



Twin Cities Aviation, Inc.

Repair Station No. 5TCR105B
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Blaine, Minnesota 55449
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Date: 6/6/2016, 3:15 PM

CUSTOMER INFORMATION

Clay Shepard
1710 West Ln
Anoka, MN 55303
612-868-2479
claytonshepard@comcast.net
Reg. No: N1432C
2003 Cirrus Design Corp SR-20
Current A/C TT: 429.3, Hobbs: 429.3
A/C Serial: 1332
Created on: 4/15/2016

Customer Invoice
Work Order: 7457-04-2016

Item: 1 - Airworthy Airframe

Discrepancy	Hours	Subtotal
Annual Inspection Due Airframe.	15.00	1,251.35

Corrective Action

C/W a Annual Airframe Inspection IAW Cirrus SR 20 MM and IG. AD's researched to date. Researched Cirrus SB's to date. ELT tested IAW FAR 91.207(d). No defects noted. Ground run, ops and leak check satisfactory. I certify that I have inspected this Airframe IAW an Annual Inspection and it was determined to be airworthy with respect to work performed at this date and time. The following discrepancies were addressed.

Hourly rate: \$85.00

Notes:

We can reduce the Annual cost by \$340.00 if done with a chute.

Labor: \$1,251.35	Parts: \$0.00	Shipping: \$0.00	Item Subtotal: \$1,251.35
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Item: 2 - Airworthy Engine

Discrepancy	Hours	Subtotal
Annual Inspection Due Engine.	7.00	585.25

Corrective Action

C/W a Annual Engine Inspection IAW Cirrus SR 20 MM and IG. AD's researched to date. Researched Cirrus SB's date. Cleaned engine. Drained oil and sample taken. Serviced w/ 7 qts of and new Tempest AA48108-2 filter. Quick drain verified closed and filter torqued and safetied. R&R induction air filter w/ new BA-24. Cleaned, inspected, gapped and tested spark plugs. Borescoped/leakdown tested cylinders IAW TCM service bulletin SB03-3, Compression: #1 - 72/80, #2 - 68/80, #3 - 60/80, #4 - 71/80, #5 - 71/80 & #6 - 70/80, External magneto timing checked and adjusted to 24 deg BTDC +/- 1 degree. Tested all ignition leads. Operation found satisfactory. Checked control travels and lubed rod ends. Visually inspected and pressurized muffler assembly. No defects noted. Ground run, ops and leak check sat. I certify that this Powerplant has been inspected IAW a Annual Inspection and was determined to be airworthy with respect to work performed at this date and time. The following discrepancies were addressed:

Hourly rate: \$85.00

Qty	Unit	Part Number	Description	Serial Number	Unit Price	Subtotal
1	EA	AA48108-2	Oil Filter Tempest (P/O: ANE-4899)		29.49	29.49
7	QT	AS15W-50 - Barrel	Aeroshell 15W-50 From Drum in Quarts.		9.45	66.15
1	EA	BA24	Filter Engine Air Brackett (50207-200) (P/O: ANE-4978)		23.96	23.96

Labor: \$585.25	Parts: \$119.60	Shipping: \$0.00	Item Subtotal: \$704.85
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Item: 3 - Airworthy Prop

Discrepancy	Hours	Subtotal
Annual Inspection Due Propeller.	1.00	81.75

Corrective Action

C/W a Annual Propeller Inspection IAW Cirrus SR 20 MM and IG. Dressed and painted blades. AD's researched to date. Cirrus SB's researched to date. Ground run, ops and leak check satisfactory. I certify that I have inspected this propeller IAW a Annual Inspection and it was determined to be airworthy with respect to work performed at this date and time. The following discrepancies were addressed:

Hourly rate: \$85.00

Labor: \$81.75	Parts: \$0.00	Shipping: \$0.00	Item Subtotal: \$81.75
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Item: 4 - Airworthy Airframe

Discrepancy	Hours	Subtotal
AD Search And Log Book Review.	1.25	106.25

Corrective Action
 reviewed AD's Thru 2016-11

Labor: \$106.25	Parts: \$0.00	Shipping: \$0.00	Item Subtotal: \$106.25
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Item: 5 - Airworthy Airframe

Discrepancy	Hours	Subtotal
Parachute Repack/Rocket Replacement Due. SB2X-95-17R2	Flat	4,675.00

