, DG sh 1222.992, and
Flux detector sh 7451. Install Lanca SN 3308
sh 4001, DG sh 1022.926, & Flux detector sh H349.
Recalib. compass system & Ramp test OK to mfg specs.LANCASTER AVIONICS INC
LANCASTER AIRPORT
LITITZ, PA 17543
DATE 6-8-11
CERTIFICATE NO. LN7R261N
SIGNED James Joo REF. WLO 16400

LANCASTER AVIONICS, INC

ALTIMETER/STATIC and ENCODER EVALUATION PER FAR 91.411 - FAR 43, APPENDIX 'E'

Customer: <u>JAERO LLC</u>		Aircraft Type: <u>Cirrus SR-20</u>		N#: <u>44YP</u>	
Altitude	Manufacturer	Part Number	Serial Number	Test Alt	Pilot
Pilot	<u>Watt</u>	<u>49340-3</u>	<u>249H</u>	Test Ceiling	<u>2000</u>
Co-Pilot	<u>ASPEA</u>	<u>EFD1000</u>	<u>9903</u>	System Leak	<u>30 ft</u>
Encoder	<u>T.C.I.</u>	<u>550120-30N</u>	<u>14896</u>	Hysteresis	
				50%	1000 ft -20 +10 +/- 75
				40%	8000 ft -15 +15 +/- 75
				After Effect	410 +5 +10 +/- 30
Error	Pilot	Co-Pilot	Tol	Encoder 125	
-1000	+5		20	-1045	-955
0	0	N	20	-50	55
1000	+10		20	445	550
1500	+5	E	25	955	1060
2000	+15		30	1450	1555
3000	+15	W	30	1955	2065
4000	+15		30	2465	3070
6000	+10		35	3965	4070
8000	-15		40	5960	6060
10000	-20		60	7945	8040
12000	-25		80	9940	10040
14000	-25		80	11935	12040
16000	-10		90	13935	14040
18000	0		100	15945	16060
20000	+20		110	17965	18075
22000			120	19990	20100
25000			130		
30000			140		
35000			155		
40000			180		
45000			205		
50000			230		
			255		
			280		
Pilot Altitude	PASS				
Co-Pilot Altitude	NEW				
Encoder					

ER(S)
AS BEEN
DIX F

DATE

AIRFRAME
TIME
IN
SERVICEAVIONICS
TIME
IN
SERVICEDESCRIPTION OF WORK PERFORMED—
SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK

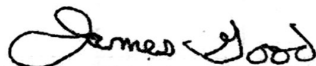
LANCASTER AVIONICS, INC. 500-U AIRPORT ROAD LITITZ, PA 17543 CRS# LN7R261N
LOG ID# 2706 12-October-2011 WO# 16727 HOBBS 1830.3
N44YP S/N 1169 CIRRUS DESIGN CORP. SR20

Pg 1 / 1

**** ITEM # 16727-1 C/W ASPEN SYNTHETIC VISION UPGRADE ****

DISCREPANCY: C/W ASPEN SYNTHETIC VISION UPGRADE.

ACTION: UPGRADED EFD1000 S/N 9903 FROM SOFTWARE VERSION 2.2.3 TO VERSION 2.4.1 IAW ASPEN SB# 2011-05A AND UNLOCKED THE SVT OPTION IAW TN# 2011-10A. UPDATED POH AND PILOT GUIDE AS REQUIRED. OPS CHECKED GOOD.



CRS# LN7R261N James Good

8-23-13 \$R20 N44YP FLIGHT=2139.7 HOBBS=1440.9
PERFORMED ALTIMETER RECALIBRATION OF ASPEN
PFD, MODEL EFD-1000, S/N 9903 PER ASPEN TECH NOTE
2009-09 KEY B. ADJUSTED BAROMETRIC SCALE OF
UNITED ALTIMETER P/N 5934D-3A. 249H S/N 422367.
ALL WORK WAS ACCOMPLISHED I.A.W. THE MAN-
UFACTURERS' INSTRUCTIONS AND FAR 91.411 AND
PART 43 APPENDIX E. ————— END

LANCASTER AVIONICS INC
LANCASTER AIRPORT
LITITZ, PA 17543
DATE 8-23-13
CERTIFICATE NO. LN7R2
SIGNED 

12/14/2011




LANCASTER AVIONICS, INC

ALTIMETER/STATIC and ENCODER EVALUATION PER FAR 91.411 - FAR 43, APPENDIX 'E'

CIRRUS \$R20 N44YP


LANCASTER AVIONICS INC. CRS# LN7R261N

I CERTIFY THAT THE ALTIMETER, ENCODER AND
STATIC SYSTEM TESTS REQUIRED BY FAR 91.411
HAVE BEEN PERFORMED IAW FAR 43 APPENDIX E

UNIT TYPE TESTED TO
#1 ALTIMETER UNITED 18,000'
#2 ALTIMETER ASPEN 18,000'
ENCODER(S) T.C.I. 18,000'
STATIC SYSTEM TEST DATE 8-23-13
SIGN  DATE 8-23-13

