DAVIDO E FLYING SERVICE INC.

10000 Airport Road • Dubuque, IA 52003 • Phone: 563-582-1293

Weight And Balance Change

and

Equipment List Revision DATE: 2 / 3 / 04 A/C Make: ___ C ESSNA Year: ___ 2003 172R Model: Serial No.: ___ 17281188 WNER: QUIVERSITY OF DUBUQUE Registration: N 167 UD Revises W & B Dated: 11-25-03 DESCRIPTION OF WORK INSTALLED TAN'S ENGINE PREHEATER SYSTEM 40.946 Previous AC Empty Weight ITEMS RE HOOVED ITEMS INSTALLED 1.1 lbs. - 18.6 - 20.46 TANIS HEATER KIT TAS-NOO-02 1691.0 lbs. 69154.38 AIRCRAFTEROSS WET .: MAX. RAMP WT. 2457.0 lbs. MAX T/O WT. 2450.0 lbs. NEW A/C EMPTYWGT .: 1691.0 165. NEW A/C L.W.C.G . 40.895 NEW A/C ISEFUL LOAD .: 766 165. FAA REPAIR STATION #D2FR184J INSPECTOR Paul M. Kaune W/O NUMBER

EIGHT & BALANCE AND INSTALLED EQUIPMENT DATA

CESSNA AIRCRAFT COMPANY SINGLE ENGINE DIVISION



| MODEL | SERIAL & REGI | ISTRATION | WEIGHT | ARM | MOMENT |
|----------------------------|-----------------------|-----------|---------|------------------------|---------|
| 172R | 17281188 | N167UD | (lbs) | (în) | (lb-in) |
| (calculated) | STANDARD EMP | TY WEIGHT | 1,656.7 | 40.555 | 67,187 |
| INSTALLED E | EQUIPMENT | * | Net Cha | nge from Standard Airc | raft |
| ALTIMETER WITH 20 FT MARK | KING, DUAL WINDOW, | 20000 FT | 0.0 | 0.000 | 0 |
| BASIC AVIONICS ITEMS, USE | D W/1ST NAV/COM | | 0.0 | 0.000 | 0 |
| C/B PNL EXCHANGE | | × . | 0.2 | 16.500 | 3 |
| DIRECTIONAL GYRO EXCHAN | | ۸ | 0.5 | 14.000 | 7 |
| DUAL AXIS AUTOPILOT | | Supra 3 | 19.7 | 91.200 | 1,797 |
| DUAL PUMP, ENGINE DRIVEN | VACUUM SYSTEM | Sufferen | 0.0 | 0.000 | 0 |
| EMERGENCY LOCATOR TRAN | ISMITTER INSTL | 11-25-2 | 0.0 | 0.000 | 0 |
| ENGINE, LYCOMING 10-360-L2 | 2A | 116/4 | 0.0 | 0.000 | 0 |
| GYRO INSTALLATION | | Ul | 47)7200 | 0.000 | 0 |
| KLN 94 GPS INSTALLATION | | 11/11 | 4.8 | 15.000 | 72 |
| KMA 28 AUDIO/INTERCOM/MA | RKER BEACON INSTL | 1/ ' - | 0.0 | 0.000 | 0 |
| KT 76C MODE C TRANSPONDE | ER INSTL | | 0.0 | 0.000 | 0 |
| KX 155A NAV/COM #1 INSTALL | ATION - NO G.S | | 0.0 | 0.000 | 0 |
| KX 155A NAV/COM #2 INSTALL | ATION W/G.S. | | 6.8 | 17.300 | 118 |
| MD41-231 GPS/NAV SELECTOR | ₹ | | 0.2 | 16.500 | 3 |
| PILOT CONTROL WHEEL EXC | HANGE | | 0.2 | 26.000 | 5 |
| PROPELLER ASSY, MCCAULEY | Y, FIXED PITCH, 1C235 | /LFA7570 | 0.0 | 0.000 | 0 |
| VINYL/FABRIC SEATS | | | 0.0 | 0.000 | 0 |

The weight and balance data shown in this report are computed on the basis of Federal Aviation Administration approved procedures for establishing fleet weight averages. [Far 21.327(f)(2)]

Weighed: 8/25/2003

Printed:

This list contains all installed optional equipment and avionics. All weights and arms are the installed difference from a standard equipped aircraft. For a detailed list of aircraft equipment weight and balance data, please refer to the comprehensive equipment list in the pilots operating handbook.

| BASIC EMPTY WEIGHT | 1,689.1 | 40.964 | 69,193 |
|-------------------------|---------|--------|----------------------|
| USEFUL LOAD | 767.9 | | |
| MAXIMUM RAMP WEIGHT | 2,457.0 | ø | |
| MAXIMUM TAKE-OFF WEIGHT | 2,450.0 | | Revised 26 Feb. 2001 |

FLYING SERVICE INC.

