U.S. Department
of Transportation
Federal Aviation
Administration

Advisory Circular

Subject: **CERTIFICATION AND OPERATION OF AMATEUR-BUILT AIRCRAFT** **Date:** **9/26/01** **Initiated by:** **AIR-200** **AC No.** **20-27E**

1. PURPOSE. This advisory circular (AC) contains information and guidance on the fabrication and assembly, airworthiness certification, and operation of amateur-built aircraft of all types; explains the amount of fabrication and assembly the builder must accomplish for the aircraft to be eligible for amateur-built certification; and describes the role of the Federal Aviation Administration (FAA) in the certification process. The information contained herein sets forth an acceptable means, but not the only means, for compliance with the applicable sections of Title 14 Code of Federal Regulations (14 CFR) part 21, Certification Procedures for Products and Parts (part 21).

2. CANCELLATION. AC 20-27D, Certification and Operation of Amateur-Built Aircraft, dated June 22, 1990, is canceled.

3. PRINCIPAL CHANGES.

a. Information for placard installation and cockpit instrument marking has been added.

b. Information for the evaluation and operation of system controls has been added.

c. Guidance regarding commercial assistance has been added.

d. Information in the examples of applicable forms has been revised.

e. Operating limitations have been removed to avoid any inconsistencies with those contained in FAA Order 8130.2, Airworthiness Certification of Aircraft and Related Products.

f. Acronyms referring to Title 14 Code of Federal Regulations have been changed from FAR to 14 CFR.

4. DEFINITIONS. The following terms are defined for use in this AC:

a. Amateur-Built Aircraft. An aircraft in which the major portion has been fabricated and assembled by a person(s) who undertook the construction process solely for their own education or recreation.

b. Commercial Assistance. Assistance in the fabrication and assembly of amateur-built aircraft in exchange for compensation. This does not include one person helping another without compensation.

c. Experimental Aircraft Association (EAA) Technical Counselor and Flight Advisor Programs. As defined by the EAA, Technical Counselors provide overall mechanical assistance and pre-cover guidance to owners/builders. EAA Flight Advisors provide pre-purchase aircraft vs. pilot skills suitability reviews and first test flight preparation guidance to owners/builders.

d. Fabricate. To construct a structure or component from raw stock or materials.

e. FAA Inspector. For the purpose of this AC, an Aviation Safety Inspector and/or an authorized Designated Airworthiness Representative (DAR).

f. FAA Office. An FAA office with airworthiness certification authority; to include the Flight Standards District Office (FSDO), Manufacturing Inspection District Office (MIDO), Certificate Management Office (CMO), Certificate Management Unit (CMU), or Manufacturing Inspection Satellite Office (MISO) that may delegate the airworthiness inspection and certification of an amateur-built aircraft.

g. Kit-Built Aircraft. An aircraft that is constructed from a manufactured kit that may include some major sub-assemblies and/or pre-assembled components. This description does not include primary category aircraft as defined in section 21.184.

h. 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). When purchasing a partially completed kit or aircraft, the major portion includes the construction efforts of the previous amateur aircraft builders, and those past efforts should be added to the new builder's "builder's log" to show the construction history of the kit or aircraft.

i. 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.

j. Plans-Built Aircraft. An aircraft constructed from plans/blueprints without the aid of purchased major sub-assemblies or pre-assembled kit components, and includes aircraft of a builder's original design.

5. RELATED PUBLICATIONS.

a. 14 CFR part 1, Definitions and Abbreviations (part 1).

b. 14 CFR part 21, Certification Procedures for Products and Parts (part 21).

c. 14 CFR part 43, Maintenance, Preventive Maintenance, Rebuilding, and Alteration (part 43), Appendix D.

d. 14 CFR part 45, Identification and Registration Marking (part 45).

e. 14 CFR part 47, Aircraft Registration (part 47).

f. 14 CFR part 65, Certification: Airmen Other than Flight Crewmembers (part 65).

g. 14 CFR part 91, General Operating and Flight Rules (part 91).

h. 14 CFR part 103, Ultralight Vehicles (part 103).

i. FAA Order 8130.2, Airworthiness Certification of Aircraft and Related Products.

j. AC 20-139, Commercial Assistance During Construction of Amateur-Built Aircraft.

k. AC 21-12, Application for U.S. Airworthiness Certificate, FAA Form 8130-6.

l. AC 43.13-1, Acceptable Methods, Techniques, and Practices-Aircraft Inspection and Repair.

m. AC 43.13-2, Acceptable Methods, Techniques, and Practices-Aircraft Alterations.

n. AC 45-2, Identification and Registration Marking.

o. AC 65-23, Certification of Repairman (Experimental Aircraft Builders).

p. AC 90-89, Amateur-Built Aircraft & Ultralight Flight Testing Handbook.

6. BACKGROUND. Part 21 provides for the issuance of FAA Form 8130-7, Special Airworthiness Certificate, in the Experimental Category, to permit the operation of an amateur-built aircraft. Section 21.191(g) defines an amateur-built aircraft as an aircraft in which the major portion of the aircraft has been fabricated and assembled by persons who undertook the construction project solely for their own education or recreation. During the construction of an amateur-built aircraft, commercially produced components and parts, including engine and engine accessories, propellers, tires, landing gear, main and tail rotor blades, rotor hubs, wheel and brake assemblies, forgings, castings, and extrusions may be used. In addition, standard aircraft hardware such as pulleys, bell cranks, rod ends, bearings, bolts, rivets, etc., may be used. Commercial assistance in the fabrication and assembly of an amateur-built aircraft is allowed and is discussed in this AC. Specific details on the use of commercial assistance are available in AC 20-139.

7. FAA INSPECTION CRITERIA.

a. The amateur-built program is designed to permit persons to build an aircraft solely for educational or recreational purposes utilizing acceptable aeronautical construction standards and practices. Amateur

builders are free to develop their own designs or build from existing designs. The FAA does not approve those designs nor would it be practical to develop design standards for the multitude of unique design configurations generated by designers, kit manufacturers, and amateur builders. Upon completion of the building process, the FAA inspects the aircraft, to verify to the extent feasible, the use of acceptable workmanship methods, techniques, and practices, and then issues an airworthiness certificate with appropriate operating limitations.

b. In addition to the requirements of 14 CFR, guidelines by which the aircraft are operated and maintained are prescribed in aircraft operating limitations, which become a part of the special airworthiness certificate. The FAA may impose additional limitations to those listed in Order 8130.2 when deemed necessary in the interest of safety. References in this AC to "Phase I" refer to those operating limitations that apply to the aircraft while undergoing its initial test flights, and "Phase II" refers to those operating limitations that apply after completion of all initial test flights.

c. The FAA has designated private persons to act on its behalf in the inspection of amateur-built aircraft and the issuance of airworthiness certificates. Those persons are known as Designated Airworthiness Representatives (DARs) and are authorized to charge a fee for their services. The fee is set by the DAR and is not governed by the FAA. DARs are considered by the FAA as the primary resource for certification of amateur-built aircraft. The amateur builder may contact the local FAA office to locate a DAR.

(1) The FAA inspector will conduct a visual inspection of the aircraft prior to issuance of the special airworthiness certificate with Phase I operating limitations. Issuance of the special airworthiness certificate and Phase I operating limitations will enable the applicant to show compliance with section 91.319(b). The inspection will include a review of the information required by section 21.193, the aircraft builder's documentation, and examination of the completed aircraft to verify to the extent feasible that acceptable workmanship has been used in the construction process. Also, the appropriate operating limitations will be prescribed at that time.

(2) The FAA inspector may elect to issue amateur-built operating limitations on a one-time basis for determining compliance with section 91.319(b) and continued operation under section 21.191(g). Under this procedure, the aircraft may be inspected by the FAA inspector once prior to flight testing. The special airworthiness certificate will be issued, but its validity will be subject to compliance with its operating limitations. Those limitations will provide for operation in an assigned flight test area for a certain number of hours (Phase I) before the second part (Phase II) of the limitations become effective, releasing the aircraft from the test area.

(a) For Phase I limitations, the FAA will prescribe operating limitations appropriate for the applicant to demonstrate that the aircraft is controllable throughout its normal range of speeds and maneuvers and has no hazardous operating characteristics or design features. The flights will be conducted over water or sparsely populated areas having light air traffic in accordance with section 91.305. Upon completion of the assigned flight test period, the pilot will endorse the aircraft logbook with a statement certifying compliance with the requirements of section 91.319(b). The aircraft may then be operated in accordance with Phase II limitations.

(b) For Phase II limitations, the FAA will prescribe operating limitations for the operation of an amateur-built aircraft for an unlimited duration. Phase I and II operating limitations are provided in Order 8130.2.

