



www.gaavionics.com
841B Ronald Wood Road
Winder, GA 30680 770-867-0002

INVOICE 7654

Page #: 1

CHARLES MOUNT
3504 MORNINGWOOD CT NE
SUWANEE, GA 30024 USA

Date : Mar-24-2010
Terms : COD
Account : CHMOU
Your PO# :
Our TEL: 770-867-0002
Your TEL: 904-813-0636
Tail# : N3212T
Work Order# : 21716

DETAILS

WO: 21716 TASK: 1 AV IFR CERTIFICATION START: 03/22/2010 FINISH: 03/24/2010

DISCREPANCY: IFR CERTIFICATION

ACTION: THE AIRCRAFT ALTIMETER WAS TESTED AND FOUND TO COMPLY WITH FAR 91.411.

AUTOMATIC PRESSURE ALTITUDE REPORTING EQUIPMENT WAS TESTED AND FOUND TO COMPLY WITH FAR 91.411.

THE ATC TRANSPONDER WAS TESTED AND FOUND TO COMPLY WITH FAR 91.413.

THE AIRCRAFT STATIC SYSTEM WAS TESTED IN ACCORDANCE WITH APPENDIX E OF PART 43.

HOURS: Flat Rate LABOR: \$265.00 PARTS/EQUIP/OTHER: \$0.00 TASK TOTAL: \$265.00

WO: 21716 TASK: 2 AV REPAIR STATIC SYSTEM LEAK START: 03/23/2010 FINISH: 03/24/2010

DISCREPANCY: REPAIR STATIC SYSTEM LEAK

ACTION: TRACED LEAK TO DEFECTIVE SUMP BOTTLE - REPLACED SAME. CHECKS OK

HOURS: 0.70 LABOR: \$52.50 PARTS/EQUIP/OTHER: \$18.80 TASK TOTAL: \$71.30

TASK	Qty	Part # \ Serial #	Description	Each	Extended
2	1.00	S12581	SUMP BOTTLE	18.800	18.80

RETURN TO SERVICE MAINTENANCE RELEASE

The Aircraft, component, propeller or appliance identified above was repaired in accordance with current Federal Aviation Agency Regulations and is hereby approved for return to service.

Labor:	317.50
Parts & Equip:	18.80
Sub Total:	336.30
STATE SALES TAX 5 %:	0.94
Municipal Tax 2 %:	0.38
Invoice TOTAL:	337.62

ALL OVERDUE INVOICES WILL BE ASSESSED A FEE OF 1.5% PER MONTH ON THE UNPAID BALANCE.

SWINK AIRCRAFT SERVICES

WORK REQUEST (WR)

1071 SPRING CREEK DR

BISHOP, GA (30621)

706-621-1272

www.swinkaircraft.com

WR# 51510

CUSTOMER NAME AND ADDRESS/CONTACT

Charles Mamt 904-813-0636Mamt, Charles H. Jr
3504 Morningwood Ct NE
Suwanee GA (30024)

WORK REQUESTED

Replace Ignition Harness
Repair Alternator
Replace Voltage Regulator

REMARKS/ AUTHORIZATION

AIRCRAFT MAKE Cessna MODEL 177 SERIAL# 17700512
REGN# 3212T TOTAL HOURS _____ HOBBS 197.0 TACH 2394.4
DATE PROMISED N/A WORK BEGAN 5/15/10 WORK FINISHED _____

CONTRACT OR OUTSIDE REPAIRS

None

\$

\$

\$

NoneTOTAL LABOR= 1 ATTACHED SHEETS 2.0 @ 65⁰⁰ \$ 455⁰⁰TOTAL PARTS= 1 ATTACHED SHEETS.....\$ 663⁰⁰FUEL\$ NoneGA SALES TAX\$ 46⁴¹TOTAL\$ 1164⁴¹

LABOR RECORD

PAGE 1-1 OF 1

MAN HOURS

PAGE TOTAL 7.0

PARTS LIST

PAGE 10 OF 11

TOTAL

PAGE TOTAL 663⁰⁰

PAGE TOTAL 663⁰⁰

MR Apoc?

N3212T : CESSNA 177 SN# 17700512
20 MAY 2010...TACH READS: 2394.4 / HOBBS READS: 197.0

REPLACED IGNITION HARNASS WITH NEW SKYTRONICS AERO-LITE
PN# A30-1AS-II (TREATED BOTH (ALL) ENDS WITH DC-4 ELECT LUBE).

