



TWI FORM 201
12/13/2018

3331 TOWERWOOD DRIVE, STE 302
FARMERS BRANCH, TX 75234
P 214.357.9595 / F 214.357.9613
FAA CRS T75R462Y

W.O. NO: D10647

PAGE 1 OF 1

NONDESTRUCTIVE TESTING REPORT

INSPECTION TYPE: RT ☐ UT ☐ ET ☒ MT ☐ PT ☐ VT ☐

CUSTOMER: ARISPE AVIATION (AIRSPEED AND ATTITUDE)	LOCATION: MCKINNEY, TX	
MANUFACTURER: CESSNA	MODEL: 177B	
REGISTRATION: N34904	SERIAL NUMBER: 17702078	
TOTAL HOURS: 5620.3	TOTAL LANDINGS: N/A	
DATE INSPECTED: 06 APRIL 2023	PRELIMINARY INSPECTION <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	HIDDEN DAMAGE INSPECTION <input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
INSPECTION PROCEDURE/SPECIFICATION SEE BELOW		
EQUIPMENT/CALIBRATION/STANDARDS USED NORTEC 600: S/N 210128701, C/D 17FEB2024 100-500 KHZ PROBE AL EDM STANDARD		


DISCREPANCIES/RESULTS

PERFORMED EDDY CURRENT INSPECTION OF THE CARRY-THRU SPAR IAW TEXTRON AVIATION SERVICE LETTER SEL-57-09 REVISION 1 AND CESSNA AIRCRAFT COMPANY NDI MANUAL 2A-13-01.

- AFTER FINAL BLENDING IN SEVERAL AREAS, NO DISCREPANT AREAS NOTED OVER THE MAXIMUM 10% AS LISTED BY SEL-57-09 -

- END OF REPORT -

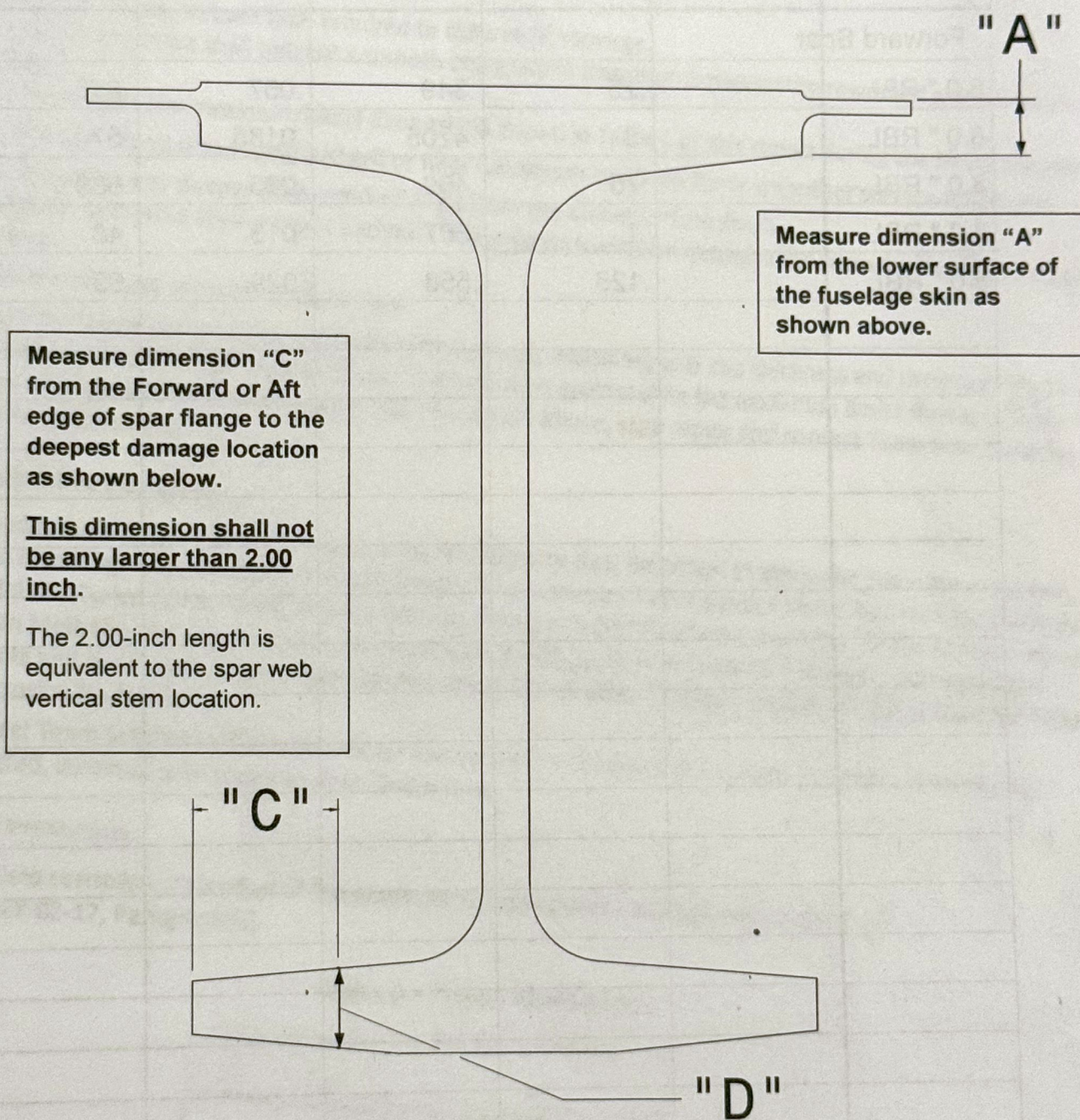
Tailwind Inspection, Inc. hereby certifies that the work accomplished herein has been performed in accordance with the applicable Federal Aviation Regulations and is approved for return to service with regard to the inspection(s) performed unless discrepancies are noted.