8. DESIGN AND CONSTRUCTION.

a. Many individuals who wish to build their own aircraft have little or no experience with respect to aeronautical practices, workmanship, or design. One source for advice in such matters is the EAA (see appendix 1 of this AC). The EAA is an organization established for the purpose of promoting aviation safety, construction of amateur-built aircraft, and providing technical advice and assistance to its members. The EAA has implemented the Technical Counselors Program to assist in ensuring the safety and dependability of amateur-built aircraft. EAA Technical Counselors are sometimes available to visit an amateur-built aircraft project and offer constructive advice regarding workmanship to EAA members. The EAA has advised the FAA that it will not provide technical assistance to the builder in designing an aircraft.

b. Amateur builders have adopted a practice of calling upon persons having expertise with aircraft construction techniques to inspect particular components (e.g., wing assemblies, fuselages, etc.) prior to covering, and to conduct other inspections as necessary. Those persons include EAA Technical Counselors, persons with aviation design and/or engineering experience, mechanics with aircraft, airframe, and powerplant experience, and other aircraft builders. This practice has proven to be an effective means of ensuring construction integrity and an acceptable level of safety.

c. The FAA does not expect the builder to personally fabricate every part of the aircraft; some components may be purchased. Any choice of engines, propellers, wheels, or other components, and any choice of materials may be used in the construction of amateur-built aircraft. It is recommended that FAA-approved components (e.g., components produced in accordance with a Production Certificate, a Technical Standard Order (TSO) authorization, or Parts Manufacturer Approval (PMA) and established aircraft quality material (e.g., military specification, SAE, AN, etc.)) be used, especially in fabricating parts constituting the primary structure, such as wing spars, critical attachment fittings, and fuselage structural members. Materials whose identity and/or quality cannot be established should not be used. The use of major components (e.g., wings, fuselage, empennage, etc.) from type certificated and/or experimental aircraft may be used in the construction as long as the builder can determine these components are in a condition for safe operation. This description refers to the condition of that component relative to structural strength, wear, or deterioration due to fatigue, corrosion, etc. It should be noted that no credit for fabrication will be given for those components. FAA Form 8000-38, Fabrication and Assembly Checklist (appendix 10 of this AC), may be used as an aid in determining if the use of those components would affect the builder's requirement to fabricate and assemble the major portion of the aircraft. Several tasks may be contracted commercially and include installation of avionics, upholstery, and painting.

d. The design of the cockpit or cabin of the aircraft should avoid or provide for padding on sharp corners or edges, protrusions, knobs, and similar objects that may cause injury to the pilot or passengers in the event of an accident. It is recommended that only FAA TSO-approved seat belts be installed

along with approved shoulder harnesses. Cockpit instruments should be appropriately marked and needed placards should be installed and placed for easy reference. A fuel selector should be readily available to the pilot to allow for shut off and flow of all tanks, and should be labeled appropriately. Careful attention should be given to the appropriate evaluation and operation of system controls (e.g., fuel selector(s) and electrical switches/breakers) to ensure they are appropriately placed, clearly marked, and provide easy access and operation. Reference AC 90-89 for additional information. It is also recommended that the amateur builder use the sample checklist in appendix 1 of AC 90-89 to inspect cockpit instrumentation and systems controls.

e. The fuel tank installation should ensure adequate fuel is supplied to the engine in all anticipated flight attitudes, and that a firewall is placed between the engine compartment and the cockpit or cabin. When applicable, a carburetor heat system should be provided to minimize the possibility of carburetor icing.

f. Additional information and guidance concerning fabrication and assembly are provided in AC 43.13-l and 43.13-2. These publications are available from the United States (U.S.) Government offices listed in paragraph 20 of this AC, and for review at local FAA offices.

g. If the amateur builder is working from plans or a construction kit, any modifications to the design or kit should be discussed with the designer, the kit manufacturer, or other equally knowledgeable person(s). During construction, these modifications should be recorded in the builder's log.

9. AIRCRAFT CONSTRUCTION KITS.

a. Construction kits containing raw materials and some prefabricated components may be used in building an amateur-built aircraft. However, aircraft that are assembled from kits composed of completely finished, prefabricated components and parts are not eligible for certification as amateur-built aircraft if the major portion of the aircraft will not have been fabricated and assembled by the builder.

b. An aircraft built from a kit may be eligible for amateur-built certification, provided the major portion has been fabricated and assembled by the amateur builder. Owners will jeopardize eligibility for amateur-built certification if they hire someone to build the aircraft for them. Commercial assistance that reduces the amount of fabrication and assembly performed by the amateur builder to less than the major portion required by section 21.191(g) would render the aircraft ineligible for certification as an amateur-built experimental aircraft. Kits may consist of raw stock such as lengths of wood, tubing, extrusions, etc., that may have been cut to an approximate length. A certain quantity of prefabricated parts such as heat-treated ribs, bulkheads, or complex parts made from sheet metal, fiberglass, or polystyrene, and precut/predrilled material would also be acceptable, provided the aircraft met the major portion of the fabrication and assembly requirement.

c. Various material/parts kits for the construction of aircraft are available for use by aircraft builders. Advertisements may be somewhat vague, and in some cases misleading, as to whether an aircraft kit is eligible for amateur-built certification. It is not advisable to obtain a kit before verifying the aircraft,

upon completion, will be eligible for certification as an amateur-built under existing regulations and established policy. The FAA does not certify nor approve aircraft kits, kit manufacturers, or kit distributors. However, the FAA does perform evaluations of kits, at the request of the kit manufacturer/distributor, primarily for the purpose of determining if an aircraft built from a particular kit would meet the major portion criteria. The placement of a kit on the Listing of Eligible Amateur-Built
Aircraft Kits is not a prerequisite for amateur-built certification. A current listing of eligible kits may be obtained by contacting the local FAA office for the current website address.

d. Purchasers of partially completed kits or plans-built aircraft should obtain all fabrication and assembly records (e.g., receipts for materials, builder's log, and aircraft/engine/propeller logbooks) from the previous owner(s). This information may enable the builder who completes the aircraft to be eligible for amateur-built certification.

10. REGISTRATION INFORMATION. Section 21.173 requires that all U.S. civil aircraft be registered before any airworthiness certificate can be issued. Part 47 prescribes the regulatory
requirements for registering civil aircraft. The procedures for registering an amateur-built aircraft are as follows:

a. The aircraft owner/applicant should submit the required documentation, in accordance with section 47.33, to the Aircraft Registration Branch, AFS-750, (see appendix 2 of this AC). AC Form 8050-88, Affidavit of Ownership for Amateur-Built Aircraft, or its equivalent may be submitted. The affidavit must also contain a statement that the aircraft was built from parts or kits and that the signer(s) is/are the owner(s). This affidavit establishes ownership of the aircraft (see appendix 3 of
this AC). If the aircraft was built from a kit, the applicant must also submit a signed bill of sale from the manufacturer of the kit. AC Form 8050-2, Aircraft Bill Of Sale, may be used provided the word "aircraft" is marked through and the word "kit" is inserted in its place (see appendix 4 of this AC). If for some reason the owner cannot provide a bill of sale for the kit, a statement should be submitted to explain why a bill of sale cannot be provided. Amateur aircraft builders who are not the original purchaser of an uncompleted kit must be able to provide traceability from the kit manufacturer, through the previous owners, to themselves, and provide that information to AFS-750. The owner should also submit a completed AC Form 8050-1, Aircraft Registration Application (see appendix 5 of this AC). The documents should be accompanied by a registration fee of $5 in the form of a check or money order payable to the FAA. It is recommended that application for registration of an amateur-built aircraft be submitted 60 to 90 days prior to completion of construction and FAA inspection for airworthiness certification.

b. AFS-750 may assign a random registration number (N-number) to an amateur-built aircraft for no additional fee. The owner may request a special registration number by submitting a letter listing up to five possible registration numbers, in order of preference (see appendix 2 of this AC). Registration numbers are made up of one to five symbols, the last two which may be alphabetical. The fee for obtaining a special registration number is $10. If a special number is being requested along with registration, a total fee of $15 would be required. Registration numbers may be reserved for a period of one year for a fee of $10. If the number is not assigned to an aircraft during this period, the reservation may be renewed annually by paying an additional $10 fee before the end of each renewal period.

c. After receipt of the applicant's letter requesting a special or random number assignment, AFS-750 will send a letter to the applicant giving the N-number assigned, a blank AC Form 8050-1, and other registration information. THIS LETTER DOES NOT CONSTITUTE REGISTRATION OF THE AIRCRAFT. The applicant should complete and return the white original and green copy of AC Form 8050-1 to AFS-750 as soon as practical, accompanied with the appropriate fee. The pink copy of the application may be retained by the applicant until receipt of AC Form 8050-3, Certificate of Aircraft Registration.

d. Since the applicant's amateur-built aircraft has never been registered nor received airworthiness certification, the pink copy cannot be used as temporary authority to operate the aircraft, nor can FAA Form 8130-6, Application for Airworthiness Certificate, be accepted by the FAA for consideration unless the FAA has verified that the aircraft has been registered. Prior to FAA inspection, the FAA inspector will contact AFS-750 to verify that the aircraft has been registered. However, if the procedures in this AC are followed, the applicant should receive the Certificate of Aircraft Registration before the actual FAA airworthiness inspection.

