# N5854A

S/N: 0171

# **Major Repair**

11/4/2019

Wing, Gear, Engine, Prop

3
US Department
of Transportation
Federal Aviation

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

Form Approved OMB No. 2120-0020 2/28/2011	Electronic Tracking Number 2019000788
	For FAA Use Only

Federal Avi Administrat		(* time		o non pranty :			,,			Electro	nically Submitted 337
instructio	CTIONS: Prin	sition of th	is form.	ies. See Title 14 . This report is rec	CF qui	R §43.9, Part 4 red by law (49 U	3 Append .S.C. §447	ix B, and 701). Fai	AC 43.9 lure to rep	0-1 (or sub port can re	psequent revision thereof) for esult in a civil penalty for each
	Nationali	ly and Re	gistratio				Serial				
1. Aircraft	Make		1.	N 5854A	_		Model	Model			Series
			JS DESIGN CORP				12	SR22			
			n on registration certificate)						own on re	gistration	certificate)
			E JR	JR				Address 580 DURAN ST			
2. 0 11.101						Zip 890156971				State NV	
					-	3. For FAA Use		00010001			
		×								A	uthorization
Inspector Signature							De Sie	esignee gnature			umber
	·				_	5. Unit Identific					
4. T	Alteration	Ur	nit		Ma		ation		Model		Serial No.
	Alteration				IVIA	ine	(4			a bayra l	Genarite.
		AIRFRA	ME				(As a	lescribea 	in Item 1	above)	
		POWER	PLANT								
		PROPE	LLER								
				Туре		1					
		APPLIAN	NCE	Manufacturer			1				
					6	. Conformity St	tement				
A. Agency's	Name and A	ddress			_	B. Kind of Agen					
	ountain Aviation Inc				_	U. S. Certifi				Man	ufacturer
Address 2830 N.	Rancho Dr. Ste. A					Foreign Cer  Certificated				C. Certifi	cate No.
City Las Veg Zip 89130		intry UNITE	DSTATES	State NV	-	Certificated			ation	L9OR47	73Y
D. I certify	een made in	accordan	ce with to	the requirements the best of my ki	of I	Part 43 of the U.S vledge.	n 5 above 6. Federal	and des Aviation	cribed on Regulatio	the reverse ns and tha	e or attachments hereto at the information
Extended ra per 14 CFR App. B				enneth W S						by Kenneth 8 15:48:29 -0	w Scherado Jr. 07'00'
				ns specified belo	_		fied in ite	m 5 wa			e manner prescribed by the
	AA Fit. Stand			ninistration and is	٦		Approv		Rejecte		ed by Canadian
BY Ir	nspector			ıfacturer	$\dashv$	Maintenance O				rtment of Tr	
	AA Designee	×		ir Station		Inspection Auth	orization			,,	
Certificate or Designation I L9OR473Y	No.		"	nneth W			Jr.	Digit Date	tally signe : 2019.10	d by Kenr .28 15:50:4	neth W Scherado Jr. 45 -07'00'

### 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.

	N5854A	10/28/2019
	Nationality and Registration Mark	Date
mplied with Cirrus Aircraft Engineering Repair Deviation #FRA0001262 blacement of canted rib. Repaired forward right belly skin and replaced rk performed in accordance with Cirrus SR22 Maintenance Manual Sec ————————————————————————————————————	left wingtip rib at station 197.5. Appro	ding gear opening with priate body and paint

Electronic Form (PDF)

FAA Form 337 (10-06)



# \*\* CDC Document Control From Repair/Alteration Released \*\* Release To: Cirrus Abproved - Revision: A.7 \*\* Release Date: 2019-04-30 09:31:41 CDT \*\*

CIRRUS DESIGN CORPORATION

STATE OF THE PARTY					4515 Taylo	or Circle, Duluth, MN 55811 (218)-788-3185
AUTHOR: David L Jo	ohnson		CHANGE CLASS:	MINOR	REPAIR #	FRA00012628
Name: WING AND FUSELAGE DAM	AGE FROM HA	RD LANDING	REASONS AND REMAR	RKS: D LANDING, RESULTING IN DAMAGE	Models Affected	ASN#' Impacted
Description:			TO THE MLG AREA OF	LOWER WING SKIN, WS197.5 RIB,	SR22	0171
WING AND FUSELAGE DAN	MAGE FROM HA	RD LANDING	AND FUSELAGE SKIN.		n/a	
DOCUMENT TYPE:	FIEL	D REPAIR	REFERENCE FSR SR2X-	3016	n/a	
Items Affected by Repair/Alteration REVISION		DESCRIPTION/TITLE		n/a		
					n/a	

#### NOTICE:

THE REPAIRS HEREIN ARE PROVIDED SPECIFIC TO DAMAGE REPORTED TO CIRRUS AIRCRAFT. OTHER DAMAGE MAY BE PRESENT AND IT IS THE RESPONSIBILITY OF THE MAINTENANCE PERSONNEL OR ORGANIZATION TO ASSESS ANY ADDITIONAL DAMAGE AND REPLACE DISCREPANT PARTIS). KNOWN DAMAGED PARTS WHICH CAN BE REPLACED IN ACCORDANCE WITH APPROVED METHODS SHOULD BE ADDRESSED AND MAY NOT BE ADDRESSED SPECIFICALLY IN THIS REPAIR.

### REPAIR INSTRUCTIONS: SUMMARY

- GENERAL REQUIREMENTS
  - A. >>> CAUTION: READ INSTRUCTIONS COMPLETELY AND THOROUGHLY BEFORE ATTEMPTING ACCOMPLISHMENT OF THIS REPAIR.
  - B. FOLLOW PRACTICES DEFINED IN DOCUMENT 13773-001, "SR22 AND SR22T AIRPLANE MAINTENANCE MANUAL" (AMM), CHAPTER 51.
  - C. AFFECTED EMM SHALL BE REMOVED PRIOR TO ACCOMPLISHMENT OF THIS REPAIR AND REPLACED AFTERWARDS PER AMM 51-20.
  - D. TAKE EXTREME CARE TO PREVENT ADDITIONAL DAMAGE TO THE AIRCRAFT STRUCTURE OR SYSTEMS.
- 2. PROCURE FROM CIRRUS AIRCRAFT OR ANOTHER SOURCE:
- A. SEE PARTS LIST ON PAGE 2.

  3. OUTBOARD LEFT-HAND WING REPAIR.
  - A. DAMAGE REMOVAL.
  - A. DAMAGE REMOVAL.

    B. WS197.5 RIB REPLACEMENT.
  - C. LOWER WING SKIN.
  - D. NUTPLATE ASSEMBLY INSTALLATION.
- INBOARD LEFT-HAND WING REPAIR.
   A. LOWER WING SKIN DAMAGE REMOVAL.
  - B. LOWER WING SKIN DAMAGE REMOVAL.

    B. LOWER WING SKIN REPAIR SECTION INSTALLATION.
    - C. LOWER WING SKIN EXTERIOR WET-LAY.
    - D. WS35.88 RIB.
    - E. LOWER WING SKIN INTERIOR WET-LAY.
    - F. EXTERIOR DENT REPAIR.

Cirrus Design Approval – This document has been approved in accordance with FAA approved procedure meeting the requirements defined in 14 CFR Part 21. This document was processed through an electronic release system. All approval signatures are stored electronically in the Cirrus Product Data Management (PDM) System. The approval state appearing in the watermark at the top of this document is evidence the appropriate loased loop approval workflow process was used and is traceable in the Cirrus PDM database.

\*\* CDC Document Control Fig. Repair/Alteration Released \*\* Release To: Cirrus Ar Syved - Revision: B.4 \*\* Release Date: 2019-07-15 13:49:33 CDT \*\*

CIRRUS DESIGN CORPORATION
4515 Taylor Circle, Duluth, MN 55811 (218)-788-3185

REPAIR# FRA00012628B

.\_LD REPAIR / ALTERATION

- 5. FUSELAGE SKIN REPAIR.
  - A. BELLY CLOSEOUT DAMAGE.
- B. FORWARD OF RIGHT-HAND WING.
- 6. BODYWORK AND PAINT.

### **PARTS LIST**

ITEM NO	QTY.	CIRRUS P/N	DESCRIPTION
1	1	FRA00012628-101	LOWER LEFT-HAND WING SKIN REPAIR SECTION
2	1	13719-003	RIB, WS197.5, WING, LEFT
3	1	13556-001	BEARING PLATE, WING TIP SHEAR PIN
4	4	NAS9301B6	RIVET
5	7	NAS1149D0332J	WASHER
6	4	NAS9301B4	RIVET
7	1	11598-001	BACKING PLATE, NUTPLATE, PITOT TUBE
8	3	MS27039-1-09	SCREW
9	1	11772-001	BACKING PLATE, WS197.5 RIB, AILERON HINGE
10	1	FRA00012628-102	CANTED RIB REPAIR PATCH ◀

- KEPAIR / ALTERATION

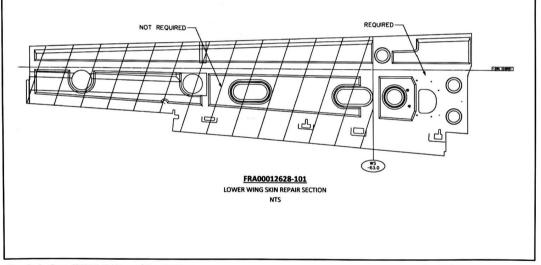
\*\* CDC Document Control Fig. Repair/Alteration Released \* Release To: Cirrus Apple Dved - Revision: B.4 \* Release Date: 2019-07-15 13:49:33 CDT \*\*

CIRRUS DESIGN CORPORATION 4515 Taylor Circle, Duluth, MN 55811 (218)-788-3185

REPAIR# FRA00012628B

### FABRICATION OF FRA00012628-101:

- 1. CDC TO FABRICATE LOWER WING SKIN REPAIR SECTION. REFERENCE FIGURE FRA00012628-101.
  - A. FABRICATE REQUIRED REPAIR SECTION FROM CDC P/N 13373-004 "WING SKIN, LOWER, LEFT".
  - B. REPAIR SECTION MAY BE LARGER THAN SHOWN FOR EASE OF FABRICATION.
  - C. SEAL ALL EXPOSED CORE WITH 5-MINUTE EPOXY.
- 2. CLEAN THOROUGHLY AND PACKAGE IN PLASTIC FOR SHIPPING.