 SIGNATURE OF INSPECTOR FOR TAILWIND INSPECTION, INC. - FAA CERTIFIED REPAIR STATION T75R462Y	II CERT. LEVEL	06 APRIL 2023 DATE
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[illegible]

Cessna Model 177/210

Cross Section of Cabin Carry Thru Spar



"A" – Vertical thickness of end of upper spar flange.

Measure dimension "A" from the lower surface of the skin as shown above.

"C" – Horizontal distance from end of spar flange to deepest spot of corroded area being evaluated.

"D" – Vertical thickness of spar flange at deepest spot of corrosion.

4. Repair Procedure

The corrosion damage found on the lower cap of the Wing Spar - Center Section Cantilever (P/N 1710703-7) shall be blended out and inspected in accordance with the following instructions. Corrosion protection of the lower cap shall be accomplished in accordance with Airworthiness Directive: AD 2023-02-17.

4.1 Damage Removal

1. Blend out the corrosion damage using 180 grit or finer sandpaper.
 - a. Blend using a 20:1 minimum width to depth ratio.
 - i. See Figure 3 for blend profile.
 - b. Do not blend any deeper than required to remove all damage.
 - c. Blending operation shall present a smooth and gradual transition between the reworked and non-reworked regions.
 - d. Do not exceed the maximum blend dimensions shown in Table 1 of this report during the blend operation.
2. Final polish the blend areas using 320 grit or finer sandpaper to 63 μ m Ra or smoother surface roughness.
 - a. Do not polish any deeper than required to achieve the above surface finish.
 - b. Polishing operation shall present a smooth and gradual transition between the reworked and non-reworked regions.
3. Measure the damage removal at blend sites.
 - a. Use a digital caliper or analog dial caliper to measure remaining spar cap thickness and maximum depth of blend at each blend site. Verify damage removal is no greater than the maximum limits shown in Table 1.
 - b. If remaining material thicknesses are less than noted above, stop repair and contact Team Structures for further instructions.