11. IDENTIFICATION AND REGISTRATION MARKING. When applying for an airworthiness certificate for an amateur-built aircraft, the builder must show compliance with the identification requirements of section 21.182 and the nationality and registration marking requirements of part 45.

a. The aircraft must be identified by means of a fireproof identification plate that is etched, stamped, engraved, or marked by some other approved fireproof marking. The term "fireproof" is defined in part 1 as "has the capacity to withstand the heat associated with fire at least as well as steel in dimensions appropriate for the purpose for which they are used." For example, should an aircraft constructed of wood and fabric be destroyed by fire, the identification plate should remain intact. The identification plate must be secured in such a manner that it will not be defaced or removed during normal service, or lost or destroyed in an accident. Attachment by riveting or bonding is acceptable. Section 45.11 requires the identification plate to be located on the exterior either adjacent to and aft of the rear-most entrance door or on the fuselage near the tail surfaces, and must be legible to a person standing on the ground.

b. The information placed on an amateur-built aircraft identification plate must include the name of the amateur builder (not the designer, plans producer, or kit manufacturer), the model designation, and the serial number of the aircraft. The model designation and serial number may be whatever number the builder wishes to assign, if the aircraft is of the builder's own design and not used to identify any other aircraft. If the aircraft is built from a kit or plans, the builder should use the identification information provided by the kit manufacturer or plans designer. All information should agree with the information submitted on AC Form 8050-88.

c. The builder should refer to sections 45.22 and 45.25 for definition of specific requirements for the location of registration marks for fixed-wing aircraft. The location of registration marks for

non-fixed wing aircraft is specified in section 45.27. All registration marks should be painted on or affixed by any means ensuring a similar degree of permanence. A degree of permanence is shown when paint used to apply required markings is of a type that requires thinners or strippers to remove it, or when the markings are affixed in the form of decals. The use of tape which can easily be peeled off, or water soluble paint such as poster paint, is not acceptable.

d. Most amateur-built aircraft are required to display nationality and registration marks with a minimum height of 3 inches. However, if the maximum cruising speed of the aircraft exceeds 180 knots calibrated air speed (207 miles per hour), the size of the marks must be at least 12 inches in height. The 12-inch markings are also required for any operation outside the United States or if any Air Defense Identification Zone (ADIZ) is penetrated. In accordance with section 45.23(b), the word "Experimental" shall be displayed on the aircraft near each entrance to the cabin or cockpit in letters not less than 2 inches and not more than 6 inches in height. If the amateur-built aircraft has the same external configuration (i.e., is a replica) of a small aircraft built at least 30 years ago, the size of the nationality and registration markings must be at least 2 inches high. For replica aircraft only, the letter "X" may be used and the word "Experimental" would not be required. For example, markings on an amateur-built replica of an antique aircraft would be "NX1234." The letter/symbol used should be appropriate for the airworthiness certificate of the aircraft being certificated, not the aircraft being replicated.

> **NOTE: Part 45 subpart C provides specific marking requirements for all aircraft. AC 45-2, Identification and Registration Marking, provides additional guidance and information and describes acceptable means of complying with marking requirements. Any questions in this area should be resolved on an individual basis through consultation with the FAA office that will perform the airworthiness certification.**

12. CERTIFICATION PROCESS. The following procedures, in general order, are to be followed in the certification process:

a. Initial Step. The prospective builder should first contact the nearest FAA office. During this initial contact, the type of aircraft, its complexity, and/or materials should be discussed. The builder should provide a three-view sketch, drawing, or photograph of the proposed aircraft project and a tentative completion date of the project. The FAA should provide the prospective builder with any guidance and information necessary to ensure a thorough understanding of applicable regulations, with emphasis on the following items:

(1) FAA inspection will be limited to a general airworthiness inspection when the aircraft is submitted for airworthiness certification. The FAA inspector cannot be involved in the building process and will not perform any progressive or in-process inspections during the building process. The in-process inspections should be conducted by a knowledgeable person (e.g., EAA Technical Counselor, etc.) and should be documented in the aircraft logbook.

(2) The builder will be required, at time of application for airworthiness certification, to submit a program letter in accordance with section 21.193, identifying the aircraft, the purpose of the certificate

(operating an amateur-built aircraft), and describing a flight test program that addresses the requirements, goals, and objectives during flight testing of the aircraft, including the area over which the test flights will be conducted (see appendix 8 of this AC). This letter provides information to the FAA for prescribing adequate limitations and conditions necessary to ensure safety. AC 90-89 is an excellent source of information to assist amateur builders in developing aircraft flight test plans.

(3) The FAA office, when requested, will furnish the builder with the following forms:

(a) AC Form 8050-1, Aircraft Registration Application.

(b) AC Form 8050-88, Affidavit of Ownership for Amateur-Built Aircraft.

(c) FAA Form 8130-6, Application for Airworthiness Certificate.

(d) FAA Form 8130-12, Eligibility Statement, Amateur-Built Aircraft.

(e) FAA Form 8610-2, Airman Certificate and/or Rating Application.

b. Registration. The procedures for aircraft registration are found in paragraph 10 of this AC. The aircraft should be registered prior to submitting Form 8130-6 to the FAA.

c. Marking. The registration number (N-number) assigned to the aircraft and an identification plate should be affixed to the aircraft in accordance with sections 21.182 and 45.11. Detailed procedures are in paragraph 11 of this AC.

d. Application. The builder may apply for a special airworthiness certificate by submitting the following documents and data to the FAA.

(1) Form 8130-6 (see appendix 6 of this AC).

(2) AC Form 8050-3.

(3) Sufficient data, such as photographs or three-view drawings, to identify the aircraft.

(4) A notarized Form 8130-12, certifying the major portion of the aircraft was fabricated and assembled for education or recreation, and that evidence (e.g., builder's log or equivalent) is available to support this statement. See appendix 7 of this AC.

(5) A program letter in accordance with section 21.193.

(6) Evidence of inspections, such as construction log entries signed by the amateur builder or other knowledgeable persons, e.g., EAA Technical Counselors, certified mechanics, or other builders,

describing the inspections conducted during construction of the aircraft, in addition to photographic documentation of construction details. Those entries should indicate what was inspected, by whom, and the date of the inspection.

(7) Logbooks for the aircraft, engine, and propeller/rotor blade(s) to allow for review of service records, recording the inspection, and certification by the FAA inspector. Logbook entries will substantiate that the construction has been accomplished in accordance with acceptable workmanship methods, techniques, and practices and support the owner's inspection and airworthiness statement on Form 8130-6.

NOTE: The review of documents listed in paragraphs 12d(6) and (7) are reviewed during the FAA on-site certification inspection of the aircraft.

e. Aircraft Inspection.

(1) The applicant should be prepared to furnish to the FAA an aircraft complete and ready to fly except for cowlings, fairings, and panels opened for inspection. The FAA will perform a general airworthiness inspection of the aircraft. The inspection will be performed by simple means and will not normally require the removal of equipment or components, or the disassembly of any part of the aircraft. The only reason extensive disassembly would be requested is when there is a question of safety that would endanger the pilot or general public.

NOTE: The FAA does not certify amateur-built aircraft designs or require that the amateur builder modify the design prior to airworthiness certification. However, the FAA may deny airworthiness certification if, upon inspection, the aircraft does not meet the requirements for the certification requested and is not in a condition for safe operation. The FAA inspector who denies an airworthiness certificate shall provide a letter to the applicant stating the reason(s) for denying the airworthiness certificate. A copy will be forwarded to the Aircraft Registry to be made a part of the aircraft record. Reference section 21.193(c) and Order 8130.2.

(2) After inspection of the documents and data submitted with the application, the applicant should expect the FAA inspector to inspect the aircraft. The FAA inspector will verify that all required markings are properly applied, including the following placard (this placard is not applicable to single-place aircraft). The placard shall be displayed inside the aircraft, in letters at least 3/8 inches in height, in a location easily visible, and legible to all persons entering the aircraft:

"PASSENGER NOTICE: THIS AIRCRAFT IS AMATEUR-BUILT AND DOES NOT COMPLY WITH FEDERAL SAFETY REGULATIONS FOR STANDARD AIRCRAFT"

f. Issuance of Airworthiness Certificate.

(1) Upon completion of the inspection and the determination that the aircraft is in a condition for safe operation, the FAA will issue Form 8130-7, together with appropriate operating limitations, in accordance with Order 8130.2.

(2) Details concerning flight test areas are contained in paragraph 13 of this AC. The operating limitations are a part of the airworthiness certificate and must be displayed with the certificate when the aircraft is operated. It is the responsibility of the pilot to conduct all flights in accordance with the operating limitations, as well as the General Operating and Flight Rules in part 91.

(3) Standard FAA policy is to issue one airworthiness certificate for the aircraft. In some cases an inspector may issue a limited duration airworthiness certificate which would only be valid for test flying (Phase I) the aircraft. Upon satisfactory completion of all test flight maneuvers and required test flight hours, the amateur builder of the aircraft may apply to the local FAA office for amended operating limitations by submitting another Form 8130-6, along with a letter requesting amendment of operating limitations. Prior to issuance of the amended airworthiness certificate and operating limitations
(Phase II), the applicant should expect the FAA to review the flight log to determine whether corrective actions have been taken on any problems encountered during the flight testing and that the aircraft's condition for safe operation has been established in accordance with section 91.319. The FAA reserves the right to reinspect the aircraft upon completion of the Phase I flight test period.

(4) If the aircraft is fabricated from a kit identified as meeting the major portion rule, the FAA will verify that the aircraft description and configuration agree with the information given in the FAA listing of eligible amateur-built kits. Deviations from the FAA identified kit configuration will require the inspector to make an independent determination that the applicant fabricated and assembled the major portion of the aircraft, and may prolong the certification process.