Cirrus Design Form: CDEP112-Field Repair/Alteration-Form

\*\* Viewed or Printed On: July 15, 2019 03:39PM David Johnson \*

Page 3 of 25

\*\* CDC Document Control Fig. Repair/Alteration Released \*\* Release To: Cirrus Applied - Revision: B.4 \*\* Release Date: 2019-07-15 13:49:33 CDT \*\*

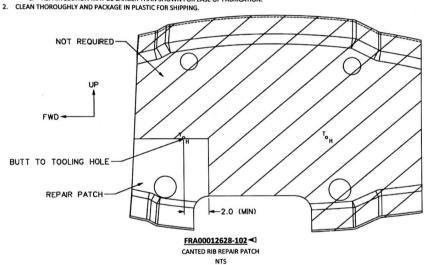
CIRRUS DESIGN CORPORATION

4515 Taylor Circle, Duluth, MN 55811 (218)-788-3185 REPAIR# FRA00012628B

EPAIR / ALTERATION

FABRICATION OF FRA00012628-102: ◀

- 1. CDC TO FABRICATE CANTED RIB REPAIR PATCH. REFERENCE FIGURE FRA00012628-102.
  - A. FABRICATE CANTED RIB REPAIR PATCH USING THE TOOL TO LAYUP CDC P/N 13428-003 "CANTED RIB, WING, LEFT". B. LAYUP OF CANTED RIB REPAIR PATCH.
    - i. [45/0/-45/90/45/0/-45/90/45/0/-45]
  - C. REPAIR SECTION MAY BE LARGER THAN SHOWN FOR EASE OF FABRICATION.



Cirrus Design Form: CDEP112-Field Repair/Alteration-Form

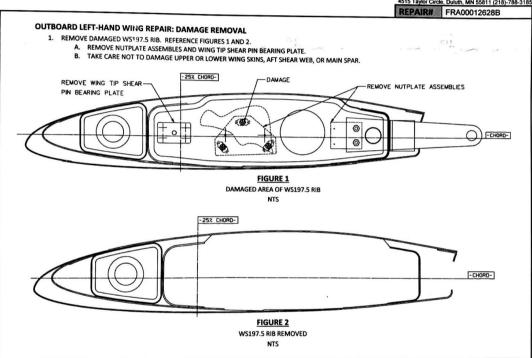
\*\* Viewed or Printed On: July 15, 2019 03:39PM David Johnson \*

Page 4 of 25

\*\* CDC Document Control Fig. Repair/Alteration Released \*\* Release To: Cirrus A Boved - Revision: B.4 \*\* Release Date: 2019-07-15 13:49:33 CDT \*\*

CIRRUS DESIGN CORPORATION

4515 Taylor Circle, Duluth, MN 55811 (218)-788-3185



Cirrus Design Form: CDEP112-Field Repair/Alteration-Form

\*\* Viewed or Printed On: July 15, 2019 03:39PM David Johnson \*

Page 5 of 25

### KEPAIR / ALTERATION

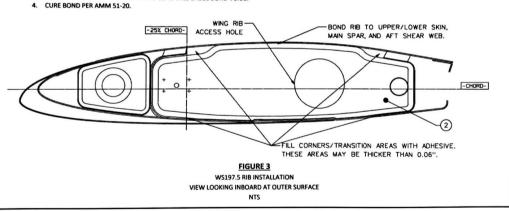
\*\* CDC Document Control Fig. Repair/Alteration Released \*\* Release To: Cirrus Al Dived - Revision: B.4 \*\* Release Date: 2019-07-15 13:49:33 CDT \*\*

CIRRUS DESIGN CORPORATION
4515 Taylor Circle, Duluth, MN 55811 (218)-788-3185

REPAIR# FRA00012628B

### **OUTBOARD LEFT-HAND WING REPAIR: WS197.5 RIB REPLACEMENT**

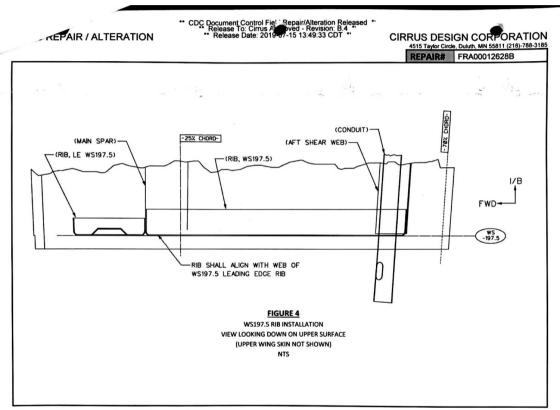
- 1. INSTALL WS197.5 RIB AS SHOWN IN FIGURES 3 AND 4.
  - A. ENSURE AT LEAST 70% OF THE LAMINATE SURFACE IS EXPOSED BEFORE PROCEEDING WITH BOND.
  - B. ENSURE REPLACEMENT RIB TIGHTLY FITS INTO OPENING.
- 2. PREPARE FAYING SURFACES FOR BONDING PER AMM 51-20, "REPAIR SURFACE PREPARATION".
  - A. PREPARE THE FAYING SURFACES OF WS197.5 RIB, UPPER AND LOWER WING SKINS, MAIN SPAR, AND AFT SHEAR WEB.
  - B. PREPARE SURFACES BEYOND THAN THE AREAS TO BE BONDED TO ENSURE PROPER ADHESION. BOND REPLACEMENT RIB INTO POSITION.
- A. USE STRUCTURAL ADHESIVE PER AMM 51-30: PTM&W ES6292-A/B.
  - B. MIX ADHESIVE PER AMM 51-30, "STRUCTURAL REPAIR SYSTEMS".
  - C. APPLY ADHESIVE PER 51-20, "REPAIR PROCESSES".
  - D. ACHIEVE BOND THICKNESS OF 0.005" (MINIMUM) AND 0.060" (MAXIMUM) EXCEPT WHERE SHOWN IN FIGURE 3.
  - E. SECURE REPLACEMENT RIB IN PLACE WITH FIXTURING AS REQUIRED TO PREVENT MOVEMENT DURING CURE.
  - \*NOTE: MOVEMENT DURING CURE WILL CAUSE BOND VOIDS.\*



Cirrus Design Form: CDEP112-Field Repair/Alteration-Form

Page 6 of 25

\*\* Viewed or Printed On: July 15, 2019 03:39PM David Johnson \*



Cirrus Design Form: CDEP112-Field Repair/Alteration-Form

\*\* Viewed or Printed On: July 15, 2019 03:39PM David Johnson \*

Page 7 of 25



\*\* CDC Document Control Fie! Repair/Alteration Released \*

\*\* Release To: Cirrus A Boved - Revision: B.4 \*

\*\* Release Date: 2019-07-15 13:49:33 CDT \*\*

CIRRUS DESIGN CORPORATION 4515 Taylor Circle, Duluth, MN 55811 (218)-788-3185 REPAIR# FRA00012628B

OUTBOARD LEFT-HAND WING REPAIR: LOWER WING SKIN

- 1. TO AVOID PLY BRIDGING FOR BAGSIDE REPAIR, CREATE A FILLET USING FILLER PASTE PER AMM 51-30.
  - A. CREATE A SMOOTH FILLET BETWEEN REPAIR SECTION, WS35.88 RIB, MAIN SPAR, CANTED RIB, AND AFT SHEAR WEB.
    - I. USE STRUCTURAL RESIN PER AMM 51-30.
- II. INITIAL CURE PER AMM 51-20.
  - 2. FABRICATE THREE (3) REPAIR PLIES FOR BAGSIDE WETLAY. REFERENCE FIGURES 5 AND 6.
    - A. USE STRUCTURAL FABRIC PER AMM 51-30: HEXCEL 7781/F16 OR F3.
    - B. ORIENT REPAIR PLIES AS FOLLOWS (IN ORDER OF PLY APPLICATION): ±45° WITH RESPECT TO ROSETTE IN FIGURES 5 AND 6.
    - C. FOR ALL PLIES DOWN, MAINTAIN 1.0" (MINIMUM) OVERLAP BEYOND DAMAGE UNLESS NOTED OTHERWISE. I. OVERLAP ONTO RIB.
      - II. BUTT TO EDGE OF LOWER WING SKIN IN OUTBOARD AND FORWARD DIRECTIONS.
- 3. FABRICATE TWO (2) REPAIR PLIES FOR TOOLSIDE WETLAY REPAIR. REFERENCE FIGURES 5 AND 6.
- A. USE STRUCTURAL FABRIC PER AMM 51-30; HEXCEL 7781/F16 OR F3.

  - ORIENT REPAIR PLIES AS FOLLOWS (IN ORDER OF PLY APPLICATION): ±45° WITH RESPECT TO ROSETTE IN FIGURES 5 AND 6.
  - C. FOR FIRST PLY DOWN, MAINTAIN 0.5" (MINIMUM) INITIAL OVERLAP BEYOND DAMAGE IN ALL DIRECTIONS UNLESS NOTED OTHERWISE. I. BUTT OR TRIM TO EDGE OF LOWER WING SKIN IN OUTBOARD AND FORWARD DIRECTIONS.
  - D. FOR SUBSEQUENT PLY, MAINTAIN 0.5" (MINIMUM) STAGGER BEYOND PREVIOUS PLY IN ALL DIRECTIONS UNLESS NOTED OTHERWISE.
- I. BUTT OR TRIM TO EDGE OF LOWER WING SKIN IN OUTBOARD AND FORWARD DIRECTIONS. 4. PREPARE THE REPAIR AREA FOR WET-LAY PER AMM 51-20, "REPAIR SURFACE PREPARATION".
- A. PREPARE AREA SUFFICIENTLY BEYOND THE AREA OF THE LARGEST REPAIR PLY TO ENSURE PROPER ADHESION.
- APPLY REPAIR PLIES TO THE WS197.5 RIB AND LOWER WING SKIN.
  - A. USE STRUCTURAL RESIN SYSTEM PER AMM 51-30: L285/H287.
- CURE PER AMM 51-20.

REPAIR / ALTERATION

\*\* CDC Document Control Fiel Repair/Alteration Released \* Release To: Cirrus A Release To: Cirrus A Release Date: 2019-07-15 13:49:33 CDT \*\*

CIRRUS DESIGN CORPORATION
4515 Taylor Circle, Duluth, MN 55811 (218)-788-3185

REPAIR# FRA00012628B

(MAN SPAR

(RIB, UE, WS197.5)

(CONDUIT)

(RIB, LE, WS197.5)

(CONDUIT)

(RIB, LE, WS197.5)

(CONDUIT)

(CONDUIT)

(FWD

(

Cirrus Design Form: CDEP112-Field Repair/Alteration-Form

\*\* Viewed or Printed On: July 15, 2019 03:39PM David Johnson \*

Page **9** of **25** 

REPAIR / ALTERATION

\*\* CDC Document Control Fig. Released \*\* Release To. Cirrus All Pued - Revision: B.4 \*\*

\*\* Release Date: 2019-07-15 13:49:33 CDT \*\*

TRIM PLIES AROUND
ACCESS OPENING

TOOLSIDE WET-LAY REPAIR

TOOLSIDE WET-LAY REPAIR

SECTION A-A

CIRRUS DESIGN CORPORATION
4015 Taylor Circle, Dulen, MM 58911 (216)-789-3185

TRIM PLIES AROUND
1.0 (MIN.)