LI
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PI

SI
DI

Customer: JET AERO L.L.C.		Aircraft Type: CIRRUS \$R20		NR: N44YP	
Altitude	Manufacturer	Part Number	Serial Number	Test Ceiling	Test Alt
Pilot	UNITED	5934D-3A.249H	422367	System Leak	0 FPM
Co-Pilot	ASPEN	EFD1000	9903	Hysteresis:	9,000' -25' +15'
Encoder	T.C.I.	\$3D120-30N	14896	50%	-10' +15'
				40%	7,200' -25' +15'
				After Effect	0' -5' +15'
Error	Pilot	Co-Pilot	Tol	Encoder 125'	Friction
-1000	-5	-5	20	N/A	Pilot Tol Co-Pilot
zero	-5	0	20	-40	1000 25 70 N/A
500	-5	0	20	-40	2000 25 70
1000	-5	+5	20	-40	3000 25 70
1500	-5	+10	25	-40	4000 25 70
2000	0	+10	30	-40	5000 25 70
3000	0	+10	30	-40	6000 25 70
4000	0	+10	35	-40	7000 25 70
6000	-15	+10	40	-40	8000 25 70
8000	-30	+10	60	-40	9000 25 70
10000	-30	+20	80	-40	10000 25 70
12000	-30	+20	90	-40	11000 25 70
14000	-25	+30	100	-40	12000 25 70
16000	-15	+30	110	-40	13000 25 70
18000	0	+40	120	-40	14000 25 70
20000			130		15000 25 70
22000			140		16000 25 70
25000			155		17000 25 70
30000			180		18000 25 70
35000			205		19000 25 70
40000			230		20000 25 70
45000			255		21000 25 70
50000			280		22000 25 70
				Pressure - Alt Diff. Tol +/- 25	
				Pilot Tol Co-Pilot	
				28.10' -1750 -1725	
				28.50' -1340 -1340	
				29.00' -870 -860	
				29.50' -395 -390	
				29.92' 0 0	
				30.50' 535 535	
				30.90' 875 875	
				30.99' 975 975	
Pilot Altimeter		PASS		Technician: 	
Co-Pilot Altimeter		PASS		Date: 8-23-13	
Encoder		PASS			

(717) 589-1953 Phone
(717) 589-1722 Fax

Lancaster Avionics Inc.
500-U Airport Rd
Lititz, PA 17543

CRS# LN7R261N

DATE

AIRFRAME
TIME
IN
SERVICEAVIONICS
TIME
IN
SERVICE

The Altimeter System & altitude Reporting
Equipment tests & Inspections Required by
F.A.R. Part 91.411 & 91.413 have been performed

The Altimeter has been tested to :

16,000 FT 10-9-15 Date

Signed [Signature]

Keystone Instruments Services Inc.

F.A.A. Repair Station No: BX1R050K

Instrument Class 1,2,3, and 4

Complies with FAR
Part 43, Appendix E

Calibrated to: 16,000

Date 10-9-15

Keystone Instruments Services Inc.

Sarasota Avionics Inc Tampa (TPA)
6530 Tampa Executive Airport Rd. Tampa FL 33610
Tail No.: N44YP/Cirrus/SR-20/Serial Number: 1169
Date: 2/23/16 Work Order: 21037



Removed GNS430W (#1 and #2) and GMA 340. Installed GTN 750 (SN: 1ZA017158), GMA35c (SN: 1T6005636) and GTN 650 (SN: 1Z8019179) according to Garmin GTN 6XX/7XX AML STC Installation Manual (190-01007-A3) Rev. 8 dated Nov 2014 per STC SA02019SE-D. Installed GA 35 (SN: 120394) Antenna according to Cirrus Service Bulletin SB 2X-34-23 R1. Removed and replaced Encoder, installed SSD-120(SN: 20661). Removed GTX327 and Installed Garmin GTX 33/330ES (SN: 89130893) according to Garmin Installation Manual 190-00734-10 Rev. 4 per STC SA01714WI. Installed Garmin GDL 88 (SN: 22T004820) according to STC SA2119SE and Part 23 AML STC Installation Manual(190-01310-00) dated October 2015 Revision 8. Installed Garmin AOA (GSU 25 SN: 2SA002699, GI 260 SN: 3GQ001501, GAP 26 SN: 34F00080) according to Garmin Installation Manual 190-01752-00 Rev 5 dated Sept 2014. Installed Flight Stream 210 (SN: 3RE003239) according to Garmin Installation Manual 190-01700-00 Rev E. dated Dec 2015.

Removed and replaced Aspen ACU, Removed (P/N 910-G0004-001 S/N 11837) installed (P/N 910-00004-001 S/N:15010) op checked ACU noting no discrepancies.