13. FLIGHT TEST AREAS.

a. Amateur-built aircraft will initially be limited to operation within an assigned flight test area for a minimum of 25 hours when a type certificated (FAA-approved) engine/propeller combination is installed, or 40 hours when a non-type certificated engine/propeller combination is installed.
Amateur-built gliders, balloons, dirigibles, and ultralight vehicles found eligible in meeting the requirements of section 21.191(g) should be limited to operation within an assigned flight test area for a minimum of 10 hours of satisfactory operation, including at least five takeoffs and landings. The FAA may increase the time within an assigned flight test area as necessary to determine compliance with section 91.319(b).

> **NOTE: AC 90-89 contains recommended procedures for the flight testing of amateur-built aircraft. It is strongly recommended that amateur builders obtain a copy of this AC and follow its guidance. At the end of the test flight period, the amateur builder should be able to show compliance with section 91.319(b).**

b. The desired flight test area should be defined by the applicant and if found acceptable by the FAA, approved and specified in the operating limitations. The test area will usually encompass an area within a 25-statute mile radius from the aircraft's base of operation. Section 91.305 requires test flights to be conducted over open water or sparsely populated areas having light air traffic, so that the flight testing would not pose a hazard to persons or property on the ground. When requested, the FAA may assist applicants in selecting a suitable area to ensure adequate airspace for testing.

c. The carrying of passengers will not be permitted while the aircraft is restricted to the flight test area. It is suggested that a tape/video recorder, for example, be used by the pilot for recording readings, etc. If an additional crew member is required for a particular test function, that requirement should be specified in the application program letter for the airworthiness certificate and listed in the operating limitations by the FAA.

d. Flight instruction will not be allowed in the aircraft while conducting flight tests.

e. In those instances when an unlimited duration special airworthiness certificate was issued, the operating limitations may be prescribed in accordance with the guidelines in Order 8130.2. The purpose of the operating limitations is for the amateur builder to show and maintain compliance with section 91.319. The operating limitations would include a requirement for the owner/operator to endorse the aircraft maintenance record (logbook) with a statement certifying that the aircraft has been shown to comply with section 91.319. The limitations may vary for some aircraft and unusual conditions may require the FAA to impose additional limitations deemed necessary in the interest of safety. The FAA and the applicant should jointly review each limitation to ensure a thorough and common understanding.

14. SAFETY PRECAUTION RECOMMENDATIONS.

a. All Aircraft.

(1) The pilot should become thoroughly familiar with the aircraft, its engine/propeller operation, and ground handling characteristics including operation of the brakes, by conducting taxi tests before attempting flight operations. LIFTOFF IS NOT PERMITTED DURING TAXI TESTS WITHOUT AN AIRWORTHINESS CERTIFICATE.

(2) Before the first flight of an amateur-built aircraft, the pilot should take precautions to ensure that emergency equipment and personnel are readily available in the event of an accident.

(3) Acrobatic maneuvers should not be attempted until sufficient flight experience has been gained to establish that the aircraft is satisfactorily controllable throughout its normal range of speeds and maneuvers. The pilot should document all maneuvers satisfactorily conducted in the aircraft logbook, test flight program log, or equivalent.

(4) The operating limitations issued by the FAA will require the aircraft to be operated in accordance with applicable air traffic control and general operating rules of part 91 as they apply to

amateur-built aircraft. Those operators who plan to operate under Instrument Flight Rules should take note of the applicable requirements of part 91.

(5) Operations to be conducted (VFR, day/night, or IFR) will be authorized by the issuance of operating limitations which are made part of the airworthiness certificate. These operating limitations may state that the instruments and equipment mandated by section 91.205(b), (c), and/or (d) must be installed and operable. In addition, operating limitations may state flight test areas as defined by section 91.305.

(6) Unless authorization to deviate is obtained from Air Traffic Control, any aircraft that will be equipped with a Mode C transponder must have a calibrated airspeed/static pressure system to prevent an error in altitude reporting. The Mode C transponder should be tested and inspected per section 91.413.

(7) Section 91.207 requires an emergency locator transmitter to be on board upon release from the flight test area. An aircraft equipped to carry not more than one person is exempt from this requirement per section 91.207(f)(9).

b. Rotorcraft. The appropriately rated rotorcraft pilot should be aware of the following operating characteristics:

(1) Operators of rotorcraft having fully articulated rotor systems should be particularly cautious of ground resonance. This condition of rotor imbalance, if maintained or allowed to progress, can be extremely dangerous and usually results in structural failure.

(2) Tests showing that stability, vibration, and balance are satisfactory should normally be completed with the rotorcraft tied down, before beginning hover or horizontal flight operations.

15. CONTINUED OPERATION.

a. After successful completion of all required test flights, hours, and maneuvers, the aircraft is considered safe for continued flight. Continued operations will be in accordance with the operating limitations issued with the aircraft airworthiness certificate.

b. The owner of an amateur-built aircraft should be aware of the responsibilities for maintenance and recordkeeping.

16. AMATEUR-BUILT AIRCRAFT CONSTRUCTED OUTSIDE THE UNITED STATES AND PURCHASED BY U.S. CITIZENS.

a. When a U.S. citizen purchases an aircraft constructed outside the United States, acceptable procedures for obtaining airworthiness certification for amateur-built operations are as follows:

NOTE: A U.S. citizen building an experimental amateur-built aircraft outside the United States should comply with the Civil Aviation Authority (CAA) rules in the country or jurisdiction where he/she wishes to operate the aircraft. Bringing this experimental amateur-built aircraft into the United States at a later date requires the U.S. citizen to follow the procedures contained in this paragraph to obtain a U.S. airworthiness certificate.

(1) The new U. S. owner should contact the local FAA office to determine the exact steps that should be taken to meet U.S. certification requirements. The FAA will provide this information to the new U.S. owner.

(2) The previous owner should have conducted or had a condition inspection performed on the aircraft within a reasonable period of time (suggested 30 days) prior to the new U.S. owner applying for certification. Part 43, appendix D, should be used as a guide, and the inspection should be recorded in the aircraft records.

(3) The previous owner should obtain documentation from the CAA verifying the aircraft is/was originally certificated in that country or jurisdiction as an amateur-built experimental aircraft and meets the requirements of section 21.191(g).

NOTE: Numerous CAAs recognize FAA regulatory requirements and certification procedures and in some cases have incorporated them into their certification process. However, persons considering purchasing an aircraft built in another country or jurisdiction should be aware that some countries' or jurisdictions' requirements for certification may not meet FAA requirements, and the owner could acquire an aircraft that may not be allowed to operate under section 21.191(g).

b. The new owner of such an aircraft should present the FAA with a properly completed Form 8130-6, along with the following documentation:

(1) All letters and records of inspections indicated in paragraph 16a(2) and (3) of this AC.

(2) Proper documentation of registration in accordance with part 47.

(3) A letter of request to accompany Form 8130-6.

c. The FAA will:

(1) Conduct a thorough review of all documentation specified in paragraphs 16(a) and (b) of this AC.

(2) Determine the amateur-built eligibility of the aircraft presented.

(3) Inspect the aircraft in the same manner as any other amateur-built aircraft, since these airworthiness certifications are considered original.

(4) If the aircraft is found to be eligible and the inspection is satisfactory, issue Form 8130-7 with appropriate operating limitations. If the required flight time has not been met or there is some question regarding the aircraft's flight capability, the inspector may require flight testing.

(5) Advise the owner that the condition inspection on the aircraft can only be performed by the original builder who holds the repairman's certificate for that aircraft, or an FAA-certificated mechanic as authorized by section 43.3, per the operating limitations.

17. REPAIRMAN CERTIFICATION.

a. The aircraft builder may be certificated as a repairman if that person is the primary builder of the aircraft and can satisfactorily prove requisite skill in determining whether the aircraft is in condition for safe operation. This certification can be obtained by making application to the local FAA office in accordance with AC 65-23, Certification of Repairman (Experimental Aircraft Builders). Each certificate is issued for a particular aircraft. See appendix 9 of this AC.

b. It is possible to register an amateur-built aircraft in a corporation's name and for one of the builders of the aircraft to receive a repairman's certificate. The applicant should prove through use of the builder's log that the builder possesses the requisite skill in determining whether the aircraft is in condition for safe operation.

c. Amateur-built aircraft owners should be aware of the privileges and limitations of the Repairman Certificate. The ONLY PRIVILEGE extended under section 65.104 is the ACCOMPLISHMENT OF THE ANNUAL CONDITION INSPECTION. The certificate will be valid for one person, for one specific aircraft, and only allows that person to perform the condition inspection. The privileges and limitations addressed in section 65.103 (i.e., maintenance and alterations) do not apply to repairman (experimental aircraft builder).

18. LOST AMATEUR-BUILT AIRCRAFT OPERATING LIMITATIONS.

a. The aircraft must not be operated without the operating limitations on board the aircraft. If they are lost, have been mutilated, or are no longer legible, contact the local FAA office for guidance or contact AFS-750 to obtain a copy of the operating limitations.

b. If a copy can not be obtained, the owner should contact the local FAA office for issuance of a replacement Form 8130-7 and operating limitations. If the owner can document the aircraft has completed the test flight requirements (in logbook entries) the FAA may then issue new operating limitations without initial test flight operating limitations.

19. FORMS. AC Forms 8050-1, 8050-2, and 8050-88, and Forms 8130-6, 8130-12, and 8610-2 may be obtained from the local FAA office.

