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## REPUBLIC OF CYPRUS

MINISTRY OF COMMUNICATIONS AND  
WORKS  
DEPARTMENT OF CIVIL AVIATION  
AERONAUTICAL INFORMATION  
SERVICE  
NICOSIA CYPRUS

A I C

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### MODIFICATIONS AND STRUCTURAL REPAIRS TO AIRCRAFT

#### 1 Introduction

- 1.1 This AIC defines the Department of Civil Aviation's policy with regards to the modification and repair of aircraft on the Cyprus register. With effect from the accession of the Republic of Cyprus into the European Union on 1 May 2004, EASA Regulation EC1592/2002 has full effect in Cyprus. With respect to repairs and modifications, this means they must now be approved to standards acceptable to the European Aviation Safety Agency (EASA).
- 1.2 Non-compliance with the requirements set out in this AIC will cause the Certificate of Airworthiness to become invalid under Article 17, of the Civil Aviation Act 2002.
- 1.3 Modifications to Aircraft or Aircraft Equipment require to be approved to standards acceptable to EASA. In the case of simple modifications, which do not affect airworthiness, no formal approval is necessary. It is however for the Department of Civil Aviation to decide the status of a modification and not the person or organisation proposing the Modification.

#### 2 Modifications to Aircraft

- 2.1 Modifications defined in Service Bulletins issued by the manufacturer of an aircraft do not require the direct approval of EASA. The Service Bulletin must however be approved by the Civil Aviation Authority of the State of Design either directly, or by a design approval granted by that Authority.
- 2.2 An organisation approved in accordance with EASA Part 21, Subpart J can classify changes to the type design as either "Major" or "Minor" and approve minor changes directly if this is included as a privilege in their approval. Major changes will be subject to approval by EASA.

- 2.3 FAA Supplemental Type Certificates (STC's) are defined by FAR 21-113 as a major change and if embodied on an aircraft must be classified as a major modification. All modifications based on an FAA STC must be submitted through a Part 21, Subpart J organisation and approved by EASA.
  - 2.4 For Aircraft with a maximum take-off weight above 5700 Kgs, unless the modification is simple in nature, the DCA requires all modifications submitted for approval to have been designed by a Part 21, Subpart J, design organisation.
  - 2.5 For Aircraft with a maximum take-off weight below 5700kgs, modifications that the Department of Civil Aviation find on investigation do not involve major changes to the aircraft or systems nor require expert design input, may be accepted without the involvement of a Part 21, Subpart J, approved design organisation. In order for this to occur, the applicant must be able to show that the modification can be designed and installed to an acceptable standard, in accordance with the applicable regulations and good aviation practice. In all other circumstances, modifications must be designed by a Part 21, Subpart J, approved design organisation.
3. **Approval of modifications for aircraft below 5700Kgs as defined in paragraph 2.5**
    - 3.1 Following discussions with the Department the applicant will prepare a modification package and submit this for approval. The Modification package must contain sufficient information for the Department to determine the acceptability of the Modification and the degree of surveillance required.
    - 3.2 The modification package must contain at least the following information
      - 3.2.1 **Engine/Airframe Modifications**
        - a) Title page to include: Company name and address, aircraft type, Registration, Serial number, Company Mod. number, Modification title and a brief description of the modification.
        - b) Details of equipment to be fitted and its approval basis.
        - c) Proposed modification procedure.
        - d) Details of proposed ground and air tests.



- e) Details of manuals requiring amendment.
- f) Details of any special requirements such as the need to re-weigh the aircraft, changes to weight and centre of gravity.

### **3.2.2 Avionics Modifications**

- a) All the requirements of 3.2.1
  - b) Details of changes to the aircraft electrical load analysis
  - c) Wiring diagrams and aerial locations if applicable
  - d) Compass swing requirements
- 3.3 The Department will assess the information contained in the modification documentation and if satisfactory arrange for the approval of the modification by EASA. Once approved, a copy of the "Approval of Minor Change" and "EASA Approval from the Executive Director" documents will be supplied to the applicant. These must be retained with the aircraft records in order to confirm the approval of the modification.
- 3.4 The Department will determine the level of surveillance it will require to undertake during the installation of the modification.

## **4 Structural Repairs**

- 4.1 All structural repairs to aircraft on the Cyprus register must be carried out using approved data.
- 4.2 Most manufacturers produce a structural repair manual for their aircraft, approved by their Civil Aviation Authority (State of Design). This will describe approved methods of repairing structural damage. The manufacturer's structural repair manual is considered approved data.
- 4.3 Sometimes the structural damage is outside the limits of the repairs defined in the structural repair manual. In these cases, the manufacturer must be contacted and requested to produce an approved repair. The Civil Aviation Authority of the State of Design must approve this repair, either directly or under the terms of a design approval issued to the manufacturer design organisation.
- 4.4 If the State of Design is part of the European Union, European Union Commission Regulation 1702/2003 requires the manufacturer's design organisation to be approved in accordance with Part 21, Subpart J. If the State of Design is outside the EU, then the requirements of Article 3(2) of Commission Regulation 1702/2003 apply. In practice, this means that

if the manufacturer's design organisation's, principle place of business, is based in the United States, Canada or Brazil, they are accepted by EASA, if they hold a design approval issued by their national airworthiness authority.

- 4.5 For American manufactured general aviation aircraft, where specific repair manuals or repair documentation is not available, the FAA publication "Advisory Circular AC 42.13 Acceptable Methods and Techniques – Aircraft Inspection and Repair" may be used for guidance. The Department of Civil Aviation will consider AC43-13 data as an acceptable basis for the approval of a repair. In these circumstances, the Department must be advised of the nature of the repair or repairs before work commences. This will allow the inspection of the repair work and the intended repair data to be undertaken. If the repair requires the use of a combination of techniques or procedures defined in the Advisory Circular. The DCA may require the repair to be designed by a Part 21, Subpart J, design organisation. This decision will, in part, be based on the known competence of the organisation or individual that has developed the repair proposal.
- 4.6 If the repair or repairs identified in paragraph 4.5 are considered simple in nature, the repair will be approved as a "Change" using the process defined in Paragraph 3.3 above.

## **5 Records of Structural Repairs**

- 5.1 Owners or Operators must ensure that they keep adequate and complete records of all repairs carried out on their aircraft in the aircraft technical records. This must include the applicable Certificate of Release to Service and the approved repair data used. Any EASA approval documents issued to approve the repair must also be retained. A list of all structural repairs carried out on the aircraft since manufacture must also be kept. This document should allow easy reference to be made to the original repair data and certification.
- 5.2 Organisations or individual engineers carrying out structural repairs must supply the Owner or Operator with a copy of the Certificate of Release to Service covering the work performed. The Certificate of Release to Service must clearly state what approved data was used to carry out the repair.
- 5.3 For further advice and guidance on this matter, the Department of Civil Aviation, Safety Regulation Unit should be contacted.

This AIC replaces AIC C10/2003, which is hereby cancelled.