Pilot Altimeter (910-00001-001 SN: 9903) and standby (5934AD-3 S/N: 422361) has been tested to an altitude of 20,000 feet and was found to comply with App E of 14 CFR 43. The Automatic pressure altitude reporting equipment (SSD-120 SN: 20661) was tested and found to comply with App E of 14 CFR 43, and calibration is in compliance with 14 CFR 91.217. The transponder (GTX 33 S/N:89130893) was tested, inspected and found to comply with App F of 14 CFR 43 and 14 CFR 91.413. The Static Pressure system was tested and inspected in accordance with 14 CFR 91.411. Updated Weight and balance/Equipment list. FAA Form 337 submitted on this date.

I certify all work done to the aircraft and/or component identified above was done in accordance with current regulations of the Federal Aviation Administration and was found approved for return to service with respect to the work performed.

[Signature]

for Sarasota Avionics Tampa, QV0D957X

Table I		Table III		Table IV			Table II				
alt	scale error	friction error	up encoder	down encoder	baro scale error	baro scale milibars		ALT	hysieresis up	down	
-1000	-1000				28.10	-1730	951.6	40%	8,000	8,010	8,040
0	0				28.50	-1340	965.1	50%	10,000	9,990	10,030
500	500				29.00	-860	982.0				
1000	995	40			29.50	-390	999.0	After	Effect	30 ft	0
1500	1495				29.92	0	1013.2	Case	Leak	100ft	0
2000	2010	40			30.50	+530	1032.8		Serial No:	N#	444P
2500	2570				30.90	+890	1046.4		Calibration		20,000
3000	3010	40			30.99	+970	1049.4				
4000	4000				TESTED IN COMPLIANCE WITH F.A.R. 43 APPENDIX E PAR. A-B-C I.F.R. <input checked="" type="checkbox"/> V.F.R. <input type="checkbox"/> TEST BOX OTHERS WORK ORDER # 15-841 DATE 10-9-15						
5000	5010	40									
6000	6010										
8000	8010										
10000	9990	40									
12000	11,980				F.A.A. INSTRUMENT REPAIR STATION # BX1R050K CLASS 1,2,3,& 4 AND SPECIALIZED SERVICES KEYSTONE INSTRUMENTS SERVICES, INC. 353 PROCTOR STREET, PO BOX 2 LOCK HAVEN PA. 17745 TELE: 570-748-7083 FAX: 570-748-4439						
14000	13,990										
15000	14,990	40									
16000	15,980										
18000	18,030										
20000	20,050	40			F.A.R. PART 43 Appendix E						
22000											
25000											
30000											
35000											
40000											
45000											
50000											
60000											
70000											
80000											

DATE

AIRFRAME
TIME
IN
SERVICEAVIONICS
TIME
IN
SERVICEDESCRIPTION OF WORK PERFORMED—
SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK

Sarasota Avionics Inc Tampa (TPA)
6530 Tampa Executive Airport Rd. Tampa FL 33610
Tail No.: N44YP/Cirrus/SR-20/Serial Number: 1169
Date: 9/9/2016 Work Order: 21171



Troubleshoot altimeter and pitot not indicating correctly, found water in static sump. Removed water in static system performed op check of pitot/static indications noting no discrepancies.

I certify all work done to the aircraft and/or component identified above was done in accordance with current regulations of the Federal Aviation Administration and was found approved for return to service with respect to the work performed.

_____ for Sarasota Avionics Tampa, QV0D957X

Sarasota Avionics Inc Tampa (TPA)
6530 Tampa Executive Airport Rd. Tampa FL 33610
Tail No.: N44YP/Cirrus/SR-20/Serial Number: 1169
Date: 2/14/2017 Work Order: 21254
Tach:2703.8



Complied with Garmin SB 1655 Rev A. No discrepancies noted.

I certify all work done to the aircraft and/or component identified above was done in accordance with current regulations of the Federal Aviation Administration and was found approved for return to service with respect to the work performed.

_____ for Sarasota Avionics Tampa, QV0D957X

Sarasota Avionics Inc Tampa (TPA)
6530 Tampa Executive Airport Rd. Tampa FL 33610
Tail No.: N44YP/Cirrus/SR-20/Serial Number: 1169
Date: 2/24/2017 Work Order: M265
Hobbs:1881.3



Deactivated and Deferred Engine Instruments on MFD Per FAR 91.213(d)

I certify all work done to the aircraft and/or component identified above was done in accordance with current regulations of the Federal Aviation Administration and was found approved for return to service with respect to the work performed.

_____ David McGee A&P 3195124.

DATE

AIRFRAME
TIME
IN
SERVICEAVIONICS
TIME
IN
SERVICE

Sarasota Avionics Inc Tampa (TPF)
845 Severn Ave. Tampa, FL 33606
Tail No.: N44YP/Cirrus/SR20/SN:1169
Date: 2/15/18
Hobbs: 1965
Work Order: 21449

Updated GTN750 and GTN650 Main software from v6.21 to v6.41 in accordance with Garmin
Service Bulletin NO.: 1758 Rev B.