20. HOW TO OBTAIN PUBLICATIONS.

a. The CFR and those ACs for which a fee is charged may be obtained from the Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. A listing of CFR and current prices is located in AC 00-44, Status of Federal Aviation Regulations, and a listing of all ACs is located in AC 00-2, Advisory Circular Checklist.

b. Additional information and guidance regarding Amateur-Built Experimental Aircraft may be obtained by contacting the local FAA office for applicable website addresses.

c. To be placed on the FAA's mailing list for free ACs, contact: U.S. Department of Transportation, Subsequent Distribution Office, SVC-121.23, Ardmore East Business Center, 3341Q 75th Avenue, Landover, MD 20785.

21. COMMENTS INVITED.

a. The issuance, revision, or cancellation of material in this AC is the responsibility of the Aircraft Certification Service, Production and Airworthiness Division, AIR-200. Future changes will be issued as required to carry out the responsibility of the FAA. Interested persons are invited to submit recommendations for revisions or new material to keep this AC current.

b. Proposed material for inclusion in this AC should be forwarded to:

Federal Aviation Administration
Production and Airworthiness Division, AIR-200
800 Independence Avenue, SW.
Washington, DC 20591
FAX Number (202) 267-5580

/S/
Frank P. Paskiewicz
Manager, Production and Airworthiness
Division, AIR-200

APPENDIX 1. USEFUL ADDRESSES

FEDERAL AVIATION ADMINISTRATION, AIRCRAFT REGISTRATION BRANCH, AFS-750

Mail to:
P.O. Box 25504
Oklahoma City, Oklahoma 73125-0504

Courier deliveries should be addressed to:
Federal Aviation Administration
Aircraft Registration Branch, AFS-750
6425 South Denning
Oklahoma City, Oklahoma 73169

Telephone: (405) 954-3116
Facsimile: (405) 954-3548

EXPERIMENTAL AIRCRAFT ASSOCIATION, INC.

Mail to:
P.O. Box 3086
Oshkosh, Wisconsin 54903-3086

Street address:
3000 Poberezny Road
Oshkosh, Wisconsin 54902

Internet address: http://www.eaa.org/
EAA Homebuilders Headquarters (members only section): http://members.eaa.org/homebuilders/index.html
EAA Aviation Information services: (888) 322-44636
e-mail: infoserv@eaa.org

Telephone: (920) 426-4821
Facsimile: (920) 426-6560

APPENDIX 2. SAMPLE LETTER FOR REQUESTING AN AIRCRAFT REGISTRATION NUMBER IN ACCORDANCE WITH SECTION 47.15

xx/xx/xx

FAA
Aircraft Registration Branch, AFS-750
P.O. Box 25504
Oklahoma City, OK 73125

Sir/Madam:

This is a request for a United States identification number assignment for my amateur-built aircraft.

Aircraft description:

Make/Builder Early A. Builder ; **Type** (airplane, rotorcraft, glider, or balloon.) Airplane ; **Model** Van's RV-6 ;
Serial Number 1001 .

This aircraft has not previously been registered anywhere.
(reference section 47.15(a)(1))

___ Normal Request - $ 5.00 (Fee attached - check or money order)

__X__ Special Registration Number Request
$ 10.00 (Fee attached - check or money order)

CHOICES
1 st 130EA
2 nd 130JR
3 rd 130FE
4 th 130JJ
5 th 130TX

_____
Signature - Owner

APPENDIX 3. SAMPLE AFFIDAVIT OF OWNERSHIP FOR AMATEUR-BUILT AIRCRAFT

AFFIDAVIT OF OWNERSHIP FOR AMATEUR-BUILT AIRCRAFT

U. S. Identification Number N130EA

Builder's Name Early A. Builder

Model VAN'S RV-6 Serial Number 1001

Class (airplane, rotorcraft, glider, etc.) Airplane

Type of Engine Installed (reciprocating, turbopropeller, etc.) reciprocating

Number of Engines Installed 1

Manufacturer, Model and Serial Number of each Engine Installed LY-CON. O-320 EXP., L023-48X

Built for Land or Water Operation Land

Number of Seats 2

MUST CHECK ONE

☐ **More than 50% of the above-described aircraft was built from miscellaneous parts and I am the owner.**

☑ **More than 50% of the above-described aircraft was built from a kit (prefabricated parts) and I am the owner. The bill of sale from the kit manufacturer is attached.**

Early A. Builder
(Signature of Owner)
Address 1240 Bois d' Arc Road **City** Savoy

State TX **Zip Code** 75479 **Telephone** 9003 555-1212

State of _____

County of _____

Subscribed and sworn to before me this _____ day of _____

My commission expires _____

_____
(Signature of Notary Public)

AC Form 8050-88 (9/98) (0052-00-559-0002) Supersedes previous edition

APPENDIX 4. SAMPLE AC FORM 8050-2, KIT BILL OF SALE

FORM APPROVED
OMB NO. 2120-0042

UNITED STATES OF AMERICA
U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

KIT ~~AIRCRAFT~~ BILL OF SALE

FOR AND IN CONSIDERATION OF $ THE UNDERSIGNED OWNER(S) OF THE FULL LEGAL AND BENEFICIAL TITLE OF THE AIRCRAFT DESCRIBED AS FOLLOWS:

UNITED STATES REGISTRATION NUMBER N 130EA

AIRCRAFT MANUFACTURER & MODEL VAN'S RV-6

AIRCRAFT SERIAL No. 1001

DOES THIS DAY OF 20 HEREBY SELL, GRANT, TRANSFER AND DELIVER ALL RIGHTS, TITLE, AND INTERESTS IN AND TO SUCH AIRCRAFT UNTO:

Do Not Write In This Block
FOR FAA USE ONLY

PURCHASER

NAME AND ADDRESS
(IF INDIVIDUAL(S), GIVE LAST NAME, FIRST NAME, AND MIDDLE INITIAL.)

BUILDER, Early A.
1240 Bois d' Arc Road
Savoy, TX 75479

DEALER CERTIFICATE NUMBER

AND TO EXECUTORS, ADMINISTRATORS, AND ASSIGNS TO HAVE AND TO HOLD SINGULARLY THE SAID AIRCRAFT FOREVER, AND WARRANTS THE TITLE THEREOF.

IN TESTIMONY WHEREOF HAVE SET HAND AND SEAL THIS DAY OF 20

SELLER

NAME (S) OF SELLER (TYPED OR PRINTED)	SIGNATURE (S) (IN INK) (IF EXECUTED FOR CO-OWNERSHIP, ALL MUST SIGN.)	TITLE (TYPED OR PRINTED)
VAN'S		

ACKNOWLEDGMENT (NOT REQUIRED FOR PURPOSES OF FAA RECORDING: HOWEVER, MAY BE REQUIRED BY LOCAL LAW FOR VALIDITY OF THE INSTRUMENT.)

ORIGINAL: TO FAA

AC Form 8050-2 (9/92) (NSN 0052-00-629-0003) Supersedes Previous Edition

APPENDIX 5. SAMPLE AC FORM 8050-1, AIRCRAFT REGISTRATION APPLICATION

FORM APPROVED
OMB No. 2120-0042

UNITED STATES OF AMERICA DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION-MIKE MONRONEY AERONAUTICAL CENTER
AIRCRAFT REGISTRATION APPLICATION

CERT. ISSUE DATE

UNITED STATES REGISTRATION NUMBER N 130EA

AIRCRAFT MANUFACTURER & MODEL
BUILDER - VANS RV-6

AIRCRAFT SERIAL No.
1001

FOR FAA USE ONLY

TYPE OF REGISTRATION (Check one box)

☒ 1. Individual ☐ 2. Partnership ☐ 3. Corporation ☐ 4. Co-owner ☐ 5. Gov't. ☐ 8. Non-Citizen Corporation

NAME OF APPLICANT (Person(s) shown on evidence of ownership. If individual, give last name, first name, and middle initial.)

BUILDER, EARLY A.

TELEPHONE NUMBER: (903) 555-1212

ADDRESS (Permanent mailing address for first applicant listed.)

Number and street: 1240 Bois d' Arc Road

Rural Route: P.O. Box:

CITY	STATE	ZIP CODE
Savoy	TX	75479

☐ **CHECK HERE IF YOU ARE ONLY REPORTING A CHANGE OF ADDRESS**

ATTENTION! Read the following statement before signing this application. This portion MUST be completed.

A false or dishonest answer to any question in this application may be grounds for punishment by fine and / or imprisonment (U.S. Code, Title 18, Sec. 1001).

CERTIFICATION

I/WE CERTIFY:

(1) That the above aircraft is owned by the undersigned applicant, who is a citizen (including corporations) of the United States.

(For voting trust, give name of trustee: _____), or:

CHECK ONE AS APPROPRIATE:

a. ☐ A resident alien, with alien registration (Form 1-151 or Form 1-551) No. _____

b. ☐ A non-citizen corporation organized and doing business under the laws of (state) _____ and said aircraft is based and primarily used in the United States. Records or flight hours are available for inspection at _____

(2) That the aircraft is not registered under the laws of any foreign country; and

(3) That legal evidence of ownership is attached or has been filed with the Federal Aviation Administration.

NOTE: If executed for co-ownership all applicants must sign. Use reverse side if necessary.

TYPE OR PRINT NAME BELOW SIGNATURE

EACH PART OF THIS APPLICATION MUST BE SIGNED IN INK.