O/B

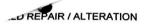
FILLER PASTE FILLET

SECTION A-A

Cirrus Design Form: CDEP112-Field Repair/Alteration-Form

\*\* Viewed or Printed On: July 15, 2019 03:39PM David Johnson \*

Page 10 of 25



\*\* CDC Document Control Fie Pepair/Alteration Released \* Release To: Cirrus Alexander Pepair/Alteration Released \* Release Date: 2019-07-15 13:49:33 CDT \*\*

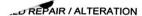
CIRRUS DESIGN CORPORATION 4515 Taylor Circle, Duluth, MN 55811 (218)-788-3185

REPAIR# FRA00012628B BUTT PLIES TO EOP-TOOLSIDE WET-LAY PLIES PITOT TUBE TRIM IN WING CUFF-O/B .5 (MIN.), TYP.-FWD .5 (MIN.), TYP.4 WS 197.5 (RIB, LE, WS197.5) -25% CHORD-(AFT SHEAR WEB) (MAIN SPAR (RIB, WS197.5) (CONDUIT) FIGURE 6 WING SKIN TOOLSIDE WET-LAY VIEW LOOKING UP AT LOWER WING SKIN

Cirrus Design Form: CDEP112-Field Repair/Alteration-Form

\*\* Viewed or Printed On: July 15, 2019 03:39PM David Johnson \*

Page 11 of 25



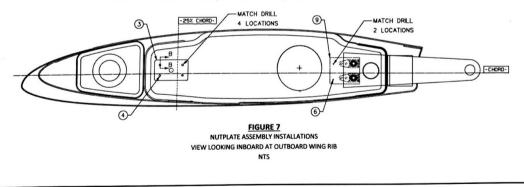
\*\* CDC Document Control Fig. Repair/Alteration Released \*\*
Release To: Cirrus Aller Development Control Fig. Released \*\*
Release Date: 2019-07-15 13:49:33 CDT \*\*

CIRRUS DESIGN CORPORATION 4515 Taylor Circle, Duluth, MN 55811 (218)-788-3185

REPAIR# FRA00012628B

# OUTBOARD LEFT-HAND WING REPAIR: NUTPLATE ASSEMBLY INSTALLATION

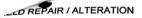
- 1. INSTALL WING TIP SHEAR PIN BEARING PLATE (13556-001). REFERENCE FIGURE 7.
  - A. BEARING PLATE IS LOCATED (UP/DOWN/FORE/AFT) BY THE SHEAR PIN ON WING TIP.
    - I. TEMPORARILY INSTALL WITH TAPE OR SIMILAR METHOD.
    - II. MATCH DRILL BEARING PLATE MOUNTING HOLES WITH MOUNTING HOLES IN EXISTING RIB. USE CAUTION TO ENSURE SHEAR PIN (WING TIP) ALIGNS PROPERLY WITH BEARING PLATE.
  - B. INSTALL BEARING PLATE.
- I. IF BEARING PLATE AND SHEAR PIN CANNOT BE ASSEMBLED CONTACT CIRRUS DESIGN FOR FURTHER INSTRUCTION. 2. INSTALL AILERON HINGE BACKING PLATE (11772-001). REFERENCE FIGURE 7.
- A. MATCH DRILL MOUNTING HOLES. I. ORIENT BACKING PLATE USING AILERON HINGE MOUNTING HOLES.
  - B. ATTACH BACKING PLATE USING NAS9301B4 (CHERRY MAX CR3213-4), BLIND RIVETS.
- 3. INSTALL PITOT TUBE ASSEMBLY AND BACKING PLATE (11598-001). REFERENCE FIGURE 8.
  - \*NOTE: CORRECT INSTALLATION OF PITOT TUBE IS VERY CRITICAL.\*
  - A. TRANSFER DRILL MOUNTING HOLES. I. ONCE PROPER ORIENTATION IS ACHIEVED TRANSFER DRILL MOUNTING HOLES AND RIVET HOLES INTO WS197.5 RIB.
  - B. ATTACH BACKING PLATE USING NAS9301B4 (CHERRY MAX CR3213-4), BLIND RIVETS.



Cirrus Design Form: CDEP112-Field Repair/Alteration-Form

\*\* Viewed or Printed On: July 15, 2019 03:39PM David Johnson \*

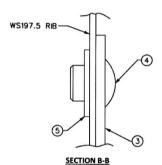
Page 12 of 25



\*\* CDC Document Control Fig. Repair/Alteration Released \* Release To: Cirrus A Powed - Revision: B.4 \* Release Date: 2019-07-15 13:49:33 CDT \*\*

CIRRUS DESIGN CORPORATION
4515 Taylor Circle, Duluth, MM 55811 (218)-788-3185

REPAIR# FRA00012628B



WING TIP BEARING PLATE RIVET INSTALLATION

Cirrus Design Form: CDEP112-Field Repair/Alteration-Form

\*\* Viewed or Printed On: July 15, 2019 03:39PM David Johnson \*

Page 13 of 25



\*\* CDC Document Control Fie

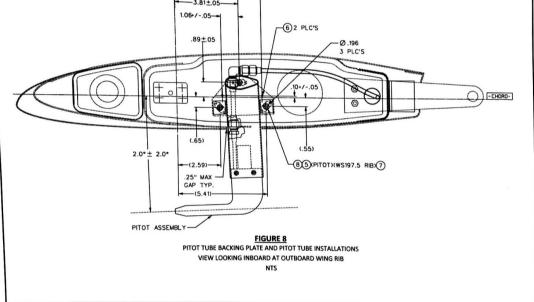
Release To: Cirrus Ai

Release To: Cirrus Ai

Release Date: 2019-07-15 13:49:33 CDT

\*\*

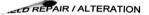
CIRRUS DESIGN CORPORATION
4515 Taylor Circle, Duluth, MN 55811 (218)-788-3185 REPAIR# FRA00012628B -25% CHORD--1.37+/-.05 6)2 PLC'S Ø.196 3 PLC'S



Cirrus Design Form: CDEP112-Field Repair/Alteration-Form

\*\* Viewed or Printed On: July 15, 2019 03:39PM David Johnson \*

Page 14 of 25

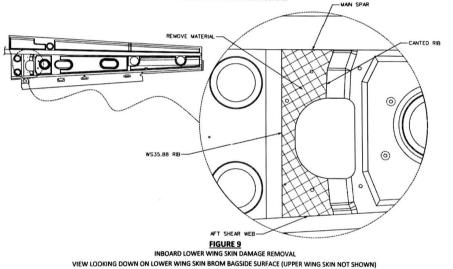


\*\* CDC Document Control Fig. | Repair/Alteration Released \* Release To: Cirrus Applied - Revision: B.4 \* Release Date: 2019-07-15 13:49:33 CDT \*\*

CIRRUS DESIGN CORPORATION 4515 Taylor Circle, Duluth, MN 55811 (218)-788-3185 REPAIR# FRA00012628B

INBOARD LEFT-HAND WING REPAIR: LOWER WING SKIN DAMAGE REMOVAL 1. REMOVE MATERIAL AS SHOWN IN FIGURE 9.

- A. REMOVE FULL THICKNESS LAMINATE WHERE SHOWN TO EDGES OF UNDERLYING STRUCTURE.
  - i. CUT TO EDGE OF WS35.88 RIB, CANTED RIB, MAIN SPAR, AND AFT SHEAR WEB.
- II. TAKE CARE NOT TO DAMAGE ANY OTHER PARTS OF THE WING STRUCTURE.



Cirrus Design Form: CDEP112-Field Repair/Alteration-Form

\*\* Viewed or Printed On: July 15, 2019 03:39PM David Johnson \*

Page 15 of 25



CIRRUS DESIGN CORPORATION

FRA00012628B

INBOARD LEFT-HAND WING REPAIR: CANTED RIB REPAIR €

1. SAND TO REMOVE ALL LOOSE AND DAMAGED FIBERS IN DAMAGED AREA.

2. INJECT RESIN FROM ANY FREE EDGES INTO ALL DAMAGED AREAS OF CANTED RIB. REFERENCE FIGURE 9A. A. USE STRUCTURAL RESIN SYSTEM PER AMM 51-30: L285/H287. 3. USING FORCE (CLAMPS) AS REQUIRED SHAPE CANTED RIB TO ORIGINAL CONTOUR AS BEST AS POSSIBLE.

DAMAGED AREA FORWARD

> FIGURE 9A ◀ CANTED RIB DAMAGE REMOVAL AND RESIN INJECTION

> VIEW LOOKING OUTBOARD AT THE INBOARD SURFACE NTS

Cirrus Design Form: CDEP112-Field Repair/Alteration-Form

\*\* Viewed or Printed On: July 15, 2019 03:39PM David Johnson \*

Page 16 of 25

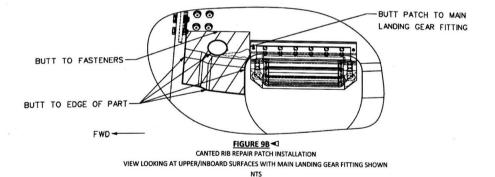
EPAIR / ALTERATION

\*\* CDC Document Control Fig. \*\* Pepair/Alteration Released \*\* Release To. Cirrus Applied - Revision: B.4 \*\* Release Date: 2019-07-15 13:49:33 CDT \*\*

CIRRUS DESIGN CORPORATION 4515 Taylor Circle, Duluth, MN 55811 (218)-788-3185 REPAIR# FRA00012628B

INBOARD LEFT-HAND WING REPAIR: CANTED RIB REPAIR ◀

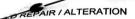
- 1. TRIM CANTED RIB REPAIR PATCH (FR.A00012628-102) APPROXIMATELY AS SHOWN IN FIGURE 9B.
  - A. BUTT TO MAIN LANDING GEAR FITTING AS REQUIRED. B. BUTT TO EDGE OF PART AS REQUIRED.
  - C.
  - BUTT TO SIDE BRACE FASTENERS AS REQUIRED.
  - PREPARE FAYING SURFACES FOR BONDING PER AMM 51-20, "REPAIR SURFACE PREPARATION".
    - A. PREPARE THE FAYING SURFACES OF CANTED RIB AND CANTED RIB REPAIR PATCH IN THE AREAS WHERE THEY WILL BE BONDED.
    - B. PREPARE SURFACES BEYOND THE AREAS TO BE BONDED TO ENSURE PROPER ADHESION.
- 3. BOND CANTED RIB REPAIR PATCH INTO POSITION. A. USE STRUCTURAL ADHESIVE PER AMM 51-30: PTM&W ES6292-A/B.
  - B. MIX ADHESIVE PER AMM 51-30, "STRUCTURAL REPAIR SYSTEMS".
  - C. APPLY ADHESIVE PER 51-20, "REPAIR PROCESSES".
  - D. ACHIEVE BOND THICKNESS OF 0.005" (MINIMUM) AND 0.080" (MAXIMUM).
  - E. SECURE CANTED RIB REPAIR PATCH IN PLACE WITH FIXTURING AS REQUIRED TO PREVENT MOVEMENT DURING CURE. \*NOTE: MOVEMENT DURING CURE WILL CAUSE BOND VOIDS.\*
- 4. CURE REPAIR SECTION BOND PER AMM 51-20.



