

SECTION 3.4.1APPROVAL OF A KIT FOR A CAO 95.10 ULTRALIGHT  
AIRCRAFT

## INTRODUCTION

1. CAO 95.10 paragraph 2.2 (c) (iii) permits construction of a privately built single seat ultralight aircraft from an approved kit that complies with the design standards specified in CAO 101.55, including a design standard nominated by the applicant and acceptable to the Australian Civil Aviation Safety Authority (CASA).
2. The alternative design standard described below is acceptable when seeking approval of a kit for an aircraft type conforming to CAO 95.10.
3. A kit for an aircraft that complies with the weight and wing loading requirements CAO 95.10 and that has been approved for construction as an amateur built aircraft under CAO 100.18 and meets the design standards specified in CAO 101.28 is acceptable in lieu of meeting the alternative design standard described below.
4. Approval of a kit for a CAO 95.10 aircraft type may also be based on a demonstrated history of safe operation of the type. Details are contained in Section 3.4.2.

## ACCEPTABLE ALTERNATIVE STANDARD

5. **Basic Requirements and Equivalent Safety.** The requirements specified below shall be met unless the AUF Technical Manager, after consulting with the CASA, has determined on the basis of evidence submitted that any item not complied with is compensated for by factors which provide equivalent safety.
6. **Performance and Handling.** The manner in which all controls are used shall be determined and recorded in sufficient detail to establish that the flight characteristics are able to be repeated by pilots of average ability. Stall speed and maximum speed demonstrations are to be conducted in accordance with the method outlined in the Flight Test Guide for Certification of CAO 101.28 Aeroplanes.
7. **Structural Tests.** An example of the aeroplane type shall be subjected to structural tests to ultimate flight loads in accordance with requirements for structural flight load tests specified in the design standards listed in CAO 101.55, or to another standard specified by the applicant and recognised by the AUF and the CASA. As a minimum, tests of the mainplane and its attachments for the most critical loading case is required.

8. **Occupant Restraint.** Design and/or test data shall be provided which demonstrates that the occupant restraints and their attachments are capable of accepting the ultimate inertia forces corresponding to a crew mass of 90 kg and upward and downward accelerations of 4.5g and forward accelerations of 9g.
9. Seat belt webbing and fittings certified to an Australian or overseas SAE standard are acceptable provided evidence showing that the particular belts and fittings meet those standards is presented.

#### APPLICANT PROCEDURE

10. **Documentation Required.** An applicant seeking approval of a kit shall provide the following data to the AUF Technical Manager.
  - a. a detailed description of the aircraft including specification of its engine(s) and propeller(s);
  - b. a statement specifying the design standard to which the aircraft was structurally tested and including an applied loads report and a report of the static testing undertaken;
  - c. a report of the flight tests undertaken. These should follow the format given in the Flight Test Guide for Certification of CAO 101.28 Aeroplanes;
  - d. a statement detailing operational limitations applicable to the aircraft type including as a minimum the weight, speed, centre of gravity, loading, manoeuvre limitations and any other parameters to which limitations apply;
  - e. drawings showing the general arrangement of the aircraft type and its sub-assemblies and which clearly define the material specifications, dimensions, rigging details, control surface deflections, tolerances, standard parts used and finish;
  - f. a copy of pilots handling and operating instructions, assembly or building instructions and a maintenance manual and a parts catalogue, preferably illustrated.
  - g. the aircraft kit manufacturers name, address, telephone and facsimile numbers as well as the principal contact officer; and
  - h. where the aircraft kit is of overseas origin, the name, address, telephone and facsimile numbers of the manufacturer's representative in Australia and/or the Australian agent.
11. **Inspection.** The applicant shall present an example of the aircraft type for which approval is sought to a person acceptable to the AUF and the CASA. That person will conduct an inspection to confirm that the aircraft conforms with the data, drawings and statements for the type. The inspector will report the details of that inspection to the AUF Technical Manager.

**ASSESSMENT**

12. **Assessment and Certification.** The AUF Technical Manager, or a person acceptable to the AUF and the CASA, will assess the inspection report, data, drawings and statements for completeness and ensure that the aircraft type meets the applicable requirements. If acceptable the AUF Technical Manager shall issue a certificate which indicates that the kit is approved. The issue of this certificate will allow kits to be produced for sale provided they replicate the aircraft for which the approval was given.
13. **Audit.** The CASA may conduct an audit of any data, drawings, statements and reports held in the AUF Office relating to an approved kit.

**SALE OF APPROVED KITS**

14. Each kit offered for sale is to include pilot handling and operating instructions, a building or assembly manual, a maintenance manual, a parts manual and, if available, a set of drawings for the aircraft. A copy of the AUF certificate and certification by the manufacturer that the kit is complete as per the AUF certificate is also to be included.

**COMPLIANCE OF INDIVIDUAL AIRCRAFT BUILT FROM AN APPROVED KIT**

15. An applicant wishing to register an aircraft with the AUF that was built from an approved kit shall present the aircraft to a person designated by the AUF who shall establish that the aircraft complies with the weight and wing loading requirements of CAO 95.10. Procedures for the registration of aircraft complying with CAO 95.10 are detailed in Section 7.1.1 of this AUF Technical Manual.
16. For the purposes of paragraphs 10 and 11 above, a "*person acceptable to the AUF and CASA*" shall include a person who holds an approval under Civil Aviation Regulation 35, an appropriately qualified AUF Level 2 maintenance authority holder or an SAAA designated inspector specifically designated by the AUF Technical Manager to undertake the assessment or inspection of the specific aircraft type.

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