SIGNATURE	TITLE	DATE
Early A. Builder Early A. Builder	Owner	xx/xx/xx
SIGNATURE	TITLE	DATE
SIGNATURE	TITLE	DATE

NOTE Pending receipt of the Certificate of Aircraft Registration, the aircraft may be operated for a period not in excess of 90 days, during which time the PINK copy of this application must be carried in the aircraft.

AC Form 8050-1 (12/90) (0052-00-628-9007) Supersedes Previous Edition

APPENDIX 6. SAMPLE FAA FORM 8130-6, APPLICATION FOR AIRWORTHINESS CERTIFICATE (AMATEUR-BUILT)

Form Approved
O.M.B. No. 2120-0018

U.S. Department of Transportation
Federal Aviation Administration

APPLICATION FOR AIRWORTHINESS CERTIFICATE

INSTRUCTIONS - Print or type. Do not write in shaded areas. These are for FAA use only. Submit original only to an authorized FAA Representative. If additional space is required use an attachment. For special flight permits complete Sections II, VI and VII as applicable.

I. AIRCRAFT DESCRIPTION

1. REGISTRATION MARK	2. AIRCRAFT BUILDER'S NAME (Make)	3. AIRCRAFT MODEL DESIGNATION	4. YR MFR	FAA CODING
N130EA	Builder	VAN'S RV-6	2001	
5. AIRCRAFT SERIAL NO.	6. ENGINE BUILDERS NAME (Make)	7. ENGINE MODEL DESIGNATION		
1001	LY-CON	O-360 EXP		
8. NUMBER OF ENGINES	9. PROPELLER BUILDER'S NAME (Make)	10. PROPELLER MODEL DESIGNATION	11. AIRCRAFT IS (Check if applicable)	
ONE	SENSENICH	C2YK-1BF/F7661B4	IMPORT	

II. CERTIFICATION REQUESTED

APPLICATION IS HEREBY MADE FOR: (Check applicable items)

A	1		STANDARD AIRWORTHINESS CERTIFICATE (Indicate category)		NORMAL		UTILITY		ACROBATIC		TRANSPORT		COMMUTER		BALLOON		OTHER
B		X	SPECIAL AIRWORTHINESS CERTIFICATE (Check appropriate items)														
			7		PRIMARY												
			2		LIMITED												
			5		PROVISIONAL (Indicate class)	1		Class I									
						2		Class II									
			3		RESTRICTED (Indicate operation(s) to be conducted)	1		AGRICULTURE AND PEST CONTROL	2		AERIAL	3		AERIAL ADVERTISING			
						4		FOREST (Wildlife conservation)	5		PATROLLING	6		WEATHER CONTROL			
						0		OTHER (Specify)									
			4	X	EXPERIMENTAL (Indicate operation(s) to be conducted)	1		RESEARCH AND DEVELOPMENT	2	X	AMATEUR BUILT	3		EXHIBITION			
						4		AIR RACING	5		CREW TRAINING	6		MARKET SURVEY			
						0		TO SHOW COMPLIANCE WITH THE CFR	7		OPERATING (Primary Category) KIT BUILT AIRCRAFT						
			8		SPECIAL FLIGHT PERMIT (Indicate operation to be conducted then complete Section VI or VII as applicable on reverse side)	1		FERRY FLIGHT FOR REPAIRS, ALTERATIONS, MAINTENANCE, OR STORAGE									
						2		EVACUATE FROM AREA OF IMPENDING DANGER									
						3		OPERATION IN EXCESS OF MAXIMUM CERTIFICATED TAKE-OFF WEIGHT									
						4		DELIVERING OR EXPORTING	5		PRODUCTION FLIGHT TESTING						
						6		CUSTOMER DEMONSTRATION FLIGHTS									
C	8		MULTIPLE AIRWORTHINESS CERTIFICATE (Check ABOVE "Restricted Operation" and "Standard" or "Limited" as applicable)														

III. OWNER'S CERTIFICATION

A. REGISTERED OWNER (As shown on certificate of aircraft registration) — IF DEALER, CHECK HERE →

NAME	ADDRESS
Early A. Builder	1240 Bois d' Arc Road, Savoy, TX 75479

B. AIRCRAFT CERTIFICATION BASIS (Check applicable blocks and complete items as indicated)

AIRCRAFT SPECIFICATION OR TYPE CERTIFICATE DATA SHEET (Give No. and Revision No.)	N/A	X	AIRWORTHINESS DIRECTIVES (Check if all applicable AD's complied with and give the number of the last AD SUPPLEMENT available in the biweekly series as of the date of application) 2001 - 13
AIRCRAFT LISTING (Give page number(s))	N/A		SUPPLEMENTAL TYPE CERTIFICATE (List number of each STC incorporated) N/A

C. AIRCRAFT OPERATION AND MAINTENANCE RECORDS

X	CHECK IF RECORDS IN COMPLIANCE WITH 14 CFR section 91.417	TOTAL AIRFRAME HOURS 0.0	3	EXPERIMENTAL ONLY (Enter hours flown since last certificate issued or renewed) 0.0

D. CERTIFICATION - I hereby certify that I am the registered owner (or his agent) of the aircraft described above, that the aircraft is registered with the Federal Aviation Administration in accordance with Title 49 of the United States Code 44101 et seq. and applicable Federal Aviation regulations, and that the aircraft has been inspected and is airworthy and eligible for the airworthiness certificate requested.

DATE OF APPLICATION	NAME AND TITLE (Print or type)	SIGNATURE
xx/xx/xx	Early A. Builder - Owner	Early A. Builder

IV. INSPECTION AGENCY VERIFICATION

A. THE AIRCRAFT DESCRIBED ABOVE HAS BEEN INSPECTED AND FOUND AIRWORTHY BY: (Complete these sections only if 14 CFR part 21.183(d) applies)

2	14 CFR PART 121 CERTIFICATE HOLDER (Give Certificate No.)	3	CERTIFICATED MECHANIC (Give Certificate No.)	6	CERTIFICATED REPAIR STATION (Give Certificate No.)
5	AIRCRAFT MANUFACTURER (Give name of firm)				

DATE	TITLE	SIGNATURE

V. FAA REPRESENTATIVE CERTIFICATION

(Check ALL applicable blocks in items A and B)

A. I find that the aircraft described in Section I or VII meets requirements for: THE CERTIFICATE REQUESTED (4) AMENDMENT OR MODIFICATION OF CURRENT AIRWORTHINESS CERTIFICATE

B. Inspection for a special flight permit under Section VII was conducted by: FAA INSPECTOR | FAA DESIGNEE | CERTIFICATE HOLDER UNDER | 14 CFR part 65 | 14 CFR part 121 or 135 | 14 CFR part 145

DATE	DISTRICT OFFICE	4	DESIGNEE'S SIGNATURE AND NO.	1	FAA INSPECTOR'S SIGNATURE

FAA Form 8130-6 (5-01) Supercedes Previous Edition

NSN: 0052-00-024-7006

APPENDIX 7. SAMPLE ELIGIBILITY STATEMENT, AMATEUR-BUILT AIRCRAFT

Form Approved
O.M.B. NO. 2120-0018

US Department of Transportation Federal Aviation Administration

ELIGIBILITY STATEMENT
AMATEUR-BUILT AIRCRAFT

Instructions: Print or type all information except signature. Submit original to an authorized FAA representative. Applicant completes Section I thru III. Notary Public Completes Section IV.

I. REGISTERED OWNER INFORMATION

Name(s): Early A. Builder

Address(es): 1240 Bois d' Arc Road (No. & Street) Savoy (City) TX (State) 75479 (Zip)

Telephone No.(s): (903)555-1212 (Residence) (214)555-1212 (Business)

II. AIRCRAFT INFORMATION

Model: VAN'S RV-6

Assigned Serial No.: 1001

Registration No.: N130EA

Aircraft Fabricated: Plan ☐ Kit ☒

Engine(s) Make: LY-CON O-320 EXP

Engine(s) Serial No.: L 023-48X

Prop./Rotor(s) Make: Sensenich

Prop./Rotor(s) Serial No.(s): 195001

III. MAJOR PORTION ELIGIBILITY STATEMENT OF APPLICANT

I certify the aircraft identified in Section II above was fabricated and assembled by Early A. Builder (Name of Person(s) (Please Print)) **for my (their) education or recreation. I (we) have records to suppor this statement and will make them available to the FAA upon request.**

-NOTICE-

Woever in any matter within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals or covers up by any trick, scheme, or device a material fact, or who makes any false, fictitious or fraudulent statements or representations, or makes or uses any false writing or document knowing the same to contain any false, fictitious or fraudulent statement or entry, shall be fined not more than $10,000 or imprisoned not more than 5 years, or both (U.S. Code, Title 18, Sec. 1001.)

APPLICANT'S DECLARATION

I hereby certify that all statements and answers provided by me in this statement form are complete and true to the best of my knowledge, and I agree that they are to be considered part of the basis for issuance of any FAA certificate to me. I have also read and understand the Privacy Act statement that accompanies this form.