Corrective Action
 C/W Cirrus SB 2X-95-17R2 CAPS Rocket Motor Assembly Replacement. Removed CAPS parachute CDC P/N:15046-001, S/N:03542. Removed rocket motor assembly CDC P/N:15047-001, S/N:00894. Performed aircraft modifications for installation of new rocket motor assembly. Installed new CAPS parachute P/N:25574-004, S/N:00099R1 IAW Cirrus SR20 CAPS CMM Rev. E2 95-01-01, exp. 4-11-2026 . Installed new rocket motor assembly P/N:29500-003, S/N:1704, exp. 5-2-2026. Inserted temporary revision TPOH 13-06R1 in POH and updated weight and balance.

 Hourly rate: \$85.00

Qty	Unit	Part Number	Description	Serial Number	Unit Price	Subtotal
1	EA	25574-001-REB-E	Parachute Assy, SR20, G1 Retrofit (P/O: ANE-4964)		5,100.00	5,100.00
1	EA	29500-403	Assy, Motor, Rocket (P/O: ANE-4964)		3,550.00	3,550.00
1	EA	29705-402	Frangible Link W/Hold Down Hardware (P/O: ANE-4964)		225.00	225.00
1	EA	50013-201-200G	TETA, Hardener, 3234 EPI-CURE (P/O: ANE-4982)		4.08	4.08
1	EA	50013-401-200G	Epon 862 / Heloxy 68 Blend (P/O: 1262)		6.80	6.80
1	EA	70268-002	Kit, Retrofit, ELC ING, AVID (P/O: ANE-4964)		1,025.00	1,025.00
1	EA	70269-001	Kit, Retrofit, G5, Rocket, G1 (P/O: ANE-4964)		500.00	500.00
1	EA	91067-1	Contact Insertion/Extraction Tool (P/O: ANE-4963)		11.93	11.93
1	EA	91067-2	Contact Insertion/Extraction Tool (P/O: ANE-4963)		12.21	12.21
1	EA	Cover Kit Adhesive	Adhesive. CAPS Cover kit. P/N 50013-401-200G (P/O: ANE-4964)		52.06	52.06
1	EA	COVER-KIT	SR 20/22 CAPS Enclosure G1 Cover Kit (P/O: ANE-4964)		156.40	156.40

Labor: \$4,675.00	Parts: \$10,643.48	Shipping: \$1,379.00	Item Subtotal: \$16,697.48
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Item: 6 - Airworthy Airframe

Discrepancy	Hours	Subtotal
C/W Mandatory Line cutter replacement	1.96	166.60

Corrective Action
 Removed expired CAPS Reefing Line Cutters, installed new cutters, P/N:26707-001, S/N:9301 and S/N:9295, next replacement due March 2022.

 Hourly rate: \$85.00

Qty	Unit	Part Number	Description	Serial Number	Unit Price	Subtotal
1	EA	25347-002	Kit Line Cutter Replacement SR20/22 (P/O: ANE-4982) (Ship: 11.87)		1,198.00	1,198.00

Labor: \$166.60	Parts: \$1,198.00	Shipping: \$11.87	Item Subtotal: \$1,376.47
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Item: 7 - Airworthy Airframe

Discrepancy	Hours	Subtotal
C/W Cirrus Service Bulletin SB 2X-95-13, CAPS Strap Inspection And Grommet Installation.	N/C	0.00

Corrective Action

C/W Cirrus Service Bulletin SB 2X-95-13, CAPS Strap Inspection And Grommet Installation, by installation of strap grommets, P/N:MS21266-1N, and P/N:MS21266-6N, while parachute was out during parachute re-pack.

 Hourly rate: \$85.00

Qty	Unit	Part Number	Description	Serial Number	Unit Price	Subtotal
1	EA	MS21266-1N 3inch	Grommet (P/O: ANE-4373)		1.83	1.83
1	EA	MS21266-6N	GROMMET: PL / NYLON (P/O: ANE-4196)		3.78	3.78

Labor: \$0.00	Parts: \$5.61	Shipping: \$0.00	Item Subtotal: \$5.61
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Item: 8 - Airworthy Engine

Discrepancy	Hours	Subtotal
AD 08-11-18, Engine Exhaust Heat Exchanger.	0.25	21.25

Corrective Action

C/W AD 08-11-18, Engine Exhaust Heat Exchanger. next due at 529.7 or annual inspection.

