

***Note: This is an Electronic Work Order. All Names and Stamp Numbers You See On this Document Were Applied Electronically, And Then Acknowledged By the Individuals Represented

RS

Repair Station Work Order

Repair Station: 5S5R934B

ASM: 0
Job: 24214-17953RS
Page: 1 of 2
Date: 7/2/2019

Job: 24214-17953RS

ASM: 0

Part: 700-00006-000

S/N: 20058226



PFD Unit

011Repair

Comments:

Job: CUSTOMER: Nexair Avionics LLC
PO NUMBER: 5216
Serial Number: 20058226
Reason for return: DFC 90 upgrade PFD needs MOD 55 Avidyne SO 4501422
WARRANTY= YES NO
SERVICE BULLETINS REQUIRED = YES NO
RS License Warranty- Funding Not Required

Seq Operation

Signoff

Date

10 RS - Incoming Inspection

sandrews 6/22/2019

PERFORM PRELIMINARY INSPECTION.
VERIFY ARTICLE IS IN REPAIR STATION CAPABILITY LIST.
VERIFY AD'S ARE APPLICABLE AND RECORD.

NOTIFY CUSTOMER SERVICE IF BEZEL IS DAMAGED.

Activity Performed:

Performed preliminary inspection and found cracked knob. Found AD 2009-05-05. Note: Unit has Rev 35. Mods 31, 34, 36-40, 43 & 47. RCVD with warranty/quality seal. (Performed FOD test). Reason returned: MOD 55 upgrade.

20 RS - Evaluation

cricoy 6/24/2019

PERFORM EVALUATION AND VERIFICATION OF FAILURE PER PMM.
RUN EVALUATION TEST USING UNITS CURRENT REVISION ON LABEL
VERIFY AND RECORD LATEST REVISION OF PMM.
VERIFY SOFTWARE AND MOD STATUS.

Activity Performed:

Evaluated PFD unit per PMM 600-00128-004 Rev06, Dated 09/20/16. Incoming software is 530-00194-000 Rev 02. Based on TSO label and PMM unit requires MODs 45, 51, 52, 57, 58. MOD 52 does not need to be performed per SB 601-00006-096 Rev 01, dated 7/14/2008 A.D. 2009-05-05 is N/A as per unit S/N. Customer squawk is MOD 55. R4R- verified. Will install MOD 55 per customer squawk. Unit had MOD 45 previously installed but not marked on TSO Label. Will correct TSO Label to reflect all MODs installed.

30 RS - Repair

cricoy 7/1/2019 1

PERFORM REPAIR PER PMM.

IF TORQUE WRENCH IS USED; RECORD TORQUE WRENCH USED.

Activity Performed:

Installed MODs 51, 55, 57, and 58. Installed software version 530-00214-002 Rev 06. All work done per PMM 600-00128-004 Rev 06, Dated 09/20/16. See product analysis sheet for part numbers used. Torque Wrench used PC 10290.


*****Note: This is an Electronic Work Order. All Names and Stamp Numbers You See On this Document Were Applied Electronically, And Then Acknowledged By the Individuals Represented**

RS

Repair Station Work Order

Repair Station: 5S5R934B

ASM: 0
Job: 24214-17953RS
Page: 2 of 2
Date: 7/2/2019

 40 RS - Inspection sandrews 7/1/2019 1

IN PROGRESS INSPECTION (AS REQUIRED)


Activity Performed: **Performed in progress inspection. No issues found.**

 50 RS - Test cricoy 7/1/2019 1

PERFORM FINAL ASSEMBLY AND RE-TEST PER PMM.

IF TORQUE WRENCH IS USED; RECORD TORQUE WRENCH USED.

Activity Performed: **Cracked knobs noted, and replaced. Re-assemble unit and Perform Final ATP per PMM 600-00128-004 Rev 06, Dated 09/20/16. Unit passed all tests and added warranty labels. Torque Wrench used PC 10290.**

 60 RS - Inspection sandrews 7/2/2019 1


PERFORM FINAL INSPECTION
INSPECT, VERIFY AND GENERATE RELEASE FOR SERVICE TAG

Validation of "WARRANTY VOID LABEL" placement and record label sequential number.
Unit "WARRANTY VOID LABEL" photographs complete and filed.

