

AERONAUTICAL CIRCULAR CIVIL AVIATION AUTHORITY – MACAO, CHINA

SUBJECT:

*Return to Service of Aircraft Items Recovered from
Aircraft Involved in Accidents/Incidents*

EFFECTIVE DATE:

20 February 2009

CANCELLATION:

Nil

GENERAL:

The President of Civil Aviation Authority – Macao, China, in exercise of his power under Paragraph 89 of the Air Navigation Regulation of Macao (ANRM) and Article 35 of the Statutes of Civil Aviation Authority, approved by the Decree-Law 10/91/M, established this Aeronautical Circular (AC).

1 Introduction

This circular reviews the factors involved in establishing the acceptability of aircraft items recovered from aircraft involved in accidents/incidents, and states the conditions to be met before such items may be returned to service.

2 Definition

For the purpose of this Circular the following definition applies:

- (a) **Items** include all components, parts, engines and accessories.

3 Establishing Origin of Recovered Items

- 3.1 When an aircraft has been involved in an accident/incident, the title to the salvage may pass from the insured owner to other persons (e.g. aircraft insurers) and this salvage may be offered for sale either complete or as separate aircraft items in an "as is - where is" condition. While some items may be totally unaffected by the accident/incident which caused the aircraft to be declared as salvage, it is essential to obtain clear evidence that this is the case. If such evidence cannot be obtained, the item may not be returned to service.
- 3.2 All such items must therefore be subject to competent assessment and inspection in the light of adequate knowledge of the circumstances of the accident, subsequent storage and transport conditions, and with evidence of previous operational history obtained from valid airworthiness records, before overhaul and re-installation can be considered.
- 3.3 In particular, if a crash load is sufficient to take any part above its proof strength, residual strains may remain which could reduce the effective strength of the item or otherwise impair its functioning. Loads higher than this may of course crack the item, with an even more dangerous potential. Further, a reduction in strength may be caused by virtue of the change of a material's characteristics following overheating from a fire. It is therefore of the utmost importance to establish that the item is neither cracked, distorted or overheated. The degree of distortion may be difficult to assess if the precise original dimensions are not known, in which case there is no option but to reject the item. Any suggestion of overheating would be cause for a laboratory investigation into significant change of material properties.
- 3.4 The standard procedures appropriate to items removed for overhaul following normal service life may not therefore be sufficient for items from salvaged aircraft. If the information in the Manufacturer's Manual, or other technical publications, is insufficient to deal with the considerations detailed above then the manufacturer must be consulted for guidance. If the manufacturer provides the additional information, and the item can be shown to meet this, then it may be returned to service.
- 3.5 Where a difficulty exists in classifying the airworthiness significance of an aircraft item recovered after an accident/incident, the question should be referred to the AACM for advice. The AACM will require full details of the circumstances of the accident/incident before a response is made to the enquiry.

4 Information Obtained from Aviation Insurers

- 4.1 Aviation insurers and other persons who obtain title to salvage parts may supply to salvage purchasers the details of the accident/incident leading to the aircraft, or aircraft item, being declared as salvage. It is also common practice for aviation insurers to pass over the airworthiness records to the salvage purchaser. Whilst such information and records are an essential part of the assessment, where return to service is being considered, they are not a guarantee that the item is acceptable for re-installation.

5 Supplementary Information

- 5.1 Attention is drawn to AC/AW/016 which also deals with the safeguards necessary for users obtaining aircraft parts in the open market, particularly in relation to the release documentation and evidence of previous history.

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