I certify all work done to the aircraft and/or component identified above was done in
accordance with current regulations of the Federal Aviation Administration and was found
approved for return to service with respect to the work performed.

for Sarasota Avionics Tampa, QV0D957X

LANCASTER AVIONICS
500 U AIRPORT RD
LITITZ PA 17543
717-569-1953

DATE: 08/23/13
MER#: 04867589

TIME:
TERM:

S-A-L-E-S D-R-A-F-T

REF: 0002 BCH:
CD TYPE: MC
TR TYPE: PR
INV #: 23309

AMOUNT: \$493.

ACCT: *****9207 EXP: **/
AP: 07345C

NAME: ERIC CIPCIC

I AGREE TO PAY ABOVE TOTAL AMOUNT
ACCORDING TO CARD ISSUER AGREEMENT
(MERCHANT AGREEMENT IF CREDIT VOUCHER)

X
TOP COPY-MERCHANT BOTTOM COPY-CUSTOMER

PART - 1

INVOICE # _____ WORK NO: 15-841

CUSTOMER Jet Arrow

ADDRESS _____

CITY _____ STATE _____ ZIP _____

INST: Pilot / Static S/N: N# 44YP

MFG. NO: United, Garmin TYPE 20,000

PART - 4

THE AIRCRAFT, AIRFRAME, AIRCRAFT ENGINE, PROPELLER OR APPLIANCE IDENTIFIED ABOVE
WAS REPAIRED AND INSPECTED IN ACCORDANCE WITH CURRENT REGULATIONS OF THE FEDERAL
AVIATION AGENCY AND IS APPROVED FOR RETURN TO SERVICE, PERTINENT DETAILS OF THE REPAIR
ARE ON FILE AT THIS AGENCY UNDER WORK ORDER # 15-841

DATE 10-9-15 SIGNED [Signature]

KEYSTONE INSTRUMENTS SERVICES INC.
WM. T. PIPER MEMORIAL AIRPORT
P.O. BOX 2 • 353 PROCTOR STREET
LOCK HAVEN, PA 17745

REPAIR STATION #BX1R050K
INSTRUMENT CLASS 1, 2, 3, 4
AND SPECIALIZED SERVICES

FORM 100A

VOICE

7156

ORDER NO.

5 15-841 N44YP

TERMS

CK#

1135

UNIT PRICE

TOTAL

150.00

1% Service charge will be added after 30 days. Annual percentage rate is 12%

Form #201

Reese's Print Shop
748-6528

Thank You

Line
493.63
-129.65
623.28
588.00
35.28

D FAR 43

09, REV

E - HARD

13 AND

CORP.

09

LANCASTER AVIONICS, INC.
500-U AIRPORT ROAD
LITITZ, PA 17543 USA

JET AERO, LLC
971 HEILMAN RD.
MONTROUSEVILLE, PA 17754-7994 USA

INVOICE 23309

Work Order#: 18348
Page #: 1 of 1
Date: Aug-23-2013
Terms: COD
Account: JEAER
Your PO#: VERBAL
Our TEL: 717-569-1953
Your TEL: 570-435-0064
Tail#: N44YP
A/C Make: CIRRUS DESIGN CORP.
Model: SR20
Serial: 1169

DETAILS

WO: 18348 TASK: 1 AV C/W 2YR IFR CERTS START: 08/23/2013 FINISH: 08/23/2013
DISCREPANCY: C/W 2YR (1)STATIC/(2)ALT/(1)XPDR/(1)ENC CERTIFICATION.
ACTION: COMPLIED WITH FAR 91.411 AND FAR 43, APPENDIX E ALT./ENC./STATIC SYS CERT. COMPLIED WITH FAR 91.413 AND FAR 43, APPENDIX F 2YR TRANSPONDER CERT.
HOURS: Flat Rate LABOR: \$439.50 PARTS/EQUIP/OTHER: \$0.00 TASK TOTAL: \$439.50

WO: 18348 TASK: 2 AV REPAIR ASPEN PFD START: 08/23/2013 FINISH: 08/23/2013
MODEL#: EFD1000 SER#: 9903
DISCREPANCY: ASPEN ALTIMETER HAS 35 FT ERROR WHICH EXCEEDS ALLOWABLE TOLERANCE. REPAIR KNOB ON RIGHT SIDE - HARD TO PUSH IN.
ACTION: ADDED SHIM TO RIGHT KNOB TO IMPROVE OPERATION. CALIBRATED ALTIMETER I.A.W. ASPEN TECH NOTE 2009-09, REV B.
HOURS: 1.00 LABOR: \$99.00 PARTS/EQUIP/OTHER: \$0.00 TASK TOTAL: \$99.00

WO: 18348 TASK: 3 AV ADJUST ALTIMETER START: 08/23/2013 FINISH: 08/23/2013
PART#: 5934D-3A.249H
DISCREPANCY: BAROMETRIC CORRECTION SCALE HAS ERRORS WHICH EXCEED ALLOWABLE TOLERANCE.
ACTION: ADJUSTED BAROMETRIC CORRECTION SCALE TO CERTIFICATION SPECS. WORK PERFORMED I.A.W. FAR 91.411 AND FAR 43 APPENDIX E.
HOURS: 0.50 LABOR: \$49.50 PARTS/EQUIP/OTHER: \$0.00 TASK TOTAL: \$49.50