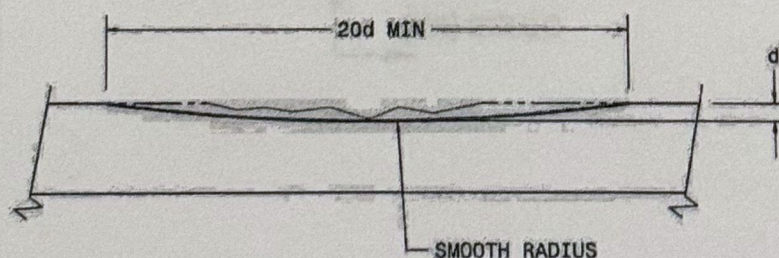
4.2 Non-Destructive Inspection

1. Surface eddy current inspect all the blend areas on the carry-thru (common to the lower cap - lower surface, edge and lower cap - upper surface) in addition to the lower cap - lower surface at the kick area for cracks per the Model 177 Series (1968 - 1978) Service Manual, Paragraph 2(B) "Surface Inspection" of the Nondestructive Inspection Methods and Requirements, Document 2A-13-01 found in Section 2A Supplemental Inspection Documents and the Cessna Single Engine Service Letter SEL-57-09R1 "Wings - Model 177 Carry-Thru Spar One-Time Corrosion Inspection".
 - a. Contact Team Structures if cracks or other anomalies are detected. If no cracks or other anomalies are detected, continue with repair as described below.

4.3 Corrosion Protection

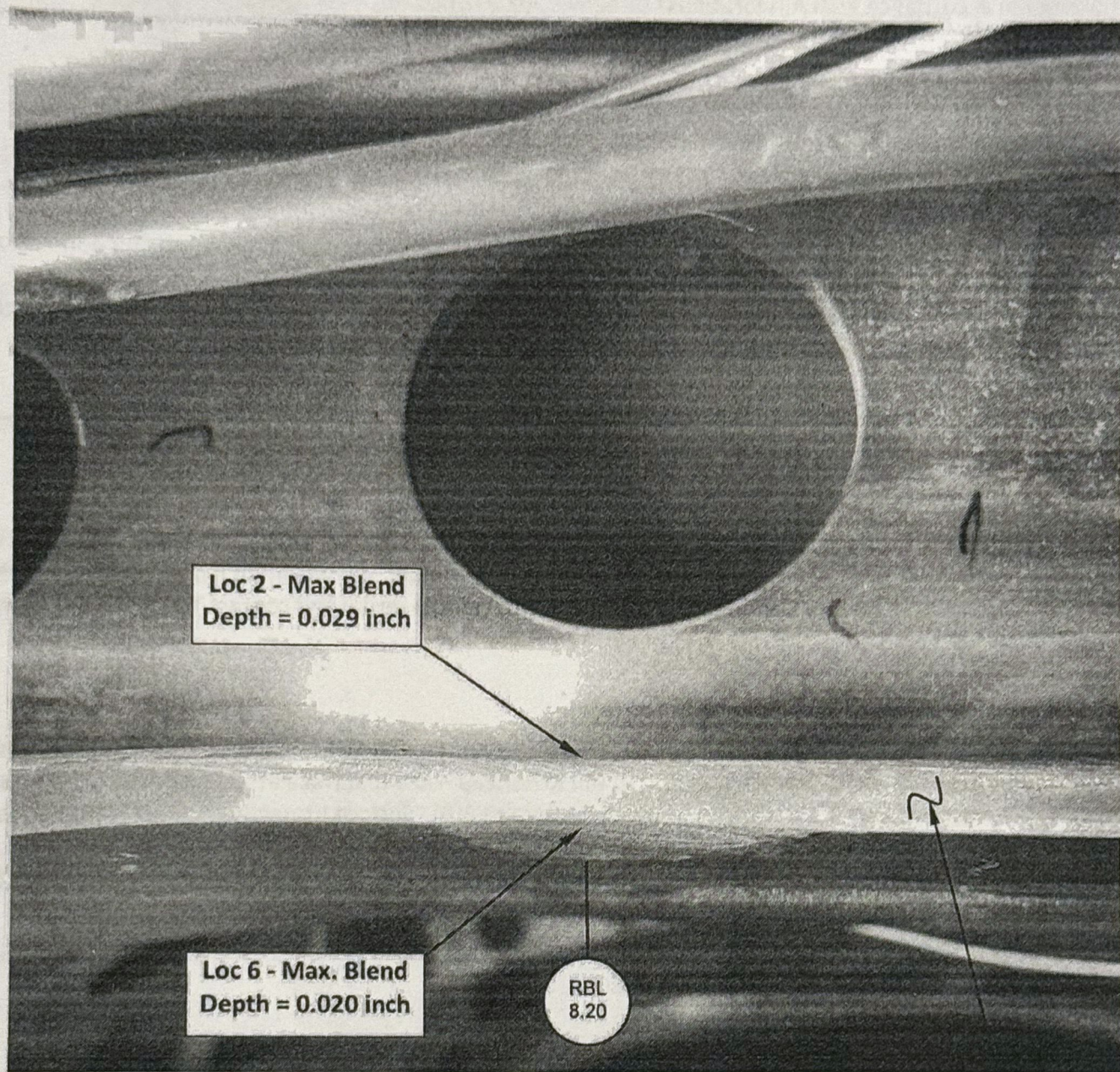
- a. Complete corrosion protection of the lower cap in accordance with the requirements of AD 2023-02-17, Paragraph (i).

