



NOTICE OF PROPOSED AMENDMENT (NPA) No 2008-16

**DRAFT DECISION OF THE EXECUTIVE DIRECTOR OF THE EUROPEAN AVIATION
SAFETY AGENCY**

AMENDING

**DECISION NO. 2003/19/RM OF THE EXECUTIVE DIRECTOR OF THE EUROPEAN
AVIATION SAFETY AGENCY**

of 28 November 2003 on

**acceptable means of compliance and guidance material to Commission
Regulation (EC) No 2042/2003 on the continuing airworthiness of aircraft and
aeronautical products, parts and appliances, and on the approval of
organisations and personnel involved in these tasks**

'Fuel Tank Safety'

***(incorporation of the Critical Design Configuration Control Limitations (CDCCL)
into Acceptable Means of Compliance for Part-M, Part-145 and Part-66)***

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A. EXPLANATORY NOTE

I. General

1. The purpose of this Notice of Proposed Amendment (NPA) is to envisage amending Decision 2003/19/RM of the Executive Director of the European Aviation Safety Agency of 28 November 2003¹. The reasons for this rulemaking activity are outlined in Terms of Reference (ToR) MDM.022b and is described in more detail below.
2. The European Aviation Safety Agency (the Agency) is directly involved in the rule-shaping process. It assists the Commission in its executive tasks by preparing draft regulations, and amendments thereof, for the implementation of the Basic Regulation² which are adopted as "Opinions" (Article 19(1)). It also adopts Certification Specifications, including Airworthiness Codes and Acceptable Means of Compliance and Guidance Material to be used in the certification process (Article 19(2)).
3. When developing rules, the Agency is bound to following a structured process as required by Article 52(1) of the Basic Regulation. Such process has been adopted by the Agency's Management Board and is referred to as "The Rulemaking Procedure"³.
4. This rulemaking activity is included in the Agency's rulemaking programme for 2008. It implements the rulemaking task MDM.022b Fuel tank safety issues – AMC/GM, here referred to as the Task MDM.022b.
5. The text of this NPA has been developed by the Agency. It is submitted for consultation of all interested parties in accordance with Article 52 of the Basic Regulation and Articles 5(3) and 6 of the Rulemaking Procedure. In order to shorten the period for the issuance of the new decisions, the period of consultation of the NPA is shortened to 6 weeks in accordance with the published TOR.

II. Consultation

6. To achieve optimal consultation, the Agency is publishing the draft decisions of the Executive Director of the European Aviation Safety Agency on its internet site. Comments should be provided within 6 weeks in accordance with Article 6(5) of the EASA Rulemaking Procedure. Comments on this proposal should be submitted by one of the following methods:

CRT: Send your comments using the Comment-Response Tool (CRT) available at <http://hub.easa.europa.eu/crt/>

E-mail: Only in case the use of CRT is prevented by technical problems these should be reported to the [CRT webmaster](mailto:CRT_webmaster@easa.europa.eu) and comments sent by email to NPA@easa.europa.eu.

¹ Decision No 2003/19/RM of the Executive Director of the Agency of 28.11.2003 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. Decision as last amended by Decision 2007/018/R of 18.12.2007.

² Regulation (EC) No 216/2008 of the European Parliament and of the Council of 20 February 2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, and repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2002 and Directive 2004/36/EC (OJ L 79, 19.03.2008, p.1).

³ Management Board Decision concerning the procedure to be applied by the Agency for the issuing of opinions, certifications specifications and guidance material ("Rulemaking Procedure"), EASA MB 08-2007 of 13.06.2007.

Correspondence: If you do not have access to internet or e-mail you can send your comment by mail to:
Process Support
Rulemaking Directorate
EASA
Postfach 10 12 53
D-50452 Cologne

Comments should be received by the Agency before 11 July 2008. If received after this deadline they might not be taken into account.

III. Comment response document

7. All comments received in time will be responded to and incorporated in a comment response document (CRD). The CRD will be available on the Agency's website and in the Comment-Response Tool (CRT).