10800 Airport Road • Dubuque, IA 52003 • Phone: 563-582-1293

Weight And Balance Change

and

| Equipment | List Revis | sion | |
|---|--------------------------|----------------------|-----------------|
| DATE: 11 / 25 / 2003 | | A/C Make:Cess | sna |
| | • | Year:2003 | 3 |
| • | | Model:172F | ₹ . |
| OWNER: University of Dubuque | | Serial No.:17281 | 188 |
| | | Registration: N167U | |
| | | V & B Dated: 81251 | 03 |
| DESCRIPTION OF WORKInstalled Winteria | | | |
| B | WEIGHT 1689.1 | ARM 40.964 | MOMENT 69193 |
| Previous A/C Empty Weight | 1009.1 | 40.904 | . 09193 |
| ITEMS REMOVED | a G. Xveen voicenten and | | |
| | | | |
| TEMS INSTALLED | | | |
| Winterization Kit PN AK 172-16N | .8 | - 22,7 | -18.16 |
| | | | |
| | 1689.9 | | 69174.84 |
| | 1007.7 | | 0)174.04 |
| AIRCRAFT GROSS WGT.: Max Ramp WT 2457.0 |) Max T/O W | Vt 2450.0 | d. |
| NEW A/C E.W.C.G.: 40.946 | | | |
| NEW A/C USEFUL LOAD.: 767.1 | 5) | | |
| | FAAF | REPAIR STATION #D | 2FR184J |
| | | ECTOR // | |

W/O NUMBER 69747

WEIGHT & BALANCE AND INSTALLED EQUIPMENT DATA

CESSNA AIRCRAFT COMPANY SINGLE ENGINE DIVISION



| MODEL | SERIAL & REGI | ISTRATION | WEIGHT | ARM | MOMENT |
|----------------------------|-----------------------|---------------------|-----------------|------------------------|---------|
| 172R | 17281188 | N167UD | (lbs) | (in) | (lb-in) |
| (calculated) | STANDARD EMP | TY WEIGHT | 1,656.7 | 40.555 | 67,187 |
| INSTALLED E | EQUIPMENT | | Net Chai | nge from Standard Airc | eraft |
| ALTIMETER WITH 20 FT MARK | KING, DUAL WINDOW, | 20000 FT | 0.0 | 0.000 | 0 |
| BASIC AVIONICS ITEMS, USE | D W/1ST NAV/COM | | 0.0 | 0.000 | 0 |
| C/B PNL EXCHANGE | | | 0.2 | 16.500 | 3 |
| DIRECTIONAL GYRO EXCHAN | | ا ۸ | 0.5 | 14.000 | 7 |
| DUAL AXIS AUTOPILOT | | Car Cet J | 19.7 | 91.200 | 1,797 |
| DUAL PUMP, ENGINE DRIVEN | VACUUM SYSTEM | Juff | 0.0 | 0.000 | 0 |
| EMERGENCY LOCATOR TRAN | ISMITTER INSTL | Supra J 11-25-03 | 0.0 | 0.000 | 0 |
| ENGINE, LYCOMING 10-360-L2 | 2A | | 0.0 | 0.000 | 0 |
| GYRO INSTALLATION | | Ul | (1)7)0.0 4.8 | 0.000 | 0 |
| KLN 94 GPS INSTALLATION | | 411 | 4.8 | 15.000 | 72 |
| KMA 28 AUDIO/INTERCOM/MAI | RKER BEACON INSTL | 1// | 0.0 | 0.000 | 0 |
| KT 76C MODE C TRANSPONDE | ER INSTL | 1 | 0.0 | 0.000 | 0 |
| KX 155A NAV/COM #1 INSTALL | ATION - NO G.S | 1 | 0.0 | 0.000 | 0 |
| KX 155A NAV/COM #2 INSTALL | ATION W/G.S. | 1 | 6.8 | 17.300 | 118 |
| MD41-231 GPS/NAV SELECTOR | R | v 0.4 | 0.2 | 16.500 | 3 |
| PILOT CONTROL WHEEL EXCH | HANGE | | 0.2 | 26.000 | 5 |
| PROPELLER ASSY, MCCAULEY | Y, FIXED PITCH, 1C235 | /LFA7570 | 0.0 | 0.000 | 0 |
| VINYL/FABRIC SEATS | | | 0.0 | 0.000 | 0 |

