

European Aviation Safety Agency

**DECISION No 2007/001/R
OF THE EXECUTIVE DIRECTOR OF THE AGENCY
of 13 March 2007**

amending Annex I of Decision N° 2003/19/RM of the Executive Director of the Agency of 28 November 2003 on acceptable means of compliance and guidance material to Commission Regulation (EC) No 2042/2003 of 20 November 2003 on the continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the approval of organisations and personnel involved in these tasks.

THE EXECUTIVE DIRECTOR OF THE EUROPEAN AVIATION SAFETY AGENCY,

Having regard to Regulation (EC) No 1592/2002 of the European Parliament and of the Council of 15 July 2002 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency¹ (hereinafter referred to as the Basic Regulation), and in particular Articles 13 and 14 thereof,

Having regard to the Commission Regulation (EC) No 2042/2003 of 20 November 2003 on the continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the approval of organisations and personnel involved in these tasks²,

Whereas:

- (1) Annex I of Acceptable Means of Compliance to Part-M of Decision 2003/19/RM is required to be up to date to reflect the need of introducing the concept of Critical Design Control Configuration Limitations (CDCCL).
- (2) To achieve this requirement the text of the Annex I of Acceptable Means of Compliance to Part-M of Decision 2003/19/RM should be amended accordingly.
- (3) The Agency shall issue certification specifications, including airworthiness codes and acceptable means of compliance, as well as any guidance material for the application of the Basic Regulation and its implementing rules.

¹ OJ L 240, 7.9.2002, p. 1. Regulation as last amended by Regulation (EC) No 1701/2003 (OJ L 243, 27.9.2003, p. 5).

² OJ L 315, 28.11.2003, p. 1. Regulation as amended by Regulation (EC) No 707/2006 (OJ L 122, 9.5.2006, p. 17).

- (4) The Agency, pursuant to Article 43 of the Basic Regulation and Articles 5(3) and 6 of the rulemaking procedure³, has widely consulted interested parties⁴ on the matters which are the subject of this Decision and has provided thereafter a written response to the comments received⁵.

HAS DECIDED:

Article 1

The Annex I of Acceptable Means of Compliance to Part-M of Decision 2003/19/RM of the Executive Director of the Agency of 28 November 2003 on acceptable means of compliance and guidance material to Commission Regulation (EC) No 2042/2003 of 20 November 2003 on the continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the approval of organisations and personnel involved in these tasks, is hereby amended in accordance with the Annex 1 to this Decision.

Article 2

This Decision shall enter into force on 20 March 2007.

Done in Cologne, 13 March 2007

P. GOUDOU
By delegation C. PROBST

³ Decision of the Management Board concerning the procedure to be applied by the Agency for the issuing of opinions, certification specifications and guidance material ("rulemaking procedure"), EASA MB/7/03, 27.6.2003.

⁴ See: NPA No 22-2005

⁵ See: CRD No 22-2005

Annex 1 to Decision 2007/001/R

The following paragraphs of Annex I to Decision 2003/19/RM AMC to Part-M are amended as follows:

AMC M.A.201 (h) Responsibilities

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4. An operator should therefore have adequate knowledge of the design status (type specification, customer options, airworthiness directives (AD), airworthiness limitations including Critical Design Configuration Control Limitations (CDCCL), modifications, major repairs, operational equipment) and required and performed maintenance. Status of aircraft design and maintenance should be adequately documented to support the performance of the quality system.

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AMC M.A.301 -5- Continuing Airworthiness Tasks

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Any other continued airworthiness requirement made mandatory by the Agency includes TC related requirements such as: certification maintenance requirements (CMR), certification life limited parts, airworthiness limitations including Airworthiness Limitation Items (ALI), Critical Design Configuration Control Limitations (CDCCL), etc.

