M-494.4

AC 43.9-1D

DATE 9/5/79

ADVISORY CIRCULAR



DEPARTMENT OF TRANSPORTATION
Federal Aviation Administration
Washington, D.C.

FAR GUIDANCE MATERIAL

Subject: INSTRUCTIONS FOR COMPLETION OF FAA FORM 337 (OMB 04-R0060),

MAJOR REPAIR AND ALTERATION (AIRFRAME, POWERPLANT,

PROPELLER, OR APPLIANCE)

- 1. <u>PURPOSE</u>. This advisory circular (AC) provides instructions for completing FAA Form 337, Major Repair and Alteration (Airframe, Powerplant, Propeller, or Appliance).
- 2. <u>CANCELLATION</u>. AC 43.9-1C, Instructions for Completion of FAA Form 337 (OMB 04-R0060) Major Repair and Alteration (Airframe, Powerplant, Propeller or Appliance), dated 12/20/73, is canceled.
- 3. RELATED FAR SECTIONS. Federal Aviation Regulation (FAR) Part 43, Sections 43.5, 43.7, 43.9, and Appendix B.
- 4. INFORMATION. FAA Form 337 is furnished free of charge by the Federal Aviation Administration (FAA) and is available at all FAA Air Carrier, General Aviation, Engineering and Manufacturing, and Flight Standards District Offices and all International Field Offices. The form serves two main purposes; one is to provide aircraft owners and operators with a record of major repairs or alterations indicating details and approval, and the other is to provide the FAA with a copy of the form for inclusion in the aircraft records at the FAA Aircraft Registration Branch, Oklahoma City, Oklahoma.
- 5. <u>INSTRUCTIONS FOR COMPLETING FAA FORM 337</u>. The person who performs or supervises a major repair or major alteration should prepare FAA Form 337. The form is executed at least in duplicate and is used to record major repairs and major alterations made to an aircraft, spare part, or spare appliance. The following instructions apply to corresponding items 1 through 8 of the form as illustrated in Appendix 1.
- a. <u>Item 1 Aircraft</u>. Information to complete the 'Make,' 'Model,' and "Serial Number" blocks will be found on the aircraft manufacturer's identification plate. The 'Nationality and Registration Mark' is the same as shown on the Certificate of Aircraft Registration, AC Form 8050-3.

Initiated by: AWS-340

b. Item 2 - Owner. Enter the aircraft owner's complete name and address as shown on the Certificate of Aircraft Registration.

Note: When a major repair or alteration is made to a spare part or appliance, items 1 and 2 will be left blank and the original and duplicate copy of the form will remain with the part until such time as it is installed on an aircraft. The person installing the part will then enter the required information in blocks 1 and 2; give the original of the form to the aircraft owner/operator and forward the duplicate copy to the local FAA District Office.

- c. Item 3 for FAA Use Only. When the FAA determines that the data used in performing a major repair or major alteration complies with accepted industry practices, an appropriate approval statement will be entered here. This block is used when the repair or alteration data has not been previously approved by the FAA. See paragraph 6b for further details.
- d. Item 4 Unit Identification. The information blocks under item 4 are used to identify the airframe, powerplant, propeller, or appliance repaired or altered. It is only necessary to complete the blocks for the unit repaired or altered.
- e. Item 5 Type. Enter a checkmark in the appropriate column to indicate if the unit was repaired or altered.

f. Item 6 - Conformity Statement.

- (1) "A" Agency's Name and Address: Enter name of the mechanic, repair station, or manufacturer accomplishing the repair or alteration. Mechanics should enter their name and permanent mailing address. Manufacturers and repair stations should enter the name and address under which they do business.
- (2) "B" Kind of Agency: Check the appropriate box to indicate the type of person or organization who performed the work.
- (3) "C" Certificate Number: Mechanics should enter their mechanic certificate number in this block, e.g., 1305888. Repair stations should enter their air agency certificate number and the rating or ratings under which the work was performed, e.g., 1234, Airframe Class 3. Manufacturers should enter their type and/or production certificate number. Manufacturers altering TSO appliances should enter the TSO number of the appliance altered.
- (4) "D" Compliance Statement. This space is used to certify that the repair or alteration was made in accordance with Federal Aviation Regulations. When work was performed or supervised by certificated

mechanics not employed by a manufacturer or repair station, they should enter the date the repair or alteration was completed and sign their full name. Repair stations are permitted to authorize persons in their employ to date and sign this conformity statement.