INSTALLED OVERHAULED KELLY AERO ALTERNATOR PN# DOFF-103001
SN# K012042

INSTALLED NEW ZEFTRONICS VOLTAGE REGULATOR PN# R15V00-A
SN# Y14027 (UNIT HAS INTERNAL OVERVOLTAGE PROTECTION),
REMOVED FACTORY INSTALLED OVERVOLTAGE CONTROL. PER ZEFTRONICS
INSTR DWG# 2001DD REV A DTD 11/21/07

GROUND RUN AND TESTED AT FULL LOAD AND MINIMUM LOAD @ 1600 RPM
STEADY OUTPUT @ 13.8 VDC (BUSS)

ICW FOR ZEFTRONICS REGULATOR ARE DWG # 2001DD REV A DTD 11/21/07
PART "INSTALLATION TESTS AND ICA MAINTENANCE"

Bob
BOBBY OSWINK 1975936 A&P
MR# 51510

SWINK AIRCRAFT SERVICES
1071 SPRING CREEK DR.
BISHOP, GA 30621

Type here - prints onto Avery 5168 labels

Type here - prints onto Avery 5168 labels

*"Peel off" and Place
Sticker in Aircraft
" Airframe Notebook "
Next Available page*

← Bob

Type here - prints onto Avery 5168 labels

1. Approving National Aviation Authority/Country: FAA/UNITED STATES		2.		3. Form Tracking Number: K012042	
4. Organization Name and Address: KELLY AEROSPACE ENERGY SYSTEMS, 2900 SELMA HWY., MONTGOMERY, AL. 36108				5. Work Order/Contract/Invoice Number: W/O: M340250	
AUTHORIZED RELEASE CERTIFICATE FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG					
6. Item:	7. Description:	8. Part Number:	9. Eligibility: *	10. Quantity:	11. Serial/Batch Number:
1	ALTERNATOR ***** DOFF10300J MOD/NO END *****	N/A		1	K012042
13. Remarks:	COPY OF WORK ORDER AVAILABLE ON REQUEST FROM KELLY AEROSPACE ENERGY SYSTEMS CERTIFIES THAT THE WORK SPECIFIED IN BLOCK 12/13 WAS CARRIED OUT IN ACCORDANCE WITH EASA PART 145 AND WITH RESPECT TO THAT WORK THE AIRCRAFT COMPONENT IS CONSIDERED READY FOR RELEASE TO SERVICE UNDER EASA APPROVAL CERTIFICATE NUMBER EASA.145.4418 AND BY THE FAA AIR AGENCY CERTIFICATE NUMBER UT2R226L. APPROVED FOR EXPORT THE ORIG. EQUIP. MFG. DATA APPEARS ON THE DATA PLATE IN THE LINES IDENTIFIED AS MOD/NO & ORIG. MFG. COMPLIES WITH PPS-9001 LATEST REVISION. OVERHAULED PER CESSNA MANUAL # D5107-1-13, REV 1..				
14. Certifies the items identified above were manufactured in conformity to:		19. <input checked="" type="checkbox"/> 14 CFR 43.9 Return to Service <input checked="" type="checkbox"/> Other regulation specified in Block 13			
<input type="checkbox"/> Approved design data and are in a condition for safe operation. <input type="checkbox"/> Non-approved design data specified in Block 13		Certifies that unless otherwise specified in Block 13, the work identified in Block 12 and described in Block 13 was accomplished in accordance with Title 14, Code of Federal Regulations, part 43 and in respect to that work, the items are approved for return to service.			
15. Authorized Signature:	16. Approval/Authorization No.:		20. Authorized Signature:	21. Approval/Certificate No:	
17. Name (Typed or Printed):		18. Date (m/d/yr):	22. Name (Typed or Printed):	23. Date (m/d/yr):	
			Selina P. Stokes	UT2R226L FEB 09 2010	

User/Installer Responsibilities

It is important to understand that the existence of this document alone does not automatically constitute authority to install the part/component/assembly.

Where the user/installer performs work in accordance with the national regulations of an airworthiness authority different than the airworthiness authority of the country specified in Block 1, it is essential that the user/installer ensures that his/her airworthiness authority accepts parts/components/assemblies from the airworthiness authority of the country specified in Block 1.

Statements in Block 14 and 19 do not constitute installation certification. In all cases, aircraft maintenance records must contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.

Instolled in N32125 5/6/2010 Tech Rods. 2394.4 hrs



CERTIFICATE OF CONFORMANCE
NEW PARTS

Customer Name: IRWIN INTERNATIONAL P.O. #: 176190
MFG Part Number: _____ Skytronics P/N: A30-IAS-II
Customer Number: 0003405 Quantity: 6.00
Description: HARNESS Serial #: NON-SERIALIZED
Skytronics INVOICE #: 0071051 Folio: 10D966

The undersigned hereby Certifies that the material covered by this Certificate of Conformance is in new condition. It was produced by a manufacturer holding an FAA Approved Production and Inspection system issued under FAR 21, Sub-Part F, Sub-Part G or by Skytronics holding an FAA Parts Manufacturing Approval issued under FAR 21.303(h) (PMA).

It is hereby Certified that all articles in the quantities called for in the above purchase order are in conformance with the requirements, specifications and drawings listed on that order. "Substantiating evidence is on file and available upon request to customer representatives."

SPECIAL NOTICE

Signed by: _____

SKYTRONICS QUALITY CONTROL

Date: _____

APR 29 2010

Installed on N3912T 5/80/2010 @ Tach: 2394.4

227 Oregon St. P.O. Box 807 El Segundo, CA 90245
Tel: (310) 322-6284 (800) 421-6846 US/Canada Fax: (310) 322-6160

Zeftronics Voltage Regulator "ICW" ↓

If the aircraft has Electrodelta's VR600A, remove it. To use R15V00 Rev A in such system, connect pin A to the alternator's Bat terminal IAW the original Cessna wiring.