Check for AD's

Initial _____

Activity Performed: **Performed final inspection and found no issues. Verified sequential number 03003 Warranty Void Label. (Performed FOD test).**

 70 Production Control rgleason 7/2/2019 1

PC COMPLETE, READY TO SHIP

Activity Performed: **PC COMPLETE - READY TO SHIP**

| | | | | | | |
|---|------------------------|----------------------------------|--|--------------------|---|--|
| 1. Approving Civil Aviation Authority/Country: FAA/United States | | 2. | | | 3. Form Tracking Number: 24214-17953RS | |
| AUTHORIZED RELEASE CERTIFICATE FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG | | | | | | |
| 4. Organization Name and Address: Extant Aerospace, 1615 W. NASA Blvd, Melbourne, FL. 32901 (5S5R934B) | | | | | 5. Work Order/Contract/Invoice Number: 24214-17953RS | |
| 6. Item: | 7. Description: | 8. Part Number: | 9. Quantity: | 10. Serial Number: | 11. Status/Work: | |
| 1 | Primary Flight Display | 700-00006-000 | 1 | 20058226 | Repaired | |
| 12. Remarks: Repaired in accordance with PMM 600-00128-004, Rev. 06, Dated 09/20/16. See attached W/O 24214-17953RS. "Direct Shipment Authorization" | | | | | | |
| 13a. 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 12. | | | 14a. <input checked="" type="checkbox"/> 14 CFR 43.9 Return to Service <input type="checkbox"/> Other regulation specified in Block 12 Certifies that unless otherwise specified in Block 12, the work identified in Block 11 and described in Block 12 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. | | | |
| 13b. Authorized Signature: | | 13c. Approval/Authorization No.: | 14b. Authorized Signature:  | | 14c. Approval/Certificate No.: 5S5R934B | |
| 13d. Name (Typed or Printed): | | 13e. Date (dd/mmm/yyyy): | 14d. Name (Typed or Printed): Carlos Feliciano | | 14e. Date (dd/mmm/yyyy): 02/JUL/2019 | |
| User/Installer Responsibilities | | | | | | |
| <p>It is important to understand that the existence of this document alone does not automatically constitute authority to install the aircraft engine/propeller/article.</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 aircraft engine(s)/propeller(s)/article(s) from the airworthiness authority of the country specified in Block 1.</p> <p>Statements in Blocks 13a and 14a 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.</p> | | | | | | |

Vibration Test

| | |
|-----|-----------------|
| | Serial number # |
| PFD | <u>20058224</u> |

Technician: 2388 SYM
19
TRS Date: 7.1.19

During the vibration test, the UUT is to be monitored for the following pass/fail criteria.

| Parameter | Setting | Pass/Fail Criteria and Data | Pass | Fail |
|-------------------------------|--------------------|--|------|------|
| Altitude | 11,000ft | Max 11,035ft Min 10,965ft | ✓ | |
| Airspeed | 100kts | Max 102kts Min 98kts | ✓ | |
| Attitude | Level | The attitude display should remain level during the test. Fail = Movement of the attitude from level >2° | ✓ | |
| Heading | Varies per MAG | Heading at start = <u>BS</u> Not to exceed +/- 5° from initial heading | ✓ | |
| Outside Air Temperature (OAT) | Site Ambient | OAT Temperature at start = <u>20</u> Not to exceed +/- 2° during the course of the test. Note: N/A for PFD 700-00006-003 or when using HASS Code | ✓ | |
| Bezel Lights | Default Brightness | Pass = Even illumination Fail = Flicker, uneven/darkened areas | ✓ | |
| Display | Default Brightness | Pass = Clear image remaining at default brightness Fail = Flicker, line outs, bands, unusual dimming, white lines across screen, flashing backlight, loss of video data, etc. Note: Under high vibration, LCD printing may be observed, this is normal and acceptable. LCD printing is a localized change in brightness caused by physical stress on the liquid crystal cell of the display. Printing can easily be distinguished from other flickering anomalies (i.e. loose backlight or video connections) by the fact that the center of the display is far more affected than the edges. In contrast, backlight and video data connection issues will affect the entire display or particular rows/columns of the display. Printing is temporary and will only be observable during vibration exposure. | ✓ | |

COPY

Avidyne EXP5000 Test Data Sheet

Attach this form to the EXP5000 (PFD) traveler. This form must be completed in permanent ink.