Cirrus Design Form: CDEP112-Field Repair/Alteration-Form

\*\* Viewed or Printed On: July 15, 2019 03:39PM David Johnson \*

Page 17 of 25



\*\* CDC Document Control Fig. Repair/Alteration Released \*\* Release To: Cirrus A boved - Revision: B.4 \*\* Release Date: 2019-07-15 13:49:33 CDT \*\*

CIRRUS DESIGN CORPORATION 4515 Taylor Circle, Duluth, MN 55811 (218)-788-3185 REPAIR# FRA00012628B

d:;

# INBOARD LEFT-HAND WING REPAIR: LOWER WING SKIN REPAIR SECTION INSTALLATION

- 1. SCARF LOWER WING SKIN FROM TRIMED EDGE TO 1.5" INTO PART (MAXIMUM). REFERENCE FIGURE 10. A. TAKE CARE NOT TO DAMAGE UNDERLYING STRUCTURE.
- \*NOTE: ALL LAMINATE DAMAGE MAY NOT BE REMOVED DURING SCARFING.\* 2. FIT REPAIR SECTION (FRA00012628-101) TO OPENING CREATED IN FIGURE 10. REFERENCE FIGURE 11.
- A. MAXIMUM GAP OF .05" IN AREA SCARF.
- B. SCARF EDGE OF REPAIR SECTION TO MATE ONTO LOWER WING SKIN. 3. PREPARE FAYING SURFACES FOR BONDING PER AMM 51-20, "REPAIR SURFACE PREPARATION".
- A. PREPARE THE FAYING SURFACES OF LOWER WING SKIN AND REPAIR SECTION IN THE AREAS WHERE IT WILL BE BONDED. B. PREPARE SURFACES BEYOND THAN THE AREAS TO BE BONDED TO ENSURE PROPER ADHESION.
- 4. BOND REPAIR SECTION INTO POSITION.
  - A. USE STRUCTURAL ADHESIVE PER AMM 51-30: PTM&W ES6292-A/B. B. MIX ADHESIVE PER AMM 51-30, "STRUCTURAL REPAIR SYSTEMS".
    - C. APPLY ADHESIVE PER 51-20, "REPAIR PROCESSES".
    - D. ACHIEVE BOND THICKNESS OF 0.005" (MINIMUM) AND 0.080" (MAXIMUM).
      - SECURE REPAIR SECTION IN PLACE WITH FIXTURING AS REQUIRED TO PREVENT MOVEMENT DURING CURE.
      - \*NOTE: MOVEMENT DURING CURE WILL CAUSE BOND VOIDS.\*
      - \*NOTE: USE OF VACUUM IS ACCEPTABLE TO PROVIDE A MORE UNIFORM PRESSURE ON THE REPAIR SECTION.\*
- 5. CURE REPAIR SECTION BOND PER AMM 51-20.

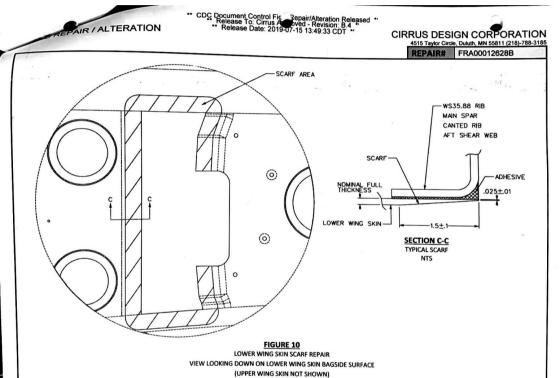
### INBOARD LEFT-HAND WING REPAIR: LOWER WING SKIN EXTERIOR WET-LAY

- 1. FABRICATE EIGHT (8) REPAIR PLIES FOR EXTERIOR REPAIR SECTION SEAM REPAIR. REFERENCE FIGURE 12. A. USE STRUCTURAL FABRIC PER AMM 51-30: HEXCEL 7781/F16 OR F3.

  - B. ORIENT REPAIR PLIES AS FOLLOWS (IN ORDER OF PLY APPLICATION): [45/0/90/-45/45/0/90/-45] WITH RESPECT TO ROSETTE IN FIGURE 12. C. FOR FIRST PLY DOWN, MAINTAIN 0.5" (MINIMUM) INITIAL OVERLAP BEYOND THE REPAIR SECTION SEAM IN ALL DIRECTIONS.
  - D. FOR SUBSEQUENT PLIES, MAINTAIN 0.25" (MINIMUM) STAGGER BEYOND PREVIOUS PLIES IN ALL DIRECTIONS, UNLESS NOTED OTHERWISE.
- I. BUTT PLIES TO ACCESS PANEL OFFSETS AS REQUIRED. 2. PREPARE THE REPAIR AREA FOR WET-LAY PER AMM 51-20, "REPAIR SURFACE PREPARATION".

\*\* Viewed or Printed On: July 15, 2019 03:39PM David Johnson \*

- A. PREPARE AREA SUFFICIENTLY BEYOND THE AREA OF THE LARGEST REPAIR TO ENSURE PROPER PLY ADHESION.
- APPLY REPAIR PLIES TO THE EXTERIOR REPAIR SECTION SEAM.
- A. USE STRUCTURAL RESIN SYSTEM PER AMM 51-30: L285/H287.
- CURE WET-LAY PER AMM 51-20.



Cirrus Design Form: CDEP112-Field Repair/Alteration-Form

\*\* Viewed or Printed On: July 15, 2019 03:39PM David Johnson \*

Page 19 of 25

REPAIR / ALTERATION

\*\* CDC Document Control Fig. 3epair/Alteration Released \*\*
Release To: Cirrus Agency Revision: B.4 \*\*
Release Date: 2019-07-15 13:49:33 CDT \*\*

CIRRUS DESIGN CORPORATION
4515 Taylor Circle, Duluth, MN 55811 (218)-788-3185

FRA00012628B WS35.88 RIB MAIN SPAR CANTED RIB AFT SHEAR WEB .05 (MAX), TYP. SCARF GAP 0 LOWER WING SKIN REPAIR SECTION 0 SECTION D-D
TYPICAL REPAIR SECTION INSTALLATION NTS FIGURE 11 LOWER WING SKIN REPAIR SECTION INSTALLATION VIEW LOOKING DOWN ON LOWER WING SKIN BAGSIDE SURFACE (UPPER WING SKIN NOT SHOWN) NTS

Cirrus Design Form: CDEP112-Field Repair/Alteration-Form

\*\* Viewed or Printed On: July 15, 2019 03:39PM David Johnson \*

Page 20 of 25

O REPAIR / ALTERATION

\*\* CDC Document Control Fig. \_\_epair/Alteration Released \*\* Release To: Cirrus Aller Devel - Revision: B.4 \*\* Release Date: 2019-07-15 13:49:33 CDT \*\*

CIRRUS DESIGN CORPORATION
4515 Taylor Circle, Duluth, MN 55811 (218)-788-3185

REPAIR# FRA00012628B BUTT PLIES AS REQUIRED TO ACCESS WS35.88 RIB PANEL OFFSET MAIN SPAR CANTED RIB 0 AFT SHEAR WEB .5 (MIN.), TYP. -.25 (MIN.), TYP. SECTION E-E NTS FIGURE 12 LOWER WING SKIN EXTERIOR WET-LAY REPAIR VIEW LOOKING DOWN ON LOWER WING SKIN BAGSIDE SURFACE (UPPER WING SKIN NOT SHOWN)

Cirrus Design Form: CDEP112-Field Repair/Alteration-Form

\*\* Viewed or Printed On: July 15, 2019 03:39PM David Johnson \*

Page 21 of 25



# \*\* CDC Document Control Fig. Repair/Alteration Released \* \*\* Release To: Cirrus A Boved - Revision: B.4 \* \*\* Release Date: 2019-07-15 13:49:33 CDT \*\*

CIRRUS DESIGN CORPORATION 4515 Taylor Circle, Duluth, MN 55811 (218)-788-3185 REPAIR# FRA00012628B

INBOARD LEFT-HAND WING REPAIR: WS35.88 RIB

- 1. CAREFULLY SAND TO REMOVE LOOSE FIBERS.
- 2. RESIN SEAL DELAMINATED AREA WITH RESIN.
  - A. USE STRUCTURAL RESIN SYSTEM PER AMM 51-30: L285/H287.
- CURE REPAIR SECTION BOND PER AMM 51-20.

### INBOARD LEFT-HAND WING REPAIR: LOWER WING SKIN INTERIOR WET-LAY

- 1. TO AVOID REPAIR PLY BRIDGING, CREATE A FILLET USING FILLER PASTE PER AMM 51-30.
  - A. CREATE A SMOOTH FILLET BETWEEN REPAIR SECTION, WS35.88 RIB, MAIN SPAR, CANTED RIB, AND AFT SHEAR WEB.
    - B. USE STRUCTURAL RESIN PER AMM 51-30: L285/H287. C. INITIAL CURE PER AMM 51-20.
- 2. FABRICATE THREE (3) REPAIR PLIES FOR INTERIOR REPAIRS OF WS35.88 RIB. MAIN SPAR. CANTED RIB. AND AFT SHEAR WEB.
  - A. USE STRUCTURAL FABRIC PER AMM 51-30: HEXCEL 7781/F16 OR F3.
  - B. ORIENT REPAIR PLIES AS FOLLOWS (IN ORDER OF PLY APPLICATION): ±45° WITH RESPECT TO ROSETTE IN FIGURE 13.
  - C. FOR FIRST PLY DOWN, MAINTAIN 0.5" (MINIMUM) INITIAL OVERLAP BEYOND EDGE OF STRUCTURE INTERFACE AND FILLER PASTE FILLET IN ALL DIRECTIONS.
  - D. FOR SUBSEQUENT PLIES, MAINTAIN 0.5" (MINIMUM) STAGGER BEYOND PREVIOUS PLIES IN ALL DIRECTIONS.
- 3. PREPARE THE REPAIR AREA FOR WET-LAY PER AMM 51-20, "REPAIR SURFACE PREPARATION". A. PREPARE AREA SUFFICIENTLY BEYOND THE AREA OF THE LARGEST REPAIR TO ENSURE PROPER ADHESION.
- APPLY REPAIR PLIES TO THE INTERIOR REPAIR SECTION SEAM.
- A. USE STRUCTURAL RESIN SYSTEM PER AMM 51-30: L285/H287. 5. CURE WET-LAY PER AMM 51-20.



