Service Instruction SI-0027

Epic Aircraft, LLC ◆ 22590 Nelson Road ◆ Bend OR 97701
Phone: 541-318-8849 ◆ Fax: 541-382-5125 ◆ Web: www.epicaircraft.com

Subject: K021 Static Port Surface Roughness

ATA-Code: 34-10

Labor: 4 Hours

Effectivity: K021

Affected Model(s): E1000 GX

Due: Upon Condition

Compliance: Recommended ☐ Mandatory ☒

Recurrence: No

1 BACKGROUND AND PURPOSE:

Upon inspection, K021's pilot side static port fell outside of the surface roughness requirement of 32 RMS. Part will need to be reworked to smooth the part surface.
This service letter describes the rework method to achieve proper surface roughness.

2 REFERENCES:

Epic E1000 Aircraft Maintenance Manual, PN SK0500000

3 WARRANTY:

For aircraft under warranty, parts and labor will be covered by Epic Aircraft, LLC if the work is performed within the compliance period and by a properly certificated Airframe and Powerplant mechanic or FAA approved repair station.

4 APPROVAL:

The engineering aspects of this service document have been shown to comply with the applicable Federal Aviation Regulations and are FAA approved.

5 TOOLS:

No.	Description	Qty	Epic Aircraft Supplied	Customer Supplied
1.	Basic Hand Tools	A/R	☐	☒
2.	Surface Roughness tester (54-410-500-0 Fowler X-PRO)	A/R	☐	☒
3.	Sanding block	A/R		

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6 PARTS/MATERIALS:

No.	Part Number	Description	Qty	Epic Aircraft Supplied	Customer Supplied
1.	Stellar Solutions CF5-2210	CitriSurf 2210	A/R	☐	☒
2.	N/A	Deionized Water	A/R	☐	☒
3.	N/A	Isopropyl Alcohol	A/R	☐	☒
4.	TK1-CuSO4	Copper Sulfate Test Solution	A/R	☐	☒
5.	N/A	Aluminum Oxide, 80-400 Grit Sandpaper	A/R	☐	☒

7 INSTRUCTIONS:

1. Inspect surface roughness of pilot side static port with Fowler X-Pro or equivalent tester.

Note: Set tester to RA µin, to convert to RMS, multiply output by 1.11. Result should be 32 RMS or better.

a. Follow manufacturer's instructions for set up and operation of the tester.

i. If found to be within tolerance, aircraft is ok to return to service.

ii. If found to be out of tolerance, follow the steps outlined below.

2. Remove all external electrical power to the airplane (refer to Epic E1000 Aircraft Maintenance Manual, PN SK05000000, chapter 24-40).

3. Remove pressure bulkhead access panel (refer to the E1000 AMM PN SK05000000, chapter 21-30).

NOTE: During each rework step, ensure the static port orifices are free from FOD and remove debris as necessary to ensure FOD does not enter the system.

4. Disconnect the tubing from the static port and install protective covers to the tubing and static port fittings.

5. Mask the area on the fuselage around the static port.

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CAUTION: Sanding must be performed using a sanding block, disc, etc. that will ensure flatness of the surface is maintained.

6. Sand the discrepant surface of the static port to reduce surface roughness.

a. Start sanding (by hand) with 80 grit Aluminum Oxide sand paper on an appropriately sized sanding block

b. Incrementally use finer sand paper until reaching the desired surface roughness, ending with 220 (if surface still does not meet 32RMS, 400 grit may be used).

7. Measure Surface roughness with Fowler roughness tester (or similar tester) using extreme caution to avoid damaging nearby structure. Measurement should be a maximum of 32 RMS.

8. Inspect each static port orifice to ensure all burrs and sharp edges are removed.

NOTE: Be sure to blow out FOD from inside the fuselage so as to not introduce debris to the inside of the aircraft.

9. Use compressed air to blow out the static port holes and eliminate debris.

10. Clean face of static port with alcohol wipe or alcohol applied to a lint free cloth.

Caution: When applying CitriSurf 2210, take care to not allow contact with painted surfaces.

11. Passivate static port.

a. Apply CitriSurf 2210 to face of static port with application brush.

b. Allow to sit for 30 minutes between 70-120°F.

NOTE: If room is colder than 70°F, refer to the manufacturer's requirements.

c. Rinse face with deionized water.

d. Dry with lint free cloth or air dry.

e. Allow to sit for 2 hours before testing.

12. Verify passivation process.

a. Apply copper sulfate test solution to face of static port.

NOTE: Part must be kept wet with copper sulfate solution for at least 6 minutes, apply more as necessary.

b. Carefully rinse and dry surface.

c. Inspect surface for copper sulfate deposits.

d. If discoloration from solution is present, it is considered a failure to passivate.

e. If the static port fails the test, it must be abraded until no copper sulfate deposits are evident, cleaned, and passivated again (refer to the E1000 AMM PN SK05000000, chapter 51-20 for surface prep/abrasion instructions).

13. Remove masking tape from the fuselage and protective covers from the static port fittings and tubing.

NOTE: Be sure to blow out FOD from inside the fuselage so as to not introduce debris to the inside of the aircraft.

14. Blow out each of the 3 static Ports using filtered shop air.

CAUTION: Ensure static ports and fittings are clear of FOD before connecting tubing.

15. Reconnect tubing to the static port (refer to the E1000 AMM PN SK05000000, chapter 34, Figure 34-10.1 Sheet 9).

16. Measure the static port step height (refer to the E1000 AMM PN SK05000000, chapter 34 Figure 34-10.1 Detail J2).

17. Perform Pitot Static System Leakage Test (refer to the E1000 AMM PN SK05000000, chapter 34-10.2.F).

18. Install Pressure bulkhead access panel (refer to the E1000 AMM PN SK05000000, chapter 21-30).

8 WEIGHT AND BALANCE:

Negligible

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9 PUBLICATIONS AFFECTED:

Epic E1000 Aircraft Maintenance Manual, PN SK0500000

10 RECORD COMPLIANCE:

Make appropriate entry in airplane maintenance records.

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Appendix A: Compliance Letter

Please complete and mail this form to Customersupport@epicaircraft.com

This is to certify that I have completed the work in accordance with the Epic Aircraft, LLC Service Instruction.

Aircraft Owner Information:
Date: _____ Aircraft Serial Number: _____ Aircraft Reg. Number: _____ Owner's Name: _____
Maintenance Entity Information
Name of Shop Performing the work: _____ Name of Person(s) Performing inspection and/or work: _____ Phone Number: _____ Email: _____