Figure 3 - Typical Blend Profile

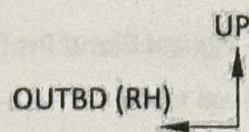


Size	CAGE Code	Drawing No.	Rev
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Scale		Title page rights apply	Sheet
None			5 of 5

Figure 2 – Close-Up Photograph
 Lower Cap – Upper/Lower Surface – Locations 2 and 6
 (View looking Aft at RHS of Carry-Thru)



(View looking Aft and slightly Up)



Wing Spar - Center
 Section Cantilever
 - Lower Cap
 (P/N 1710703-7)

Size A	CAGE Code 7EK50	Drawing No. FR-17702078-11811	Rev -
Scale None	Title page rights apply		Sheet 4 of 5

Table 1 - Damage Summary

Site	Location	Spar P/N	Measured Thickness (in)	Nominal Thickness (in)	Max Blend Depth (in)
1 - LCUS	RBL 8.20; FS 123.65	1710703-7	0.507	0.296	0.013
2 - LCUS	RBL 8.20; FS 123.67	1710703-7	0.558	0.300	0.029 *
3 - LCUS	RBL 8.20; FS 123.80	1710703-7	0.365	0.320	0.021
4 - LCUS	RBL 8.20; FS 124.05	1710703-7	0.421	0.360	0.019
5 - LCUS	RBL 8.20; FS 124.30	1710703-7	0.469	0.400	0.005
6 - LCLS	RBL 8.20; FS 123.80	1710703-7	0.365	0.320	0.020 *
7 - LCFE	RBL 8.20; FS 123.55	1710703-7	NA	Edge Blend	0.007

LCLS - Lower Cap Lower Surface / LCUS - Lower Cap Upper Surface / LCFE - Lower Cap Forward Edge

