



Advisory Circular

Subject: COMMERCIAL ASSISTANCE
DURING CONSTRUCTION OF
AMATEUR-BUILT AIRCRAFT

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Change:

1. PURPOSE. This advisory circular (AC) explains current Federal Aviation Regulations (FAR) and Federal Aviation Administration (FAA) policy for the fabrication and assembly of amateur-built aircraft. It provides information and guidance to persons involved in the construction of amateur-built aircraft, the manufacture of kits designed to be assembled into aircraft by amateur-builders, builders of aircraft fabricated from plans for certification as amateur-built, and persons providing assistance to amateur-builders. Like all AC material, this AC is not mandatory and does not constitute a regulation. It is issued for guidance purposes and to outline a method of compliance with the applicable FAR. In lieu of following this method without deviation, a person may elect to follow an alternate method, provided the alternate method is also found by the FAA to be an acceptable means of complying with the requirements of the FAR. Since the method of compliance presented in this AC is not mandatory, the terms "shall" and "must" used herein apply only to a person who chooses to follow this particular method without deviation. This AC does not change regulatory requirements and does not authorize changes in, or deviations from, regulatory requirements.

2. RELATED FEDERAL AVIATION REGULATIONS, FAA ADVISORY CIRCULARS AND FAA ORDERS.

- a. 14 CFR part 21, Certification Procedures for Products and Parts.
 - b. 14 CFR part 65, Certification: Airman other than Flight Crewmembers.
 - c. Advisory Circular 20-27, Certification and Operation of Amateur-Built Aircraft.
 - d. Advisory Circular 65-23, Certification of Repairmen (Experimental Aircraft Builders).
 - e. Advisory Circular 90-89, Amateur-Built Aircraft and Ultralight Flight Testing Handbook.
 - f. FAA Order 8130.2, Airworthiness Certification of Aircraft and Related Products.
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3. BACKGROUND.

a. The FAR provides for the issuance of a special airworthiness certificate in the experimental category for the purpose of operating amateur-built aircraft. Title 14 CFR part 21, section 21.191(g), defines an amateur-built aircraft as "an aircraft THE MAJOR PORTION of which has been FABRICATED AND ASSEMBLED BY PERSONS who undertook the construction project SOLELY FOR THEIR OWN EDUCATION OR RECREATION" (emphasis added).

b. The FAA, in partnership with the Experimental Aircraft Association (EAA) and the Small Aircraft Manufacturers Association (SAMA), saw a need to address the practice of fabrication and assembly of amateur-built aircraft for profit. The aircraft were designed as kits and/or plans-built, with the intent that they would be constructed by amateur-builders for their own education or recreation.

4. DEFINITIONS. As used in this advisory circular, the following definitions apply:

a. **Aircraft Evaluation.** The evaluation performed for the purpose of determining if a specific amateur-built aircraft meets the major portion requirement of section 21.191(g).

b. **Builder Center.** A place where amateur-builders can obtain instruction, help, and support during construction of their aircraft.

c. **Commercial Assistance.** Assistance in the building of an amateur-built aircraft in exchange for compensation. This does not include one builder helping another.

d. **Compensation.** Payment by the amateur-builder applicant in cash, services, or other tender, to any person who provides assistance on a commercial basis in the building of an aircraft.

e. **Checklist.** The FAA Form 8000-38, Fabrication/Assembly Operation Checklist, is used by the FAA as an aid in determining if a manufacturer's aircraft kit meets the major portion requirements of section 21.191(g). It is also used for determining if a completed aircraft is eligible for certification as an amateur-built aircraft (sample in appendix 1).

f. **Kit-Built Aircraft.** An aircraft that is constructed from a manufactured kit that may include some major sub-assemblies and/or pre-assembled components.

g. **Kit Evaluation.** An evaluation by the FAA to determine if an aircraft built from, and according to, the kit instructions will meet the major portion requirement of section 21.191(g).

h. **Letter of Eligibility.** A letter provided by the FAA to an aircraft kit manufacturer advising that the aircraft kit requested to be evaluated meets the major portion requirement of section 21.191(g).

i. **Major Portion.** As related to a special airworthiness certificate issued for the purpose of operating amateur-built aircraft, major portion means that when the aircraft is completed, the majority of the fabrication and assembly tasks have been performed by the amateur builder(s) who submit the application for certification.

j. Person. An individual, firm, partnership, corporation, company, association, joint-stock association, or governmental entity. It includes a trustee, receiver, assignee, or similar representative of any of them.

k. Plans-Built Aircraft. An aircraft that is constructed exclusively from plans/blueprints without the aid of purchased major sub-assemblies or pre-assembled kit components. This also includes aircraft of a builder's original design.

l. Unacceptable Commercial Assistance. Any commercial assistance that reduces the work performed by the amateur-builder to less than the major portion of the aircraft construction.