AMC M.A.501(b) Installation

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3. The person referred to under M.A.801 or the M.A. Subpart F approved maintenance organisation should be satisfied that the component in question meets the approved data/standard, such as the required design and modification standards. This may be accomplished by reference to the TC holder or manufacturer's parts catalogue or other approved data (i.e. ~~SB~~Service Bulletin). Care should also be exercised in ensuring compliance with applicable ADs and the status of any service life limited parts fitted to the aircraft component as well as compliance with Critical Design Configuration Control Limitations.

AMC M.A.501(d) Installation

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Insert a new paragraph 7:

7. When using raw or consumable material on an aircraft or component near, or adjacent to, or that directly impacts an identified Critical Design Configuration Control Limitation item, it should be ensured that the CDCCL has not been compromised.

AMC M.A.704 Continuing airworthiness management exposition

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Insert a new paragraph 11:

10. Whenever the accountable manager is changed it is important to ensure that the new accountable manager signs the paragraph 9 statement at the earliest opportunity as part of the acceptance by the approving competent authority.

Failure to carry out this action invalidates the M.A. Subpart G continuing airworthiness management approval or the air operator's certificate.

11. The exposition should contain information as applicable, on how the continuing airworthiness management organisation complies with CDCCL instructions.

Appendix V contains an example of an exposition lay-out.

Add a new paragraph AMC M.A.706(f):

AMC M.A.706(f) Personnel requirements

Additional training in fuel tank safety as well as associated inspection standards and maintenance procedures should be required of continuing airworthiness management organisations' technical personnel, especially those technical support staff involved with the management of CDCCL, Service Bulletin assessment, work planning and maintenance programme management. EASA guidance is provided for training to Continuing Airworthiness Management Organisations' continuing airworthiness personnel in Appendix XII to AMC to M.A.706(f) and M.B.102(c).

Add a new paragraph AMC M.A.708(b)3:

AMC M.A.708(b)3. Continuing Airworthiness Management

When managing the approval of modifications or repairs the organisation should ensure that Critical Design Configuration Control Limitations are taken into account.

Modify paragraph 1.6 of AMC M.B.102(c):

AMC M.B.102(c) Competent authority – Qualification and training

1.6 knowledge of a relevant sample of the type(s) of aircraft gained through a formalised training course, including Fuel Tank Safety (FTS) training as described in Appendix XII to AMC to M.A.706(f) and M.B.102(c).

Appendix I to AMC M.A.302 and AMC M.B.301(b)

Insert a new paragraph 1.1.14:

1.1.14. If applicable, details of Critical Design Configuration Control Limitations together with appropriate procedures.

1.1.15~~14~~

- 1.1.1615
- 1.1.1716
- 1.1.1817
- 1.1.1918
- 1.1.2019
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Insert a new paragraph 2.4:

2.4 Critical Design Configuration Control Limitations (CDCCL)

If CDCCL have been identified for the aircraft type by the TC/STC holder, maintenance instructions should be developed. CDCCL's are characterised by features in an aircraft installation or component that should be retained during modification, change, repair, or scheduled maintenance for the operational life of the aircraft or applicable component or part.

Insert a new Appendix XII to AMC to Part-M:

Appendix XII to AMC to M.A.706(f) and M.B.102(c)

Fuel Tank Safety training

This appendix includes general instructions for providing training on Fuel Tank Safety (FTS) issues.

1. Levels of training

Level 1 Familiarisation training

Objectives:

The attendant should, after the completion of the training:

1. be familiar with the basic elements of the fuel tank safety issues.
2. be able to give a simple description of the historical background and the elements requiring a safety consideration, using common words and showing examples of non conformities.
3. be able to use typical terms.

The familiarisation training should include a presentation of bulletins/notices, short videos or CD material, poster campaigns, etc.