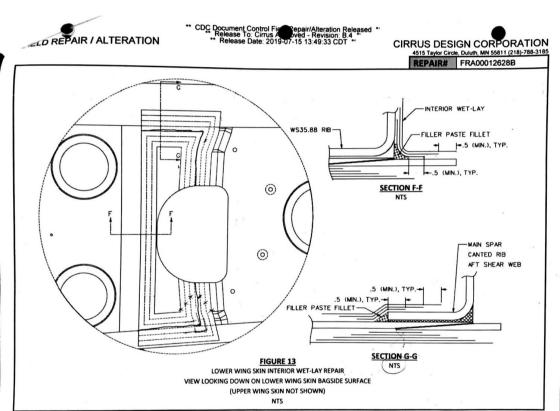
\*\* CDC Document Control Fig. Repair/Alteration Released \*\* Release To: Cirrus April Dived - Revision: B.4 \*\* Release Date: 2019-07-15 13:49:33 CDT \*\*

CIRRUS DESIGN CORPORATION
4515 Taylor Circle, Duluth, MN 55811 (218)-788-3185

REPAIR# FRA00012628B

## INBOARD LEFT-HAND WING REPAIR: EXTERIOR DENT REPAIR

- 1. DRILL INJECTION HOLES AT EACH AREA OF LAMINATE-CORE SEPARATION (FAILED TAP TEST).
  - A. USE DRILL BIT WITH 0.098" (#40) MAXIMUM DIAMETER.
  - B. USE A DRILL STOP TO ENSURE HOLE STOPS 0.020" (APPROXIMATE) THROUGH THE LOCAL LAMINATE THICKNESS.
  - C. MAINTAIN A 6D MINIMUM PITCH (0.60" CENTER TO CENTER) WHERE MULTIPLE INJECTION OR VENTING HOLES ARE REQUIRED.
- 2. INJECT RESIN TO RESTORE STABILITY TO THE AREA(S) WITH LAMINATE-CORE SEPARATION.
  - A. USE STRUCTURAL RESIN SYSTEM PER AMM 51-30: L285/H287.
  - B. CUT SYRINGE TIP LENGTH TO THE THICKNESS OF THE LAMINATE.
  - C. INJECT RESIN INTO LAMINATE UNTIL, THE RESIN STOPS FLOWING IN AN OUTWARD DIRECTION. \*NOTE: FILL UNTIL THE OUTWARD FLOW OF RESIN STOPS.\*
- 3. FABRICATE TWO (2) REPAIR PLIES FOR EXTERIOR LAMINATE REPAIR.
  - A. USE STRUCTURAL FABRIC PER AMM 51-30: HEXCEL 7781/F16 OR F3.
  - B. ORIENT REPAIR PLIES AT ±45° WITH RESPECT TO MAIN SPAR OR LEADING EDGE AS 0°.
  - C. MAINTAIN 0.5" (MINIMUM) INITIAL OVERLAP BEYOND DAMAGE IN ALL DIRECTIONS.
  - D. MAINTAIN 0.5" (MINIMUM) STAGGER BEYOND EACH SUBSEQUENT PLY IN ALL DIRECTIONS.
  - PREPARE THE REPAIR AREA FOR WET-LAY PER AMM 51-20, "REPAIR SURFACE PREPARATION".
  - A. PREPARE AREA SUFFICIENTLY BEYOND THE AREA OF THE LARGEST REPAIR PLY TO ENSURE PROPER PLY ADHESION.
- APPLY REPAIR PLIES OVER DAMAGE.
   A. USE STRUCTURAL RESIN SYSTEM PER AMM 51-30: L285/H287.
- 6. CURE WET-LAY PER AMM 51-20.



Cirrus Design Form: CDEP112-Field Repair/Alteration-Form

\*\* Viewed or Printed On: July 15, 2019 03:39PM David Johnson \*

Page 24 of 25



\*\* CDC Document Control Fig. Repair/Alteration Released \*\* Release To: Cirrus April 2019-07-15 13:49:33 CDT \*\*

CIRRUS DESIGN CORPORATION
4515 Taylor Circle, Duluth, MN 55811 (218)-788-3185

REPAIR# FRA00012628B

## FUSELAGE SKIN REPAIR: BELLY CLOSEOUT DAMAGE

- 1. CAREFULLY REMOVE CRACKS IN ADHESIVE BETWEEN FUSELAGE SKIN AND SPAR COVER.
- A. IF CRACKS CANNOT BE FULLY REMOVED WITHOUT CAUSING DAMAGE TO FUSELAGE OR BELLY CLOSEOUT CONTACT CIRRUS FOR FURTHER INSTRUCTION.

  2. AFTER CRACK REMOVAL, FILL IN CAVITY WITH ADJESTUF
  - A. USE STRUCTURAL ADHESIVE PER AMM 51-30: PTM&W ES6292-A/B.
  - MIX ADHESIVE PER AMM 51-30, "STRUCTURAL REPAIR SYSTEMS".
     APPLY ADHESIVE PER 51-20, "REPAIR PROCESSES".
- 3. CURE ADHESIVE PER AMM 51-20.
- 4. RESIN SEAL DELAMINATED AREA.
  - A. USE STRUCTURAL RESIN SYSTEM PER AMM 51-30: L285/H287.
- 5. CURE ADHESIVE PER AMM 51-20.

#### FUSELAGE SKIN REPAIR: FORWARD OF RIGHT-HAND WING

- 1. DRILL INJECTION HOLES AT EACH AREA OF LAMINATE-CORE SEPARATION (FAILED TAP TEST).
  - A. USE DRILL BIT WITH 0.098" (#40) MAXIMUM DIAMETER.

    B. USE A DRILL STOP TO ENSURE HOLE STOPS 0.020" (APPROXIMATE) THROUGH THE LOCAL LAMINATE THICKNESS.
  - B. USE A DRIEL STOP TO ENSURE HOLE STOPS 0.020 (APPROXIMATE) THROUGH THE LOCAL DAMINATE THICKNESS.

    C. MAINTAIN A 6D MINIMUM PITCH (0.60" CENTER TO CENTER) WHERE MULTIPLE INJECTION OR VENTING HOLES ARE REQUIRED.
- 2. INJECT RESIN TO RESTORE STABILITY TO THE AREA(S) WITH LAMINATE-CORE SEPARATION.
  - A. USE STRUCTURAL RESIN SYSTEM PER AMM 51-30: L285/H287.
    - B. CUT SYRINGE TIP LENGTH TO THE THICKNESS OF THE LAMINATE.
      C. INJECT RESIN INTO LAMINATE UNTIL, THE RESIN STOPS FLOWING IN AN OUTWARD DIRECTION.
  - \*NOTE: FILL UNTIL THE OUTWARD FLOW STOPS.\*
- FABRICATE FOUR (4) REPAIR PLIES FOR FUSELAGE LAMINATE REPAIR.
   A. USE STRUCTURAL FABRIC PER AMM 51-30: HEXCEL 7781/F16 OR F3.
  - B. ORIENT REPAIR PLIES AT ±45° WITH RESPECT TO BLO AS 0°.
  - C. MAINTAIN 0.5" (MINIMUM) INITIAL OVERLAP BEYOND DAMAGE IN ALL DIRECTIONS UNLESS NOTED OTHERWISE.
  - I. REDUCE OVERLAP IN DIRECTION OF VORTEX GENERATOR TO 0.25".
- D. MAINTAIN 0.5" (MINIMUM) STAGGER BEYOND EACH SUBSEQUENT PLY IN ALL DIRECTIONS UNLESS NOTED OTHERWISE.
  I. REDUCE STAGGER IN DIRECTION OF VORTEX GENERATOR TO 0.25".
- REDUCE STAGGER IN DIRECTION OF VORTEX GENERATOR TO 0.25.

   PREPARE THE REPAIR AREA FOR WET-LAY PER AMM 51-20. "REPAIR SURFACE PREPARATION".
  - A. PREPARE AREA SUFFICIENTLY BEYOND THE AREA OF THE LARGEST REPAIR PLY TO ENSURE PROPER ADHESION.
- 5. APPLY REPAIR PLIES OVER DAMAGE.
  - A. USE STRUCTURAL RESIN SYSTEM PER AMM 51-30: L285/H287.
- 6. CURE WET-LAY PER AMM 51-20.

Cirrus Design Form: CDEP112-Field Repair/Alteration-Form

#### BODYWORK AND PAINT:

1. BODYWORK AND PAINT PER AMM 51-20, "EXTERIOR FINISH".

Page 25 of 25

\*\* Viewed or Printed On: July 15, 2019 03:39PM David Johnson \*

### NEVADA AIRCRAFT ENGINE LLC. PISTON ENGINE WARRANTY

The following "warranty policy" is supplied to the purchaser by NAE and the purchaser agrees that the terms and conditions set forth in this warranty are made part of the work order or contract to supply parts and labor.

### " AS IS" - NO WARRANTY:

The repair and/or workmanship provided by NAE are without warranty, expressed or implied, and the equipment, parts and/or repairs are provided to the purchaser in "as is" condition.

### LIMITED WARRANTY

Nevada Aircraft Engines LLC. (NAE) warrants each product to be free from defects in material and workmanship under normal use and service for a period of 2 years or 1000 hours, which ever occurs first provided that NAE's liability and buyer's remedies under this limited warranty are limited to the repair or replacement, at NAE's election, of engine or components which are shown, to NAE's reasonable satifaction, to have been defective and returned to NAE within 1 year from the date of delivery with no hours restriction, upon which such parts supplied or repaired by NAE were originally installed, but in no event later than 1 year after the date of delivery of the unit by NAE. A written notice of a warranty claim must be given promptly by purchaser to NAE, but in no event later than thirty (30) days after purchaser's discovery of a defect. In the event NAE agrees that there was in fact a defect in either material or workmanship provided by NAE after the 1 year no hours restriction period ends, a pro-rated Repair or Replacement policy will be in force as follows: Current list price shall be used for any overhauled engine affected by warranty replacement or repair, divided by the applicable manufacturer's Time Between Overhaul (TBO) and then multiplied by the greater of the following: The number of hours on the repaired or replaced engine by Hobbs Meter or Tachometer hourmeter ( whichever is greater) or greatest amount of logged hours or 40 hours per month accumulation beginning with the month of delivery. The end amount of the formula total to be borne by purchaser. Labor costs associated with the repair of a defective engine or part shall be pro-rated in the same manner.

Transportation charges for the return of such defective parts to NAE and their reshipment to NAE at Henderson, Nevada and the risk of loss thereof will be borne by purchaser. NAE shall not assume freight charges, transportation or delivery expenses, installation, removal costs or airframe repairs, or loss of use, all of which are excluded under this warranty. NAE does not warrant parts, materials or services supplied or performed by others including, without limitation, parts and engine accessories such as magnetos, starters, engine component parts, alternators or turbos which were purchased from a manufacturer other than NAE as an assembled unit without alteration by NAE. This warranty shall not apply if engine was repaired or altered in any manner outside NAE's shop. Replacement or repairs of an engine or component will not be construed as to extend the initial warranty period. The foregoing warranty applies only if the engine supplied by NAE was properly installed by FAA certified mechanics and maintained valid log book entries according to current manufacturer's manuals and service bulletins and in accordance with FAA standards.