5. EVALUATION OF KITS, COMPLETED KIT-BUILT, AND PLANS-BUILT AIRCRAFT.

The evaluation to determine compliance with the major portion construction requirement of the FAR is usually performed by an FAA Aviation Safety Inspector (ASI) from a Manufacturing Inspection District Office (MIDO) or a Flight Standards District Office (FSDO). Additionally, a Designated Airworthiness Representative (DAR) may be authorized to evaluate a completed plans-built aircraft intended for certification as an amateur-built.

a. Initial Evaluation of Kits.

(1) Aircraft kit manufacturers requesting a kit evaluation should submit a letter to the local FAA Manufacturing office. The purpose of the evaluation is to determine if the completed aircraft is capable of meeting the major portion requirements of section 21.191(g).

(2) When the kit is evaluated using the checklist as a guide and found to comply with the major portion requirement of section 21.191(g), a Letter of Eligibility is sent to the kit manufacturer. The kit is then acceptable to be included in the Listing of Eligible Amateur-Built Aircraft Kits. This letter SHOULD NOT be construed to mean the kit or its manufacturer is FAA certified, certificated, or approved, and it is not appropriate to represent it as such.

(3) The listing is published by the FAA's Engineering and Manufacturing Branch, AFS-610, P.O. Box 25082, Oklahoma City, OK 73125, telephone number, (405) 954-4103. This information is also available in electronic format through Fed World in Springfield, VA by calling (703) 487-4608 or through the internet via: <http://www.fedworld.gov/>. The purpose of the listing is to assist the amateur-builder, the ASI, or the DAR by eliminating the duplication or evaluations for the major portion determination.

(4) If the kit manufacturer later offers an option or makes changes to the kit that decreases the amount of fabrication and assembly required by the builder, the manufacturer should request a new Letter of Eligibility. The kit manufacturer would provide a revised checklist and a description of the option or change to the FAA with drawings and/or photos as necessary. If the FAA determines that the revised kit still meets the major portion requirement, the FAA will issue a new Letter of Eligibility for the amended checklist without conducting a physical inspection or complete re-evaluation of the kit. If the FAA determines that the option or change was of sufficient magnitude, a physical inspection and re-evaluation of the kit will be performed.

b. Completed Kit-Built Aircraft. When a kit has been evaluated and published in the listing of eligible amateur-built aircraft kits, and no commercial assistance was used in the construction of the aircraft using the evaluated kit, the ASI or DAR will not be required to make another major portion rule determination for the completed aircraft.

c. Plans-Built Aircraft.

(1) During final inspection for compliance with section 21.191(g), a plans-built aircraft must be evaluated using the FAA Form 8000-38 as a guide. If the builder intends to utilize commercial assistance, the FAA Form 8000-38 can be submitted to the FAA prior to construction, listing the tasks or processes for which the commercial assistance is proposed. It should also show the intended fabrication and assembly tasks the builder will perform. On the basis of this pre-construction checklist, a builder of a plans-built aircraft should be able to obtain an evaluation in writing from the ASI or DAR of the effect that the proposed commercial assistance will have on the major portion requirement for the completed aircraft.

(2) A person may provide commercial assistance to a builder of a plans-built aircraft or non-evaluated kit. This assistance or task must be listed in the KIT MANUFACTURER column on the checklist when the completed aircraft is presented for evaluation/certification to the ASI or DAR.

6. COMMERCIAL ASSISTANCE NOT REQUIRING RE-EVALUATION OF THE COMPLETED AIRCRAFT.

a. Commercial instructional assistance may be obtained by the amateur builder in the fabrication or assembly of specific parts and the completion of certain tasks or processes involved in the construction of the aircraft. During all instructional activity, the amateur-builder must be present to accomplish the tasks and all subsequent fabrication and assembling of parts for which commercial instruction is being rendered. Tasks completed by the amateur-builder would be identified on the FAA Form 8000-38 under AMATEUR or in the assembly manual. For example, assume fabrication of the wing ribs is listed on the checklist or in the assembly manual as a task required to be completed by the amateur-builder. Instructional activity could be provided to build the first few ribs with the remainder to be completed by the amateur-builder.

b. Commercial assistance may be obtained for non-checklist items on a kit that has been evaluated by the FAA. A non-checklist item is a task or process that is not listed in the checklist. These items also include painting and the installation of interior upholstery or avionics beyond basic regulatory requirements. Such a task or process would not be required to be personally completed by the amateur-builder for the aircraft to receive an airworthiness certificate under section 21.191(g).

c. The amateur-builder is not expected to have fabricated every component that makes up the completed aircraft. Non-checklist items include the fabrication of the engines, propellers, wheels and brake assemblies, and standard aircraft hardware. The installation of these items may be required to be accomplished by the builder if they are checked in the AMATEUR column on the checklist.