Labor: 588.00
Sub Total: 588.00
PA STATE: 35.28

Invoice TOTAL: 623.28

Credit -129.65

Balance 493.63

LANCASTER AVIONICS
500 U AIRPORT RD
LITITZ PA 17543
717-569-1953

DATE: 08/23/13
TIME: 16:37
MEM#: 04867589
TER#: 0001

S-A-L-E-S D-R-A-F-T

REF: 0002 BCH: 173
CD TYPE: MC
TR TYPE: PR
INV #: 23309

AMOUNT: \$493.63

ACCT: *****207
AP: 07345C
EXP: **/**

NAME: ERIC CIPIC

I AGREE TO PAY ABOVE TOTAL AMOUNT
ACCORDING TO CARD ISSUER AGREEMENT
(MERCHANT AGREEMENT IF CREDIT VOUCHER)

TOP COPY-MERCHANT BOTTOM COPY-CUSTOMER

LANCASTER AVIONICS, INC.
500-U AIRPORT ROAD
LITITZ, PA 17543 USA

JET AERO, LLC
971 HEILMAN RD.
MONTICELLO, PA 17754-7994 USA



INVOICE 21256

Work Order#: 16727

Page #: 1 of 1

Date : Oct-12-2011

Terms : COD

Account : JEAER

Your PO#: VERBAL

Our TEL : 717-569-1953

Your TEL : 570-435-0064

Tail#: N44YP

A/C Make : CIRRUS DESIGN CORP.

Model : SR20

Serial : 1169

DETAILS

WO: 16727 TASK: 1 AV C/W ASPEN SYNTHETIC VISION UPGRADE START: 10/12/2011 FINISH: 10/12/2011

DISCREPANCY: C/W ASPEN SYNTHETIC VISION UPGRADE.

ACTION: UPGRADED EFD1000 S/N 9903 FROM SOFTWARE VERSION 2.2.3 TO VERSION 2.4.1 IAW ASPEN SB# 2011-05A AND UNLOCKED THE SVT OPTION IAW TN# 2011-10A. UPDATED POH AND PILOT GUIDE AS REQUIRED. OPS CHECKED GOOD.

HOURS: 1.25 LABOR: \$111.25 PARTS/EQUIP/OTHER: \$1,995.00 TASK TOTAL: \$2,106.25

TASK	Qty	Part # \ Serial #	Description	Each	Extended
1	1.00	SVT-ASPEN	SYNTHETIC VISION	1,995.000	1,995.00
				Labor:	111.2
				Parts & Equip:	1,995.0
				Sub Total:	2,106.2
				PA STATE:	126.3
				Invoice TOTAL:	2,232.6

[illegible]

Type Log Entry Made: CMPTK ADHESIVE



LANCASTER AVIONICS, INC.
500-U AIRPORT ROAD
LITITZ, PA 17543 USA

JET AERO, LLC
971 HEILMAN RD.
MONTGOMERYVILLE, PA 17754-7994 USA

Handwritten signature: Cust Copy

INVOICE 20993

Work Order# : 16400
Page # : 1 of 2
Date : Jul-26-2011
Terms : COD
Account : JEAER
Your PO# : VERBAL
Our TEL : 717-569-1953
Your TEL : 570-435-0064
Tail# : N44YP
A/C Make : CIRRUS DESIGN CORP.
Model : SR20
Serial : 1169

DETAILS

WO: 16400 TASK: 1 AV REPAIR SANDEL HSI START: 06/08/2011 FINISH: 07/26/2011

DISCREPANCY: HSI INTERMITTENTLY HAS COMPASS CARD ERRORS.

ACTION: The following equipment was removed: Sandel SN3308 EHSI System & United 7000C.31 VSI. The following equipment was installed: Aspen EFD1000 Pro PFD System. Installed Aspen EFD1000 Pro PFD IAW Aspen STC# SA10822SC as listed on the AML. All work was accomplished IAW AC 43.13-1B/-2A Chapters 2 & 3, and Aspen Installation Manual p/n 900-00003-001 utilizing manufacturer's supplied hardware. Inserted Aspen Flight Manual Supplement p/n 900-00008-001 in the Aircraft Flight Manual. Inserted Aspen Instructions for Continued Airworthiness p/n 900-00012-001 in Aircraft Flight Manual. Inserted ALL STC required configuration documents in the aircraft maintenance records. Aspen EFD1000 Pro PFD conforms to TSO-C2d, -C3d, -C4c, -C6d, -C8d, -C10b, -C106, and C113 per FAA Acceptance Letter dated 3/14/2008 and Quality Assurance Manual document p/n A-04-101-00 dated 3/3/2008. All wiring/cabling used for installation purposes meets or exceeds the following specifications: (M17/29, and/or M17/60) - coax; (M22759, M27500, and/or M81044) - wire. All circuit breakers used for installation purposes were of the Klaxon, Potter/Brumfield, and/or Mechanical Products variety. All of the above installed equipment was functionally tested and was found to perform its intended function with no adverse effects on other aircraft systems. Weight and Balance change recalculated. Equipment list revised.