NAE is not liable for failures due to latent or unobvious manufacturing, engineering or improper design of parts or components furnished by a manufacturer to NAE. Any engines or components that have broken or tampered seals will not be covered by the foregoing warranty. The above Limited Warranty does not apply to an engine that has been subject to misuse, neglect, accident, abuse or damage from the elements. Thermal shock cooling to parts is excluded under this warranty. Warranty also does not apply to parts overheated from improper operating or running lean of peak EGT. installed, repaired, maintained or altered improperly by the purchaser or third parties in the judgment of NAE. Engines internally damaged by rust and corrosion from storage or non-usage will be excluded under this warranty.

Exclusive Warranties and Remedies- Pursuant to the Uniform Commercial Code Section 2-316 and 2-302, THE FOREGOING WARRANTIES ARE EXCLUSIVE AND ARE GIVEN AND ACCEPTED IN LIEU OF (i) ANY AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE: AND (ii) ANY OBLICATION, LIABILITY, RIGHT, CLAIM OR REMEDY IN CONTRACT OR TORT, WHETHER OR NOT ARISING FROM SELLER'S NEGLIGENCE, ACTUAL OR IMPUTED. THE REMEDIES OF THE BUYER SHALL BE LIMITED TO THOSE PROVIDED HERIN TO THE EXCLUSION OF ANY OTHER REMEDIES INCLUDING, WITHOUT LIMITATION, INCIDENTAL OR CONSEQUENTIAL DAMAGES.

WORK ORDER WARRANTY NO. 2197

ENGINE MODEL 10-550-N

ENGINE SERIAL NO. 686184

Auth	oving Civil Aviation hority/Country: FAA/UNITED STATI	2. ES	CE	IZED RELEASE RTIFICATE , Airworthiness Approval Tag			3. Form Tracking Number: 82309		
l. Organia	zation Name and Address	Nevada Re 2482 Progr Redding, C	ess Drive	ic. (CRS# S7HR883	J)		5. Work Order/Co	ntract/ Invoice Number:	
5. Item	7. Description:		8. Part Number:		9.Quantity:	10. Seria	l Number:	11. Status/Work:	
1	Magne	eto	S6RSC-25 (	(10-500556-1)	1		D01HA133	Overhauled	
/lagneto	arks: o Overhauled in according to the second secon				Aug 31 2011.				
Magneto Full deta	o Overhauled in accor ails of work carried out	t per Work Order	No 82309 attached.	14a. [X] 14 CFR Certifies that	43.9 Return to S	specified in	Block 12, the work id	specified in Block 12.	
Full deta	o Overhauled in accor	per Work Order	No 82309 attached.	14a. [X] 14 CFR Certifles that idescribed in E	43.9 Return to S inless otherwise s lock 12 was acco	specified in mplished in	Block 12, the work id accordance with Titl		
Full deta	o Overhauled in accor ails of work carried out	per Work Order bove were manufact is in a condition safe for	No 82309 attached.  ured in conformity to: operation  urthorization No.:	14a. [X] 14 CFR Certifles that idescribed in E	43.9 Return to S inless otherwise s clock 12 was acco art 43 and in resi	specified in mplished in	Block 12, the work id accordance with Titl	entified in Block 11 and e 14, Code of Federal pproved for return to service.	
Full deta  13a. Certi Ap No 13b. Auti	o Overhauled in accor- ails of work carried out lifes the Items Identified al opproved design data and an on-approved design data sp thortzed Signature:	per Work Order bove were manufacts is in a condition safe for ecified in Block 12.  13c. Approval A	No 82309 attached.  ured in conformity to:  or operation  unthorization No.:	14a. [X] 14 CFR Certifiles that described in E Regulations, I	43.9 Return to S inless otherwise a lock 12 was according 43 and in resi	specified in mplished in	Block 12, the work id accordance with Titl work, the items are a	entified in Block 11 and e 14, Code of Federal pproved for return to service.	
Full deta  13a. Certi Ap Not 13b. Auti Not	o Overhauled in accor- ails of work carried out files the Items identified al pproved design data and an on-approved design data sp thorized Signature: Applicable	per Work Order bove were manufactor in a condition safe for ecified in Block 12.  13c. Approval A Not Applici	No 82309 attached.  ured in conformity to:  or operation  urthorization No.: able	14a. [X] 14 CFR Certifies that 14 described in the Regulations, i	43.9 Return to S inless otherwise a lock 12 was acco art 43 and in resi Signature:	specified in mplished in	Block 12, the work id accordance with Titl work, the items are a 14c. Approval/Cer S7HR883J	entified in Block 11 and e 14, Code of Federal pproved for return to service. tiffcate Number:	

NSN: 0052-00-12-9005

FAA FORM 8130-3 (02-14)

### WORK ORDER

DATE	WORK ORDER #	
01/29/19	82309	

Mfr: TCM/Bendix Desc: Magneto Part No.: 10-500556-1 (S6RSC-25) Serial No.: D01HA133 Work Order No.: 82309

Received Magneto for Overhaul:

1 ea P/N 10-500556-1 (S6RSC-25), S/N D01HA133

Magneto disassembled, cleaned and inspected. Noted finger loose on distributor gear. Repaired as necessary. Replaced worn and defective parts as required. Distributor block reconditioned. Magneto assembled, internally timed and tested.

Magneto Overhauled in accordance with Manufacturer Overhaul Manual X42002-3, dated Aug 31 2011.

The following parts have been replaced in this unit:

ı						
		10-81806	DE Bearing	1 ea	10-50752	Felt Washer
	1 ea	2-202	CE Bearing	1 ea	10-391213	Cam Screw
	1 ea	10-400554	Oil Seal	1 ea	MS16624-1037	Retainer Ring
	1 ea	10-51678	Oil Deflector	1 ca	10-51324	Impulse Spring
	1 ea	10-160844	Carbon Brush	1 ea	10-382584	Breaker
	1 ea	10-163374	Felt Strip	And		Related Hardware
	1 ea	10-400012	Nameplate			

In addition to Standard Overhaul the following was required:

1 ea AB357586 Distributor Gear (PMA)

AD / SB STATUS:

SB 556C / 74-26-09 Drive Bushing - N/A MAG P/N

SB 623A / 82-20-01 Impulse Coupling - N/A, SNAP RING STYLE CAM INSTALLED

SB 631 Lubricant - C/W

SB 634 Contacts - N/A MAG P/N

SB 639 Impulse Coupling - C/W

CSB 641 / 94-06-09 Capacitor - N/A CAPACITOR P/N

SB 643C Maintenance Interval - OVERHAUL

MSB 644 / 73-07-04 / 94-01-03R2 Coil & Rotor - IN COMPLIANCE

MSB 645 / 78-09-07R3 / 2005-12-06 Impulse Coupling - C/W INSPECTION X=.043; X=.047

SB 654A Improved Capacitor - IN COMPLIANCE

SB 658 Distributor Gear Maintenance - C/W, INSTALLED NEW DISTRIBUTOR GEAR

SIL 663A Isolation of Tach Circuit - N/A MAG P/N

SB 664 Capacitor - N/A CAPACITOR P/N

CSB 665A Capacitor - N/A CAPACITOR P/N

SB 669 Distributor Block Bushing Inspection - C/W INSPECTION, SUPPLY COPY

SB 670 Improved Distributor Block - N/A BATCH CODE, 10-357426 01-03

2482 Progress Drive Redding, CA 96001-3235 (530) 221-4397 (530) 221-0660 fax Repair Station #S7HR883J

The aircraft component identified above was repaired and Inspected in accordance with current Regulations of the Federal Aviation Administration and is approved for return to service. FAA REPAIR STATION NO. S7HR8831

Inspector:

1. Approving Civil Aviation Authority/Country:  FAA/UNITED STATES			AUTHORIZED RELEASE CERTIFICATE FAA Form 8130-3, Airworthiness Approval Tag				3. Form Tracking Number: 82308		
l. Organ	Ization Name and Address:	Aircraft Elec Nevada Rep 2482 Progre Redding, CA	ss Drive	:. (CRS# S7HR883	J)		5. Work Order/Con	stract/ Invoice Number:	
6. Item	7. Description:		8. Part Number:		9.Quantity:	10. Serial	Number:	11. Status/Work:	
1	Magnet	to	S6RSC-25 (1	0-500556-1)	1		D06JA150	Overhauled	
	alls of work carried out	per Work Order N	lo 82308 attached.						
A	iffes the items identified ab	ove were manufactur	red in conformity to:	Certifies that described in E	Block 12 was acco	pecified in B	Block 12, the work idea accordance with Title	specified in Block 12. ntified in Block 11 and 14, Code of Federal proved for return to service.	
A	iffes the Items Identified ab pproved design data and are on-approved design data spe	ove were manufacture in a condition safe for secified in Block 12.	red in conformity to: operation	Certifies that described in B Regulations,	unless otherwise s Block 12 was acco Part 43 and in resp	pecified in B	Block 12, the work idea accordance with Title work, the items are ap	ntified in Block 11 and 14, Code of Federal proved for return to service.	
A N	iffes the items identified ab	ove were manufactur	red in conformity to: operation thorization No.:	Certifies that described in E	unless otherwise s Block 12 was acco Part 43 and in resp d Signaturer	pecified in B	Block 12, the work idea accordance with Title	ntified in Block 11 and 14, Code of Federal proved for return to service.	
13b. Aut Not	iffes the Items Identified ab pproved design data and are on-approved design data spe thorized Signature:	ove were manufactur in a condition safe for orifled in Block 12.  13c. Approval Au	red in conformity to: operation thorization No.: ble	Certifies that described in E Regulations, I	unless otherwise s Block 12 was acco Part 43 and in resp d Signature and or Printed:)	pecified in B	Slock 12, the work idea accordance with Title work, the items are ap	ntified in Block 11 and 14, Code of Federal proved for return to service.	
13b. Aut Not	iffes the Items Identified ab pproved design data and are on-approved design data spe shortzed Signature: Applicable	ove were manufacturu in a condition safe tor cettled in Block 12.  13c. Approval Au Not Applical  13e. Date (dd/mn Not Applica	red in conformity to: operation thorization No.: ble	Certifies that described in Englations, 14b. Authorized 14d. Name (Typ. Carl E. Sch	unless otherwise s Block 12 was acco Part 43 and in resp d Signature and or Printed:)	pecified in B	lock 12, the work idea accordance with Title work, the items are ap 14c. Approval/Certi S7HR883J	ntified in Block 11 and 14, Code of Federal proved for return to service.	

FAA FORM 8130-3 (02-14) NSN: 0052-00-12-9005

### WORK ORDER

DATE	WORK ORDE	R #			
01/29/19	82308				
Mfr: TCM/Bendix	Desc: Magneto	Part No.:	10-500556-1 (S6RSC-25)	Serial No.: D06JA150	Work Order No.: 82308

Received Magneto for Overhaul:

1 ea P/N 10-500556-1 (S6RSC-25), S/N D06JA150

Magneto disassembled, cleaned and inspected. Repaired as necessary. Replaced worn and defective parts as required. Distributor block reconditioned. Magneto assembled, internally timed and tested.