TROUBLE-SHOOTING COMMON PROBLEMS

Flickering / oscillating ammeter and panel lights.
Check the connections between the alternator's Bat terminal and the pin A input (to the controller) for high resistance or open circuit, corrosion, dirt, loose or intermittent connection.

No voltage regulation or Bus remain at 12V or less
With the engine off and the Master switch on, pins I, A, and S should measure Battery voltage, pin F should be 0.5 to 2V less the bus voltage.

- If the measured voltage on pins A, S, or I is different from the bus voltage by more than 0.2V, find cause for it and resolve the problem.
- If the pin F voltage is the same as the bus voltage, look for and correct open circuit or high resistance in the alternator's field or the wire between the field and pin F. The controller might not be properly grounded.
- If the pin F voltage is 0 and pins I, A, S have battery voltage, look for a grounded alternator field or field wire (indicated by a Red ACU Trouble-Shooting Light TSL). If the field resistance is correct as shown in step 5 (shown on the right) of the installation tests and the TSL is off, send the ACU in for test/repair.
- If the TSL is Red, repair the field ground fault or replace the alternator.
- If the TSL is Red, repair an open circuit or intermittent connection between the bus and pin S.

Bus voltage higher than 14.4V but no OV problem
If the Bus voltage exceeds 14.5V, check: the alternator Bat terminal connection/wires, devices/wires/junctions from the Bus and Alternator, and the connector to ACU pin A.

Alternator carries only about half its rated output.
Look for slack belt, an open stator wire or open diode in the alternator. Check the shunts and alternator output wires and connections, especially that of the wire/connections between pin A and the alternator Bat terminal. Verify that bus voltage is 13.8V to 14.3V.

LV-OV light does not work, everything else works
Disconnect the ACU. Turn on the Bat switch. On the airframe ACU connector ground pin I. The light should illuminate. If it does not, the lamp is defective or the wires to or from it are broken

INSTALLATION TESTS & ICA MAINTENANCE

Before installing this unit or during every Annual Inspection, perform these tests:

1. Read page 1 and this page.
2. Check for and replace open, frayed, or broken wires. Clean thoroughly or replace corroded, dirty, or oxidized connections, terminals, contact, or poorly soldered wire junction.
3. Check for Open or Ground-shortened alternator field. Most 12V alternators have 3-6Ω field resistance. Ground shorted alternator field will damage most Voltage Regulators. Repair or replace an alternator with a ground shorted field, do not connect the ACU to it.
4. With the engine off and master switch on: Check voltage drops across the Field, Alt switch, Alt field circuit breaker, Alt Bat terminal and the ACU's pin A. High voltage-drop means excessive junction resistance and will lead to many problems like: fluctuation ammeters, charge-meters and panel lights, as well as over voltage.
5. Perform and record the following tests with the Master Switch Off:

	Measured Values	Typical Values
A. Field resistance at ALT	_____ Ω	3 - 6Ω
B. Field resistance at ACU	_____ Ω	3 - 6Ω
C. Field SW/C-BKR resistance	_____ Ω	0 - 0.1Ω
D. ALT Bat to Pin A resistance	_____ Ω	0 - 0.05Ω
E. ALT Out C/BKR resistance	_____ Ω	0 - 0.05Ω

6. Perform and record the following tests with the engine Off.

The test result depends on battery voltage value.

	Bat Switch on	Alt & Bat Sw on	Typical Values
A. Bus Voltage	_____ V	12 - 13V	_____ V 12 - 13V
B. Pin I Voltage	_____ V	12 - 13V	_____ V 12 - 13V
C. Pin A Voltage	_____ V	12 - 13V	_____ V 12 - 13V
D. Pin S Voltage	_____ V	0 - 3V	_____ V 12 - 13V
E. Field Voltage	_____ V	0 - 3V	_____ V 10 - 12V

7. **Post Installation.** If all tests are correct to or per steps 5 & 6, run the engine and record:

	Measured Values	Typical Values
A. Bus Voltage at 1200 RPM	_____ V	13.8 - 14.3V
B. Bus Voltage at 1600 RPM	_____ V	13.8 - 14.3V
C. Bus Voltage at 2000 RPM	_____ V	13.8 - 14.3V

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS MAINTENANCE

For all periodic inspection and test requirement, refer to this section and page 1. Contact us with tech support questions that are not addressed at www.zeftronics.com or in this document

It is important to check the battery, battery terminals and cable, as well as the electrical charging system (ECS) wires and connections during 100 hour and annual inspections.