HOURS: 0.00 LABOR: \$0.00 PARTS/EQUIP/OTHER: \$15,228.00 TASK TOTAL: \$15,228.00

WO: 16400 TASK: 2 AV REPLACE ENCODER AND C/W 2YR IFR CERTS START: 07/25/2011 FINISH: 07/26/2011

DISCREPANCY: REPLACE ENCODER AND C/W 2Y IFR CERTS.

ACTION: REMOVED ACK A30 ENCODER AND INSTALLED NEW TRANSCAL SSD120-30N ENCODER. COMPLIED WITH FAR 91.411 AND FAR 43, APPENDIX E ALT./ENC./STATIC SYS CERT. COMPLIED WITH FAR 91.413 AND FAR 43, APPENDIX F 2YR TRANSPONDER CERT. ALSO UPGRADE GARMIN GTX327 TRANSPONDER S/N 83707608 FROM SOFTWARE VERSION 2.09 TO VERSION 2.10. OPS CHECKED GOOD.

HOURS: 0.00 LABOR: \$0.00 PARTS/EQUIP/OTHER: \$549.00 TASK TOTAL: \$549.00

TASK	Qty	Part # \ Serial #	Description	Each	Extended
1	1.00	14806990	MATE-N-LOK 2 PIN FEMALE (CLEAR)	0.000	0.00
1	1.00	14807000	MATE-N-LOK 3 PIN MALE (CLEAR)	0.000	0.00
1	1.00	14807010	MATE-N-LOK 3 PIN FEMALE (CLEAR)	0.000	0.00
1	4.00	193-3	HOSE	0.000	0.00
1	32.00	1SH-20	SHIELDED WIRE	0.000	0.00
1	6.00	1SH-22	WIRE SHIELDED	0.000	0.00
1	19.00	205089-1	PIN	0.000	0.00
1	27.00	205090-1	PIN	0.000	0.00
1	1.00	205838-1	8-PIN CONNECTOR	0.000	0.00
1	1.00	205841-2	8 PIN MALE CONN	0.000	0.00
1	1.00	225395-1	AMP BNC CONNECTOR MALE	0.000	0.00
1	1.00	225396-1	AMP BNC CONNECTOR FEMALE	0.000	0.00
1	54.00	2SH-22	22 AWG 2SH	0.000	0.00
1	73.00	2SH-22	22 AWG 2SH	0.000	0.00
1	2.00	311-3D	FITTINGS FOR 193 HOSE	0.000	0.00
1	5.00	3506891	MATE-N-LOK SOCKET 24-18 AWG	0.000	0.00
1	3.00	3506901	MATE-N-LOK PIN 24-18 AWG	0.000	0.00
1	6.00	3SH-22	22 AWG 3SH	0.000	0.00
1	6.00	44-P	POLY FLO HOSE	0.000	0.00
1	0.60	60617-1	SOCKET	0.000	0.00
1	9.00	60618-1	PIN	0.000	0.00
1	1.00	7277-2-1	CIRCUIT BREAKER 1A	0.000	0.00
1	1.00	7277-2-71/2	CIRCUIT BREAKER 7.5A	0.000	0.00
1	1.00	7301	SWITCH	0.000	0.00
1	12.00	AN365-632A	ELASTIC STOP NUT 6-32	0.000	0.00
1	1.00	AN822-3D	90 DEGREE ELBOW	0.000	0.00

INCASTER AVIONICS, INC.
10-U AIRPORT ROAD
TITZ, PA 17543 USA

INVOICE 20993

Work Order# : 16400

Page # : 2 of 2

Date : Jul-26-2011

2.00 AN910-1D
12.00 AN960-6
1.00 DBA-600
1.00 EFD1000 PRO
1.00 HIX116
1.00 HIX14
2.00 HIX18
3.00 HIX316
1 3.00 HIX332
1 1.00 HIX38
1 13.00 MS24693C-28
1 7.00 MS24693C-30
1 8.00 PF259-N
1 8.00 PF261
1 1.00 PF268-2
1 2.00 PF271-2
1 62.00 RACH-22
1 24.00 RTS-142-50
1 23.00 RTS-142-51
1 1.00 SC628
1 60.00 T-18L
1 24.00 T-50I
1 4.00 T-50R
1 4.00 T440B
1 2.00 T440R
1 3.00 T632B-L
1 4.00 T632R
1 2.00 T832B
1 28.00 TEF-20 BLACK
1 10.00 TEF-20 RED
1 1.00 OUTSIDE WORK
2 1.00 SSD120-30N