The weight and balance data shown in this report are computed on the basis of Federal Aviation Administration approved procedures for establishing fleet weight averages. [Far 21.327(f)(2)]

Weighed: 8/25/2003

Printed:

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|-------------------------|---------|--------|----------------------|
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| MAXIMUM RAMP WEIGHT | 2,457.0 | | |
| MAXIMUM TAKE-OFF WEIGHT | 2,450.0 | L | Revised 26 Feb. 2001 |

Numerical values shown may be rounded from actual values. Therefore, the product of weight times arm may not equal the listed moment.

| Air | plane | Order | OPERATIONS | | | | CH | IAN | GE 1 ce |
|--------|--------------|----------------------------|-------------------------|-------|---------------------------|--------|-----|------|-----------------------------------|
| Sing | | ine Mkt. | Domestic | | | | | | CONTROL NO. 17281188 361188 |
| CUSTOM | ER ORDER NO. | | Skyhawk | | | | | | 06-25-03 OCK NO. |
| | | 5 | | | | | | F | ENGINE NUMBER ORE/L.H. |
| 1728 | 81188 | | REGISTRATION W/A N167UD | TEMP- | 01 01 | 08-18- | 03 | - | FT/R.H. PROPELLER NUMBI ORE/L.H. |
| | | | | | | | | | FT/R.H. |
| NSTALL | EQUIPMENT AS | FOLLOWS | | | | | | | CHANGE |
| ITEM | F.K. NUMBER | | DESCRIPTION | | ************************* | | NO. | TYPE | DATE |
| 1 2 | 601D 132C | Nav II Avionics Tow Bar | OPTIONAL EQUIPME | NT = | | | | | |
| | | - j - # | | | | | | | |
| | | | | | | | e2 | | |
| | | | | | | | | | |
| | | | | | | | | | U |
| , | | | | | | | | | |
| F | | | | | | 1 | | | |

PAINT UPHOLSTERY AND TRIM CLEAN UP

PRODUCTION DATE

PRODUCTION DATE

Per Prod Schedule

WEIGHT & BALANCE AND INSTALLED EQUIPMENT DATA

CESSNA AIRCRAFT COMPANY SINGLE ENGINE DIVISION



| MODEL | SERIAL & REGI | STRATION | WEIGHT | ARM | MOMENT |
|----------------------------|-----------------------|-----------|----------|------------------------|---------|
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| (calculated) | STANDARD EMP | TY WEIGHT | 1,656.7 | 40.555 | 67,187 |
| INSTALLED E | EQUIPMENT | | Net Char | nge from Standard Airc | raft |
| ALTIMETER WITH 20 FT MARK | KING, DUAL WINDOW, | 20000 FT | 0.0 | 0.000 | 0 |
| BASIC AVIONICS ITEMS, USEI | D W/1ST NAV/COM | | 0.0 | 0.000 | 0 |
| C/B PNL EXCHANGE | | | 0.2 | 16.500 | 3 |
| DIRECTIONAL GYRO EXCHAN | IGE | | 0.5 | 14.000 | 7 |
| DUAL AXIS AUTOPILOT | | | 19.7 | 91.200 | 1,797 |
| DUAL PUMP, ENGINE DRIVEN | VACUUM SYSTEM | Sycr 03 | 0.0 | 0.000 | 0 |
| EMERGENCY LOCATOR TRAN | ISMITTER INSTL | C Kr | 0.0 | 0.000 | 0 |
| ENGINE, LYCOMING 10-360-L2 | 2A | 54, 103 | 0.0 | 0.000 | 0 |
| GYRO INSTALLATION | | 11/25/ | 0.0 | 0.000 | 0 |
| KLN 94 GPS INSTALLATION | | 7 | 4.8 | 15.000 | 72 |
| KMA 28 AUDIO/INTERCOM/MA | RKER BEACON INSTL | | 0.0 | 0.000 | 0 |
| KT 76C MODE C TRANSPONDE | ER INSTL | | 0.0 | 0.000 | 0 |
| KX 155A NAV/COM #1 INSTALL | ATION - NO G.S | | 0.0 | 0.000 | 0 |
| KX 155A NAV/COM #2 INSTALL | ATION W/G.S. | a | 6.8 | 17.300 | 118 |
| MD41-231 GPS/NAV SELECTO | R | | 0.2 | 16.500 | 3 |
| PILOT CONTROL WHEEL EXC | HANGE | 1 | 0.2 | 26.000 | 5 |
| PROPELLER ASSY, MCCAULE | Y, FIXED PITCH, 1C235 | /LFA7570 | 0.0 | 0.000 | 0 |
| VINYL/FABRIC SEATS | | 1 | 0.0 | 0.000 | 0 |