REPLACEMENT FOR: CESSNA P/N: C611001-0201, -0101, -0102 & OVS (P/N C593001-0101) • BEECH P/N 33-380010 & OVS ELECTRODELTA P/N VR 600 & OS60 • PFT/LAMAR P/N: DGR 6 & OVS • FORD P/N: D4FF-10316-BA, CA. & OVS

ZEFTRONICS Longview, Texas, USA		This drawing is proprietary and confidential with all rights reserved by this company. Permission to duplicate, use or distribute it in any form must be granted in writing by ZEFTRONICS Div., of TOVYA GROUP INC.						©1989-2007 ZEFTRONICS	
Title.	PRODUCT INSTALLATION				Drawn By		Approved By		Released
Model No.	R15V00				Femi G. Ibitayo		<i>FPG Ibitayo</i>		
Drawing No.	Z00IDD				Date	11-21-07	Date	11-21-07	PAGE 1-11-2
Rev									Classification
Rev	A	Added ICA, How the System Works and Trouble-Shooting sections							Classification Minor

FROM:
SWINK AIRCRAFT SERVICES
1071 SPRING CREEK DR
BISHOP, GA 30621

AFFIX
POSTAGE
HERE

ORDER:560496

RMA# 644811

CORE RETURN ADDRESS LABEL

SHIP TO:
AIRCRAFT SPRUCE RETURNS
225 AIRPORT CIRCLE
CORONA, CA 92880

Alternator (OLD) Core
Return Authorization

— Customer — Copy —



Electrical Charging System Solutions

PN: R15V00 REV A SN: Y14027

14V ALTERNATOR CONTROLLER

☒ FAA-PMA ☒ FAA-STC ☐ OEM ☐ EXP ☐ SPECIAL

Phone: 903-758-6661 Fax: 903-236-9766 www.zelftronics.com

Customer (info)
copy

New Voltage Regulator
from Box sticker



www.gaavionics.com
841B Ronald Wood Road
Winder, GA 30680 770-867-0002

INVOICE

7711

Page #: 1

CHARLES MOUNT
3504 MORNINGWOOD CT NE
SUWANEE, GA 30024 USA

Date : May-24-2010
Terms : COD
Account : CHMOU
Your PO# :
Our TEL: 770-867-0002
Your TEL: 904-813-0636
Tail# : N3212T
Work Order# : 21740

DETAILS

WO: 21740 TASK: 1 AV UPGRADE EDM700 WITH FF START: 04/07/2010 FINISH: 05/24/2010
DISCREPANCY: UPGRADE EDM700 WITH FF
ACTION: REMOVED EDM700 SHIPPED TO FACTORY FOR UPGRADE TO FUEL FLOW VERSION. INSTALLED UPGRADED UNIT PER MANUFACTURER'S SPECIFICATIONS PER STC# SA00432SE. GROUND CHECKS OK. NEGLIGIBLE WEIGHT CHANGE.
HOURS: Flat Rate LABOR: \$487.50 PARTS/EQUIP/OTHER: \$920.00 TASK TOTAL: \$1,407.50

WO: 21740 TASK: 2 AV OIL TEMP PROBE START: 04/07/2010 FINISH: 05/24/2010
DISCREPANCY: OIL TEMP PROBE
ACTION: INSTALLED OIL TEMP PROBE PER MANUFACTURER'S SPECIFICATIONS. NEGLIGIBLE WEIGHT CHANGE.
HOURS: 0.00 LABOR: \$0.00 PARTS/EQUIP/OTHER: \$165.00 TASK TOTAL: \$165.00

WO: 21740 TASK: 3 AV OIL PRESSURE PROBE START: 04/07/2010 FINISH: 05/24/2010
DISCREPANCY: OIL PRESSURE PROBE
ACTION: INSTALLED OIL PRESSURE PROBE PER MANUFACTURER'S SPECIFICATIONS. NEGLIGIBLE WEIGHT CHANGE.
HOURS: Flat Rate LABOR: \$45.00 PARTS/EQUIP/OTHER: \$285.00 TASK TOTAL: \$330.00

WO: 21740 TASK: 4 AV OAT PROBE START: 04/07/2010 FINISH: 05/24/2010
DISCREPANCY: OAT PROBE
ACTION: INSTALLED OAT PROBE PER MANUFACTURER'S SPECIFICATIONS. NEGLIGIBLE WEIGHT CHANGE.
HOURS: Flat Rate LABOR: \$45.00 PARTS/EQUIP/OTHER: \$165.00 TASK TOTAL: \$210.00

WO: 21740 TASK: 5 AV RPM START: 04/07/2010 FINISH: 05/24/2010
DISCREPANCY: RPM
ACTION: INSTALLED RPM SENSOR IN LEFT MAG PER MANUFACTURER'S SPECIFICATIONS. NEGLIGIBLE WEIGHT CHANGE.
HOURS: Flat Rate LABOR: \$45.00 PARTS/EQUIP/OTHER: \$285.00 TASK TOTAL: \$330.00

WO: 21740 TASK: 6 AV #1 G/S VERY WEAK START: 04/26/2010 FINISH: 05/24/2010
PART#: 42100-0000 MODEL#: R443B SER#: 4595
DISCREPANCY: #1 G/S VERY WEAK WILL ONLY PICK UP 1.5 MILES OUT
ACTION: FOUND THAT THE 109 MHZ CHANNELING DOES NOT WORK IN THE GLIDESLOPE RECEIVER. INSTALLED SERVICEABLE UNIT R443B SN 24503. RAMP CHECKS GOOD. NO WEIGHT CHANGE
HOURS: 3.40 LABOR: \$255.00 PARTS/EQUIP/OTHER: \$275.00 TASK TOTAL: \$530.00

