



US Department of Transportation
Federal Aviation Administration

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

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification

SEA FSDO

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 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. 1421). Failure to report can result in a civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act of 1958).

1. Aircraft	Make <p style="text-align: center;">Republic</p>	Model <p style="text-align: center;">RC-3 Seabee</p>
	Serial No. <p style="text-align: center;">387</p>	Nationality and Registration Mark <p style="text-align: center;">398CM</p>
2. Owner	Name (As shown on registration certificate) <p style="text-align: center;">Charliemax Corp.</p>	Address (As shown on registration certificate) 1830 Lindberg Lane, Daytona Beach, FL 32124

3. For FAA Use Only

The data identified herein compiles with applicable airworthiness requirements and is approved only for the above described aircraft subject to conformity inspection by a person authorized in F.A.R. 43.7 (b) & (c)

3/25/98 Robert W. White SEA-FSDO

DATE SIGNATURE

4. Unit Identification

Unit	Make	Model	Serial No.	5. Type	
				Repair	Alteration
AIRFRAME	~~~~~ (As described in Item 1 above) ~~~~~				X
POWERPLANT					
PROPELLER					
APPLIANCE	Type				
	Manufacturer				

RECEIVED
 APR 27 1998
 SEATTLE FSDO-AW

6. Conformity Statement

A. Agency's Name and Address Don Wallace dba W.E. Aerotech Services Inc. 171 W Sanderson Way, Shelton WA	B. Kind of Agency <input checked="" type="checkbox"/> U.S. Certificated Mechanic <input type="checkbox"/> Foreign Certificated Mechanic <input type="checkbox"/> Certificated Repair Station <input type="checkbox"/> Manufacturer	C. Certificate No. <p style="text-align: center;">552-76-1362</p>
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D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

Date <p style="text-align: center;">2-20-98</p>	Signature of Authorized Individual <p style="text-align: center;"><u>DW</u></p>
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7. Approval for Return To Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is APPROVED REJECTED

BY	FAA Fit. Standards Inspector	Manufacturer	<input checked="" type="checkbox"/>	Inspection Authorization	Other (Specify)
	FAA Designee	Repair Station		Person Approved by Transport Canada Airworthiness Group	

Date of Approval or Rejection <p style="text-align: center;">4-22-98</p>	Certificate or Designation No. <p style="text-align: center;">552-76-1362</p>	Signature of Authorized Individual <p style="text-align: center;"><u>DW</u></p>
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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.)

Installed Piper pilot and copilot seats assy. PN 79337 and seat rails PN 62557. Seat rails installed to same structure as originals. Seat rails incorporate travel stops to prevent inadvertent aft travel of seat. Installation similar to N12CX Ser. 264 (see attached FAA Form 337 dated 7-22-93 and Drawing BF200).

Installed floor storage boxes 7" x 20" x 15" under pilot and copilot seats. Boxes fabricated from .032 2024 T3 aluminum. Floor cutout reinforced with .080 2024 T3.

Modified seat base to improve forward visibility by relocating seat frame 5 inches aft on seat base and addition of aft diagonal support brace fabricated from .5" x .035" 4130 steel tubing. Welding done in accordance with AC 43.13-1A Change 3, Chapt. 2, Section 2, Par. 68.

Seats and seat rail / cabin floor supporting structure was load tested to equivalent loads for original installation ref. Republic Hull and Cabin Stress Analysis Report E-17-2 (see attached excerpt titled "Analysis of Intermediate Deck For Front & Rear Seat Loads"). 170 LBS pilot load (Normal Category) was substituted for 190 LBS pilot load (Utility Category). This aircraft is restricted to Normal Category limitations by engine modification STC SA5684NM. Single pilot load was used as original two seat rails carried both pilot and co-pilot seats. This modified seat installation uses two individual seats each seat supported by two seat rails.

300 LBS aft load (ultimate elevator reaction load) was applied approximately 22.5 inches above the floor at the seat back centroid. No adverse stress or deflection was noted in either the seat or seat support structure.

1049 LBS down load (combined pilot weight, 170# + seat weight, 14# X 5.7 G) was applied to seat bottom. No adverse stress or deflection was noted in either the seat or the seat support structure.

I have determined that this data is appropriate to the product being altered, is directly applicable to the alteration and is not contrary to the manufacturers data. This alteration does not require any change to the approved maintenance and inspection procedures for this aircraft.

