Park Rapids Avionics
301 Airport Road
Park Rapids, MN 56470 USA

Tech time

INVOICE 10527

Work Order# : 5721
Page # : 1 of 2
Date : Mar-11-2019
Terms : 30 days
Account : CHTR
Your PO# :
Our TEL : 218-237-1525
Your TEL : 1-406-487-2725
Tail# : N161KT
A/C Make : CIRRUS
Model : SR20
Serial : 1144

Charles Trower Aviation, Inc.
60 Airport Road (UPS address)
Box 530 Scobey Airport
Scobey, MT 59263

DETAILS

WO: 5721 ITEM: 1 AV Avionics Upgrade START: 01/07/2019 FINISH: 03/11/2019
DISCREPANCY: Avionics Upgrade
ACTION: Removed the following equipment:
a. ARNAV Systems ICDS 2000 MFD
b. Garmin GTX-327 Transponder
c. ACK A30 Encoder

Installed the following equipment:
a. Garmin GTX-345 Transponder p/n 011-03302-00 s/n 3EG026014
b. Garmin GAE-12 Altitude Encoder p/n 011-03080-01 s/n 3T6008276
c. Mid Continent TA-202 Dual USB Charging Port p/n 6430202-15 s/n K18-12687

Installed Garmin GTX-345 Transponder and Garmin GAE-12 Altitude Encoder in accordance with manufactures installation manual p/n 190-00734-10 Rev. 11 and STC # SA01714WI.

Installed Mid Cont TA-202 Dual USB Charge port in accordance with manufactures installation manual p/n 9017899 Rev E.

Installed equipment in accordance with AC 43.13-2B chapters 3,11, 2, sections 201,202,203,204,205,206, 207, 208,209, and 210, and reference to AC 43.13-1B chapters 4,7,11 and 12.

The continuous electrical load does not exceed 80% of the total alternators capacity.

All equipment was functional tested per manufactures installation manuals and interference tested with existing systems.

The installed ADS-B OUT system was shown to meet the equipment performance requirements of 14 CFR section 91.227.

A copy of the Garmin GTX-345 FAA approved flight manual supplement p/n 190-00734-15 Rev. 3 has been added to the FAA approved flight manual.

Computed new weight and balance and updated equipment list.

Updated software GNS-430W p/n 011-01060-40 s/n 97101747 and GNS-430W p/n 011-01060-40 s/n 97101829 main from 3.10 to 3.30 in accordance with Garmin SB#949 rev A. Updated software GNS-430W p/n 011-01060-40 s/n 97101747 and GNS-430W p/n 011-01060-40 s/n 97101829 main from 3.30 to 5.4 in accordance with Garmin SB# 1766 rev A. and GPS from 3.10 to 5.0 in accordance with Garmin SB#1317 Rev A.

Troubleshoot stormscope, found broken wires, repaired wiring. Ground tested, ops checked good.

Installed mount and wiring for portable GPS.

The altimeter, encoder, transponder, static system tests required by FAR 91-411, FAR 91-413,and FAR 91-217 were performed and found to meet the requirements of FAR 43 appendix E and F.

Tested to 20,000 feet.

Altimeter m/n p/n 5934D-3 s/n 416926
Transponder m/n GTX-345 p/n 011-03302-00 s/n 3EG026014
Encoder m/n GAE-12 p/n 011-03080-01 s/n 3T6008276

ITEM	Qty	Part # \ Serial #	Description	Each	Extended

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1	1.00	010-00967-11\2CY014316	aera 796 GPS	1,599.000	1,599.00
1	1.00	PD22	Garmin Aera 795/796 Panel Dock	243.000	243.00
1	1.00	011-03302-00\3EG026014	GTX-345 w/ADSB Unit Only	0.000	0.00
1	1.00	010-01216-01	GTX-345 ADSB Transponder	4,995.000	4,995.00
1	1.00	011-03080-01\3T6008276	Garmin GAE-12 Altitude Encoder	0.000	0.00
1	1.00	011-03080-00	Garmin Altitude Encoder (kit)	279.000	279.00
1	1.00	6430202-15\K18-12687	TA-202 Dual (A) charging port 3	527.000	527.00
1	1.00	010-11756-01	Aera 796/795 Bare Wire Mount	65.000	65.00
1	1.00	1-480303-0	3 pin Female Mat-n-Lock	0.500	0.50
1	1.00	1-480305-0	3 PIN MALE PM/FH MATE-N-LOK	1.000	1.00
1	1.00	1-480349-0	1 PIN FEMALE FH MATE-N-LOK	1.000	1.00
1	1.00	1-480350-0	1 PIN MALE FH MATE-N-LOK	1.000	1.00
1	2.00	225395-6	BNC male RG-142	9.750	19.50
1	6.00	225396-1	BNC crimp Female/RG-58	13.000	78.00
1	5.00	225973-4	BNC Right Angle RG142/400	48.510	242.55
1	4.00	259N04	Insert Stabilizer - Nylon	3.000	12.00
1	1.00	264N04	union tee	14.000	14.00
1	1.00	268N04X02	male connector	9.000	9.00
1	2.00	383XBK-ND	Resistor	1.500	3.00
1	1.00	44PN	1/4 poly tube	0.710	0.71
1	3.00	RG-142	coax cable	4.400	13.20
1	3.00	RG-400	coax cable	4.400	13.20

Labor:	4,250.00
Parts & Equip:	8,116.66
Parts & Equip -5.00%:	-405.83
Sub Total:	11,960.83
Invoice TOTAL:	11,960.83