TASK	Qty	Part # \ Serial #	Description	Each	Extended
2	1.00	OIL TEMP PROBE\NSN		165.000	165.00
3	1.00	OIL PRES\NSN	PROBE, OIL PRESSURE	285.000	285.00
4	1.00	OATPROBE\NSN	PROBE, OAT FOR D10A/D100	165.000	165.00
5	1.00	RPM SENSOR\NSN		285.000	285.00
6	1.00	R443B-U	USED CES 40CH GS RCVR	275.000	275.00

RETURN TO SERVICE MAINTENANCE RELEASE BY FAA CRS# GX4R222M

The Aircraft, component, propeller or appliance identified above was repaired in accordance with current Federal Aviation Agency Regulations and is hereby approved for return to service.

Labor: 877.50
Parts & Equip: 2,095.00
Shipping & Handling: 141.04
Sub Total: 3,113.54
STATE SALES TAX 5 %: 104.75
Municipal Tax 2 %: 41.90

Invoice TOTAL: 3,260.19

\$ 2649.57

1. Approving National Aviation Authority / Country: FAA / UNITED STATES		2. AUTHORIZED RELEASE CERTIFICATE FAA FORM 8130-3, AIRWORTHINESS APPROVAL TAG				3. Form Tracking Number: 5510	
4. Organization Name and Address: Georgia Avionics Inc. 841B RONALD WOOD ROAD WINDER, GA 30680						5. Work Order, Contract, or Invoice Number: 21740	
6. Item:	7. Description:	8. Part Number:	9. Eligibility: *	10. Qty:	11. Serial/Batch Number:	12. Status/Work:	
1	KI208 KING INDICATOR	42100-0000		1	24503	SERVICEABLE	
13. REMARKS: UNIT WAS INSPECTED AND TESTED; MEETS MANUFACTURER'S SPECIFICATION REQUIREMENTS.							
14. Certifies the items identified above were manufactured in conformity to: <input type="checkbox"/> Approved design data and are in a condition for safe operation. <input type="checkbox"/> Non-approved design data specified in Block 13.				19. <input checked="" type="checkbox"/> 14 CFR 43.9 Return to Service <input type="checkbox"/> Other regulation specified in Block 13 Certifies that unless otherwise specified in Block 13, the work identified in Block 12 and described in Block 13 was accomplished with Title 14, Code of Federal Regulations, part 43 and in respect to that work, the items are approved for return to service.			
15. Authorized Signature:		16. Approval Authorization No.:		20. Authorized Signature 		21. Approval/Certificate No: GX4R222M	
17. Name (Typed or Printed):		18. Date (m/d/y):		22. Name (Typed or Printed): H. C. Swindell Jr.		23. Date (m/d/y): Apr/14/2010	
User/Installer Responsibilities							
<p>It is important to understand that the existence of this Document alone does not automatically constitute authority to install the part/component/assembly.</p> <p>Where the user/installer performs work in accordance with the national regulations of an Airworthiness Authority different than the Airworthiness Authority of the country specified in Block 1, it is essential that the user/installer ensures that his/her airworthiness authority accepts parts/components/assemblies from the airworthiness authority of the country specified in Block 1.</p> <p>Statements in Blocks 14 and 19 do not constitute installation certification. In all cases, aircraft maintenance records must contain an installation certification issued in accordance with the national regulation by the user/installer before the aircraft may be flown.</p>							



U.S. Department
of Transportation
Federal Aviation
Administration

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

Form Approved
OMB No. 2120-0020
For FAA Use Only
Office Identification

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed \$ 1000 for each such violation (Section 901 Federal Aviation Act of 1958).

1. Aircraft	Make CESSNA	Model 177
	Serial No. 17700512	Nationality and Registration Mark USA N3212T
2. Owner	Name (As shown on registration certificate) CHARLES MOUNT	
	Address (As shown on registration certificate) 3504 MORNINGWOOD CT NE SUWANEE, GA 30024 USA	

3. For FAA Use Only

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

6. Conformity Statement

A. Agency's Name and Address Georgia Avionics Inc. 841B Ronald Wood Road Winder, GA 30680 770-867-0002	B. Kind of Agency <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td><input type="checkbox"/></td><td>U. S. Certified Mechanic</td></tr> <tr><td><input type="checkbox"/></td><td>Foreign Certified Mechanic</td></tr> <tr><td><input checked="" type="checkbox"/></td><td>Certified Repair Station</td></tr> <tr><td><input type="checkbox"/></td><td>Manufacturer</td></tr> </table>	<input type="checkbox"/>	U. S. Certified Mechanic	<input type="checkbox"/>	Foreign Certified Mechanic	<input checked="" type="checkbox"/>	Certified Repair Station	<input type="checkbox"/>	Manufacturer	C. Certificate No. RS #GX4R222M Instrument Radio Limited Airframe
<input type="checkbox"/>	U. S. Certified Mechanic									
<input type="checkbox"/>	Foreign Certified Mechanic									
<input checked="" type="checkbox"/>	Certified Repair Station									
<input type="checkbox"/>	Manufacturer									