Weighed aircraft prepared weight and balance report (see weight and balance and equipment list dated 2-20-98)

END

ADDITIONAL SHEETS ARE ATTACHED

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

FOR FAA USE ONLY
OFFICE IDENTIFICATION

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE Republic	MODEL RC-3 Seabee
	SERIAL NO. 264	NATIONALITY AND REGISTRATION MARK N12CX
2. OWNER	NAME (As shown on registration certificate) Crossings Aviation	ADDRESS (As shown on registration certificate) 1302 26th Ave. NW Gig Harbor WA

~~DATA~~ 3. FOR FAA USE ONLY

The information identified herein complies with applicable airworthiness requirements and is approved only for the above described aircraft subject to conformity inspection by a person authorized in F. A. R. 43.7 (b) & (c)

07-29-93 *[Signature]* SEA-FSDO
DATE SIGNATURE

4. UNIT IDENTIFICATION				5. TYPE	
UNIT	MAKE	MODEL	SERIAL NO.	REPAIR	ALTERATION
AIRFRAME	~~~~~ (As described in item 1 above) ~~~~~				X
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				

RECEIVED
APR 27 1998
SEATTLE FSDO-AW

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS Don Wallace dba W.E. Aerotech Services Inc. W 171 Sanderson Way, Shelton Wa.	B. KIND OF AGENCY <input checked="" type="checkbox"/> U.S. CERTIFICATED MECHANIC <input type="checkbox"/> FOREIGN CERTIFICATED MECHANIC <input type="checkbox"/> CERTIFICATED REPAIR STATION <input type="checkbox"/> MANUFACTURER	C. CERTIFICATE NO. 552-76-1362
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D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 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.

DATE 7-22-93	SIGNATURE OF AUTHORIZED INDIVIDUAL <i>[Signature]</i>
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7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is APPROVED REJECTED

BY	FAA FLT. STANDARDS INSPECTOR	MANUFACTURER	<input checked="" type="checkbox"/> INSPECTION AUTHORIZATION	OTHER (Specify)
	FAA DESIGNEE	REPAIR STATION	CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	

DATE OF APPROVAL OR REJECTION 8-6-93	CERTIFICATE OR DESIGNATION NO. IA 756078	SIGNATURE OF AUTHORIZED INDIVIDUAL <i>[Signature]</i>
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NOTICE