Ambient Air Data Drift Check

| | |
|-----|-----------------|
| | Serial number # |
| PFD | 2005 8226 |

Technician: 2387  Date: 7.1.19

| Time | Displayed Airspeed | Displayed Altitude | Pass | Fail |
|------------|--------------------|--------------------|------|------|
| Power up | N/A | N/A | N/A | N/A |
| 30 seconds | 0 | -65 | ✓ | COPY |
| 1 minute | 0 | -65 | | |
| 2 minutes | 0 | -65 | | |
| 3 minutes | 0 | -70 | | |
| 4 minutes | 0 | -70 | | |
| 5 minutes | 0 | -70 | | |

Warm up time = 30 seconds

Pass criteria

Altitude:

Not to exceed +/- 10 feet altitude change after warm up to the end of the 5 minute monitoring period

Airspeed:

HASS Code: After warm not to exceed 2 kts until the end of the 5 minute monitoring period

Flight Code: not to break the yellow tape

Comant
COBHAM**INSTALLATION INSTRUCTIONS**

II A258005

Comant Industries, Inc.

Revision: E

ECN 08-102

INSTALLATION INSTRUCTIONS FOR CI 2580-200 GPS/VHF LIGHTNING-PROTECTED COMDAT® ANTENNA**PART IDENTIFICATION SUPPLEMENT:**

This part is categorized as a "TSO C144 and TSO C169 (Incomplete System)" per FAA 8150.1B, Section 17(b). This antenna provides a major function of a TSO C169 transceiver system. It may be used with any approved TSO C169 VHF Transceiver System, Equipment Class C, D, E, 3, 4, 5, and /or 6. It is also a TSO C144 antenna and may be used with any approved TSO C145a and/or C146a GPS receiver system. Both are limited to the RTCA DO-160D environmental category noted on the identification label attached to the part.

(RECOMMENDATIONS & LIMITATIONS)**IT'S IMPORTANT TO UNDERSTAND THAT THIS DOCUMENT IS NOT AN INSTALLATION AUTHORIZATION**

The CI-2580-200 GPS/VHF LIGHTNING-PROTECTED COMDAT® antenna delivers optimum performance only when installed correctly. To ensure adequate structural strength of the aircraft for associated air loading during flight, use of a backing plate or doubler (**not supplied**) refer to **FAA ADVISORY CIRCULAR 43.13-2A** for complete information is highly recommended. It is the responsibility of the installation agency to determine the appropriate and adequate antenna installation. The CI 2580-200 is designed to provide GPS RX from a single TNC Female coaxial connector and to provide VHF TX/RX from a single BNC Female coaxial connector.

WARNING: The GPS on the CI 2580-200 GPS/VHF LIGHTNING-PROTECTED COMDAT® antenna are electrostatic discharge (ESD) sensitive. ESD protection procedures must be used as a minimum.

- 1) Do not remove the **ESD** protective plug on the GPS connectors until the coaxial cables are connected to the antenna.
- 2) Use a grounded wrist strap when attaching the coaxial cables to the antenna.
- 3) Make sure that the receiver is not turned on before the antenna is completely installed.
- 4) Ground the center pins of the connecting coaxial cables using two jumper cables before connecting them to the antenna to dissipate any residual **ESD** charges that may have accumulated on it.

EQUIPMENT COMPATIBILITY:

The CI 2580-200 GPS/VHF LIGHTNING-PROTECTED COMDAT® antenna is designed to operate with the following equipment:

- 1) Standard 50 Ohm VHF Communication Equipment Class C, D, E, 3, 4, 5, 6 transceiver systems per TSO C169 covering 118-137 MHz frequencies.
- 2) GPS frequencies 1575.42 MHz +/- 10 MHz with gain values of 26.5 to 31.5 dB. Designed for 27 dB GPS systems.

| | | | | | |
|-----------------------------------|--------------------------|------------------------------------|--------------------------|--|-------------------------|
| Prepared By: <i>J. Souza</i> | Date: <i>10/31/08</i> | Engineering: <i>[Signature]</i> | Date: <i>11/06/08</i> | | |
| Production: <i>[Signature]</i> | Date: <i>11/6/08</i> | Sales: <i>[Signature]</i> | Date: <i>11/6/08</i> | Quality Assurance: <i>[Signature]</i> | Date: <i>11/6/08</i> |

LOCATION:

- 1) The CI 2580-200 GPS/VHF LIGHTNING-PROTECTED COMDAT® antenna must be mounted on the top of the aircraft to assure maximum visibility of satellites. The optimum antenna location is at a high point on the cabin when viewed in level flight and away from projections such as a propeller, tail surfaces, or the shadow of larger antennas. **NOTE: The CI 2580-200 GPS/VHF LIGHTNING-PROTECTED COMDAT® antenna must be at least four feet away from any antenna to avoid interference. (EXCEPTIONS – COMANT/COMDAT VHF antennas and low profile GPS receive-only antennas).**
- 2) Mount the CI 2580-200 GPS/VHF LIGHTNING-PROTECTED COMDAT® antenna on top of the fuselage, clear of any metallic surfaces such as wings, so that during banking the antenna maintains an unobstructed view of the satellites. **NOTE: The location chosen should provide the least obstructed visual line of sight path from the signal source to the antenna elements.**

INSTALLATION PREPARATION:

- 1) Prepare the surface for antenna installation in such a manner as to ensure ground contact of less than .003 Ohm. If bare metal surfaces are needed for surface preparation they should be treated with Alodine 1200 or Iridite to eliminate aluminum oxidation.
- 2) Drill holes in the aircraft skin per the footprint on figure 1. Antenna clearance holes for the mounting screws must be 0.177" diameter and .625" diameter for the TNC (GPS) and single BNC (VHF) connectors. **NOTE: The footprint in figure 1 shown below is not to scale and is for reference only. Do not use it as a template for drilling holes.**

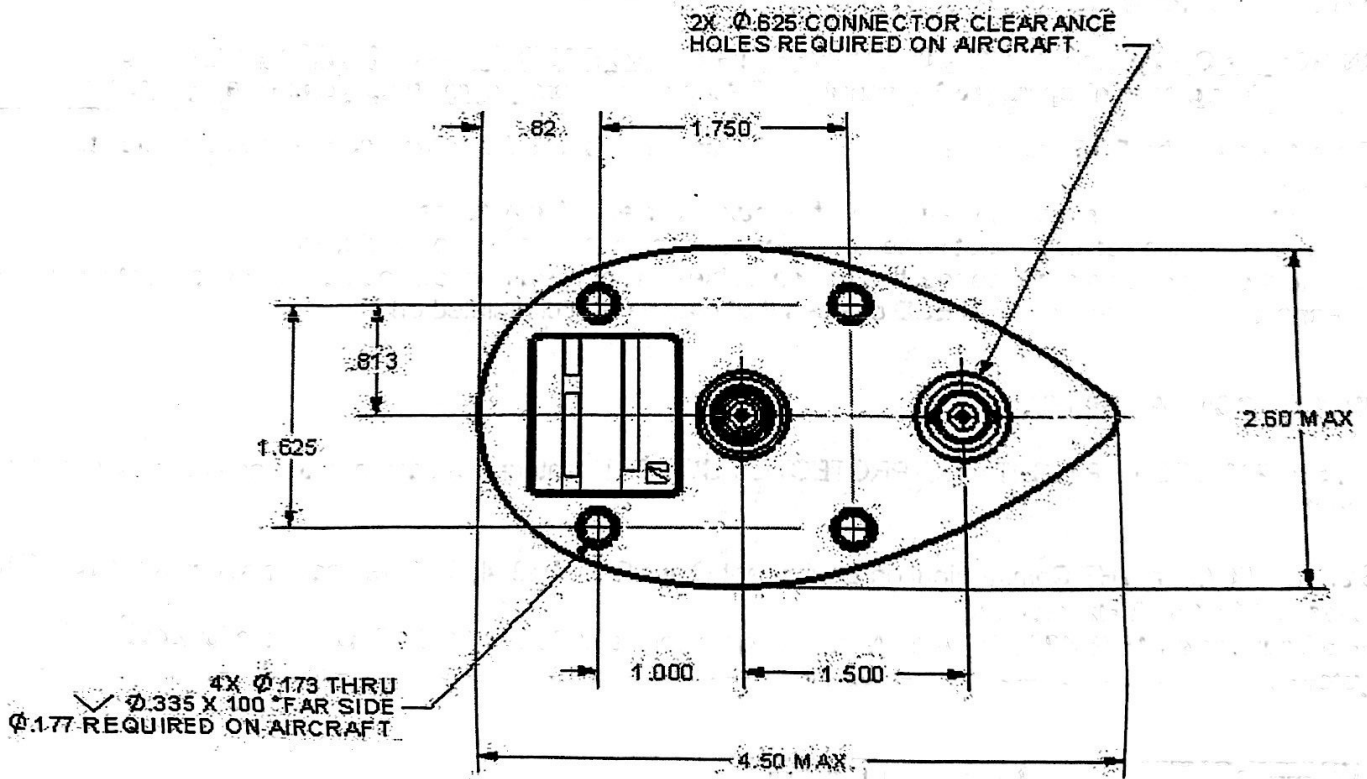


FIGURE 1.