Magneto Overhauled in accordance with Manufacturer Overhaul Manual X42002-3, dated Aug 31 2011.

The following parts have been replaced in this unit:

1 ea	10-81806	DE Bearing	1 ea	10-50752	Felt Washer
1 ea	2-202	CE Bearing	1 ea	10-391213	Cam Screw
1 ea	10-400554	Oil Seal	1 ea	MS16624-1037	Retainer Ring
1 ea	10-51678	Oil Deflector	1 ea	10-51324	Impulse Spring
1 ea	10-160844	Carbon Brush	1 ea	10-382584	Breaker
1 ea	10-163374	Felt Strip	And		Related Hardware
1 ea	10-400012	Nameplate			

### AD / SB STATUS:

SB 556C / 74-26-09 Drive Bushing - N/A MAG P/N

SB 623A / 82-20-01 Impulse Coupling - N/A, SNAP RING STYLE CAM INSTALLED

SB 631 Lubricant - C/W

SB 634 Contacts - N/A MAG P/N

SB 639 Impulse Coupling - C/W

CSB 641 / 94-06-09 Capacitor - N/A DATE CODE, AB349276 15-06

SB 643C Maintenance Interval - OVERHAUL

MSB 644 / 73-07-04 / 94-01-03R2 Coil & Rotor - IN COMPLIANCE

MSB 645 / 78-09-07R3 / 2005-12-06 Impulse Coupling - C/W INSPECTION X=.041; X=.045

SB 654A Improved Capacitor - N/A @ THIS TIME

SB 658 Distributor Gear Maintenance - IN COMPLIANCE

SIL 663A Isolation of Tach Circuit - N/A MAG P/N

SB 664 Capacitor - N/A CAPACITOR P/N

CSB 665A Capacitor - N/A CAPACITOR P/N

SB 669 Distributor Block Bushing Inspection - C/W INSPECTION, SUPPLY COPY

SB 670 Improved Distributor Block - N/A BATCH CODE, 10-357426 05-10

2482 Progress Drive Redding, CA 96001-3235 (530) 221-4397 (530) 221-0660 fax Repair Station #S7HR883J The aircraft component identified above was repaired and Inspected in accordance with current Regulations of the Federal Aviation Administration and is approved for return to service. FAA REPAIR STATION NO. S7HR883J

Inspector:\_\_\_\_

	ving Civil Aviation	2.				3. Form Tracking Number:	
17.313.00	thority/Country:	30001					
FAA	A/United States	AU	THORIZED REI				
4. Organia	zation Name and Address:	TROTALIAG	5. Work Order/Contract/Invoice				
Mike's	Aircraft Fuel Metering	Number: 30001					
6. Item:	7. Description:		8. Part Number:	9. Quantity:	10. Serial Number:	11. Status/Work:	
	•						
1	I FLOW DIVIDER		646433-5A2	1	C02BA046	OVERHAULED	
	12. Remarks: I/A/W/ MANUAL NO. MAF1000 5/12						
13a. Certif	fies the items identified abo	ve were manuf	actured in conformity to:	14a. 🛭 14 C	FR 43.9 Return to Service  Ott	ner regulation specified in Block 12	
	Approved design data and Non-approved design data			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. Autho	orized Signature:		13c. Approval/Authorization No.:	14b. Authoria	zed Signature:	14c. Approval/Certificate No.:	
				WA	ander	HK2R875K	
13d. Name	(Typed or Printed):		13e. Date (dd/mmm/yyyy):	14d. Name (T	yped or Printed):	14e. Date (dd/mmm/yyyy):	
				WILLIAM	L. ANDERSON	12-Feb-2019	
			User/Installer	Responsibilit	ies		
It is import	ant to understand that the	existence of this	document alone does not automatically	constitute author	rity to install the aircraft engine/propeller/	article.	
Block 1, it i	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 Slock 1, it is essented 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 perified in Block 1.						
	tatements 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 ational regulations by the user/installer before the aircraft may be flown.						

FAA Form 8130-3 (02-14) NSN: 0052-00-012-9005

1. Approx	ing Civil Aviation	2.				1.5	
	hority/Country:		3. Form Tracking Number:				
FAA	VUnited States	AUT	HORIZED REL			30001	
4. Organiz	ration Name and Address:		TAA FORM 0130-5, AIRWC	KITHINESS A	FFROVAL IAG	5. Work Order/Contract/Invoice	
Mike's	Aircraft Fuel Meterine	Service, 9406 F	E. 46th St. North, Tulsa, OK 74	117 918-838-	5217	Number:	
						30001	
6. Item:	7. Description:	8.	Part Number:	9. Quantity:	10. Serial Number:	11. Status/Work:	
1 FUEL CONTROL VALVE		653353-5A1	1	A02BA064	OVERHAULED		
12. Remai	rks:						
	IANUAL NO. MAFI	000 5/12					
1							
13a. Certi	fies the items identified at	ove were manufact	tured in conformity to:	14a. 🛭 14 (	CFR 43.9 Return to Service  Oth	er regulation specified in Block 12	
				Certifie	s that unless otherwise specified in Block 12.	, the work identified in Block 11	
_	Approved design data and Non-approved design data			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			
"	.von-approved design date	a specified in Block	12.	return	o service.	work, the items are approved for	
13b. Auth	orized Signature:		13c. Approval/Authorization No.:	14b. Author	ized Signature:	14c. Approval/Certificate No.:	
				1 1	. 0	HK2R875K	
				W	rusu.	IIK2K0/JK	
13d. Nam	e (Typed or Printed):		13e. Date (dd/mmm/yyyy):	14d. Name (	Typed or Printed):	14e. Date (dd/mmm/yyyy):	
				WILLIAN	L. ANDERSON	12-Feb-2019	
			Licen/Imatelle	. D	41		
			User/Installe	•			
It is impor	tant to understand that th	e existence of this d	locument alone does not automaticall	constitute auth	ority to install the aircraft engine/propeller/	article.	
Where the Block 1, it specified in	is essential that the user/ii	ork in accordance v nstaller ensures tha	with the national regulations of an air t his/her airworthiness authority acce	worthiness autho pts aircraft engi	ority different than the airworthiness author ne(s)/propeller(s)/article(s) from the airwort	rity of the country specified in hiness authority of the country	
Statements national re	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 tinational regulations by the user/installer before the aircraft may be flown.						
FAA Form	FAA Form 8130-3 (02-14)  NSN: 0052-00-012-9005						
		**					

	* *			i		
FAA		AUTHORIZED R		CASE CE		3. Form Tracking Number: H-S103993
_	ation Name and Address: ELL ENGINE TECHNOLO	OGIES, 2900 SELMA HWY., N	IONTG	OMERY, AL. 3	6108 (1HZR769B)	5. Work Order/Contract/Invoice Number: W/O: M458060
6. Item:	7. Description:	8. Part Number:	9.	Quantity:	10. Serial Number:	11. Status/Work:
1	STARTER ***********************************	646275-1 MOD/NO END		1	H-S103993	OVERHAULED
.13a. ·Certi	EASA.145.4418 AND BY T THE ORIG. EQUIP. MFG. DAT COMPLIES WITH PPS-9001 L/ OVERHAULED PER TCM SER	DR RELEASE TO SERVICE UNDER EASA HEF FAA AIR AGENCY CERTIFICATE NU A APPEARS ON THE DATA PLATE IN THATEST REVISION.  LYICE INSTRUCTION X30592, DATED 1/8  PER MANUFACTURE OF THE PROPERTY OF T	MBER 1H IE LINES 1 7.	ZR769B. APPR	OVED FOR EXPORT DNO & ORIG. MFG.	regulation specified in Block 12
		n:in a:condition for:saft: operation:		Certifies that us	uless otherwise specified in Block n Block 12 was accomplished in actions, part 43 and in respect to the	12, the work identified in Block 11 coordance with Title 14, Code of it work, the items are approved for
	orized Signature:	~	in No.:	14b. Authorized Sig	mature:	14c. Approval/Certificate No: 1HZR769B
13d. Name	s (Typed or Printed):	:13e; :Duti: (dd/nonro/9999)		James D. I		14e. Date (dd/mmm/yyyy): 02/Nov/2018

User/Installer Responsibilities
It is important to understand that the existence of this document alone does not automatically constitute authority to install the aircraft engine/propeller/acticle.

FAA Form 8130-3 (02-14)

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 accept aircraft engine(a)/propeller(s)/arrticle(s) from the airworthiness authority of the country specified in Block 1.

Statements in Block 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.

HETCODE: 02437

NSN: 0052-00-012-9005

Au	ng Civil Aviation tholty / County: / United States	RTIFICATE PPROVAL TAG	. Form Tracking Number		
4. Organiz	ation Name and Address:	Pacific Oil Cooler Service, Inc.	F.A.A RF3R8	13L 5	. Work Order/Contact/Invoice No
		1677 Curtiss Court, La Verne,	CA 91750		130891
6. Item:	7. Description:	8. Part Number:	9. Quantity:	10. Serial Number: 11	. Status/Work:
1	OIL COOLER	10281A 654585	1	B02-200-334	OVERHAULED
The des applicat Certifies	der Number (Block 5) desc cribed work was performe ble Airworthiness Directive that the work specified in E	s work / status.	Pacific Oil Cooler Service ance with EASA part 145,	e, Inc. process specification #001. (See Wand with respect to that work, the compo	
Γ.		were manufactured in conformity to: in a condition for safe operation cified in Block 12  Nac. Approval (Authorization No:	12 was accomplished in	erwise specified in Block 12, the work identified in a accordance with Title 14, Code of Federal Regulapproved for return to service.	ation specified in Block 12  Block 11 and described in Block lations, part 43 and in respect to  14c. Approval/Certificate No.:
			Pm-		RF3R813L
13d. Nam	e (Type or Print):	13e. Date (dd/mmm/yyyy):	14d. Name (Type or Print Ricardo Gayt		14e. Date (dd/mmm/yyyy): 19/Feb/2019
		Use	er / Installer Responsit	pilities	
When the essential Statemen	e user / installer performs the w I that that user / installer ensure	s that his/her airworthiness authority accepts ai t constitute installation certification. In all cases	of an airworthiness authority of ircraft engine(s)/propeller(s)/ar	It engine/propeller/article.  Ifferent than the airworthiness authority of the co- ticle(s) from the airworthiness authority of the co- must contain an installation certification issued in	intry specified in Block 1.
	AA Form 8130-3 (02/14)			NSN:	

Aut	ing Civil Aviation hority/Country: JNITED STATES	a.	UTHORIZED RI FAA Form 8130-3, AIR			3. Form Tracking Number:
4. Organiz	zation Name and Address	<b>S</b>	Ameritech Industries dba American Proj 20208 Charlanne Drive Redding, CA 96002 USA	peller Service		5. Work Order/Contract/Invoice Number: 23344-12-2018
6. Item:	7. Description:		8. Part Number:	9. Quantity:	10. Serial Number:	11. Status/Work:
1	Hartzell propeller		Prop: Hartzell propeller Hub: PHC-J3YF-1RF Blade: F7694	1	Blade: J89677, J89674, J89681 Hub: FP2392B	OVERHAULED
13a. Certi	lletin 61-118FR1, 61-136RI	l and 61-374F	anufactured in conformity to: tion for safe operation.	14a. 14 CFR  Certifies that and described	43.9 Return to Service Constitution of the state of the s	10 Rev. 35, V11 Rev. 36. Complied with  Other regulation specified in Block 12 k 12, the work identified in Block 11 accordance with Title 14, Code of that work, the items are approved for
13b. Auth	orized Signature:		13c. Approval/Authorization No.:	14b. Authorized Si	gnature:	14c. Approval/Certificate NO3R717L
13d. Name	(Typed or Printed):		13e. Date (dd/mmm/yyyy):	14d. Name (Typed Mike Crowell	or Printed):	14e. Date (dd/mmm/yyyy): 21 dec 2018
			User/Insta	ller Responsibilit	ies	
Where the Block 1, it specified in Statements	user/installer performs w is essential that the user/i i Block1. i in Blocks 13a and 14a do	ork in accord	res that his/her airworthiness authori te installation certification. In all case	an airworthiness autho ty accepts aircraft engi	ority different than the airworthin ne(s)/propeller(s)/article(s) from the	propeller/article. ess authority of the country specified in he airworthiness authority of the country tion certification issued in accordance
	8130-3 (02-14)	user/installer	before the aircraft may be flown.			