COUPLING	0.000	0.00
REGULAR FLAT WASHER 6-32	0.000	0.00
TRAY CONNECTOR/BNC	0.000	0.00
PFD	14,270.000	14,270.00
HEAT SHRINK 1/16	0.000	0.00
HEAT SHRINK 1/4	0.000	0.00
HEAT SHRINK 1/8	0.000	0.00
HEAT SHRINK 3/16	0.000	0.00
HEAT SHRINK 3/32	0.000	0.00
HEATSHRINK 3/8	0.000	0.00
STAINLESS C.SUNK 6-32 SCREW 1/2"	0.000	0.00
STAINLESS C.SUNK 6-32 SCREW 3/4"	0.000	0.00
1/4" NYLON INSERT	0.000	0.00
1/4" NYLON NUT & SLEEVE ASSY	0.000	0.00
1/4" MALE CONNECTOR 1/8" PIPE	0.000	0.00
1/4" MALE RUN TEE 1/8" PIPE	0.000	0.00
22 AWG WIRE WHITE	0.000	0.00
REMTX 1/8"	0.000	0.00
REMTX 1/4"	0.000	0.00
SONALERT	0.000	0.00
TY-WRAP 8"	0.000	0.00
TY-WRAP 11 3/4"	0.000	0.00
TY-WRAP 8"	0.000	0.00
BLUE 4/40 TERMINAL	0.000	0.00
RED 4/40 TERMINAL	0.000	0.00
BLUE 6-32 TERMINAL (LARGE BARREL)	0.000	0.00
RED 6/32 TERMINAL	0.000	0.00
BLUE 8/32 TERMINAL	0.000	0.00
20 AWG BLACK	0.000	0.00
20 AWG RED	0.000	0.00
CHARGES FROM AAS	958.000	958.00
ENCODER	549.000	549.00

Parts & Equip:	15,777.00
Sub Total:	15,777.00
PA STATE:	946.62

Invoice TOTAL: 16,723.62

MATERIAL USED

JOB	QUAN.	PART NO.	DESCRIPTION	PRICE	
				UNIT	TOTAL
	1	SN3308-00-02	LA 1001		
	1	4305-150	LA 10222926		
	1	FD01-0201-2	LA H349		
	5	66103-4	CPC Pin		



LANCASTER AVIONICS, INC.

LANCASTER AIRPORT
500-U AIRPORT ROAD
LITITZ, PA 17543

717-569-1953 FAX 717-569-1722

AVIONICS WORK

CUSTOMER #

TEAER

NAME	REC'D	AM	DATE
ADDRESS	PROMISED	AM	CUSTOMERS ORDER NO.
CITY	TERMS	PM	ORDER WRITTEN BY
AIRCRAFT MAKE/MODEL/SERIAL NUMBER/HOBBS		PHONE	REGISTRATION NUMBER
JOB		INIT'L	REPAIR ORDER INSTRUCTIONS
			LABOR CHARGE

Jet Aero, LLC

6/8/11

Verbal

INT

Cirrus

N44YP

- 1 ~~56~~ Repair INT. 20° HSI Error by installing Laner units
Remove SN3308 sh 3900, mid cat. DG 4305-150 sh 10222926, Flux det sh H349
Install Laner SN3308 sh 4001, mid cat. DG 4305-150 sh 10222926, Flux det sh H349
Calib. comp sys & ramp check system ok to MFG specs. (SDG)
Removed Sandoz EHSI SYS. & Installed ATIS
EFD1000 SYSTEM @
- 2 ~ Replace Encoder, clw 2nd Conts. & updated
TRANSPONDER SOFTWARE @

I hereby authorize the above repair work to be done along with the necessary material, and hereby grant you and/or your employees permission to operate and fly the airplane herein described for the purpose of testing and/or inspection. An express mechanic's lien is hereby acknowledged on above airplane to secure the amount of repairs thereto.

NOT RESPONSIBLE FOR LOSS OR DAMAGE TO PLANE OR ARTICLES LEFT IN PLANE IN CASE OF FIRE, THEFT OR ANY OTHER CAUSE BEYOND OUR CONTROL.

X

TOTAL LABOR	
TOTAL PARTS	
SHIPPING/HANDLING	
MISC.	
SUB TOTAL	
PA SALES TAX	
TOTAL ▶	

MAINTENANCE RELEASE

The part and/or component identified above was repaired and inspected in accordance with current Federal Air Regulations, was found airworthy, and is approved for return to service.

Date 6-8-11 By James Loo
LANCASTER AVIONICS, INC. CRS LN7R261N

ADHESIVE

	YES	NO	N/A
Preliminary Inspection Findings	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Hidden Damage Inspection Findings	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

(**See Attached Prelim./Hidden Damage Insp. Form)

WHITE/Customer

CANARY/Shop Copy

LANCASTER AVIONICS, INC.
500-U AIRPORT ROAD
LITITZ, PA 17543 USA

JET AERO, LLC
971 HEILMAN RD.
MONTOURSVILLE, PA 17754-7994 USA

INVOICE 20814

Work Order#: 16392
Page #: 1 of 1
Date: Jun-06-2011
Terms: COD
Account: JEAER
Your PO#: VERBAL
Our TEL: 717-569-1953
Your TEL: 570-435-0064
Tail#: N44YP
A/C Make: CIRBUS DESIGN CORP.
Model: SR20
Serial: 1169

DETAILS

WO: 16392 TASK: 1 AV REPAIR SANDEL HSI START: 06/06/2011 FINISH: 06/06/2011
PART#: SN3308-00-BL MODEL#: SN3308 SER#: 3900

DISCREPANCY: INTERMITTENTLY HAS 90 DEGREE COMPASS CARD ERROR.