Level 2 Detailed training

Objectives:

The attendant should, after the completion of the training:

1. know the history and the theoretical and practical elements of the subject, have an overview of Special Federal Aviation Regulations (SFARs) from 14 CFR SFAR 88 of the FAA and of JAA Temporary Guidance Leaflet TGL 47, be able to give a detailed description of the concept of Critical Design Configuration Control Limitations

- CDCCL, Airworthiness Limitations Items (ALI) and using theoretical fundamentals and specific examples,
2. have the capacity to combine and apply the separate elements of knowledge in a logical and comprehensive manner.
 3. have detailed information on how the above items affect the aircraft in the scope of the activity of the organisation or in the fleet.
 4. understand and carry out activities with the use of manufacturer and regulatory authority data providing instructions on design and maintenance, such as Service Bulletins, Airworthiness Directives, Aircraft Maintenance Manual, Component Maintenance Manual etc.
 5. use easily the manufacturer's documentation from various sources and apply corrective action where appropriate.
 6. identify the components or parts or the aircraft subject to FTS from the manufacturer's documentation, plan the action or apply a Service Bulletin and an Airworthiness Directive.

Continuing training

The interval between continuing training shall be established by the Continuing Airworthiness management organisation, but should not exceed two years. The continuing training shall include knowledge on evolution of material, tools, documentation and manufacturer's or competent authority's directives.

2. The personnel directly involved in Fuel Tank Safety (FTS) systems shall be qualified according to the following table:

Organisation	Personnel	Level of knowledge	Continuing training
Continuing Airworthiness Management Organisations	Any personnel required by M.A.706 except the Accountable Manager of the continuing airworthiness management organisation. The airworthiness review staff as required by M.A.707.	2	Yes
	Quality manager as required by M.A.712	1	Not required
NAA	Management, inspectors and auditors.	1	Not required

3. General requirements

The training shall be carried out at the earliest for the personnel needing level 1 training. Nevertheless, the training for the personnel needing level 2 training has to be carried out before they perform any continuing airworthiness management activity.

The training should be made in appropriate facilities containing examples of components, systems and parts affected by FTS issues and having access to aircraft or component where typical examples of FTS issues can be shown. The use of pictures, films and practical examples of the maintenance on fuel tank system is recommended. The training shall include a representative number of repair and inspections as required by the maintenance programme showing the necessity of using the manufacturer's data.

4. Characteristics of the training

The following characteristics shall be taken into consideration when the level 1 or 2 training programmes are being established:

- a) understanding of the background and concepts of fuel tank safety as developed during the last 10 years, and
- b) how in maintenance instructions to maintenance organisations the mechanics can recognise, interpret and handle the improvements that have been made or are being made during fuel tank system maintenance,
- c) awareness of any hazards working on the fuel system, and especially with a Flammability Reduction System using nitrogen.

a), b) and c) should be introduced in the training programme addressing the following issues:

- i) The theoretical background behind the fuel tank safety: the explosions of mixtures of fuel and air, the behaviour of those mixtures in an aviation environment, the effects of temperature and pressure, energy needed for ignition etc, the 'fire triangle',
- Explain 2 concepts to prevent explosions: (1) ignition source prevention and (2) flammability reduction,
- ii) The major accidents and accident investigations and their conclusions,
- iii) SFARs from 14 CFR SFAR 88 of the FAA and JAA Internal Policy INT POL 25/12: reason of these documents, and what was the ultimate goal, margins of fuel system safety improvements (from 10⁻⁶ to 10⁻⁹, in fact improvement by a factor 100-1000, to identify unsafe conditions and to correct them, to systematically improve fuel tank maintenance),
- iv) Explain the concepts that are being used: the results of SFAR 88 of the FAA and JAA INT/POL 25/12: modifications, airworthiness limitations and CDCCL,
- v) Where relevant information can be found by the mechanics and how to use and interpret this information (maintenance manuals, component maintenance manuals)
- vi) Fuel Tank Safety and Maintenance: fuel tank entry and exit procedures, clean working environment, what is meant by configuration control, wire separation, bonding of components etc,
- vii) Flammability reduction systems: reason for their presence, their effects, the hazards of an FRS using nitrogen for maintenance, safety precautions in maintenance/working with an FRS,
- viii) recording maintenance actions, recording measures and results of inspections.