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| MAXIMUM RAMP WEIGHT | 2,457.0 | | |
| MAXIMUM TAKE-OFF WEIGHT | 2,450.0 | | Revised 26 Feb. 200 |

Numerical values shown may be rounded from actual values. Therefore, the product of weight times arm may not equal the listed moment.

| REGISTRATION NOT TRAN | ISFERABLE | | |
|--|--------------------------------|---|--|
| UNITED STATES OF AMERICA DEPARTMENT OF TRANSPORTATION - FEDERAL AVIA CERTIFICATE OF AIRCRAFT REGIS | TION ADMINISTRATION | This certificate must be in the air- craft when operated. | U.S. Departmen |
| ATIONALITY AND NEST NEST NEST NEST NEST NEST NEST NEST | AIRCRAFT SERIAL NO. | | Federal Adation Administration 0 4'0 3 |
| ANUFACTURER AND MANUFACTURER'S DESIGN CESSNA 172R ICAO Aircraft Address Code: 50206565 | NATION OF AIRCRAFT | | Civil Aviation Registry P.O. Box 2550 Oklahoma City, OK 23 OK-0564 |
| UNIVERSITY OF DUBUQUE 2000 UNIVERSITY AVE DUBUQUE IA 52001-5050 | | This certificate is issued for registration purposes only and is not a certificate of title. The Federal Aviation does not determine rights of ownership as between private persons. | Official Business Penalty for Private Use \$300 AC Form 8050-3(8/97) Superse TO: UNIVERSITY OF DUBI 2000 UNIVERSITY A DUBUQUE IA 52001-3 |
| CORPORAT s certified that the above described aircraft has been entered ation Administration, United States of America, in accordance w mational Civil Aviation dated December 7, 1944, and with the | on the register of the Federal | U.S. Department | 0 |

Federal Aviation Administration

DATE OF ISSUE

October 31, 2003

AC Form 8050-3(8/97) Supersedes previous editions

OF DUBUQUE
RSITY AVE
52001-5050

U.S. OFFICIA

PB METER 7249713 U.S. /PC

FOR PRIVATE USE \$300

DATE OF ISSUANCE TERMS AND CONDITIONS

Unless sooner surrendeled, suspended, revoked, on a legra-halion airworthiness certificate is effective as long as the matrienance of accordance with Parts 21, 43 and 3 or the Federal Aviation Begülatio NATIONALITY AND 2. MANUFACTURER AND MOBEL REGISTRATION MARKS AUTHORITY AND BASIS FOR ISSUMUCE 09/10/2003 None This airworthiness certificately is fauled pursuant to be aircraft to which issued has been inspected and aircraft to which issued has been showing meet the footing concration, and has been showing meet the footing the same and the same aircraft. provided by Annex 8 to the Canvention on Inter DETAK I MEN I OF I KANGFOR A LICIN-STANDARD AIRWORTHINESS CERTIFICATE FAA RERRESENTATIVE PWAZR aistable of affenotexceeding \$1,000, or imprisonment not exceeding 3 Begulations, as app ation Act of 1958 end Certifies that, as of the date of issuance, the or date is otherwi 3. AIRCRAFT SERIAL NUMBER 2281188 established by the Administrator, this chance, and alterations are performed in and the aircraft is registered in the United DESIGNATION NUMBER DOA-100129-CE 4. CATEGORY