TYPE OF AIRCRAFT:

- 1) The CI 2580-200 GPS/VHF LIGHTNING-PROTECTED COMDAT® antenna is designed for installations for non turbine single engine aircraft. Applications on single and twin turbine aircraft and business jets are not advised.

INSTALLATION:

WARNING: SILASTIC, RTV OR SILICONE-BASED SEALING/CAULKING COMPOUNDS ARE NOT TO BE USED AROUND THE BASE OR OVER THE SCREW FILLETS. THE HIGH DIELECTRIC CONTENT OF THESE MATERIALS DISTORT SATELLITE RECEPTION AT LOW ANGLES OF ELEVATION.

- 1) Mount a CI 2580-200 GPS/VHF LIGHTNING-PROTECTED COMDAT® antenna using #8-32 x 100° flat head fasteners (**Not Supplied**) by sandwiching the aircraft skin between the antenna and the internal backing plate or doubler. Gently tighten the hardware so that uniform stress is placed on either side of the antenna element and make sure that the connectors have sufficient clearance through the aircraft skin. **Note:** Metal adapter plates are **optional** but they should be used if the curvature or compound radius of skin is such that antennas cannot be directly installed.
- 2) For maximum signal strength, the length of the antenna lead to the receiver should be as short as possible:
 - a. Connect the VHF Comm. coaxial cable with the BNC (M) connector to the BNC (F) connector on the antenna and hand-tighten.
 - b. Connect the GPS connector on the antenna to the TNC(M) connectors on the GPS coaxial cable respectively and hand tighten.

NOTE: PAINTING A CI 2580-200 GPS/VHF LIGHTNING-PROTECTED COMDAT® ANTENNA MAY DEGRADE PERFORMANCE AND IS NOT RECOMMENDED. MODIFICATION OF ANY COMANT PRODUCT WILL VOID THE WARRANTY.

COMPOSITE AIRCRAFT INSTALLATION:

- 1) Except for preparation instructions, installation is the same with the addition of a ground plane, as indicated in **FAA ADVISORY CIRCULAR 43.13-2A, section 37.C** may enhance performance. Receiver lightning protection can be improved by grounding the coaxial shield with an appropriate metal mounting clamp at any convenient location before the receiver is connected to the CI 2580-200 GPS/VHF LIGHTNING-PROTECTED COMDAT® antenna.

LIMITATIONS:

- 1) "The conditions and tests required for TSO approval of this article are minimum performance standards. It is the responsibility of those desiring to install this article either on or within a specific type or class of aircraft to determine that the article, when installed, performs in accordance with the design specifications that meet this TSO. The article may be installed only if further evaluation by the application documents and acceptable installation is approved by the Administrator."
- 2) Installation of these products should be done by qualified personnel.
- 3) Contact Comant Industries for specific aircraft applications and limitations.

PFD

NEXAIR
AVIONICS

Altimeter Correction Card

Altimeter: 700-00006-000

SN: 20058226

| ALT | Error | ALT | Error |
|-------|-------|-------|-------|
| -1000 | 0 | 14000 | -10 |
| 0 | 0 | 16000 | -10 |
| 500 | 0 | 18000 | -10 |
| 1000 | 0 | 20000 | -10 |
| 1500 | 0 | 22000 | |
| 2000 | 0 | 25000 | |
| 3000 | 0 | 30000 | |
| 4000 | 0 | 35000 | |
| 6000 | 0 | 40000 | |
| 8000 | 0 | 45000 | |
| 10000 | -10 | 50000 | |
| 12000 | -10 | 55000 | |

Barometric InHg: 29.92

Test Date: 7/10/19

Tested By: 

CRS N4OR087B

Plymouth Airport 246 S Meadow Rd Gate 6 Hangar SW-1 Plymouth, MA 02360