



Terms of Reference

for a rulemaking task

Reorganisation of Part 23 and CS-23

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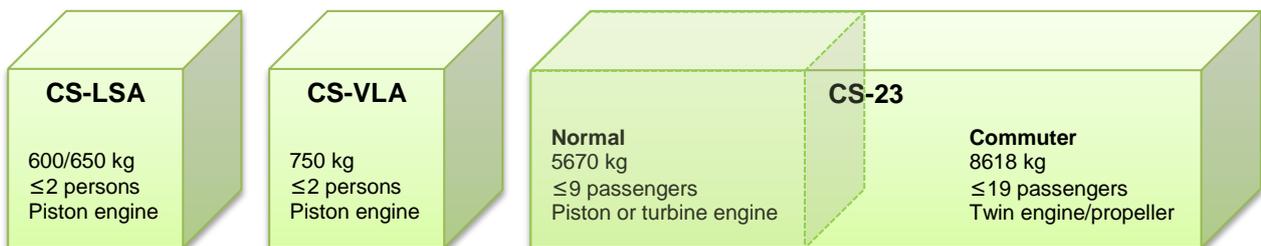
	Applicability	Process map
Affected regulations and decisions:	CS-23; CS-LSA; CS-VLA; CS-Def; Part 21 AMC & GM	Rulemaking lead: R4 Concept Paper: Yes
Affected stakeholders:	Manufacturers of GA aeroplanes	Rulemaking group: Yes RIA type: Full
Driver/origin:	European General Aviation Safety Strategy (September 2012); 14 CFR Part 23 Reorganization Aviation Rulemaking Committee (15 August 2011)	Technical consultation during NPA drafting: Yes Publication date of the NPA: 2015/Q2 Duration of NPA consultation: 3 months
Reference:	ARC final report	Review group: Yes Focussed consultation: Yes Publication date of the Opinion: N/A Publication date of the Decision: 2016/Q2

1. Issue and reasoning for regulatory change

A number of issues related to the certification process of General Aviation aeroplanes is described below that contribute to the need for regulatory change. At the end of this paragraph a conclusion of the consequences of these issues is drawn.

1.1. The diversity of aeroplane designs

The diversity of aeroplanes in the category up to 19 passengers and a maximum take-off weight below 8 618 kg is high in respect of performance, complexity, technology and intended operation. The Certification Specifications (CSs) that are today available for this wide scope of aeroplanes (CS-LSA, CS-VLA and CS-23) provide a number of 'boxes' that in turn aim to provide standard means to show compliance with the essential requirements. These 'boxes' are primarily defined by weight, passenger numbers or propulsion types, as it is schematically shown below.



When the requirements of the applicable CSs do not contain adequate or appropriate safety standards for a particular application, special conditions are prescribed. For applications of aeroplanes that are basically in the scope of CS-LSA and CS-VLA, special conditions are regularly needed. When CS-23 will be used as the applicable airworthiness code alternatively to CS-VLA or CS-LSA, it will cause the following issue.

1.2. Appropriateness of requirements

As it can already be seen from the criteria used to define the 'boxes', weight and type of propulsion are the main tools to establish applicability in the current certification requirements. For a long time these have worked well because there used to be a clear relation between the weight of the aeroplane and its performance and complexity. With technological developments this relation is however not always valid anymore. High performance and complex aeroplanes nowadays exist within the weight 'box' that used to cover light and simple aeroplanes. This development has over time introduced more stringent and demanding requirements in the lower weight boxes for these aeroplanes — however, with a detrimental effect on the more simple and low performance aeroplanes in the same weight box. The result of this is that some of the current requirements have become over-demanding and therefore not appropriate for these simple and low performance aeroplanes.

1.3. The rate of development of new technologies

The rate of development and use of new technologies has increased and expanded dramatically in the last decade. Composites, computers, software, glass cockpit, etc., are rapidly becoming available, while it is taking years for the rulemaking process to follow these changes. As a consequence, CSs are becoming outdated and special conditions and certification memoranda are developed at an ad hoc basis for individual products to bridge this gap. The incorporation of these ad hoc requirements in the certification process is a burdensome and costly process that in particular slows down the introduction of new technologies in the lower end of General Aviation.