FAA Form 8100-2 (8-82) Any alteration, reproduction, or misuse of this certifical transposes, or both. THIS CERTIFICATE MUST BE DISPLAYED IN AVIATION REGULATIONS. U.S. GPO-2001 - 668-455 Normal/Utility ALLIED SIGNAL AEROSPACE
COMMERCIAL AVIOLES SYSTEMS
WOLK OR ER DELL ERY LIKET

8:45:29

PAGE

1

PRINTED 8/11/1003

DELIVERY SET S Servos DUE: 11-07-2003 MFG STN: 13.00 RSC:____

| | Unit Number | Part Number | Description | Qty | Mop | Serial 5/ w |
|----|----------------|----------------|--------------------------------|-----|-----|-------------|
| | KC 0140 | 065-00176-7904 | FLT CMPTR-2 AX W/ALTPRE/MSG RS | 1 | 0, | 684304/0 |
| | KCM0100 | 071-00073-5000 | CONFIGURATION MODULE | 1 | 1 | 11162 NA |
| | KLN0094 | 069-01034-0102 | KLN94 COLOR GPS ROLL STEERING | 1 | O | 20414 02/0 |
| | KLN0094 | 071-00163-0103 | KLN94 AMERICAS DATABASE CARD | 1 | J | N/A |
| | KMA0028 | 066-01176-0101 | AUDIO MKR/INTERCOM/STERO/SPLIT | 1 | 44 | A03419 MA |
| | KT 0076C | 066-01156-0101 | XPDR ATCRBS DIGITAL SC PLUS | 1 | 5 | 16199 01/01 |
| 92 | KX 0155A | 069-01032-0101 | NAV/COM 25KHZ 28V GS | 1 | 12 | 2565101/06 |
| | KX 0155A | 069-01032-0201 | NAV/COM 25KHZ 28V (NO G/S) | 1 | 12 | 2624901/06 |
| | | | | | | |
| | | | | | | |

| Received by | 0 | | |
|-------------|--|------|--|
| | | | |
| Date | NACE - 1 - 2 To 1 - 2 | Time | |

(MKTRJT34)

ALLIED SIGNAL AEROSPACE
COMMERCIAL AVIONES SYSTEM
WORK OR DER LELIVARY 10 ET

16:57:23

PAGE

1

PRINTED 8/11/2003

A5-0.

Work Order Number 1728118 Air raft Seriel# 17281188
Aircraft Type 172
Package Option 172172-65 03 FC140-7704 JAV2 172

DUE: 11-07-2003 MFG STN: 13.00 RSC: DELIVERY SET S Servos Serial Part Unit Qty Number Model Number Description Number P 57124~ 1 KM 0275 065-00030-0000 SERVO MOUNT T 57274~ 1 KM 0275 065-00030-0002 SERVO MOUNT P 6470 6 KS 0270C 065-00178-2200 PITCH SERVO, DUAL SG-2.40 RPM 1 T 60845 1 KS 0272C 065-00180-0400 TRIM SERVO - 2.40 RPM Received by Time Date

Sigma Tek, Inc. 1001 Industrial Road . Augusta, KS 67010-9510 (316) 775-6373 FAX (316) 775-1416

Sales Order PICK LIST Order

Date Number 04/22/03 130682 11/10/00

Ship Via UPS INDEPENDENCE, KANSAS F.O.B. Ship Term Bill of Lading

Bill To:

82385 CESSNA AIRCRAFT CO. ACCOUNTS PAYABLE/DEPT 824 P.O. BOX 12917 WICHITA, KS 67277

Ship To:

SUPPLIER CITY C/O CORNERSTONE WAREHOUSING 2147 ENTERPRIZE DRIVE INDEPENDENCE, KS 67301

NEW MANUFACTURE CS

Payment Terms NET 30 DAYS

Sales Rep # 1

Cust PO

SE137189 PER P01

Qty. U/M Part Number Description

Scheduled Qty. Ship Date Shipped 04/23/03

Line 29

10 EA

EA5175-17PTL-CES

STOCKROOM: 303

AIRSPEED

LOCATION: NO LOC

S/N: T42949B, T42950B, T42951B, T42952B, T42953B,

T42954B, T42955B, T42956B, T42957B, T42958B

CESSNA P/N: S3325-1

LINE #0002

Control of the contro

(DATE FUNCTIONALLY TESTED: 04/22/03)

CERTIFICATE OF CONFORMANCE

"I hereby certify that the supplies or services listed herein were shipped as shown above in quantities and the quality called for in the above ofted contract and were in all respects in accordance with applicable specifications." Unless otherwise stated herein, the items

listed are new and are manufactured by Sigma Tok, Inc.