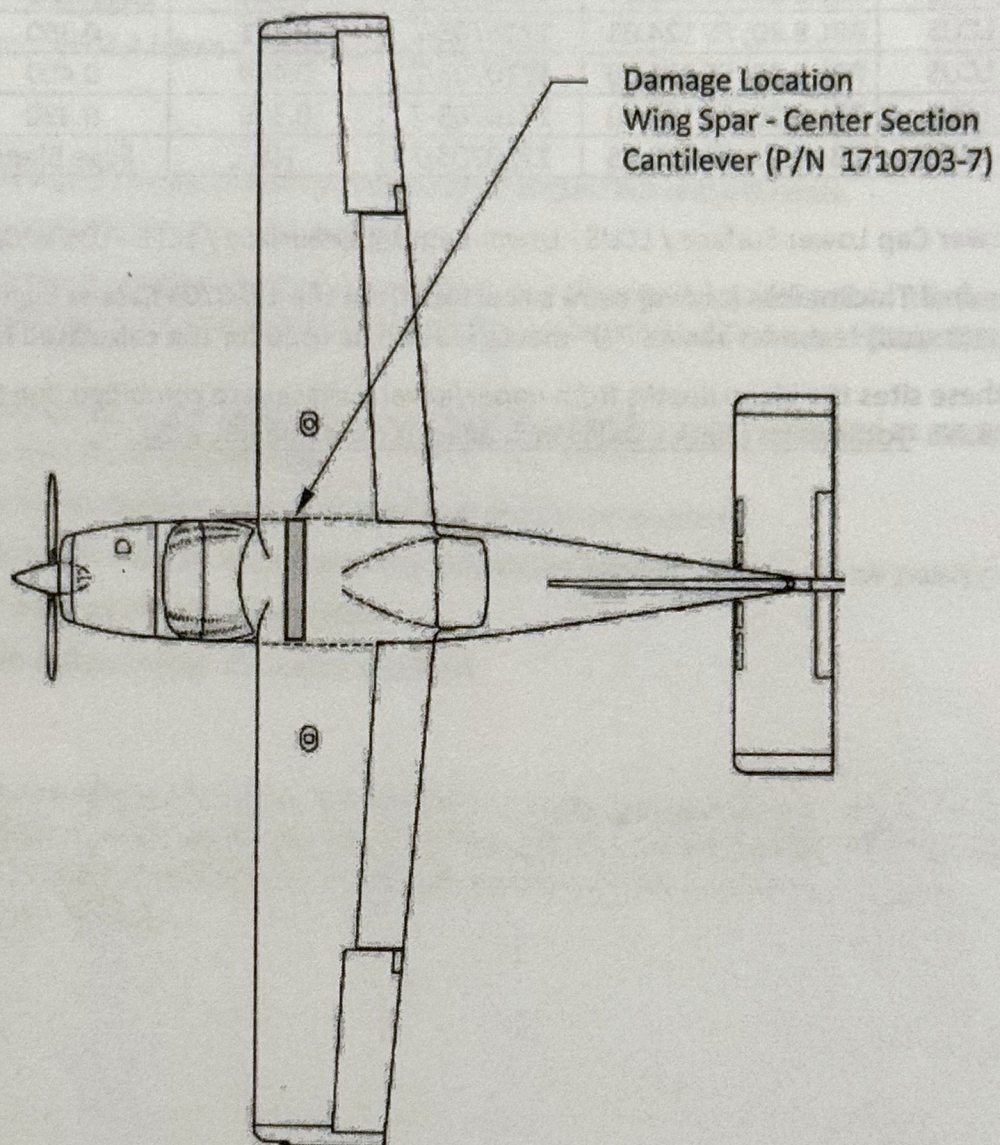
Note: The Nominal Thicknesses (above) were calculated from the 1710703 Cessna Engineering Drawing except where ("D" measured) is shown above. "D" measured will be used for the calculated Nominal Thickness here.

* = At these sites the blend depths from upper/lower surfaces are combined due to damage at the same RBL 8.20. Total blend depth = 0.049 inch deep at the same RBL 8.20.

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Scale None	Title page rights apply		Sheet 2 of 5

Figure 1 is a sketch showing the damage locations. Figure 2 is a close-up photograph of the damage sites.

Figure 1 - Damage Location



Model 177B Aircraft

Size	CAGE Code	Drawing No.	Rev
A	7EK50	FR-17702078-11811	-
Scale	Title page rights apply		Sheet
None			3 of 5

Revisions			
Rev	Description	Date	Approved

1. Aircraft Data

Repair request: This repair is based on information provided by Arispe Aviation LLC DBA Airspeed & Attitude, McKinney, TX, in damage report dated 14 Apr 2023 (ref DQ 38985).

Aircraft: Model 177B, serial number 17702078 (1974)

Registration number: N34904

Current reported usage: 5643.4 hours total time, N/A landings


2. General Notes

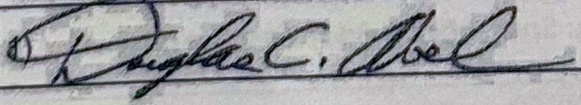
1. This repair does not affect the published maintenance or inspection requirements.
2. This repair is authorized for the stated aircraft only.
3. This repair is applicable to an aircraft which is unaltered by a third-party modification. It is the responsibility of the repair facility to contact the originator or holder of any relevant non-Textron Aviation STC to determine compatibility.
4. It is the responsibility of the repair facility to ensure that the damage as reported and as summarized in this repair corresponds with the actual damage.
5. All referenced documents shall be worked to the latest published revision.
6. Embodiment of this repair must be recorded in the aircraft log book stating the repair number and revision.
7. Aircraft weight and balance change is negligible.
8. All dimensions are in inches unless otherwise specified.