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

Date 24-May-2010	Signature of Authorized Individual HCS H. C. SWINDELL JR.
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7. Approval for Return to Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ APPROVED ☐ REJECTED

BY	FAA Fit. Standards Inspector		Manufacturer	Inspection Authorization	Other (Specify)
	FAA Designee	<input checked="" type="checkbox"/>	Repair Station	Person Approved by Transport Canada Airworthiness Group	
Date of Approval or Rejection 24-May-2010			Certificate or Designation No. GX4R222M	Signature of Authorized Individual HCS H. C. SWINDELL JR.	

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.)

N3212T CESSNA 177

1. INTRODUCTION: THIS MODIFICATION WAS PERFORMED ON N3212T. THE FOLLOWING INFORMATION PROVIDES ADEQUATE GUIDANCE TO DETERMINE THAT THESE SYSTEMS ARE AIRWORTHY.
2. DESCRIPTION: THE FOLLOWING ITEM/ITEMS WAS UPGRADED: EDM700
THE JPI ENGINE MONITORING SYSTEM IS A FULLY INTEGRATED PANEL MOUNTED INSTRUMENT LOCATED IN THE RADIO CUTOUT ON PILOTS INSTRUMENT PANEL. THE MODIFICATIONS LISTED, MEET THE FOLLOWING FAR'S: 21.303; 21.305; 23.611; 23.627; 23.1301; 23.1309; 23.1357; 23.1367; 23.1431; 23.1525; 23.1541; AC20-67B. THE EQUIPMENT WAS INSTALLED I/AW MANUFACTURER'S INSTRUCTIONS AND I/AW AIRCRAFT MANUFACTURER'S MAINTENANCE MANUALS. ALL WORK WAS ACCOMPLISHED PER AC43.13-1B AND AC43.13-2B.
3. CONTROL, OPERATION INFORMATION: OPERATION MANUALS SUPPLIED BY THE EQUIPMENT MANUFACTURER HAVE BEEN PROVIDED.
4. SERVICING INFORMATION: ALL INTERNAL SERVICING OF ITEMS INCLUDED IN THIS INSTALLATION MUST BE ACCOMPLISHED BY APPROVED DEALERS.
5. MAINTENANCE INSTRUCTION: THE EQUIPMENT DOES NOT REQUIRE USER MAINTENANCE. OTHER MAINTENANCE AS DESCRIBED IN FAR PART 43 APPENDIX D(I) 1,2,4.
6. TROUBLESHOOTING INFORMATION: TROUBLESHOOTING THIS EQUIPMENT SHOULD ONLY BE ACCOMPLISHED BY AN AUTHORIZED SERVICE CENTER.
7. REMOVAL AND REPLACEMENT INFORMATION: ALL COMPONENTS CAN BE REMOVED WITH COMMON TOOLS AND PRACTICES.
8. DIAGRAMS: SEE INSTALLATION MANUAL.
9. SPECIAL INSPECTIONS: NOT APPLICABLE.
10. APPLICATIONS OF PROTECTIVE TREATMENTS: PANEL MOUNTED COMPONENTS SHOULD NOT BE EXPOSED TO PROTECTIVE TREATMENTS.
11. STRUCTURAL FASTENERS: ALL FASTENERS AND HARDWARE PER AC43.13-1B/2B.
12. SPECIAL TOOLS: NOT APPLICABLE.
- 13A. ELECTRICAL LOADS: POWER IS SUPPLIED THROUGH A 5AMP CIRCUIT BREAKER IN THE AIRCRAFT/AVIONICS BUSS. THE AIRCRAFT EQUIPMENT HAS BEEN TESTED AND DOES NOT EXCEED 80% OF THE AIRCRAFT'S AVAILABLE ELECTRICAL POWER. ALL FUNCTIONS ARE COMPATIBLE TO OTHER AIRCRAFT SYSTEMS.
14. OVERHAUL TIME LIMITATIONS: NO ADDITIONAL OVERHAUL TIME LIMITATIONS.
15. AIRWORTHINESS LIMITATIONS: NO ADDITIONAL AIRWORTHINESS LIMITATIONS.
16. REVISION: A LETTER WILL BE SUBMITTED TO THE LOCAL FSDO WITH A COPY OF THE REVISED FAA FORM 337.

AIRCRAFT RECORDS REVISED IN ACCORDANCE WITH FAR43.5 AND AC43.9B. DETAILS ARE ON FILE AT GEORGIA AVIONICS INC. UNDER WORK ORDER# 21740.