IV. Content of the draft decision

8. Further to the task MDM.022, an NPA 22-2005 was published on March 2006 to recommend training for continuing airworthiness management organisations and maintenance organisations dealing with limitations which include Critical Design Configuration Control Limitations (CDCCL).
9. As a result of NPA 22-2005, three Decisions of the Executive Director of the European Aviation Safety Agency were published: 2007/001/R modifying AMC on Part-M, 2007/002/R modifying AMC on Part-145 and 2007/003/R modifying AMC on Part-66. Each Decision was provided with an attachment that provided a training plan for personnel involved in continuing airworthiness management and maintenance of aircraft affected by Fuel Tank Safety (FTS) airworthiness limitations items. After publication of these decisions, some concerns were raised by NAAs and the industry on different questions related to aircraft, wording of the decisions, and training programme.

As a result of a workshop held by EASA on 23 November 2007 with the NAAs and some representatives of industry, the following agreement was reached:

- The Agency shall issue new decisions superseding the current ones. These new decisions will introduce a simplified training plan consisting of a Phase 1 (Awareness training) and a Phase 2 (Detailed training), and will recommend dates of implementation for each phase;
 - In order to make a publication of these decisions as soon as possible, shortened periods of consultation will be required;
 - In order to cover the interim period, the Agency would issue a letter to the NAAs recommending them to issue national AMCs that would anticipate on the future Agency revision described above. This letter was issued on 7 January 2008.
10. The envisaged change of this NPA is to propose three new decisions dealing with fuel tank safety and to modify the Decision 2003/19/RM as amended by Decisions 2007/001/R, 2007/002/R and 2007/003/R published on 13 March 2007.

The following changes have been proposed:

- AMC M.A.301-5 is modified in order to introduce the Critical Design Configuration Control Limitations (CDCCL) as airworthiness limitations items;
- AMC to M.A.501(b) is modified in order to remove CDCCL items since subpart-F organisations and independent certifying staff can not perform maintenance on aircraft affected by CDCCLs (they only perform maintenance on other than large aircraft, which are not affected by this NPA);

- The paragraph 7 of AMC to M.A.501(d) which was initially introduced with previous Decision 2007/001 has been removed in coordination with working group MDM.007 dealing with harmonization of the EASA form 1, which is in final stage to produce a CRD. It had been agreed that the paragraph 7 was not necessary;
- AMC M.A.704 is modified in order to introduce the definition of aircraft affected by CDCCL items;
- AMC M.A.706(f) is modified to clarify the wording of personnel involved in the management of CDCCL items;
- The Appendix XII to AMC M.A.706(f) and M.B.102(c) is replaced by a new text describing the training required for continuing airworthiness management organisations (CAMO) and competent authorities, following the conclusions of the workshop held in EASA. References to mandatory requirements are removed;
- A new AMC 145.A.45(e) has been introduced to clarify work cards and work sheets should be updated to include CDCCL items;
- AMC 145.A.50(a) is modified in order to remove the mandatory requirement;
- AMC 145.A.70(a) is modified to introduce in the Maintenance Organisation Exposition (MOE) the aircraft and components affected by CDCCL;
- The Appendix IV to AMC to 145.A.30(e) and 145.B.10(3) is replaced by a new text describing the training required for Part-145 maintenance organisations and competent authorities, following the conclusions of the workshop held in EASA. References to mandatory requirements are removed;
- AMC 66.A.45(d) has been amended to remove the reference to Appendix IV to AMC to 66.A.45(d), since this Appendix has been removed;
- The Appendix IV to AMC to 66.A.45(d) is removed as training for airworthiness review staff of CAMO (those holding a licence) and for support staff and certifying staff of Part-145 organisations are already included in the AMC to Part-M and to Part-145.

V. Regulatory Impact Assessment (RIA)

The modification introduced by this NPA do not affect the initial RIA submitted in NPA 22-2005, therefore the RIA remains unchanged and is not repeated here.

