FAA AIRCRAFT REGISTRY
CAMERA NO. 1N DATE: 3-21-86

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SO-FSDO-62
Nashville

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

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

*Form Approved*
*Budget Bureau No. 04-R060.1*

*FOR FAA USE ONLY*
OFFICE IDENTIFICATION
SO-FSDO-62

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 |
| | SERIAL NO.: 765 | NATIONALITY AND REGISTRATION MARK: N6499K |
| 2. OWNER | NAME (*As shown on registration certificate*): EDMOND F. FREEMAN | ADDRESS (*As shown on registration certificate*): #11 CRAIG TERRACE APT. RT. 9, JONESBORO, TN. 37659 |

**3. FOR FAA USE ONLY**

"The ~~alterations~~ data identified herein complies with applicable airworthiness requirements and is approved for the above described aircraft, subject to conformity inspection by a person authorized in FAR 43, section 43.7."

5-12-78 — Date
B. Leaton Deese — Signature of FAA Inspector
SO-FSDO-62

**4. UNIT IDENTIFICATION**

| UNIT | MAKE | MODEL | SERIAL NO. | 5. TYPE: REPAIR | 5. TYPE: ALTERATION |
|---|---|---|---|---|---|
| AIRFRAME | (As described in item 1 above) | | | | X |
| POWERPLANT | | | | | |
| PROPELLER | | | | | |
| APPLIANCE | TYPE / MANUFACTURER | | | | |

**6. CONFORMITY STATEMENT**

| A. AGENCY'S NAME AND ADDRESS | B. KIND OF AGENCY | C. CERTIFICATE NO. |
|---|---|---|
| Mr. EDMOND F. FREEMAN<br>#3 PRINCETON RD. APT.<br>JOHNSON CITY, TN. 37601 | X U.S. CERTIFICATED MECHANIC<br>FOREIGN CERTIFICATED MECHANIC<br>CERTIFICATED REPAIR STATION<br>MANUFACTURER | AP1580607 |

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: 5-15-78
SIGNATURE OF AUTHORIZED INDIVIDUAL: Edmond F. Freeman

**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 | X | INSPECTION AUTHORIZATION | OTHER (*Specify*) | |
| | FAA DESIGNEE | | REPAIR STATION | | CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT | | |

| DATE OF APPROVAL OR REJECTION | CERTIFICATE OR DESIGNATION NO. | SIGNATURE OF AUTHORIZED INDIVIDUAL |
|---|---|---|
| 5-15-78 | A1 1580607 | Edmond F. Freeman |

FAA Form 337 (7-67) (8320)

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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.)*

VERTICALLY ADJUSTABLE FRONT SEAT INSTALLATION

1. Removed front bench type seat and seat tracks, removed seat track mount pads attached to outboard floor beams, removed four floor beam support angles which attach forward end of the four floor beams ~~at~~ bulkhead station 47.

2. Fabricated new floor beam support angles using .064 2024-T3 alclad. Each support angle is 32" long 4"wide with a .75" flange formed on one end to a 3/16" radii.

3. Fabricated new seat track mount pads. Using .125 2024-T3 alclad. Each pad is 32" long and 4" wide with a 3/16" radii filed along one end to fit the flange radii on the floor beam support angles.

4. Placed new seat track mount pads on top of the new beam support angles matching the 3/16" radii. Centered and rivited Piper P/N 62557-04 seat track to seat track pads and support angles. Using original Piper rivit spacing and diameter.

5. Each seat track assembly now mounted on top of each floor beam using original Republic hole spacing except the original 3/16" rivits replaced by 3/16" AN-3 bolts. Flange attached to bulkhead station 47 using original hole spacing except the or original 1/8" rivits replaced by AN832 serews.

6. Hand holes 5" in diameter cut in floor skin between seat tracks. Installed Cessna P/N S1443-1 Doubler and P/N S225-4F cover plates. Use Cessna recommended rivets and screws.

7. The new floor beam support angles and seat track mount pads were fabricated out of the same size and type material as original Republic angles and pads except they are made to support the beam and seat tracks along 32" of its length rather than the 2" as in the original Republic installation.

8. Installed Piper P/N 79592-02/03 vertically adjustable seats, using Piper P/N 62655-00 seat stops. This is the same seat installed in the Piper PA-32 aircraft. This is a approved seat which complies with the requirements of TSO C25a/C39.

9. Static test of the new installation of the inboard seat tracks performed from two points, 12" apart the seat attach point spacing at the most aft position possible, which is the most critical position for the load applied. See "Static Test Data" attachment.

10. Weight and balance recomputed and equipment list revised.

11. All work was accomplished in accordance with applicable F. A. R.'s AC43.13-2 and Republic and Piper maintenance manuals and parts catalogs.

☐ ADDITIONAL SHEETS ARE ATTACHED

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## STATIC TEST DATA

1. AC43.13-2, Chapter 1, Section 2, paragraph D.
   Direction: Factor X Special = Static Test Factor

| | | | |
|---|---|---|---|
| A. Sideward | 1.5G | 1.33 | 1.9G |
| B. Upward | 3.0G | 1.33 | 3.9G |
| C. Forward | 9.0G | 1.33 | 11.9G |
| D. Downward | 6.6G | 1.33 | 8.7G |

2. AC43.13-2, Chapter 12, Section 206

A. Sideward: The total weight of the seat and seat occupant is restrained in this direction at four points: two seat belt attach points and two seat tra

$$\frac{(w1 + w2)sf}{Rp}$$

Where: W1=weight of occupant
W2=weight of seat
SF=Static Test Factor
Rp=Restraint Points

$$\frac{(170 + 19.5)1.9}{4} = 90 \text{ Static Test Weight}$$

B. Upward: The total weight of the seat occupant is restrained in the direction by the seat belt. The weight of the seat is restrained by the seat track.

Calculation of Test on One Seat Track:

$$\frac{W2 \times Sf}{Rp} = \frac{19.5 \times 3.9}{2} = 38 \text{ Static Test Weight}$$

C. Forward: The total weight of the seat occupant is restrained in this direction by the seat belt. The weight of the seat is restrained by the seat track.

Calculation of Test on One Seat Track

$$\frac{W2 \times Sf}{Rp} = \frac{19.5 \times 11.9}{2} = 116.0 \text{ Static Test Weight}$$

D. Downward: The total weight of the seat occupant and seat is restrained in this direction by the floor structure which has remained unchanged from the original installation.

ATTACHMENT: F.A.A. FORM 337, DATED
N6499K, RC-3 7/65

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CHECKLIST: SEAT INSTALLATION - FAR 23 AIRCRAFT

REFERANCE: 8310.6 PAGE 42 CHAPTER 2
AIRWORTHINESS COMPLIANCE CHECK SHEET #13
SECTION 4 a. STRUCTURAL REQUIREMENTS.

(1) SEE ITEM 8 OF ATTACHED 337 FORM FOR SEAT PART NUMBER AND T.S.O REQUIREMENTS.

(2) SEE ITEM 9 OF ATTACHED "337 FORM" AND ATTACHED "STATIC TEST DATA" FORM FOR PROOF OF SEAT ATTACHMENT.

ATTACHMENT: F.A.A. FORM 337, DATED
N6499K RC-3/765