***** END *****

☐ ADDITIONAL SHEETS ARE ATTACHED

SWINK AIRCRAFT SERVICES

WORK REQUEST (WR)

1071 SPRING CREEK DR

BISHOP, GA (30621)

706-621-1272

www.swinkaircraft.com

WR# 52110

CUSTOMER NAME AND ADDRESS/CONTACT

Charles Mont 904-813-0636Mont, Charles H, Jr3504 Morningwood Ct NESumner, GA (30084)

WORK REQUESTED

Repair Left Cabin doorupper hinge excess play
& wear

REMARKS/ AUTHORIZATION

Verbal Charles

AIRCRAFT MAKE

Cessna

MODEL

177

SERIAL#

17700512

REG#

3212T

TOTAL HOURS

HOBBS

197.1

TACH

2394.5

DATE PROMISED

N/A

WORK BEGAN

5/21/10

WORK FINISHED

5/22/10

CONTRACT OR OUTSIDE REPAIRS

NONE

\$

\$

\$

TOTAL LABOR=

NO

ATTACHED SHEETS

5.0 hrs @ 65/hr

\$

325.00

TOTAL PARTS=

N/A

ATTACHED SHEETS

NONE

\$

NONE

FUEL

\$

NONE

GA SALES TAX

\$

NONE

TOTAL

\$

325.00

Labor only: Fabricate & Repair upper L/H
Cabin door hinge Repair
even size pin & hinge slot
CRACK ✓ & Functional ✓ OK

1975936 A4P



850 Airport Road, Box 7
Lawrenceville, GA 30046
770-962-9092
gwinnettaero.com

Invoice

Date	Invoice #
7/19/2010	1543

Bill To
Charles Mount 9504 Morningwood CT NE Suwanee, GA 30024

Aircraft #	A/C Model	Tach/Hobbs Time	Project	Terms
N3212T	C172	2402.0/206.1	3212T	Due on recpt

Item	Description	Quantity	Rate	Amount
8L8F	Bearing	4	1.20	4.80T
6L6F	Bearing	2	1.20	2.40T
AN4-41	Bolt	2	2.064	4.13T
AN4-17A	Bolt	1	0.42	0.42T
	SUBTOTAL PARTS			11.75
SHIPPING	SHIPPING	1	5.13	5.13
LABOR	LABOR	3.94	73.00	287.62
	Flaps stuck - troubleshot. Found loose wire on flap lever limit switch. Reattached wire. Ops check OK. Nose wheel shimmy - replaced bearings in nose torque links. Ops check OK. Completed all paperwork.			
	SALES TAX		6.00%	0.71
Due upon receipt. Interest may be charged on overdue balances. A 3.5% electronic transaction fee will apply to credit card payments		Total		\$305.21



850 Airport Road, Box 7
Lawrenceville, GA 30046
770-962-9092
gwinnettaero.com

Invoice

Date	Invoice #
8/3/2010	1558

Bill To
Charles Mount 9504 Morningwood CT NE Suwanee, GA 30024

Aircraft #	A/C Model	Tach/Hobbs Time	Project	Terms
N3212T	C172	2410.00/214.9	3212T	Due on recpt

Item	Description	Quantity	Rate	Amount
D9-14-5	Filter	1	16.836	16.84T
B3-5-1	B3-5-1 Vac Filter	1	2.80	2.80T
215CC	Vacuum Pump	1	297.00	297.00T
	SUBTOTAL PARTS			316.64
SHIPPING	SHIPPING	1	16.98	16.98
LABOR	LABOR	4.57	73.00	333.61
	Vacuum pump inop -- Removed pump. Replaced filters and blew out lines. Replaced pump with overhauled unit. Ops and leak check OK. Stand-by vacuum inop -- troubleshot per manufacturer instructions. No faults noted. Removed shuttle valve. Pressure tested. Reinstalled. Ground ran - no faults noted. Completed log entry and all paperwork.			
	SALES TAX		6.00%	19.00
Due upon receipt. Interest may be charged on overdue balances. A 3.5% electronic transaction fee will apply to credit card payments		Total		\$686.23

1. Approving National Aviation
Authority/Country:

2. AUTHORIZED RELEASE CERTIFICATE
FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG

3. Form Tracking Number:
141690

FAA/UNITED STATES

4. Organization Name and Address

Rapco, Inc., 445 Cardinal Lane, Hartland, WI 53029 (NESR064N)

5. WorkOrder/Contract/Invoice
Number:
141690

6. Item:	7. Description:	8. Part Number	9. Eligibility:*	10. Quantity	11. Serial/Batch Number:	12. Status/Work:
1	Vacuum Pump	215CC	N/A	1	141690	OVERHAULED

13. Remarks:

The above item has been overhauled in accordance with FAA approved process specification #203-6-1009 Revision 7 Dated March 27th, 2009.
This certifies that the work specified in block 12 and 13 was carried out in accordance with EASA part 145 and with respect to that work, the Component is considered ready for return to service under EASA part 145 approval number "EASA.145.4802"

14. Certifies that items identified above were manufactured in conformity to:

☐ Approved design data and are in a condition for safe operation.
☐ Non-approved design data specified in Block 13.