Sectors concerned

Aircraft: Large aeroplanes as defined in Decision 2003/11/RM of the Executive Director of the Agency⁴ (CS-25) and certified after 1 January 1958 with a maximum type certified passenger capacity of 30 or more or a maximum certified payload capacity of 7500 lbs (3402 kg) cargo or more.

Organisations: Organisations maintaining or managing the continuing airworthiness of these aircraft (including workshop maintenance of fuel system components, rating C9) should pay attention to the instructions for continuing airworthiness issued by Type-Certificate (TC) or Supplementary Type Certificate (STC) holders and equipment manufacturers, to determine whether their aircraft or systems of the aircraft are affected by CDCCLs. When the aircraft/systems are affected, adequate training should be provided by these organisations.

⁴ Decision No 2003/11/RM of the Executive Director of the Agency of 5 November 2003 on definitions and abbreviations used in certification specifications for products, parts and appliances (« CS-Definitions »).

B. DRAFT DECISIONS

The text of the amendment is arranged to show deleted text, new text or new paragraph as shown below:

- deleted text is shown with a strike through: ~~deleted~~
- new text is highlighted with grey shading: **new**
-
indicates that remaining text is unchanged in front of or following the reflected amendment.

I. Draft Decision on Annex I - AMC to Part-M

AMC M.A.301-5 is amended as follows:

AMC M.A.301-5 Continuing Airworthiness Tasks

...

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**), ~~Critical Design Configuration Control Limitations (CDCCL)~~, etc.

AMC M.A.501(b) is amended as follows:

AMC M.A.501(b) Installation

...

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. 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

Remove 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 is amended as follows:

AMC M.A.704 Continuing airworthiness management exposition

...

11. The exposition should contain information as applicable, on how the continuing airworthiness management organisation complies with CDCCL for large aeroplanes as defined in Decision 2003/11/RM of the Executive Director of the Agency⁵ (CS-25) and

⁵ Decision No 2003/11/RM of the Executive Director of the Agency of 5 November 2003 on definitions and abbreviations used in certification specifications for products, parts and appliances (« CS-Definitions »).

certified after 1 January 1958 with a maximum type certified passenger capacity of 30 or more or a maximum certified payload capacity of 7500 lbs (3402 kg) cargo or more and for fuel system components installed on such aircraft when maintenance data are affected by Critical Design Configuration Control Limitation (CDCCL).

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

AMC M.A.706(f) is amended as follows:

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 the ~~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).

Appendix XII is replaced by the following text:

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

Appendix XII

Fuel Tank Safety training

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

A) Affected aircraft:

Large aeroplanes as defined in Decision 2003/11/RM of the Executive Director of the Agency (CS-25) and certified after 1 January 1958 with a maximum type certified passenger capacity of 30 or more or a maximum certified payload capacity of 7500 lbs (3402 kg) cargo or more.

B) Affected organisations:

M.A. Subpart G approved organisations involved in the continuing airworthiness management of aircraft specified in paragraph A).

Competent authorities responsible for the oversight of aircraft specified in paragraph A) or for the oversight of the M.A. Subpart G approved organisations specified in this paragraph B).

C) Persons from affected organisations who should receive training:

Phase 1 only:

- The accountable manager, the quality manager and quality department personnel.

Phase 1 + Phase 2 + Continuation training:

- All M.A. Subpart G personnel involved in the management and review of the continuing airworthiness of aircraft specified in paragraph A);
- All competent authority personnel involved in the oversight of aircraft specified in paragraph A) and in the oversight of M.A. Subpart G organisations specified in paragraph B).

D) General requirements of the training courses

1) Phase 1 – Awareness

The training should be carried out before the person starts to work without supervision.

Type: Should be an awareness course with the principal elements of the subject. It may take the form of a training bulletin, or other self study or informative session. Signature of the reader is required to ensure that the person has passed the training.

Level: It should be a course at the level of familiarisation with the principal elements of the subject.

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.

Content: Following the guidelines described in paragraph E).