- g. Item 7 Approval for Return to Service. Federal Aviation Regulations, Part 43, establishes the conditions under which major repairs or alterations to airframes, powerplants, propellers, and/or appliances may be approved for return to service. This portion of the form is used to indicate approval or rejection of the repair or alteration of the unit involved and to identify the person or agency making the airworthiness inspection. Check the "approved" or "rejected" box to indicate the finding. Additionally, check the appropriate box to indicate who made the finding. Use the box labeled "other" to indicate a finding by a person other than those listed. Enter the date the finding was made. The authorized person who made the finding should sign the form and enter the appropriate certificate or designation number.
- h. Item 8 Description of Work Accomplished. A clear, concise, and legible statement describing the work accomplished should be entered in item 8 on the reverse side of FAA Form 337. It is important that the location of the repair or alteration, relative to the aircraft or component, be described.
- (1) For example, if a repair was made to a buckled spar, the description entered in this part might begin by stating, "Removed wing from aircraft and removed skin from outer 6 feet. Repaired buckled spar 49" from tip in accordance with " and continue with a description of the repair. The description should refer to applicable FAR Sections and to the use of FAA approved data necessary to substantiate the airworthiness of the repair or alteration. If the repair or alteration is subject to being covered by skin or other structure, a statement should be made certifying a precover inspection was made and found satisfactory.
- (2) <u>Data which may be used</u> as a basis for approval of major repairs or alterations includes: FAR (e.g., airworthiness directives), AC's (e.g., AC 43.13-1A), technical standard orders (TSO's), parts manufacturing approval (PMA), FAA approved manufacturer's instructions, kits and service handbooks, type certificate data sheets, and aircraft specifications. Other forms of approved data would be those approved by a designated engineering representative (DER), a manufacturer holding a delegation option authorization (DOA), supplemental type certificates (STC's), and reference to previous FAA field approvals. Supporting data such as stress analyses, test reports, sketches, or photographs should be submitted with the FAA Form 337. This supporting data will be returned to the applicant by the local FAA district office, as only the FAA Form 337 is retained as a part of the aircraft records at Oklahoma City.
- (3) If additional space is needed to describe the repair or alteration, attach sheets bearing the aircraft nationality and registration mark and the date work was completed.

- (4) It is not required to show weight and balance computations under this item; however, it may be done. In all cases where weight and balance of the aircraft are affected, the changes should be entered in the aircraft weight and balance records with the date, signature, and reference to the FAA Form 337 that instituted the changes.
- 6. <u>ADMINISTRATIVE PROCESSING</u>. At least an original and one duplicate copy of the FAA Form 337 will be executed. FAA district office processing of the forms and their supporting data will depend upon whether previously approved or non-previously approved data was used as follows:
- a. <u>Previously Approved Data</u>. The applicant will complete the forms as instructed in this AC ensuring that item 7, "Approval for Return to Service," has been properly executed; give the original of the form to the aircraft owner or operator, and send the duplicate copy to the local FAA district office.
- b. Non-previously Approved Data. The applicant will complete the forms as instructed in this AC leaving item 7, "Approval for Return to Service," blank. Both copies of the form, with supporting data, will be sent to the local FAA district office. When the FAA determines that the major repair or alteration data complies with applicable regulations and is in conformity with accepted industry practices, data approval will be recorded by entering an appropriate statement in item 3, "For FAA Use Only." Both forms and supporting data will be returned to the applicant who will complete item 7, "Approval for Return to Service." The applicant will give the original of the form, with its supporting data, to the aircraft owner or operator and return the duplicate copy to the local FAA district office who will, in turn, forward it to the FAA Aircraft Registration Branch, Oklahoma City, Oklahoma, for inclusion in the aircraft records.

M. C. BEARD

Acting Director

Office of Airworthiness

APPENDIX 1. FAA FORM 337 (FRONT), MAJOR REPAIR AND ALTERATION (AIRFRAME, POWERPLANT, PROPELLER, OR APPLIANCE)

			DEPARTMENT OF TRA	MSPORT	ATION			Form	Approved			
FEDERAL AVIATION ADMINISTRATION									OMB No 04-R0060			
MAJOR REPAIR AND ALTERATION									FOR FAA USE ONLY			
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1. AIRCRAFT		ROBIN					RA-15-150					
			SERIAL NO.				NATIONALITY AND REGISTRATION MARK					
			15-10521				N-3763					
2. OWNER		NAME (AS Show	NAME (As shown on registration certificate)				ADDRESS (As shown on registration certificate)					
		W41142	William Taylor				36 Main Street Cambria. Pennsylvania 15946					
		WIIIE					AA USE ONLY					
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The data identified herein complies with the applicable airworthiness requirements and is approved for the above described aircraft, subject to												
conformity inspection by a person authorized by FAR Part 43. Section 43.7												
conformity inspection by a person authorized by FAR Part 43, Section 43.7. AEA-GADO-19 April 5, 1979 Ralph Burlingame												
District Office DATE Signature of FAA Inspector												
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DATE OF APPROVAL OR CERTIFICATE OR SIGNATURE OF AUTHORIZED INDIVIDUAL												
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FAA FORM 337 (BACK), MAJOR REPAIR AND ALTERATION (AIRFRAME, POWERPLANT, PROPELLER, OR APPLIANCE)

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.)
- Removed right wing from aircraft and removed skin from outer 6 feet. Repaired buckled spar 49" from tip in accordance with attached photographs and figure 1 of drawing dated March 6, 1979.

DATE: March 14, 1979, inspected splice in Item 1 and found it to be in accordance with data indicated. Splice is okay to cover. Inspected internal and external wing assembly for hidden damage and condition.

Donald Pauley
Donald Pauley, IA 237412

- Primed interior wing structure and replaced skin P/Ns 63-0085, 63-0086, 63-00878 with same material, 202473, .025" thick. Rivet size and spacing all the same as original and using procedures in Chapter 2, Section 3 of AC 43.13-1A, dated 1972.
- Replaced stringers as required and installed 6 splices as per attached drawing and photographs.
- Installed wing, rigged aileron, and operationally checked in accordance with manufacturers maintenance manual.
- 5. No change in weight or balance.

END