

EASA – Industry Fuel Tank Safety Seminar

24 June 2005, Cologne

List of attendants
Short introduction
Questions and answers during the seminar
Conclusions
Future activities

- Welcome by Yves Morier on behalf of EASA. The Civil Aviation Authorities of Canada and Brazil were not able to attend this seminar. They send apologies for absence.
- The proposed agenda is agreed, and an interactive approach is requested.
- Daniel Cheney presents a high level summary, also given in Shanghai's 2005, about the background and need for ignitions source prevention and flammability reduction seen from a regulatory point of view, refers to 5 accidents (also lightning strike and ignition within tanks)

Questions (Q) and answers (A):

The most questions relate to the following subjects:

- FAA EASA harmonisation
- Effectiveness of SFAR88 JAA INT POL 25/12
- The EASA Regulatory Impact Assessment
- Draft FAA NPRM
- Flammability Production Cut in
- Flammability Reduction Systems Retrofit
- Publication of EASA time scales for direct unsafe and not direct unsafe related data
- CDCCL's

Q: Can everyone receive the presentations?

A: Presentations will be made available on EASA website + Questions and Answers

Q: When can the closing letter for the 'statements of compliance finding' be expected (slide 4)?

A: Within a couple of weeks (before end July) the first EASA compliance statements will be ready, after which the TC/STC holders will be informed.

Q: AEA wants to see the effectiveness of all ignition source prevention actions and the improvements in safety, i.e.:

- which safety level before SFAR88/JAA INT/POL 25/12?
- which safety level after implementation of the AD's over the past years related to ignitions source prevention?
- which safety level after implementation of all SFAR88/JAA INT/POL 25/12 ignitions source prevention actions?

- can an analysis per aircraft model be made?
- can it be less costly than 7-15 billion?

A: (FAA): These are key questions. FAA wants to know also and launched a study (Sandia) to investigate. Ignitions Source Prevention is almost certain less effective than 100%, probably lower than 90%. The Sandia report will be available end of July best estimate. Of course there is a direct relation between the effectiveness of ignition source prevention, FRS and economics/cost/benefit. But, as aviation industry we live in an environment where customers do not accept any accidents.

Q: Will the 7% cut off corner point for flammability exposure level change?

A: At the moment no change is foreseen in 7%, dividing the world into high and low flammability. If by study or future developments there is a need to deviate from 7%, it should be discussed. If there is no better way than 7% will remain a fixed point, just as it is now.

Q: What are the lessons learned from the design reviews? Is one aircraft model more sensitive than another?

A: From a flammability exposure point of view, the aircraft designs with Centre Wing Tanks that are normally emptied in flight and that have heat sources close to the tanks (like Air Conditioning Packs) are the most critical ones.

From an ignition prevention point of view, it seems the situation is depending between OEMs and for a given OEM there are variations between different models. Generally, it seems fewer ADs were required for recent products, compared to aircraft from previous generations.

Q: Does the draft FAA NPRM require TC/STC holders to do a new flammability assessment with an improved version (MC model version 7)?

A: Yes, FAA NPRM will require a improved analysis with the same MC model for standardisation reasons. Boeing and Airbus are verifying the results now for FAA and EASA. Results will be used internally for verification of the model MC version 7.

Q: What is the EASA position on the FAA NPRM?

A: The NPRM is in draft form, and when it will be published EASA will provide comments.

Q: Will EASA study the effectiveness of SFAR88 – JAA INT/POL 25/12?

The EASA will review the results of the study done, at the request of FAA, by the Sandia Laboratory relative to the efficiency of SFAR-88

Q: all corrective actions from the design reviews will generate an enormous workload for the airline industry, therefore they request:

- **no end date for operator implementation**
- **at least 24 months for implementation**
- **escalation possibility to be discussed**
- **use of alternate tooling to be discussed**
- **guidance on training**

A: the EASA system (Part M) gives a 12 months period for implementation of TC/STC holder information into the maintenance programmes of the Airlines.

Although it is true that a specific period of 12 months is not mentioned in the rule, the 12 month implementation period can be found in Opinion 4/2005, which has been communicated with and agreed by the European Operators. EASA does not foresee a change in the 12 month period, however, if more details are known of the exact workload, EASA may give room for flexibility, but EASA wishes to discuss that in a future seminar when more details are known (Note: the TC holders gave no insight information during this seminar on which the EASA could draw any conclusion of excessive workload for the airlines).