19 ☒ 14 CFR 43.9 Return to service ☒ Other regulation specified in Block 13

Certifies that unless otherwise specified in Block 13, the work identified in Block 12 and described in Block 13 was accomplished in accordance with Title 14, Code of Federal Regulations, part 43 and in respect to that work, the items are approved for return to service.

15. Authorized Signature:	16. Approval/Authorization No.:	20. Authorized Signature	21. Approval/Certificate No.:
		<i>Jennifer L. Orgas</i>	NESR064N
17. Name (Typed or printed):	18. Date (m/d/y):	22. Name (Typed or Printed):	23. Date (m/d/y):
		JENNIFER L. ORGAS	July 13, 2010

User/Installer Responsibilities

It is important to understand that the existence of this document alone does not automatically constitute authority to install the part/component/assembly.

Where the user/installer performs work in accordance with the national regulations of an airworthiness authority different than the airworthiness authority of the country specified in Block 1, it is essential that the user/installer ensures the his/her airworthiness authority accepts parts/components/assemblies from the airworthiness authority of the country specified in Block 1.

Statements in Blocks 14 and 19 do not constitute installation certification. In all cases, aircraft maintenance records must contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.

FAA Form 8130-3 (6-01)

* Installer must cross-check eligibility with applicable technical data.

NSN 0052-00-012-9005

PRODUCT WARRANTY INFORMATION

Rapco warrants parts replaced in connection with new or overhauled products by it to be free from defects in material and workmanship for a period of (2) two years from date of installation or 1000 hours in service, whichever ever comes first for new 215CC and 216CW series, (1) one year from date of installation or 1000 hours in service, whichever ever comes first for overhauled 211CC, 212CW, 215CC and 216CW series, all other series 400 hours in service or (1) one year, whichever ever comes first. If within such period, any such replacement parts shall be proved to Rapco's satisfaction to be defective, such replacement parts shall be repaired or replaced, or the purchase price refunded at Rapco's sole option. The customer's exclusive remedy and Rapco's sole obligation hereunder shall be limited to such repair or replacement, F.O.B. Rapco's factory, or to refund of the purchase price, and shall be conditioned upon Rapco's receiving written notice of any alleged defects within thirty (30) days after its discovery, and at Rapco's option, return of such products prepaid to its factory. This warranty shall not apply or extend to any parts that have not been replaced in connection with reconditioning or rebuilding or products by Rapco or to replacement parts repaired or altered by others that Rapco so as in its judgment adversely to effect the same, or to replacement parts that were subject to negligence, accident, damages by circumstances beyond Rapco's control, to improper installation (if by others than Rapco), operation, maintenance or storage, or to other than normal use or service. Further, as to any parts that have not been replaced in connection with reconditioning or rebuilding or products by Rapco, Rapco, not being the manufacturer of any such parts nor the manufacturer's agent, makes no express or implied warranties or representations of any kind as to any matter whatsoever, including, without limitation, condition, design, quality or capacity of any such parts, merchantability and fitness for a particular purpose of any such parts with the requirement of any law, rule, specification or contract pertaining thereto.

For warranty to be valid the warranty registration card must be filled out and returned to Rapco, Inc. upon unit installation. For warranty consideration the customer warranty card must be completely filled out and returned with the defective unit being considered for warranty repair or replacement.

THE FORGOING WARRANTIES ARE IN LIEU OF ALL OTHER EXPRESS WARRANTIES (EXCEPT WRITTEN WARRANTIES SPECIFICALLY LABELED AS "WARRANTIES OR GUARANTIES" AND FURNISHED BY RAPCO) AND ARE IN LIEU OF ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. RAPCO SHALL NOT BE SUBJECT TO ANY OTHER OBLIGATION OR LIABILITIES WHATSOEVER WITH RESPECT TO PARTS REPLACED IN CONNECTION WITH RECONDITIONING OR REBUILDING OR PRODUCTS OR SERVICES FURNISHED BY IT, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO.

RAPCO SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL OR CONTINGENT DAMAGES WHATSOEVER WHETHER BASED ON BREACH OF WARRANTY, NEGLIGENCE OR OTHER TORT, OR ANY STRICT LIABILITY THEORY.

WARRANTY VOID IF PUMP HAS BEEN DISASSEMBLED.

CUSTOMER WARRANTY RECORD

Owner Name _____ Company _____ Address _____ City _____ St. _____ Zip _____	IMPORTANT! This card must be completed and returned for warranty consideration
--	--

Aircraft Make _____ Model _____ Registration _____ Tach Time On _____ Hrs. Tach Time Off _____ Hrs.	Unit Installed Part No. <u>215CC</u> Serial No. <u>141690</u> Date Installed _____ Date Removed _____ Purchased From _____
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RAPCO, Inc.

REPLACEMENT AIRCRAFT PARTS CO.

WARRANTY REGISTRATION

Owner Name _____ Company _____ Address _____ City _____ St. _____ Zip _____	IMPORTANT! This card must be completed and returned <i>now</i> to validate warranty.
--	--

Aircraft Make _____ Model _____ Registration _____ Tach Time _____ Hrs.	Unit Installed Part No. <u>215CC</u> Serial No. <u>141690</u> Date Installed _____
--	--