Signature of Applicant (*In Ink*): Early A. Builder — Date: xx/xx/xx

IV. NOTARIZATION STATEMENT

FAA Form 8130-12 (4-89)

APPENDIX 8. SAMPLE PROGRAM LETTER TO ACCOMPANY APPLICATION FOR AIRWORTHINESS CERTIFICATE

TO: (LOCAL FAA OFFICE OR DAR) Date: XX/XX/XX

In accordance with section 21.193, I request a Special Airworthiness Certificate for my aircraft for the purpose of operating amateur-built aircraft. The aircraft description is as follows:

Builder: Early A. Builder Registration Number: N130EA
Model: VAN'S RV-6 Serial Number: 1001
No. of Engines: 1 No. of Seats: 2
Design Criteria; my own design ___, built from plans ____, built from a kit __X__ .

The aircraft is complete and the following items have been accomplished:

Yes **No** I enclose FAA Form 8130-6 with Sections I, II, and III complete.

Yes **No** I enclose FAA Form 8130-12 with Sections I, II, and III complete and notarized in Section IV.

Yes **No** I possess AC Form 8050-3.

Yes **No** I enclose a three-view drawing or photographs of the aircraft.

Yes **No** I have weighed the aircraft to determine that the most forward and aft center of gravity positions are within established limits. The weight and balance report is available at the aircraft, and a copy is submitted with this application.

Yes **No** I have maintained a construction log for the project, including photographs showing methods of construction and workmanship during the construction. Log entries describe all inspections conducted during construction.

Yes **No** The marking requirements of part 45 have been complied with, including permanent attachment of a fireproof identification (data) plate, permanent application of appropriate registration marks, and the word "**EXPERIMENTAL**" displayed near each entrance to the cabin or cockpit.

APPENDIX 8. SAMPLE LETTER TO ACCOMPANY APPLICATION FOR AIRWORTHINESS CERTIFICATE (CONTINUED)

Yes **No** The following placard is displayed in the cockpit in full view of all occupants (not required for single place aircraft):

"PASSENGER NOTICE - THIS AIRCRAFT IS AMATEUR-BUILT AND DOES NOT COMPLY WITH FEDERAL SAFETY REGULATIONS FOR STANDARD AIRCRAFT"

The aircraft will be available for inspection at this location, and directions are as follows.

GRAYSON COUNTY AIRPORT, HGR. # 3
4701 AIRPORT DRIVE
SHERMAN, TEXAS 75020

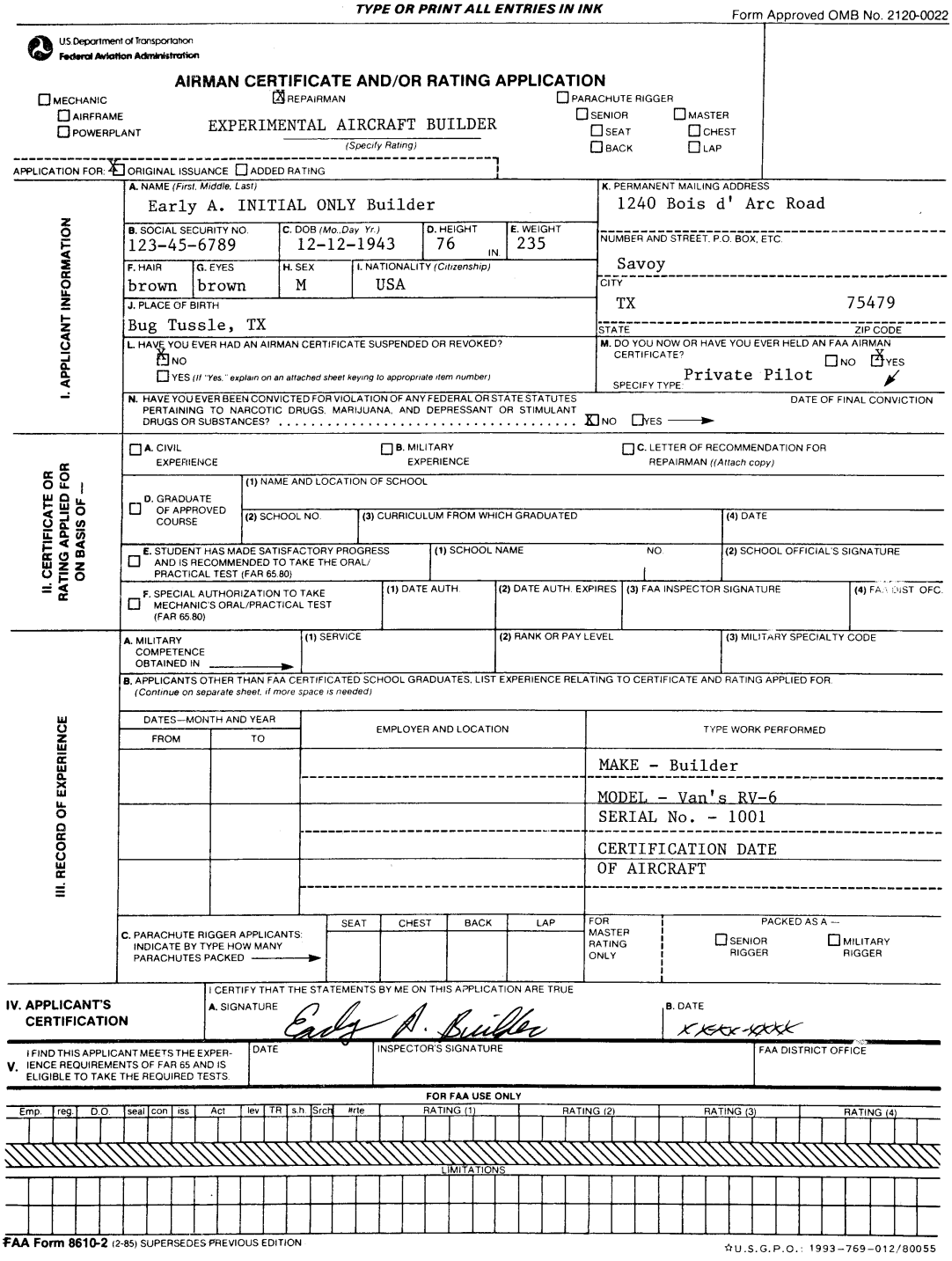
I request airworthiness certification and operating limitations be issued permitting me to operate the aircraft within the following geographical area for flight testing. Initial flights will determine engine reliability and flight control characteristics. A flight test plan has been developed using the guidance in AC 90-89 and is available for review. After phase I flight test completion I plan to operate the aircraft under VFR conditions only.

25-statute mile radius of Grayson County Airport
Lat. 33-43 N Long. 096-40W
Dallas-Ft. Worth Sectional (L13)

My residence telephone number is: (903) 555-1212
My daytime business number is: (214) 555-1212

_____
Signature (owner/builder

APPENDIX 9. SAMPLE FAA FORM 8610-2, AIRMAN CERTIFICATE AND/OR RATING APPLICATION



TYPE OR PRINT ALL ENTRIES IN INK

Form Approved OMB No. 2120-0022

US Department of Transportation
Federal Aviation Administration

AIRMAN CERTIFICATE AND/OR RATING APPLICATION

☐ MECHANIC ☐ AIRFRAME ☐ POWERPLANT ☒ REPAIRMAN — EXPERIMENTAL AIRCRAFT BUILDER (Specify Rating) ☐ PARACHUTE RIGGER ☐ SENIOR ☐ MASTER ☐ SEAT ☐ CHEST ☐ BACK ☐ LAP

APPLICATION FOR: ☒ ORIGINAL ISSUANCE ☐ ADDED RATING

I. APPLICANT INFORMATION

A. NAME (First, Middle, Last): Early A. INITIAL ONLY Builder

B. SOCIAL SECURITY NO.: 123-45-6789

C. DOB (Mo.,Day Yr.): 12-12-1943

D. HEIGHT: 76 IN.

E. WEIGHT: 235

F. HAIR: brown

G. EYES: brown

H. SEX: M

I. NATIONALITY (Citizenship): USA

J. PLACE OF BIRTH: Bug Tussle, TX

K. PERMANENT MAILING ADDRESS: 1240 Bois d' Arc Road

NUMBER AND STREET, P.O. BOX, ETC.

CITY: Savoy

STATE: TX ZIP CODE: 75479

L. HAVE YOU EVER HAD AN AIRMAN CERTIFICATE SUSPENDED OR REVOKED? ☒ NO ☐ YES (If "Yes," explain on an attached sheet keying to appropriate item number)

M. DO YOU NOW OR HAVE YOU EVER HELD AN FAA AIRMAN CERTIFICATE? ☐ NO ☒ YES — SPECIFY TYPE: Private Pilot

N. HAVE YOU EVER BEEN CONVICTED FOR VIOLATION OF ANY FEDERAL OR STATE STATUTES PERTAINING TO NARCOTIC DRUGS, MARIJUANA, AND DEPRESSANT OR STIMULANT DRUGS OR SUBSTANCES? ☒ NO ☐ YES → DATE OF FINAL CONVICTION

II. CERTIFICATE OR RATING APPLIED FOR ON BASIS OF —

☐ A. CIVIL EXPERIENCE ☐ B. MILITARY EXPERIENCE ☐ C. LETTER OF RECOMMENDATION FOR REPAIRMAN (Attach copy)

☐ D. GRADUATE OF APPROVED COURSE — (1) NAME AND LOCATION OF SCHOOL; (2) SCHOOL NO.; (3) CURRICULUM FROM WHICH GRADUATED; (4) DATE

☐ E. STUDENT HAS MADE SATISFACTORY PROGRESS AND IS RECOMMENDED TO TAKE THE ORAL/PRACTICAL TEST (FAR 65.80) — (1) SCHOOL NAME NO.; (2) SCHOOL OFFICIAL'S SIGNATURE

☐ F. SPECIAL AUTHORIZATION TO TAKE MECHANIC'S ORAL/PRACTICAL TEST (FAR 65.80) — (1) DATE AUTH.; (2) DATE AUTH. EXPIRES; (3) FAA INSPECTOR SIGNATURE; (4) FAA DIST. OFC.