2) Phase 2 - Detailed training

A flexible period may be allowed by the competent authorities to allow organisations to set the necessary courses and impart the training to the personnel, taking into account the organisation's training schemes/means/practices. This period should not extend beyond 31 December 2010.

Type: Should be a more in-depth internal or external course imparted by an instructor. It should not take the form of a training bulletin, or other self study. An examination should be required at the end, which should be in the form of a multi choice question with four alternative answers, and the pass mark of the examination should be 75%.

Level: It should be a detailed course on the theoretical and practical elements of the subject.

The training should be made in appropriate facilities containing examples of components, systems and parts affected by Fuel Tank Safety (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 should include a representative number of repairs and inspections as required by the M.A302 maintenance programme showing the necessity of using the manufacturer's data.

Objectives:

The attendant should, after the completion of the training:

1. know the history of events due to fuel tank safety issues and the theoretical and practical elements of the subject, have an overview of the FAA regulations known as SFAR (Special FAR) 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 in 1 and 2 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.

Content: Following the guidelines described in paragraph E).

3) Continuation training

Continuation training should be provided at intervals not exceeding two years. This training should be described in the Continuing Airworthiness Management Exposition (CAME).

The continuing training should include any new instruction issued related to the material, tools, documentation and manufacturer's or competent authority's directives.

E) Guidelines for preparing the content of Phase 1 and Phase 2 courses.

The following guidelines should be taken into consideration when the phase 1 or 2 training programmes are being established:

- a) understanding of the background and the concept of fuel tank safety as developed during the last 10 years,
- 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 that have happened due to fuel tank safety reasons and their conclusions,
- iii) 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 Flammability Reduction System (FRS) using nitrogen for maintenance, safety precautions in maintenance/working with an FRS,
- viii) Recording maintenance actions, recording measures and results of inspections.

F) Approval of training

For M.A. Subpart G approved organisations the training of personnel is part of the CAME and should be approved through an amendment of this manual.

II. Draft Decision on Annex II - AMC Part-145

A new AMC 145.A.45(e) is added:

AMC 145.A.45(e) Maintenance data

The maintenance organisation should ensure that work cards and work sheets including Critical Design Configuration Control Limitation (CDCCL) are properly updated and identified with such limitations.

AMC 145.A.50(a) is amended as follows:

AMC 145.A.50(a) Certification of maintenance

...

3. At any scheduled or unscheduled maintenance task carried out to a fuel system feature classified as a Critical Design Configuration Control Limitation (CDCCL) and before release to service, the maintenance records ~~shall~~**should** reflect that the correct configuration is maintained and ensured. This should be done by the marking: "CDCCL task".

AMC 145.A.70(a) is amended as follows:

AMC 145.A.70(a) Maintenance organisation exposition

The following information should be included in the maintenance organisation exposition:

The information specified in 145.A.70(a) sub - paragraphs (6) and (12) to (16) inclusive, whilst a part of the maintenance organisation exposition, may be kept as separate documents or on separate electronic data files subject to the management part of said exposition containing a clear cross reference to such documents or electronic data files.

The exposition should contain the information, as applicable, specified in this AMC. The information may be presented in any subject order so long as all applicable subjects are covered. Where an organisation uses a different format, for example, to allow the exposition to serve for more than one approval, then the exposition should contain a cross reference Annex using this list as an index with an explanation as to where in the exposition the subject matter can be found.

The exposition should contain information as applicable, on how the maintenance organisation complies with Critical Design Configuration Control Limitations (CDCCL) instructions for large aeroplanes as defined in Decision 2003/11/RM of the Executive Director of the Agency⁶ (CS-25) and certified after 1 January 1958 with a maximum type certified passenger capacity of 30 or more or a maximum certified payload capacity of 7500 lbs (3402 kg) cargo or more and for fuel system components installed on such aircraft when maintenance data are affected by Critical Design Configuration Control Limitation (CDCCL).

The exposition should state how the completion of CDCCL is traced.

...

⁶ Decision No 2003/11/RM of the Executive Director of the Agency of 5 November 2003 on definitions and abbreviations used in certification specifications for products, parts and appliances (« CS-Definitions »).