3. Damage Summary

When complying with Airworthiness Directive: AD 2023-02-17, corrosion damage was discovered common to the lower cap of the Wing Spar - Center Section Cantilever (P/N 1710703-7) defined as FS 123.55 to FS 127.55, WL 125.17 to WL 128.16, and between LBL 16 and RBL 16. After corrosion removal, the remaining lower cap thickness, and blended depths are shown in Table 1.

EXPORT CONTROL WARNING: This document contains technical data whose export, transfer, disclosure, or further publication is regulated by the International Traffic in Arms Regulations, 22 CFR 120-130, or Export Administration Regulations, 15 CFR 730-774, and may not be exported to unauthorized persons without U.S. Government approval.

Tolerances (in): X.X ± 0.1 X.XX ± 0.03 X.XXX ± 0.010 X.XXXX ± 0.0010 Angles ± 0.5°	Drawn	D. Abel 6 Jun 2023			 BY TEXTRON AVIATION
	Checker	<i>[Signature]</i>			
	Checker				Field Repair - Corrosion, Fuselage, Cantilever Wing Carry-Thru Spar, Lower Spar Cap Surface
	Specialist				
	Specialist	Size	CAGE Code	Drawing No.	
Approved	<i>[Signature]</i>	A	7EK50	FR-17702078-11811	-
Scale		233 None		Sheet	
				1 of 5	

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION STATEMENT OF COMPLIANCE WITH AIRWORTHINESS STANDARDS			FAA Project No. NA
AIRCRAFT OR AIRCRAFT COMPONENT IDENTIFICATION			
MAKE Textron Aviation Inc.	MODEL NO. 177B	TYPE (Aircraft, Engine, Propeller, etc.) Aircraft	NAME OF APPLICANT/AUTHORIZATION Textron Aviation Inc. Wichita, KS ODA-100129-CE
SUBMITTAL LETTER NO. 23-0949		LIST OF DATA	
IDENTIFICATION	TITLE		
Field Repair FR-17702078-11811 Rev -	Field Repair - Corrosion, Fuselage, Cantilever Wing Carry-Through Spar, Lower Spar Cap Surface <u>Notes:</u> 1. Delegation of Alternative Method of Compliance (AMOC) authority for AD 2023-02-17 was granted to Textron Aviation by Type Certification and Supplemental Type Certificate Organization Designation Authorization Procedures Manual ODA-GEN-001, Revision N, dated 03/02/2023 (02 March 2023). 2. This repair has been approved as an AMOC to the corrective actions required in paragraphs (g) and (h) in accordance with paragraph (n)(3) of AD 2023-02-17 and has been found to meet the Type Certification Basis of this airplane. 3. Reference data file DQ 38985 in the Structures Engineering Repair Team files for substantiating data for this repair. 4. Compatibility of this data with the aircraft configuration must be determined by the installer. 5. Before using this AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local Flight Standards District Office/Certificate Holding District. 6. All provisions of AD 2023-02-17 that are not specifically referenced above remain fully applicable and must be complied with accordingly. 7. This FAA AMOC is transferable with the aircraft to an operator who operates this aircraft under U.S. registry. 8. The FAA CCB will revoke this AMOC if the FAA CCB later determines that this AMOC does not provide an acceptable level of safety.		
PURPOSE OF DATA Approval of AMOC for S/N 17702078			
APPLICABLE REQUIREMENTS (List specific sections) 1) 14 CFR Part 23.301(a)(b) [23-0], 23.303 [23-0], 23.305(a)(b) [23-0], 23.307(a) [23-0], 23.601 [23-0], 23.603(a)(b) [23-0], 23.605 [23-0], 23.609(a)(b) [23-0], 23.613(a)(b)(c) [23-0], 23.615(a)(1) [23-0], and 23.627 [23-0] dated February 1, 1965.			
CERTIFICATION - As directed by the Administrator and in accordance with conditions and limitations of authorization under 14 CFR, data listed above and on attached sheets numbered <u>N/A</u> have been examined in accordance with established procedures and found to comply with applicable requirements of the Airworthiness Standards listed.			
I (We) Therefore <input type="checkbox"/> Recommend approval of these data <input checked="" type="checkbox"/> Approve these data			
SIGNATURE(S) OF AUTHORIZED REPRESENTATIVE(S)	NAME	CLASSIFICATION	DATE
	Douglas C. Abel	Structural	June 6, 2023

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.)