Labor: \$21.25	Parts: \$0.00	Shipping: \$0.00	Item Subtotal: \$21.25
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Item: 9 - Airworthy Airframe

Discrepancy	Hours	Subtotal
C/W Cirrus Service Bulletin Mandatory SB 2X-52-08 R2, Catcher / Diverter and Gas strut replacement.	2.00	170.00

Corrective Action

C/W Cirrus Service Bulletin SB 2X-52-08 R2, Catcher / Diverter and Gas Strut Replacement by installation of kit P/N70543-001.

 Hourly rate: \$85.00

Qty	Unit	Part Number	Description	Serial Number	Unit Price	Subtotal
1	EA	70543-001	Kit, Door Strut and Catcher, G1 Type 2, Service Bulletin (P/O: ANE-4883)		144.23	144.23

Labor: \$170.00	Parts: \$144.23	Shipping: \$0.00	Item Subtotal: \$314.23
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Item: 10 - Airworthy Airframe

Discrepancy	Hours	Subtotal
C/W MSB 2X-53-03 tail tie down replacement. Install kit.	N/C	0.00

Corrective Action

C/W Cirrus Service Bulletin SB 2X-53-03, Tail Tie-Down Replacement by installation of tie-down kit PN:70120-001, no further action required.

 Hourly rate: \$85.00

Qty	Unit	Part Number	Description	Serial Number	Unit Price	Subtotal
1	EA	16678-001	AFT TIE DOWN BUMPER Manufacturer: CIRRUS AIRCRAFT Size: 6.000 x 2.500 x 2.500 in3		63.24	63.24
1	EA	51631-001	Screw		1.03	1.03
1	EA	PR1422B1/2-2.5	Sealant Semkit		48.22	48.22

Labor: \$0.00	Parts: \$112.49	Shipping: \$0.00	Item Subtotal: \$112.49
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Item: 11 - Airworthy Airframe

Discrepancy	Hours	Subtotal
C/W Cirrus Service Bulletin SB 2X-32-18 R4, Nose Landing Gear Gusset Plate And Attach Point Weld Inspection.	0.25	21.25

Corrective Action

C/W Cirrus Service Bulletin SB 2X-32-18 R4, Nose Landing Gear Gusset Plate And Attach Point Weld Inspection. Next due at 529.7 or annual inspection.

Labor: \$21.25	Parts: \$0.00	Shipping: \$0.00	Item Subtotal: \$21.25
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Item: 12 - Airworthy Avionics

Discrepancy	Hours	Subtotal
IFR Cert	Flat	275.00

Corrective Action

Performed the following: ALTIMETER AND TRANSPONDER

The Below Identified Equipment has been tested and found to conform to the following: FAR 91.411, 91.217, Part 43 Appendix E, and FAR 91.413, Part 43 Appendix F. This equipment is compliant with the above FAR's and meets or exceeds the requirement for IFR Flight in Instrument Meteorological Conditions, (IMC).

The altimeter was tested to 20,000 feet on (5/4/2016)
 The transponder was tested on (5/4/2016)
 Encoder data correspondence was tested to 20,000 feet on (5/4/2016)
 Static System leak tested on (5/4/2016)

Altimeter	Transponder	Encoder
Make:United	Make:Garmin	Make:ACK
Model:5934D-3	Model:GTX-327	Model:A-30
SN:430495	SN:83713488	SN:91704

Hourly rate: \$85.00

Labor: \$275.00	Parts: \$0.00	Shipping: \$0.00	Item Subtotal: \$275.00
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Item: 13 - Airworthy Airframe

Discrepancy	Hours	Subtotal
ELT Batteries are due for replacement.	0.43	36.55

Corrective Action

Installed new batteries in ELT, Operational check satisfactory. ELT Battery Exp. Mar 2022.

Hourly rate: \$85.00

Qty	Unit	Part Number	Description	Serial Number	Unit Price	Subtotal
8	EA	D	Duracell Procell Battery 1.5 volt D (P/O: ANE-4941)		1.57	12.55

Labor: \$36.55	Parts: \$12.55	Shipping: \$0.00	Item Subtotal: \$49.10
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Item: 14 - Recommended Airframe

Discrepancy	Hours	Subtotal
L/H passenger overhead light inop.	1.00	85.00

Corrective Action

Installed new L/H passenger swivel light P/N 50491-002.