Quality Assurance Manager

SHIPPED

APR 23 2003

and the second second

Sigma Tek, Inc. 1001 Industrial Road • Augusta, KS 67010-9510 (316) 775-6373 FAX (316) 775-1416

Sales Order PICK LIST Order

Ship To:

Date Number 05/13/03 145215 12/20/02

Ship Via UPS FACTORY (AUGUSTA, KANSAS) F.O.B. Ship Term Bill of Lading

Bill To:

82385 CESSNA AIRCRAFT CO. ACCOUNTS PAYABLE/DEPT 824

P.O. BOX 12917 KS WICHITA, 67277 SUPPLIER CITY C/O CORNERSTONE WAREHOUSING 2147 ENTERPRIZE DRIVE INDEPENDENCE, KS 67301

NEW MANUFACTURE

Qty. U/M

30 EA

Payment Terms

Sales Rep # 1

Cust PO

SE172389 - LINE #0001

NET 30 DAYS

Line

14

Part Number 10149-015-9 Description ATTITUDE GYRO LTD W/FLAG Ship Date Shipped 05/14/03

Scheduled Qty.

STOCKROOM: 303

LOCATION: NO LOC

S/N: T83312Q, T83313Q, T83314Q, T83315Q, T83316Q, T83317Q, T83318Q, T83319Q, T83320Q, T83321Q,

T83332Q, T83333Q, T833334Q, T833335Q, T833336Q, T83337Q, T83338Q, T83339Q, T83340Q, T83341Q,

T83342Q, T83343Q, T83344Q, T83345Q, T83346Q, T83347Q, T83348Q, T83349Q, T83350Q, T83351Q

CESSNA P/N: S3326-1

(DATE FUNCTIONALLY TESTED: 05/13/03)

CERTIFICATE OF CONFORMANCE

"I hereby certify that the supplies or services listed herein were shipped as shown above in quantities and the quality called for in the above cited contract and were in all respects in accordance with applicable specifications." Unless otherwise stated herein, the items

listed are new and are manufactured by Sigma Tek, Inc.

Quality Assurance Manager

SHIPPED

MAY 1 4 2003



Sigma Tek, Inc. 1001 Industrial Road . Augusta, KS 67010-9510 (316) 775-6373 FAX (316) 775-1416

ACCOUNTS PAYABLE/DEPT 824

KS

Sales Order PICK LIST Order

Ship Via

Date Number 05/20/03 145216 12/20/02

FACTORY (AUGUSTA, KANSAS) F.O.B. Ship Term Bill of Lading

UPS

Ship To:

SUPPLIER CITY C/O CORNERSTONE WAREHOUSING 2147 ENTERPRIZE DRIVE 67301 INDEPENDENCE, KS

NEW MANUFACTURE

Bill To:

WICHITA,

3 EA

82385 CESSNA AIRCRAFT CO.

P.O. BOX 12917

Payment Terms NET 30 DAYS

CS

Line

2

Sales Rep # 1

(KS)

Cust PO SE172489

Qty. U/M Part Number 10262-042-2 Description

Scheduled Qty. Ship Date Shipped

STOCKROOM: 303

67277

DIRECTIONAL GYRO A/P LTD 05/21/03 _ LOCATION: NO LOC

S/N: T66877G, T66881G, T66884G

CESSNA P/N: S3330-2

(DATE FUNCTIONALLY TESTED: 05/20/03)

CERTIFICATE OF CONFORMANCE

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Quality Assurance Manager

SHIPPED

MAY 21 2003

ELECTRIC GYRO CORP.

Div. of Mid-Continent Inst. Co.

AUTOPILOT TURN COORDINATOR 1394T100-10RA FINAL ACCEPTANCE

| Rev | 01 | 24 | | S16 | 9 |
|-------|-----|----|---|-----|---|
| 1164. | F | ag | e | of | i |
| | JC. | | | | |

PURPOSE:

To provide pre-installation functional testing.