FAA	/United States		HORIZED RI FAA Form 8130–3, AII	19-077		
4. Organi	zation Name and Address:					5. Work Order/Contract/Invoice
	Olympia Prope	ller Governo	r, LLC 4626 88th Ave SW	Olympia, WA	98512 (360) 705-0436	Number: 0002277
6. Item:	7. Description:		8. Part Number:	9. Quantity:	10. Serial Number:	11. Status/Work:
1	Woodward Gov	vernor	D210760	One	13170230D	Overhauled
12. Remar	·ks:		1			
2) A 3) 1	All Airworthiness Dir	ectives, Serv erhauled and	ice Bulletins, and Service Le tested in compliance with V	tters as of July 1	order number shown in block 5 abo 17 <sup>th</sup> , 2019 have been complied with haul Manual #33194.	ove.

13a. Certifies the items identified above were manufact Approved design data and are in a condition Non-approved design data specified in Block J	or safe operation.	and described in Block 12 was accon	Other regulation specified in Block 12 fied in Block 12, the work identified in Block 11 nplished in accordance with Title 14, Code of respect to that work, the items are approved for
13b. Authorized Signature:	13c. Approval/Authorization No.:	14b. Authorized Signature:	14c. Approval/Certificate No.: 1OPR610B
13d. Name (Typed or Printed):	13e. Date (dd/mmm/yyyy):	14d Name (Typed or Printed): James W. Siler	14e. Date (dd/mmm/yyyy): 17/Jul/2019
	User/Installer	Responsibilities	-

It is important to understand that the existence of this document alone does not automatically constitute authority to install the aircraft engine/propeller/article.

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 engines/propeller(s)/article(s) from the airworthiness authority of the country specified in Block 1.

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.

FAA Form 8130-3 (02-14)

1. Approving Civil Aviation

3. Form Tracking Number:



Propeller Governor Test Shee  Customer: Lane Mauntain	Date: 7 1619
Model #	Serial # 13170230 D

Rotation (facing drive pad) Pressure Sense	CW Increase	CCWDecrease
Control Shaft Location		
Control Lever Angle	138 Deg +/- 2	/38 <sub>Finished</sub> Angle

Description	Specifications	1 <sup>st</sup> Run	2 <sup>nd</sup> Run
Max RPM	2799 +1-10	2702 21000	2702
Min/Feather RPM	1200 a less 12	41000	21000
Un-feathering RPM	NIA +1-		_
RV Pressure (PSI)	320 +/-20	330	.330
Pump Capacity (Qt/Min)	5	55	5.5
Internal Leakage (Qt/Hr)	40	8	රි
Transducer Output (V@RPM)	MA		
UF Valve Leak Test	Leak or No Leak	-	
Sync Coil RPM Change	NIA		

Туре	RV Pressure	Pump Capacity	Internal Leakage	Pickup Output	UF Valve Leakage
Hartzell	1750 RPM Output blocked	1750 RPM 150 PSI Output	1750 RPM 150 PSI Output	N/A	N/A
McCauley	1750 RPM Output Blocked	1750 RPM 150 PSI Output	2400 RPM Output Blocked	2.5-3.5 volts P to P @ 1800 RPM	Max drop 20 PSI In 5 minutes
Woodward	1750 RPM Output Blocked	1750 RPM 150 PSI Output	Max RPM on speed	See Manual	At 270 PSI-30 PSI max drop in 6 min

Auth	ing Civil Aviation hority/Country: A/United States	AUTHORIZED RE			3. Form Tracking Number: 30290	
4. Organiz	zation Name and Address:	5. Work Order/Contract/Invoice Number:				
Mike's A	Aircraft Fuel Metering S	Service, 9406 E. 46th St. North, Tulsa, OK	74117 918-838-	-6217	30290	
5. Item:	7. Description:	8. Part Number:	9. Quantity:	10. Serial Number:	11. Status/Work:	
ı	FUEL PUMP	655921-6A1	. 1	B13KA014	OVERHAULED	
12. Remar I/A/W/ M	rks: MANUAL NO. MAF100	00 5/12				
		e were manufactured in conformity to: re in a condition for safe operation. pecified in Block 12.  13c. Approval/Authorization?	Certifi and de Federa return	14a.		
3d. Name	(Typed or Printed):	13e. Date (dd/mmm/yyyy):	14d. Name KEVIN I	(Typed or Printed):	14e. Date (dd/mmm/yyyy): 31-Jul-2019	
		User/Insta	ller Responsibil	lities		
		existence of this document alone does not automation	cally constitute auth	nority to install the aircraft engine/prop		
Wh. v the Block 1, it is specified in Statements	is essential that the user/inst n Block 1. s in Blocks 13a and 14a do no	aller ensures that his/her airworthiness outhority a ot constitute installation certification. In all cases, or before the aircraft may be flown.	ccepts aircraft eng	ine(s)/propeller(s)/article(s) from the ai	rworthiness authority of the country	
Wh. a the Block 1, it i specified in Statements national reg	is essential that the user/inst n Block 1. s in Blocks 13a and 14a do no	aller ensures that his/her airworthiness enthority a ot constitute installation certification. In all cases.	ccepts aircraft eng	ine(s)/propeller(s)/article(s) from the ai	rworthiness authority of the country	

	ving Civil Aviation	2.				3. Form Tracking Number:						
	athority/Country: A/United States	AUTH	ORIZED REI	36623								
4. Organ	ization Name and Address:	5. Work Order/Contract/Invoice										
	PI	Number: 36623										
6. Item:	7. Description:		8. Part Number:	9. Quantity:	10. Serial Number:	11. Status/Work:						
1	Y- COLLECTO SYST		13535-001	1	N/A	REPAIRED						
	emarks:											
WORK ORDER # 36623 DESCRIBING ACTUAL WORK IS ATTACHED. ALL WORK PERFORMED IN ACCORDANCE WITH FAA AC 43.13-1 B, CHAPTER 4.												
				1								
13a. Certifies the items identified above were manufactured in conformity to:  14a. 14 CFR 43.9 Return to Service  Other regulation specified in Block 12												
	Approved design data and Non-approved design data	2, the work identified in Block 11 cordance with Title 14, Code of t work, the items are approved for										
13b. Authorized Signature: 13			Sc. Approval/Authorization No.:	14b. Autho	rized Signature:	14c. Approval/Certificate No.:						
				1		Q6SR742J						
13d. Nan	ne (Typed or Printed):	Se. Date (dd/mmsu/yyyy):		(Typed or Printed): 'NE CHINLOY	14c. Date (dd/mmm/yyyy): 29/JUL/2019							
	· · · · · · · · · · · · · · · · · · ·		User/Installe	r Responsibil	ities							
It is impo	ortant to understand that the	e existence of this docum	ent alone does not automatically	constitute author	rity to install the aircraft engine/propeller/a	rticle.						
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.												
Statemer national	nts in Blocks 13a and 14a do regulations by the user/insta	not constitute installatio ller before the aircraft n	n certification. In all cases, airc nay be flown.	raft maintenance	records must contain an installation certific	ation issued in accordance with the						
FAA F	orm 8130–3 (02–14)		20			NSN: 0052-00-012-9005						

3. Form Tracking Number:

Tel: 954.735.4412 Fax: 954.739.5206

# PlaneXhaust Corporation 5485 NW 22ND AVENUE

Repair Station Q6SR742J

			5485 NW 2 TAMAR	2ND AVEN					
		ORDE	-		No. 36623				
NAME LO	NE MOUN	TAIN AVI	ATION INC	A.O.G.		Regular	d	Other	
ADDRESS	2830 N R	R. STE A	Acceptance of this Work Order constitutes acknowledge all work performed as being in accordance with: -					gement that	
CITY	3	☐ Not Applicable ☐ the Air Carriers ten (10) or more seating maintenance							
STATE	E 89130	requirements as per FAR 135.411(A) (2)  Other requirements							
Make/Model	CIRRUS SR 22					COLLECTOR / EXHAUST SYSTEM			
Part No.	13535-001			Serial No.		N/A			
			INSPI	ECTIONS					
PRELIMINARY	well	HIDDEN DAMAGE	wa	IN PROCESS	,	Me	FINAL	We	
REMARKS									
			WORKT	O BE DO	NE		1	16 1	
Clean	and Inspe	ct 🗌	Overhaul		Re	epair 🗸	A	D 🗌	
				paration		T			
Blast			Grind			Other	Ш		
Tabaia sai an		1	IN PROG		DRK STA	2 04			
Fabrication	PARTS / MATERIAL		Welding P.O. / J.O. NUMBER				Other P.O./J.C		
	9" X 321 STAINLESS		5241	-		PARIS / IVIA	TERIAL		NUMBER
25 7.10.5	N 322 0 11 11 11 12 13								
				Control of the Control		- at at	TO BE LONG	TOTAL HOUSE	
REMARKS:								TOTAL HOURS	
								***************************************	
PRESSURE TEST. N	INDT		FINAL II	Other	ION		-	, 	
REMARKS	, ,		130111111111111111111111111111111111111			Pass	V	Fail	
The aircraft co	omponent id	lentified here	MAINTENA on was repaired / orthy for return to	overhauled	and ins	spected in a	ccordano	ce with curre	ent Federal
		D CONDITIO	NS AGREED TO A			canson the	геранто	ciliaui are of	THE at this
INSPECTOR NAME (I		CERTIFICATE		SIGNATULE	/		DATE		
WAYNE CHIN-LO		3068	t - Accountable Manager					29/JUL/20	