ACTION: RAMP CHECKED, COULD NOT DUPLICATE REPORTED MALFUNCTION. RESEATED HSI IN MOUNTING TRAY. ACCESSED FLUX DETECTOR AND CHECKED CONNECTOR PIN TENSION. PIN TENSION CHECKS GOOD. PERFORMED MINOR CALIBRATION AND FLIGHT CHECKED SLAVED COMPASS OPERATION. FLIGHT CHECKS GOOD.

HOURS: 2.00 LABOR: \$178.00 PARTS/EQUIP/OTHER: \$0.00 TASK TOTAL: \$178.00

WO: 16392 TASK: 2 NC REPAIR #2 GNS430W START: 06/06/2011 FINISH: 06/06/2011
MODEL#: GNS430W

DISCREPANCY: REPORTED INOP.

ACTION: REBOOTED UNIT & TESTED TERRAIN CARD. SYSTEM RAMP CHECKS GOOD.

HOURS: 0.00 LABOR: \$0.00 PARTS/EQUIP/OTHER: \$0.00 TASK TOTAL: \$0.00

Labor: 178.00
Sub Total: 178.00
PA STATE: 10.68

Invoice TOTAL: 188.68

LANCASTER AVIONICS
500 U AIRPORT RD
LITITZ PA 17543

DATE: 06/06/11
MEM#: 94867589
TIME: 15:22
TERM: 0001

S-A-L-E-S D-R-A-F-T
REF: 0006 BCH: 136
CD TYPE: MC
TYPE: PR
WV #: 20814

AMOUNT: \$188.68

ACCT: *****1133 EXP: **/**
P: 03894Z

NAME: JAMES MCCLAIN
I AGREE TO PAY ABOVE TOTAL AMOUNT
ACCORDING TO CARD ISSUER AGREEMENT
(MERCHANT AGREEMENT IS CREDIT VOUCHER)

TOP COPY-MERCHANT BOTTOM COPY-CUSTOMER

LANCASTER AVIONICS, INC.
500-U AIRPORT ROAD
LITITZ, PA 17543 USA

JET AERO, LLC
971 HEILMAN RD.
MONTGOMERY, PA 17754-7994 USA

INVOICE 20134

Work Order# : 15867
Page # : 1
Date : Oct-28-2010
Terms : COD
Account : JEAER
Your PO# :
Our TEL : 717-569-1953
Your TEL : 570-435-0064
Tail# : N44YP
A/C Make : CIRRUS DESIGN
Model : SR20
Serial : 1169

DETAILS

WO: 15867 TASK: 1 AV REPAIR SANDEL HSI START: 10/28/2010 FINISH: 10/28/2010
PART#: SN308-00-BL MODEL#: SN3308
DISCREPANCY: SANDEL HSI INTERMITTENTLY HAS 60 - 90 COMPASS CARD ERROR. PROBLEM HAS OCCURED EVER SINCE THE
DISPLAY LAMP WAS REPLACED.
ACTION: OPS CHECKED AND VERIFIED A +25 DEGREE EAST ERROR AND -15 DEGREE WEST ERROR. RESEATED SANDEL HSI IN RACK.
REPOSITIONED AND RECALIBRATED FLUX DETECTOR. SLAVED COMPASS SYSTEM FINAL CHECKS GOOD WITH A +1.5 NORTH ERROR AND
-1.5 DEGREE WEST ERROR.
HOURS: 2.00 LABOR: \$178.00 PARTS/EQUIP/OTHER: \$0.00 TASK TOTAL: \$178.00

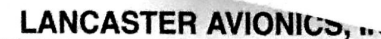
Labor: 178.00
Sub Total: 178.00
PA STATE: 10.68

Invoice TOTAL: 188.68

Your new Invoice total with 3% discount
on Labor applied is 183.02

If we receive payment via Cash/Check
by upm Receipt

Paid Check # 1033

[illegible]

717-569-1953 FAX 717-569-1722

TEAER

NAME	Jet Aero, LLC	REC'D	AM PM	DATE	10/28/10
ADDRESS		PROMISED	AM PM	CUSTOMERS ORDER NO.	Verbal
CITY		TERMS		ORDER WRITTEN BY	none
AIRCRAFT MAKE/MODEL/SERIAL NUMBER		PHONE		REGISTRATION NUMBER	
CIRRUS 1634.5				N 444P	

[illegible]

X _____

(**See Attached Prelim./Hidden Damage Insp. Form)

CRS LN7R261N

TOTAL ►

CANARY/Shop Copy