Hourly rate: \$85.00

Qty	Unit	Part Number	Description	Serial Number	Unit Price	Subtotal
1	EA	50491-002	28V Light Swivel Eye Ball (P/O: ANE-4592)		25.60	25.60

Labor: \$85.00	Parts: \$25.60	Shipping: \$0.00	Item Subtotal: \$110.60
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Item: 15 - Airworthy Airframe

Discrepancy	Hours	Subtotal
Cabin fire extinguisher is 200 grams low on weight. Replacement required.	1.49	126.65

Corrective Action

Removed existing fire extinguisher and bracket. Installed new fire extinguisher P/N12533-004 and mounted new bracket, relocated mounting holes to accommodate new model extinguisher and prevent interference with seat operation.

 Hourly rate: \$85.00

Qty	Unit	Part Number	Description	Serial Number	Unit Price	Subtotal
1	EA	12533-004	Fire Extinguisher, Halon W/Guage (P/O: ANE-5001)		166.67	166.67

Labor: \$126.65	Parts: \$166.67	Shipping: \$0.00	Item Subtotal: \$293.32
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Item: 16 - Airworthy Engine

Discrepancy	Hours	Subtotal
All fuel injectors require cleaning.	2.00	170.00

Corrective Action

Cleaned fuel injectors and reinstalled I.A.W. 300 HR inspection requirements, leak check satisfactory.

 Hourly rate: \$85.00

Labor: \$170.00	Parts: \$0.00	Shipping: \$0.00	Item Subtotal: \$170.00
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Item: 17 - Airworthy Engine

Discrepancy	Hours	Subtotal
4 of the 12 spark plugs are worn and 1 has a cracked ceramic. Replacement required.	N/C	0.00

Corrective Action

Removed 4 damaged spark plugs. Installed 4 new spark plugs P/N RHM38E

Qty	Unit	Part Number	Description	Serial Number	Unit Price	Subtotal
4	EA	RHM38E	Spark Plug Champion (P/O: ANE-5001)		50.30	201.20

Labor: \$0.00	Parts: \$201.20	Shipping: \$0.00	Item Subtotal: \$201.20
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Item: 18 - Airworthy Engine

Discrepancy	Hours	Subtotal
Throttle control not hitting high stop.	0.80	68.00

Corrective Action

Adjusted throttle to hit full stop.

 Hourly rate: \$85.00

Labor: \$68.00	Parts: \$0.00	Shipping: \$0.00	Item Subtotal: \$68.00
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Item: 19 - Airworthy Engine

Discrepancy	Hours	Subtotal
Oil sump quick drain crush gasket is leaking. Replacement of crush gasket required.	0.49	41.65

Corrective Action

Removed leaking oil quick drain. Installed new gasket P/N MS35769-11, torqued and secured with safety wire.

 Hourly rate: \$85.00

Qty	Unit	Part Number	Description	Serial Number	Unit Price	Subtotal
1		MS35769-11	Gasket Annular Copper 3/32 T 5/8 ID X 7/8 OD (AN900-10)		0.65	0.65

Labor: \$41.65	Parts: \$0.65	Shipping: \$0.00	Item Subtotal: \$42.30
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Item: 20 - Airworthy Airframe

Discrepancy	Hours	Subtotal
R/H fuel tank fuel sending unit gasket is leaking fuel. De Fuel wing and replace gasket with new required.	3.50	297.50

Corrective Action

De fueled right wing for replacement of fuel tank sending unit gasket. Removed right wing fuel sending unit. Cleaned area and installed new gasket P/N 12638-102 IAW with Cirrus SR20 AMM 28-40. Fueled right wing with fuel removed, No leaks found.

 Hourly rate: \$85.00

Qty	Unit	Part Number	Description	Serial Number	Unit Price	Subtotal
1	EA	12638-102	Fuel level sender gasket (P/O: ANE-5000)		6.02	6.02

Labor: \$297.50	Parts: \$6.02	Shipping: \$0.00	Item Subtotal: \$303.52
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Item: 21 - Airworthy Airframe

Discrepancy	Hours	Subtotal
#2 Batteries Are Due For 2 Year Replacement. No charge for labor if done with chute?	N/C	0.00

Corrective Action

R/R #2 batteries with new P/N 50979-001 IAW AMM. New batteries next due May 2018.