- 28 ±1.0 VDC power supply (ref. 1.0 Amp or greater) with regulated and filtered output.
- Rate table capable of controlled rotation about a vertical axis 0° to 480° per minute minimum.
- Vertical mounting bracket for standard 3-1/8 inch panel mount instrument.
- Inclinometer Roll Tester T-128.
- Inclinometer Tilt Fixture T-128-1.
- Voltmeter accurate to within 0.8%, suggest Fluke 87 or equivalent.
- Wiring hookup cables with 100K ohm load resistor across pins C & D and connectors as required

CESSNA ENGINEERI 18006 MODEL(S)

PROCEDURES:

Visually inspect the appearance of the glass and case, giving special attention to the clearance between the pointer and dial, and the condition and color of the dial paint. All tests shall be made at normal room temperature. Before performing Null, Damping and Turn Tests, mount the unit in the normal flight position, level with the top mounting screw holes, face vertical. During all tests, the unit may be subjected to moderate vibration per CES-1210K to minimize friction.

- 1. POWER FLAG: Switches from RED to BLACK within 2 minutes of startup and returns to RED within 10 seconds after power is removed.
- 2. INSTRUMENT LIGHTING: Apply 28 ±1.0 Volt to light tray connector contacts. Check that both bulbs are lighted.
- 3. TACH OUTPUT: After red flag is out of view, tachometer output on pin E is positive with respect to pin B (+9.0VDC minimum).
- 4. INCLINOMETER TEST:
 - A) Tilt the unit suddenly from 12° bank through level to 12° opposite bank using Tilt Fixture T-128-1. The inclinometer ball should roll from one end to the other in not less than 0.2 seconds.
 - B) Roll the unit at a rate of 135° to 145° per minute to cause the inclinometer ball to roll from one end to the other, using Inclinometer Roll Tester T-128. There shall be no evidence of the inclinometer ball sticking.
- 5. NULL TEST:
 - A) Let gyro run for 3 to 5 minutes. Check that electrical output on pins C and D is less than ±0.050 VDC.
 - B) Difference of null from testing (CW, CCW) must not exceed 0.040 VDC.
- 6. DAMPING: From maximum pointer deflection, after crossing 180°/min. indice, pointer moves halfway back to 0° indice in 1.5 to 3 seconds.
- 7. TURN TESTS: Test clockwise and counterclockwise. Right turn (clockwise) indicates a positive voltage. Left turn (counterclockwise) indicates a negative voltage.

| Turn Table | Pointer Deflection | Output Voltages |
|--------------|--------------------|-------------------|
| (Deg./Min.) | (Left & Right) | 7 |
| 0° | Within zero marks | ±0.050 Max |
| 90° | Halfway to 180° | ±0.40 to 0.70 VDC |
| 180° | Within 180° marks | ±0.90 to 1.30 VDC |
| 480° minimum | Beyond 180° marks | ±1.6 VDC Min |

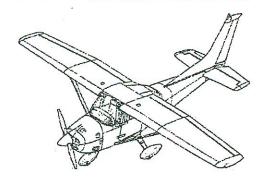


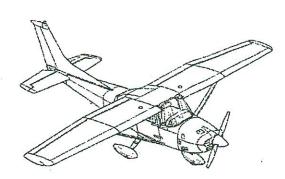
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| Acceptance Stamp | 5 | Date 6/3/2003 | S/N | 2000-20 |
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Note 1: Measurements such as dimension, temperature, voltage, time, etc. are to be accurate within ±5% unless otherwise specified. Note 2: This document may not be revised without approval from Cessna Engineering.

A/C REG #: 1614D





| | SQUAWK | CORRECTIVE ACTION | Maint. | Insp./Date |
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RS-009 Revision #6 07/29/02 Sheet ____of___

Repair Station #: I97R796N



May 11, 2005

Ray Felber Aviation Manager Wisconsin Aviation Dane County Airport 3606 Corben Court Madison, WI 53704

Reference: University of Dubuque's 17281188 & SB00-57-01 R1

Dear Mr. Felber,

As you are aware, 17281188 exhibits cracks on the trailing edge of the right hand upper wing skin. These cracks are similar to those addressed by Cessna Service Bulletin 00-57-01 R1. Since our bulletin effectivity ends with earlier serials, please comply with the "intent of SB00-57-01 R1" and make an entry in the aircraft maintenance logs. The only deviation from the bulletin will be to install a P/N 0523095-23 upper wing skin, which has an increased thickness of .032 inches. For this, log compliance with Cessna Engineering Order 172-0326

Because the right hand upper skin is cracked, Cessna authorizes warranty repair of the right wing skin on 17281188 / N167UD only. (Refer to applicable bulletin credit program) The repairs must be completed before the aircraft warranty expires and a claim submitted within 30 days of work completion. Please attach a copy of this letter with the warranty claim.