N34904

14Jun23

Nationality and Registration Mark

Date

Airworthiness Directive 23-02-17 Carry through spar inspection. Previously blended area located and measure beyond the tolerance set in the SEL 57-09R1.

Textron Aviation Notified by Structural Damage Report and Service Request DQ ID 38985.

AMOC issues by field repair Drawing No. FR-17702078-11811

Carry through spar blended and corrosion preventative applied IAW field repair document and SEL 57-09R1

NDI inspection performed by Tail Wind Inspections FAA CRS T75R462Y W.O No D10647 See Form TWI Form 201

The aircraft identified above was maintained and altered in accordance with the current Federal Aviation Agency Regulations, Aircraft Service Manual, Textron Aviation Field Repair Document, and is hereby approved for return to service with respect to work performed.

End

☐ Additional Sheets Are Attached



US Department
of Transportation
Federal Aviation
Administration

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

OMB No. 2120-0020
Exp. 8/31/2014

Electronic Tracking Number

For FAA Use Only

INSTRUCTIONS: Print or type all entries. See Title 14 CFR §43.9, Part 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. §44701). Failure to report can result in a civil penalty for each such violation. (49 U.S.C. §46301(a))

1. Aircraft	Nationality and Registration Mark N34904	Serial No. 17702078	
	Make Cessna	Model 177B	Series
2. Owner	Name (As shown on registration certificate) Peppard Jack G	Address (As shown on registration certificate) Address 16552 Big Oak Bay Rd City Tyler State TX Zip 75707-7730 Country US	

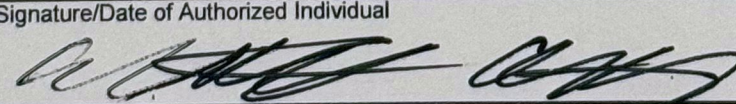
3. For FAA Use Only

4. Type		5. Unit Identification			
Repair	Alteration	Unit	Make	Model	Serial No.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	AIRFRAME		(As described in Item 1 above)	
<input type="checkbox"/>	<input type="checkbox"/>	POWERPLANT			
<input type="checkbox"/>	<input type="checkbox"/>	PROPELLER			
<input type="checkbox"/>	<input type="checkbox"/>	APPLIANCE	Type Manufacturer		

6. Conformity Statement

A. Agency's Name and Address		B. Kind of Agency	
Name Arispe Aviation	Address 10160 Doolittle Dr City McKinney State TX Zip 75071 Country US	<input checked="" type="checkbox"/> U. S. Certificated Mechanic	Manufacturer
		<input type="checkbox"/> Foreign Certificated Mechanic	C. Certificate No.
		<input type="checkbox"/> Certificated Repair Station	3381156
		<input type="checkbox"/> Certificated Maintenance Organization	

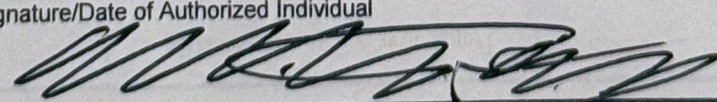
D. I certify that the repair and/or alteration made to the unit(s) identified in item 5 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

Extended range fuel per 14 CFR Part 43 App. B <input type="checkbox"/>	Signature/Date of Authorized Individual  14 JUN 23
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7. Approval for Return to Service

Pursuant to the authority given persons specified below, the unit identified in item 5 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ Approved ☐ Rejected

BY	FAA Flt. Standards Inspector	Manufacturer	Maintenance Organization	Persons Approved by Canadian Department of Transport
	FAA Designee	Repair Station	<input checked="" type="checkbox"/> Inspection Authorization	Other (Specify)

Certificate or Designation No. 3381156	Signature/Date of Authorized Individual  14 JUN 23
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