Short term escalation is possible within the EASA systems (regulation 1592/2002 article 10.3 flexibility provisions) for a period of maximum 2 months. Operators have to consult their national authority. Alternative tooling: consult national authority.

Training guidance: EASA does not foresee guidance on training, however, is able to make some advice/recommendations with regard to the contents of training programmes developed by TC/STC holders.

Q: Will EASA withdraw the JAA Recommendation Letter about Fuel Tank Safety?

A: It is not EASA's competence to withdraw a JAA recommendation letter, but, the point is taken. EASA will send a letter National Authorities explaining the 'new dates', including guidance material (text of TGL 47), the CDCCL concept and the dates at which all not direct unsafe related maintenance information must have been released for publication by the TC/STC holders.

Q: What will happen with TGL47?

A: The content of TGL47 will be a part of AMC20, which will be published for comments. Planning is 2007. The rule as such is sufficient not to wait for AMC20.

Q: Some STC holders do not respond to questions from operators or TC holders, so necessary information cannot be obtained. One leasing company has started to have already removed 2 STC's from his aircraft.

A: EASA is aware of the difficult issue of Orphan STC and would welcome further discussion with the affected leasing company.

Q: Some components manufacturers do not respond to questions from the TC holder to update the CMM (Component maintenance manual). Does EASA have any power to mandate CMM's to be updated?

A: According the regulations the TC holder is responsible. EASA does not plan and does not foresee any action. EASA will provide a paper explaining the regulatory situation, in particular why it has almost no power to oblige unwilling component manufacturers to amend their CMM. The systems for overhaul and repair at operator level should always ensure that components are overhauled and repaired to the latest approved data.

Q: What is the 'EASA' policy on the use of PMA parts, CDCCL's etc?

A: The EASA policy is based on a number of existing bilateral agreements with the USA, in fact the United Kingdom CAA UK – United States of America FAA bilateral can and will be used as basis.

- EASA will accept FAA PMA parts for products for which the FAA is the certifying authority (FAA will use the AD system for correcting unsafe conditions)
- EASA will – as a standard – accept PMA parts only when the part is non-critical (Note: consult the bilateral for a correct definition of critical)
- EASA will as – a standard - not accept PMA parts when it is a critical part (Note: consult the bilateral for a correct definition of critical)

Q: How does EASA approach the CDCCL concept?

A: EASA sees the CDCCL as an Airworthiness Limitation. This means that any change to an existing CDCCL will be a modification that requires EASA approval.

Q: Will Boeing meet EASA timescales?

A: (Boeing Representative): Boeing will probably meet the EASA timescales. The FAA policy memo was harmonised with TGL47.

Q: Fokker Services: Fokker Services is afraid for the coming FAA NPRM, since their flammability level is close to 6%, and possibly will be confronted with a new Flammability Exposure (FE) Monte Carlo Analysis.

A: During the seminar and before the seminar it is stated several times that the Fokker aircraft types with Centre Wing Tank do not seem to be critical regarding flammability levels. The original Monte Carlo F.E. levels indicate a flammability lower than 7%, and FAA (and EASA) do not expect big changes with version 7. In case strange things happen, or have happened with the Fokker Services version of model 4, EASA and FAA ask Fokker to consult and discuss with them.

Q: Will the EASA Regulatory Impact Assessment (RIA) be published, if yes when?

A: The present RIA will be published on the EASA website in July

Q: Are there any hidden secrets not to publish the RIA?

A: EASA has nothing to hide, but the RIA probably will have to be revised when new data show the need. This will be an open communication process, open for comment. The draft FAA NPRM expected for publication in September 2005 might bring the need to revise the RIA.

Q: Are FAA and EASA harmonised?

A:

- on FRS production cut in per 2007/2008 FAA and EASA are harmonised (>7% MC Flammability Exposure means high flammable and need for FRS)
- on FRS retrofit EASA and FAA are not harmonised yet, however EASA and FAA share the same global vision (i.e. a balanced approach for ignition source prevention and flammability reduction) and keep an open communication channel
- EASA and FAA are harmonised with regard to the design reviews (although for high flammables there is one unresolved issue: the EASA 1309 approach and the FAA latent + 1)
- EASA and FAA will work together on long term requirements

Q: When will EASA start rulemaking process for FRS production cut in?

A: To be ready for production cut in per 2008 (best guess at the moment) EASA will have to start the process first quarter of 2006.