The University of Dubuque may at its option have the upper left hand wing skin removed and replaced with the thicker material per EO 172-0326. However, this will not be a warranty repair as no defect has been noted.

Mr. Felber, I hope you find this information helpful and should you have any questions, please do not hesitate to call me.

Sincerely,

Doug Muensterman

Resident Service Representative

Fleet Field Service

CC: Barry Wells, Cessna Aircraft Company CC: Rob Hood, Cessna Aircraft Company (MKTRJT35)

ALLIED SIGNAL AEROSPACE COMMERCIAL AVIONICS SYSTEMS PIR ATTACHMENT REPORT

PRINTED 8/28/2003

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PAGE 1

Work Order Number 17281188 Aircraft Type

Aircraft Serial# 17281188

Package Option

172 Cessna 172 SEP172N2-65 03 KC140-7904 NAV2 172

DELIVERY SET S Servos

| Unit Number | Part Number | Description | Qty | Serial Number |
|----------------|----------------|--------------------------------|-----|------------------|
| KA 0092 | 071-01553-0200 | GPS ANTENNA | 1 | 48859 |
| KC 0140 | 065-00176-7904 | FLT CMPTR-2 AX W/ALTPRE/MSG RS | 1 | 6843 |
| KCM0100 | 071-00073-5000 | CONFIGURATION MODULE | 1 | 11162 |
| KI 0208 | 066-03056-0002 | VOR/LOC IND W/ANTI REFLECT | 1 | 73456 |
| KI 0209A | 066-03056-0011 | VOR/LOC/GS IND W/GPS DISPLAY | 1 | 8982 |
| KLN0094 | 069-01034-0102 | KLN94 COLOR GPS ROLL STEERING | 1 | 20414 |
| KLN0094 | 071-00163-0103 | KLN94 AMERICAS DATABASE CARD | 1 | N/A |
| км 0275 (| 065-00030-0000 | SERVO MOUNT | 1 | 57104 |
| KM 0275 (| 065-00030-0000 | SERVO MOUNT | 1 | 57124 |
| KM 0275 | 065-00030-0002 | SERVO MOUNT | 1 | 57274 |
| кма0028 | 066-01176-0101 | AUDIO MKR/INTERCOM/STERO/SPLIT | 1 | A03419 |
| KS 0270C | 065-00178-2200 | PITCH SERVO, DUAL SG-2.40 RPM | 1 | 6470 |
| KS 0271C 0 | 065-00179-0300 | PRIMARY SERVO-1.2RPM | 1 | 8384 |
| KS 0272C 0 | 065-00180-0400 | TRIM SERVO - 2.40 RPM | 1 | 6084 |
| кт 0076с 0 | 066-01156-0101 | XPDR ATCRBS DIGITAL SC PLUS | 1 | 16199 |
| KX 0155A 0 | 069-01032-0101 | NAV/COM 25KHZ 28V GS | 1 | 25651 |
| KX 0155A 0 | 069-01032-0201 | NAV/COM 25KHZ 28V (NO G/S) | 1 | 26249 |

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OPERATIONS

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| SERIAL NO. 17281188 | REGISTRATION W/A N167UD | TEMP- | 01 01 | 08-18-03 | PROPELLER NUMBER FORE/LH. AFT/R.H. |

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Aerospace Electronic Systems

Honeywell One Technology Center 23500 W. 105th Street Olathe, KS 66061 913 782-0400

It is possible that the database in the Honeywell product you have purchased is out of date due to shipping and installation times. Should this be the case, you may elect to exchange the database for a current one. Return this coupon within 45 days after the date of purchase to take advantage of this exchange.

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| | Mail to: FAX (913) 712-3904 | Honeywell, Inc Business & Ge Wingman Serv 23500 West 10 Olathe, Kansas Telephone (9 | eneral A vices 05 th Stre s 66061 | et, MD#66 | (800) | 247-0230 |