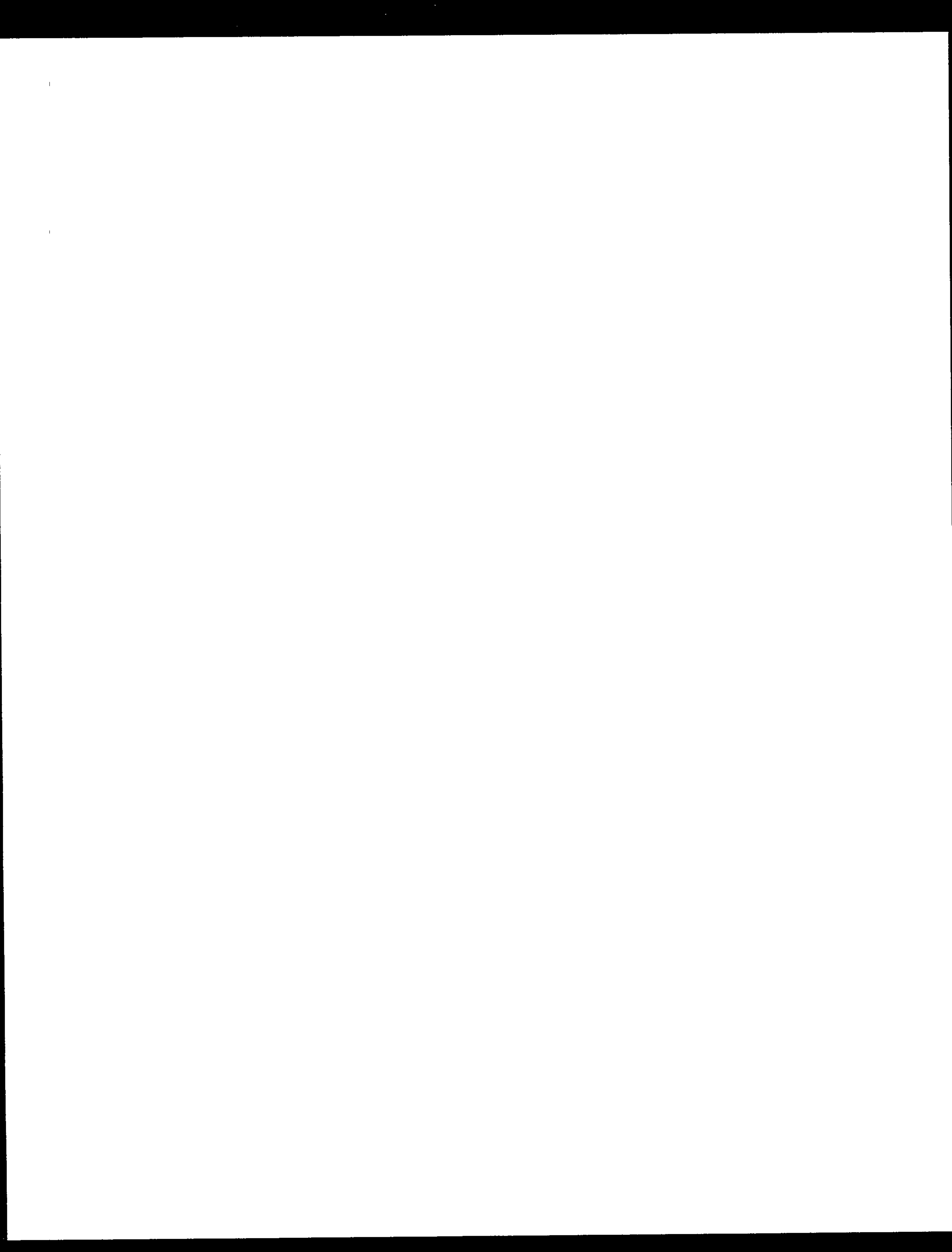
Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. DESCRIPTION OF WORK ACCOMPLISHED (If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

Installed Piper pilot and copilot seats assy. PN 79591-03, seat rails PN 62557-04 and seat rail stops PN 79601-00. Seat rails attached to same structure as original seat rail installation in accordance with drawing BF200 see attached copy. Seat belt attachment unchanged from original installation. Installation similar to N87583 see FAA Form 337 dated 3-28-92. See weight and balance and equipment list dated 7-22-93.

END

ADDITIONAL SHEETS ARE ATTACHED



ANALYSIS OF INTERMEDIATE DECK FOR FRONT & REAR SEAT LOADS. DWG. NO. 17F12003.

THE FRONT PORTION OF THE DECK IS SUBJECTED TO SEAT LOADS DUE TO BOTH FLIGHT LOADS (G.G L.F.) AND CONTROL OPERATIONAL LOADS - (300 LB REACTION AGAINST SEAT BACK.)



THE FRONT SEATS ARE MOUNTED ON A SINGLE FRAME, BUT HAVE INDIVIDUAL CUSHIONS.

- 1) THE MAX DOWN LOAD OCCURS IN UTILITY CATEGORY FLIGHT COND WITH G.G L.F. PILOT & FRONT OCCUPANT WEIGH 190 LBS EACH. FRONT SEAT WEIGHT IS APPROXIMATELY 36 #.

TOTAL LD ON FRONT SEAT SUPTS = $(190 \times 2 + 36) G.G = 2740 \#$

WITH THE C.G. OF WGT. APPROX BETWEEN THE SUPPTS

LOAD / SUPT POINT = $2740 / 4 = 685 \#$

- 2) LOAD DUE TO 300# ULT LOAD AGAINST SEAT BACK,

$\Sigma M_A = 0$

$\frac{300 \times 22.5}{12.75} = 530 \#$

DOWN LOAD NOT CRITICAL
UP LOAD TAKEN INTO SUPPT A.

- 3) THIRD LOADING CONSISTS OF ALL FOUR PASSENGERS IN PLANE (170# CA) UNDER L.F = $3.8 \times 1.5 = 5.7$.

TOTAL LOAD ON FRONT SUPTS = $(170 \times 2 + 36) 5.7 = 2140 \#$

" " REAR " = $(170 \times 2 + 27(\text{SEAT WGT})) \times 5.7 = 2090 \#$