Qty	Unit	Part Number	Description	Serial Number	Unit Price	Subtotal
2	EA	50979-001	Battery #2 Sealed Lead Acid .250 Terminals (NP7-12) (P/O: ANE-4943)		55.12	110.24

Labor: \$0.00	Parts: \$110.24	Shipping: \$0.00	Item Subtotal: \$110.24
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Item: 22 - Airworthy Engine

Discrepancy	Hours	Subtotal
R/H magneto has a 180 rpm drop.	N/C	0.00

Corrective Action

Recheck mag drop after installing new plugs Mag drop satisfactory, 25 right and 25 left.

Labor: \$0.00	Parts: \$0.00	Shipping: \$0.00	Item Subtotal: \$0.00
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Item: 23 - Airworthy Engine

Discrepancy	Hours	Subtotal
fuel set up needed, 2500 rpm at static, 900 rpm idle, not rise at shutdown.	1.92	163.20

Corrective Action

Set up fuel system and psi IAW AMM Doc.90050,and SID 97 Operations check preformed , no discrepancies noted.

 Hourly rate: \$85.00

Labor: \$163.20	Parts: \$0.00	Shipping: \$0.00	Item Subtotal: \$163.20
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Item: 24 - Airworthy Avionics

Discrepancy	Hours	Subtotal
Sandel Lamp replacement.24	N/C	0.00

Corrective Action

Inspection indicated that the bulb is not due for another 65 hours. Next due Hobbs: 494.1.

Outside Repair:
 Labor: 100.00, Parts: 250.00
 (Replace bulb)

Labor: \$100.00	Parts: \$250.00	Shipping: \$0.00	Item Subtotal: \$350.00
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Item: 25 - Airworthy Airframe

Discrepancy	Hours	Subtotal
Rudder Aileron interconnect bungee due for 5 year replacement	1.50	127.50

Corrective Action

Removed and replaced rudder/aileron interconnect bungee PN: 12983-001, adjusted IAW Cirrus MM chapter 27-20, functional check satisfactory.

Hourly rate: \$85.00

Qty	Unit	Part Number	Description	Serial Number	Unit Price	Subtotal
1	EA	12983-001	SHOCK CORD: INTERCONNECT RUDDER Manufacturer: CIRRUS AIRCRAFT Size: 4.7500 x 3.7500 x 0.5000 in3 (P/O: ANE-4592)		58.00	58.00

Labor: \$127.50	Parts: \$58.00	Shipping: \$0.00	Item Subtotal: \$185.50
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Additional Charges							Subtotal
Pilot Services	Tire Disposal	EPA Charge	Oil Analysis	Shop Supplies	Fuel	Misc.	
0.00	0.00	5.00	0.00	84.70	0.00	0.00	\$89.70

Labor Summary	
Shop Labor: \$8,469.75	Outside Repair: \$100.00

Total Labor:	\$8,569.75
Total Parts:	\$13,054.34
Total Shipping:	\$1,390.87
Additional Charges:	\$89.70
Tax:	\$565.90
Amount Due:	\$23,670.56
Deposit:	\$13,000.00
Balance Due:	\$10,670.56

Taxed Items:
Shipping In, Shipping Out, MAC Fees and Charges, Oil Sales Tax

Tax Breakdown: (Before Calculated)
 Shipping In: 1,390.87
 Shipping Out: 0.00
 Calculated Extra Taxes
 MAC Fees and Charges: 462.09
 Oil Sales Tax: 4.71

Important Information

""Not all parts installed on your aircraft may have been supplied by the aircraft manufacturer. Parts not supplied by the aircraft manufacturer are not genuine OEM Product and not covered by the aircraft manufacturer's warranty or Aftermarket Program, in whole or in part. For details, please see the Service or Parts Manager."

Please, note that all accounts are 'Due Upon Receipt', unless otherwise agreed upon in advance. A finance charge, will be assessed at an annual percentage rate of 12%. To avoid being assessed finance charges, the balance of your invoice must be paid in full upon receipt of this invoice.

If paying by credit card a fee of 3% will be added to your invoice.

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Clay Shepard or Authorized Representative

Date