III. RECORD OF EXPERIENCE

A. MILITARY COMPETENCE OBTAINED IN → (1) SERVICE; (2) RANK OR PAY LEVEL; (3) MILITARY SPECIALTY CODE

B. APPLICANTS OTHER THAN FAA CERTIFICATED SCHOOL GRADUATES, LIST EXPERIENCE RELATING TO CERTIFICATE AND RATING APPLIED FOR. (Continue on separate sheet, if more space is needed)

DATES—MONTH AND YEAR FROM	TO	EMPLOYER AND LOCATION	TYPE WORK PERFORMED
			MAKE - Builder
			MODEL - Van's RV-6
			SERIAL No. - 1001
			CERTIFICATION DATE
			OF AIRCRAFT

C. PARACHUTE RIGGER APPLICANTS: INDICATE BY TYPE HOW MANY PARACHUTES PACKED →

SEAT	CHEST	BACK	LAP

FOR MASTER RATING ONLY — PACKED AS A — ☐ SENIOR RIGGER ☐ MILITARY RIGGER

IV. APPLICANT'S CERTIFICATION

I CERTIFY THAT THE STATEMENTS BY ME ON THIS APPLICATION ARE TRUE

A. SIGNATURE: Early A. Builder B. DATE: XXXX-XXXX

V. I FIND THIS APPLICANT MEETS THE EXPERIENCE REQUIREMENTS OF FAR 65 AND IS ELIGIBLE TO TAKE THE REQUIRED TESTS. DATE; INSPECTOR'S SIGNATURE; FAA DISTRICT OFFICE

FOR FAA USE ONLY

Emp.	reg.	D.O.	seal	con	iss	Act	lev	TR	s.h.	Srch	#rte	RATING (1)	RATING (2)	RATING (3)	RATING (4)

LIMITATIONS

FAA Form 8610-2 (2-85) SUPERSEDES PREVIOUS EDITION

☆U.S.G.P.O.: 1993-769-012/80055

APPENDIX 10. FAA FORM 8000-38, FABRICATION/ASSEMBLY OPERATION CHECKLIST

Fabrication/Assembly Operation Checklist

Company Name _____

Address _____

_____

_____

Aircraft Model _____ Document Name and Date _____

Type of Aircraft _____

	Accomplished By	
	Kit Manufacturer	Amateur
FUSELAGE		
1. Fabricate Special Tools or Fixtures		
2. Fabricate Longitudinal Members, Cores or Shells		
3. Fabricate Bulkheads or Cross Members		
4. Assemble Fuselage Basic Structure		
5. Fabricate Brackets and Fittings		
6. Install Brackets and Fittings		
7. Fabricate Cables, Wire, and Lines		
8. Install Cables, Wires, and Lines		
9. Fabricate Fuselage Covering or Skin		
10. Install Fuselage Covering or Skin		
11. Fabricate Windshield/Windows/Canopy		
12. Install Windshield/Windows/Canopy		
WINGS		
1. Fabricate Special Tools or Fixtures		
2. Fabricate Wing Spars		
3. Fabricate Wing Ribs or Cores		
4. Fabricate Wing Leading and Trailing Edge		
5. Fabricate Drag/Anti-Drag Truss Members		
6. Fabricate Wing Brackets and Fittings		
7. Fabricate Wing Tips		
8. Assemble Basic Wing Structures		
9. Install Wing Leading/Trailing Edge and Tips		
10. Install Drag/Anti-Drag Truss		
11. Fabricate Cables, Wires and Lines		
12. Install Cables, Wires, and Lines		
13. Fabricate Wing Covering or Skin		
14. Install Wing Covering or Skin		
15. Fabricate Wing Struts/Wires		
16. Install and Rig Wings, and Struts		

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APPENDIX 10. FAA FORM 8000-38, FABRICATION/ASSEMBLY OPERATION CHECKLIST (CONTINUED)

Fabrication/Assembly Operation Checklist (Continued)

	Accomplished By	
	Kit Manufacturer	Amateur
FLIGHT CONTROLS		
1. Fabricate Special Tools or Fixtures		
2. Fabricate Aileron Spars		
3. Fabricate Aileron Ribs or Cores		
4. Assemble Aileron Structure		
5. Fabricate Aileron Leading and Trailing Edge		
6. Assemble Aileron Leading and Trailing Edge		
7. Fabricate Aileron Brackets and Fittings		
8. Install Aileron Brackets and Fittings		
9. Fabricate Aileron Covering or Skin		
10. Install Aileron Covering or Skin		
11. Fabricate Aileron Trim Tab		
12. Install Aileron Trim Tab		
13. Install and Rig Aileron		
14. Fabricate Flap Spars		
15. Fabricate Flap Ribs or Cores		
16. Assemble Flap Structure		
17. Fabricate Flap Leading and Trailing Edge		
18. Assemble Flap Leading and Trailing Edge		
19. Fabricate Flap Brackets and Fittings		
20. Install Flap Brackets and Fittings		
21. Fabricate Flap Covering or Skin		
22. Install Flap Covering or Skin		
23. Install and Rig Flap		
24. Fabricate Elevator Spars		
25. Fabricate Elevator Ribs or Cores		
26. Assemble Elevator Structure		
27. Fabricate Elevator Leading and Trailing Edge		
28. Assemble Elevator Leading and Trailing Edge		
29. Fabricate Elevator Brackets and Fittings		
30. Install Elevator Brackets and Fittings		
31. Fabricate Elevator Covering or Skin		
32. Install Elevator Covering or Skin		
33. Fabricate Elevator Trim Tab		
34. Install Elevator Trim Tab		
35. Install and Rig Elevator		
36. Fabricate Rudder Spars		
37. Fabricate Rudder Ribs or Cores		
38. Assemble Rudder Structure		
39. Fabricate Rudder Leading and Trailing Edge		
40. Assemble Rudder Leading and Trailing Edge		
41. Fabricate Rudder Brackets and Fittings		
42. Install Rudder Brackets and Fittings		
43. Fabricate Rudder Covering or Skin		
44. Install Rudder Covering or Skin		
45. Fabricate Rudder Trim Tab		
46. Install Rudder Trim Tab		
47. Install and Rig Rudder		

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APPENDIX 10. FAA FORM 8000-38, FABRICATION/ASSEMBLY OPERATION CHECKLIST (CONTINUED)

Fabrication/Assembly Operation Checklist (Continued)

	Accomplished By	
	Kit Manufacturer	Amateur
EMPENNAGE		
1. Fabricate Special Tools of Fixtures		
2. Fabricate Spars		
3. Fabricate Ribs or Cores		
4. Fabricate Leading and Trailing Edges		
5. Fabricate Tips		
6. Fabricate Brackets and Fittings		
7. Assemble Empennage Structures		
8. Install Leading/Trailing Edges and Tips		
9. Install Fittings		
10. Fabricate Cables, Wires, and Lines		
11. Install Cables, Wires and Lines		
12. Fabricate Empennage Covering or Skin		
13. Install Empennage Covering or Skin		
CANARD		
1. Fabricate Canard		
2. Assemble Canard Structure		
3. Install and Rig Canard		
LANDING GEAR		
1. Fabricate Special Tools or Fixtures		
2. Fabricate Struts		
3. Fabricate Brakes System		
4. Fabricate Retraction System		
5. Fabricate Cables, Wires and Lines		
6. Assemble Wheels, Brakes, Tires, Landing Gear		
7. Install Landing Gear System Components		
PROPULSION		
1. Fabricate Special Tools of Fixtures		
2. Fabricate Engine Mount		
3. Fabricate Engine Cooling System/Baffles		
4. Fabricate Induction System		
5. Fabricate Exhaust System		
6. Fabricate Engine Controls		
7. Fabricate Brackets and Fittings		
8. Fabricate Cables, Wires and Lines		
9. Assemble Engine		
10. Install Engine and Items Listed Above		
11. Fabricate Engine Cowling		
12. Install Engine Cowling		
13. Fabricate Propeller		
14. Install Propeller		
15. Fabricate Fuel Tank		

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APPENDIX 10. FAA FORM 8000-38, FABRICATION/ASSEMBLY OPERATION CHECKLIST (CONTINUED)

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		

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APPENDIX 10. FAA FORM 8000-38, FABRICATION/ASSEMBLY OPERATION CHECKLIST (CONTINUED)

Fabrication/Assembly Operation Checklist (Continued)

	Accomplished By	
	Kit Manufacturer	Amateur
COCKPIT/INTERIOR		
1. Fabricate Instrument Panel		
2. Install Instrument Panel and Instruments		
3. Fabricate Seats		
4. Install Seats		
5. Fabricate Electrical Wiring, Controls/Switches		
6. Install Electrical System Controls/Switches		
TOTAL		

Comments

Printed Name	Signature	Date

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