7. Commercial Assistance Requiring Re-evaluation of the Completed Aircraft. If commercial assistance other than that described in paragraph 6 is performed on the items listed in the checklist under

AMATEUR, on a evaluated kit, the major portion evaluation previously performed by the FAA will be invalid for that specific aircraft project. Consequently, it may result in a complete re-evaluation of the fabrication and assembly of that aircraft. This could put the amateur-built status of the aircraft in jeopardy. In other words, the aircraft will be treated as a non-evaluated kit and subject to complete evaluation by the FAA when presented for certification as an amateur-built aircraft. The builder may want to obtain a pre-construction evaluation of proposed commercial assistance in writing from the ASI or DAR to preclude certification problems at the completion of a project.

8. Commercial Assistance on Incomplete Aircraft. Commercial assistance does not include the instance where an incomplete aircraft is sold to another builder and the second or subsequent builder completes the aircraft. In such a case, the work performed by the first builder will count toward completion of the major portion by the second builder. The second or subsequent builder should obtain as much detailed information and documentation, e.g., logbooks, material receipts, pictures, etc., from the original builder as possible. This information will be helpful in the FAA's determination for the major portion requirement of the aircraft and eligibility of the subsequent builder to meet the requirement for repairman certification under section 65.104. The second builder may not be eligible for a repairman certificate under section 65.104, unless it can be shown to the satisfaction of the FAA that the individual has the requisite skill to determine whether the aircraft is in a condition for safe operation.

9. Non-Evaluated Kit Aircraft. An aircraft constructed from a non-evaluated kit must be evaluated upon completion for compliance with section 21.191(g), by the ASI or DAR using the procedures in the FAA Order 8130.2, Airworthiness Certification of Aircraft and Related Products, and the FAA Form 8000-38, as a guide.

10. ADDITIONAL INFORMATION. The FAA Form 8130-12, Eligibility Statement, is one of the forms required to be submitted by the applicant for a special airworthiness certificate for the purpose of operating an amateur-built aircraft. It includes sections for the registered owner and aircraft information along with the applicant's declaration certifying that all statements and answers are complete and true. It also provides notice of the potential penalty that could be applied if false or fraudulent statements are made. A sample of the FAA Form 8130-12 is located in appendix 2.

11. INFORMATION SUPPLIED BY INDUSTRY TO PROSPECTIVE CUSTOMERS. Kit manufacturers are encouraged to include a document explaining the intent and purpose of the amateur-built rule in their information packages. Prospective customers would then be made aware of their responsibility and limitations under the FAR. The information package should summarize the process used to determine kit eligibility and the inspection of the completed aircraft. It should also advise potential builders of the statement they must sign certifying that they fabricated and assembled the major portion of the aircraft. Additionally, the customer should be advised of the need for and the availability of flight training, as well as the value of participation in the EAA Flight Advisor Program.

12. INFORMATION SUPPLIED BY INDUSTRY TO PURCHASERS. Kit manufacturers are encouraged to include a copy of the amateur-built regulation and to advise the purchaser of the requirement for the applicant to certify that they fabricated and assembled the major portion of the aircraft for their own education or recreation. In addition to the aircraft assembly manual, the kit manufacturer should reference this AC regarding acceptable commercial assistance and the use of a builder center for help and instruction during construction of an aircraft. The manufacturers should

inform purchasers of the help available to them through various EAA programs, including: EAA Chapters, Technical Counselors, and Flight Advisors.