Appendix IV to AMC 145.A.30(e) and 145.B.10(3) is replaced by the following text:

Appendix IV to AMC 145.A.30(e) and 145.B.10(3)

Appendix IV

Fuel Tank Safety training

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

A) Affected aircraft:

Large aeroplanes as defined in Decision 2003/11/RM of the Executive Director of the Agency (CS-25) and certified after 1 January 1958 with a maximum type certified passenger capacity of 30 or more or a maximum certified payload capacity of 7500 lbs (3402 kg) cargo or more.

B) Affected organisations:

Part-145 approved maintenance organisations involved in the maintenance of aircraft specified in paragraph A) and fuel system components installed on such aircraft when the maintenance data are affected by CDCCL.

Competent authorities responsible for the oversight of the Part-145 approved organisations specified in this paragraph B).

C) Persons from affected organisations who should receive training:

Phase 1 only:

- The accountable manager, the group of persons representing the maintenance management structure of the organisation, the quality manager and the staff required to quality monitor the organisation.

Phase 1 + Phase 2 + Continuation training:

- All personnel required to plan, perform, supervise, inspect and certify the maintenance of aircraft and fuel system components specified in paragraph A).
- All competent authority personnel involved in the oversight of Part-145 approved maintenance organisations specified in paragraph B).

D) General requirements of the training courses

1) Phase 1 – Awareness

The training should be carried out before the person starts to work without supervision.

Type: Should be an awareness course with the principal elements of the subject. It may take the form of a training bulletin, or other self study or informative session. Signature of the reader is required to ensure that the person has passed the training.

Level: It should be a course at the level of familiarisation with the principal elements of the subject.

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.

Content:

Following the guidelines described in paragraph E).

2) Phase 2 - Detailed training

Type: Should be a more in-depth internal or external course imparted by an instructor. It should not take the form of a training bulletin, or other self study. An examination should be required at the end, which should be in the form of a multi choice question with four alternative answers, and the pass mark of the examination should be 75%.

Level: It should be a detailed course on the theoretical and practical elements of the subject.

The training should be made in appropriate facilities containing examples of components, systems and parts affected by Fuel Tank Safety (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 should include a representative number of repairs and inspections as required by the maintenance programme showing the necessity of using the manufacturer's data.

A flexible period may be allowed by the competent authorities to allow organisations to set the necessary courses and impart the training to the personnel, taking into account the organisation's training schemes/means/practices. This period should not extend beyond 31 December 2010.

Objectives:

The attendant should, after the completion of the training:

1. know the history of events due to fuel tank safety issues and the theoretical and practical elements of the subject, have an overview of the FAA regulations known as SFAR (Special FAR) 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 in 1 and 2 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.

Content:

Following the guidelines described in paragraph E).

3) Continuation training

Continuation training should be provided at intervals not exceeding two years. This training should be described in the Maintenance Organisation Exposition (MOE).

The continuing training should include any new instruction issued related to the material, tools, documentation and manufacturer's or competent authority's directives.

E) Guidelines for preparing the content of Phase 1 and Phase 2 courses.

The following guidelines should be taken into consideration when the phase 1 or 2 training programmes are being established:

- a) understanding of the background and the concept of fuel tank safety as developed during the last 10 years,
- 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 that have happened due to fuel tank safety reasons and their conclusions,
- iii) 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.

F) Approval of training

For Part-145 approved organisations the training of personnel is part of the Maintenance Organisation Exposition (MOE) and should be approved through an amendment of the manual.

III. Draft Decision on Annex IV - AMC Part-66

AMC 66.A.45(d) is amended as follows:

AMC 66.A.45(d) Type/task training and ratings

...

3. Theoretical and practical training should also take into account critical aspects such as Critical Design Configuration Control Limitations.

~~EASA guidance is provided for training in Appendix IV to AMC to 66.A.45(d).~~

...

Appendix IV to AMC to 66.A.45(d) is removed.