Q: Is FRS required for A380?

A: (Airbus Industries) A380 is seen as an 'in service' aircraft.

Q: Is the draft FAA NPRM frozen yet?

A: FAA answered that the NPRM is not frozen yet.

Q: Fokker Services feels 'unhappy' that Boeing and Airbus can use MC F.E. model version 7.

A: EASA considers that Fokker Services should not be unhappy at all. Airbus and Boeing perform verifying computations using version 7 for internal standardisation and verification purposes by FAA and EASA. FAA and EASA promise common sense and flexibility to discuss with Fokker in case unexpected results. EASA and FAA can not imagine that there will be major differences in Fokkers' Flammability Exposure.

Q: What will be the EASA time scale for revision of the RIA? Airbus expects that it will be around 2007, when EASA will wait for FAA NPRM, new NPA and comments.

A: EASA will consider speeding up the process and might contract an external party to assist with RIA.

Q: Does FAA consider the elements in the EASA RIA?

A: FAA: of course FAA will take note of the EASA RIA, but at the moment FAA does not agree on all the economics of the RIA. FAA agrees that the cost is the 'huge part of the decision', and FAA will look conscientiously to all figures. The economic impact is the main reason that FAA and EASA stay in constant dialogue.

Q: Why a study into the effectiveness of SFAR88 when the majority of SFAR88 corrective actions has not been implemented?

A: There is a need to study the effectiveness, although it is true that SFAR88 corrective actions have not been implemented. In case SFAR88 is 100% effective, FAA considers that FRS might not be needed, but...then the question is: when is it needed? When SFAR 88 is 90%, 80% effective?: Only a study will raise additional information FAA hopes/expects.

Q: Do EASA and FAA realise that feed back on cost effects might be inaccurate?

A: Yes, for the EASA RIA, EASA had used data estimated by the industry. EASA understand the concern but do not see any other practical forward for the revision of its RIA

Q: Why does FAA use the cost to US Airlines and benefits on a world scale in their cost benefit analysis?

A: FAA: we have used our usual process for these calculations

Q: Is there any plan between EASA and FAA to harmonise on cost for the economic analysis?

A: No, there is no plan to harmonise economic analysis methods, we live in different regulatory systems, which is a complicating factor

Q: Operators feel EASA and FAA should use the same criteria for impact analysis, because costs are the main factor for the outcome.

A: EASA cannot stop the FAA NPRM, but offers to take the results into account when revising the RIA

Q: An airline suggest to create a special website for communication about Fuel Tank Safety issues

A: EASA feels the existing possibilities are sufficient to communicate Fuel Tank Safety issues.

Q: Can the text for CDCCL's to be included in Component Maintenance Manuals be standardised?

A: The EASA and FAA will take this point under consideration.

Q: What level of detail with regard to CDCCL is required?

A: Mike Zielinsky explains that in the FAA system the TC/STC holder is requested to change every affected reference to CDCCL's. Also detailed job cards, manual changes etc are requested from operators, which have to be approved by FAA. FAA will start training their own staff with regard how to approve all the information. (Note: although EASA's systems differs from the FAA system, EASA requires about the same level of detail as the FAA).

A: FAA states that with regard to the MSG-3 analysis attention should be paid to the following:

- MSI (maintenance significant items) selection should take into account those MSI's that can produce an ignition spark or be an ignitions source
- The analysis should include the failure of the ignition prevention means

(Note: EASA concurs with FAA)

A: Mario Giordano explains that the FAA only way that they can mandate something on an operator with in service aircraft is by operational rule or by AD. This means that the FAA system is different from the European system (which requires no change).

Important comments and remarks after the detailed discussion and presentations:

- AEA: EASA FAA are thanked for organising this day: it was late in time and the information was urgently needed by the European Airlines
- EASA: The need for a detailed EASA workshop later this year depends on the availability of new information: next workshop might be for a different audience
- AEA: open communication is needed

- AEA offers specialist assistance for communication on Fuel Tank Safety issues
- AEA offers assistance commenting on FAA NPRM and for revising the RIA
- AEA offers a focal point for comments FAA NPRM (EASA responds positive)

Other important points:

- EASA will write before 1 August 2005 the letter with revised dates (see JAA [Recommendation letter from 2003) for TC/STC holders to commit to CDCCL publication before 31-12-2005 and publication of all maintenance information not related to unsafe conditions by 31-12-2006.