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**APPENDIX 1. PREPARATION INSTRUCTIONS FOR
FAA FORM 8000-38, FABRICATION/ASSEMBLY
OPERATION CHECKLIST**

1. PURPOSE. This appendix provides instructions for completing FAA Form 8000-38. A sample form is included as figure 1.

2. GUIDANCE. This form may be used by any person to establish the eligibility of an aircraft to be certificated experimental, for the purpose of operating as an amateur-built. Prepare the form as follows:

a. Enter the company name and address, aircraft model, (by name and/or number), document name and date (manufacturer's parts list, assembly manual, etc., with latest revision) and type of aircraft (land, sea, fixed-wing, rotorcraft, etc.).

b. Mark the specific tasks required to fabricate and assemble the aircraft. Mark, an "X" under the column heading "Accomplished By" in the appropriate space when the task is performed by the AMATEUR. If the task is performed by the kit manufacturer or by a person providing commercial assistance, a mark will be placed in the KIT MANUFACTURER column. Additional blank lines are provided to list any tasks not on the checklist. If a task is listed and not applicable to the construction of the aircraft enter N/A in the appropriate space.

c. Use the comments area to enter any additional comments, information or statements, as necessary.

d. Print or type name of person performing the evaluation of the kit or aircraft.

e. The person performing the evaluation of the kit or aircraft should sign their name in the signature block.

f. Enter the date the evaluation was performed.

FIGURE 1. SAMPLE FAA FORM 8000-38, FABRICATION
ASSEMBLY OPERATION CHECKLIST (CONT'D)

Fabrication/Assembly Operation Checklist (Continued)		
	Accomplished By	
	Kit Manufacturer	Amateur
PROPULSION (Continued)		
16. Install Fuel Tank		
17. Fabricate Fuel System Components		
18. Install Fuel System Components		
MAIN ROTOR DRIVE SYSTEMS AND CONTROL MECHANISM(S)		
1. Fabricate Special Static and Dynamic Main Rotor Rigging Tools		
2. Fabricate/Assemble Main Rotor Drive Train		
3. Install Main Rotor Drive Train Assembly		
4. Fabricate/Assemble Main Rotor Shaft and Hub Assembly		
5. Install Main Rotor Shaft and Hub Assembly		
6. Align Main Rotor Shaft Drive Train, Shaft and Hub Assembly		
7. Fabricate Main Rotor Rotating Controls		
8. Install Main Rotor Rotating Controls		
9. Fabricate Main Rotor Non-Rotating Controls		
10. Rig Main Rotor Rotating and Non-Rotating Controls		
11. Fabricate Main Rotor Blades		
12. Install Main Rotor Blades on Rotor Hub		
13. Statically Balance and Rig Main Rotor System		
14. Dynamically Track and Balance Main Rotor System		
TAIL ROTOR DRIVE SYSTEMS AND CONTROL MECHANISM(S)		
1. Fabricate Special Static Tail Rotor Rigging Tools		
2. Fabricate Vertical Trim Fin		
3. Install Vertical Trim Fin		
4. Fabricate Horizontal Stabilizer		
5. Install Horizontal Stabilizer		
6. Fabricate Tail Rotor Drive System		
7. Install Tail Rotor Drive System		
8. Fabricate Tail Cone or Frame		
9. Install and Rig Tail Cone or Frame		
10. Rig Vertical Trim Fin		
11. Fabricate Tail Rotor Shaft and Hub Assembly		
12. Install Tail Rotor Shaft and Hub Assembly		
13. Fabricate Tail Rotor Rotating and Non-Rotating Controls		
14. Rig Tail Rotor Rotating and Non-Rotating Controls		
15. Fabricate/Assemble Tail Rotor Blades		
16. Install Tail Rotor Blades		
17. Statically Balance and Rig Tail Rotor System		
18. Dynamically Track and Balance Tail Rotor System		

**APPENDIX 2. PREPARATION INSTRUCTIONS FOR
FAA FORM 8130-12, ELIGIBILITY STATEMENT
AMATEUR-BUILT AIRCRAFT**

1. PURPOSE. This appendix provides instructions for completing FAA Form 8130-12. A sample form is included as figure 1.

2. GUIDANCE. This form is required to be submitted by a person applying for a special airworthiness certificate, experimental, for the purpose of operating an amateur-built aircraft under section 21.191(g). Prepare the form by inserting in:

a. SECTION I. REGISTERED OWNER INFORMATION: Enter the name, address, and telephone number for residence and place of business.

b. SECTION II. AIRCRAFT INFORMATION: Enter the model (number and/or name), assigned serial number, registration number, whether aircraft was fabricated from a plan or kit, engine make, engine serial number, prop/rotor make, prop/rotor serial number.

c. SECTION III. MAJOR PORTION ELIGIBILITY STATEMENT OF APPLICANT: The name of person(s) (printed), identified in Section I that certify the aircraft identified in Section II on the form was fabricated and assembled for their own education or recreation. The applicant should sign (in ink), and enter the date signed.

d. SECTION IV. NOTARIZATION STATEMENT: The signature, date, and stamp (if applicable), of a Notary Public who witnessed the signature of the applicant.