1.4. Aviation authority resources

Aviation authority resources to develop special conditions and amend CSs for the aforementioned reasons are limited. It is already clear that some authorities need to introduce

a sequencing in the handling of applications in order to cope with limited resources. Spending a high number of resources on development of special conditions is also not very efficient. The resource problem is even bigger when we take into account the fact that the actual number of applications is not particularly high in the current economic climate and that the current certification process does not encourage or stimulate the industry.

1.5. Conclusion

Establishing the certification basis from the applicable CSs and required special conditions for a product has become a time-consuming and complicated process because of the issues described above. Therefore, the outcome of the certification basis has become less predictable from the start and introduces a higher risk for changes in the process as well as in the design. This has serious cost and resource consequences in certification projects for both applicants and authorities. The effort to introduce something not appropriately covered by the CSs can even drive designers away from innovations.

For low performance non-complex aeroplanes another negative factor is the sometimes over-demanding requirements (see paragraph 1.2).

It is expected that these complications in the certification process will play an important role in the decline of General Aviation and will slow down innovation.

The lower rate of innovations is also expected to have a negative effect on the introduction of new safety enhancing features in certified aeroplanes. This task is therefore important for both safety and economic reasons.

2. Objectives

The objectives of the task are to:

- reorganise CS-23 to make it the single Certification Specifications for aeroplanes in the range from CS-LSA up to CS-23, that:
 - contain requirements based on proportionate performance, complexity and type of operation;
 - make CS-23 less susceptible to changes as a result of technological developments or new compliance-showing methods by defining design-independent safety objectives;
 - are complemented by acceptable consensus standards that contain the detailed technical requirements to meet the safety objectives of the new CS-23 that are being developed by the standards body 'American Society for Testing and Materials' (ASTM) F44 Technical Committee;
- perform a review of CS-LSA, CS-VLA and CS-23 as required by Article 3(9) of the EASA Management Board Decision No 01-2012 of 13 March 2012.

The objective of the new concept is to:

- reduce the costs for certification by providing more flexibility and development of a tailored certification programme;
- and to give an impulse to the implementation of safety-enhancing systems by reducing the certification efforts for the introduction of these systems.

3. Specific tasks and deliverables

3.1. Tasks

Develop a Regulatory Impact Assessment (RIA) for the CS-23 reorganisation making use of the data from the Part 23 reorganisation ARC and FAA economic and safety analyses data from the FAA rulemaking task.

Develop and implement a communication plan explaining to the stakeholders the conceptual change the CS-23 reorganisation will bring for General Aviation.

Develop an Notice of Proposed Amendment (NPA) for:

CS-23

Develop objective requirements.

Develop a list of accepted consensus standards with a listing of differences to these standards, if required.

Develop a correlation table between the superseded CS-23 and the reorganised CS-23.

A blueprint for the principles, purpose and a proposed set of draft requirements for the reorganised CS-23 is provided in the final report from the 'Part 23 reorganisation Aviation Rulemaking Committee (ARC) final report'.

CS-VLA & CS-LSA

A decision stating that CS-VLA and CS-LSA are superseded by the new CS-23.

Develop a correlation table for the superseded Certification Specifications and the reorganised CS-23.

Miscellaneous

Check other regulations (e.g. Part 21 and its AMC & GM, OPS, FCL and CS Definitions) for impacts from the reorganisation of CS-23 that can be caused by changes to the numbering and definitions in CS-23 and propose corrections.

3.2. Deliverables

- NPA on the reorganisation of CS-23 and associated changes;
- Decision on CS-23;
- Decision on CS-VLA;
- Decision on CS-LSA;
- other proposals, as necessary, for consistency.

3.3. Focussed consultation

Depending on the feedback received on the NPA and/or during the implementation of the communication plan, the following focussed consultations are anticipated:

- meetings with stakeholders;
- technical workshops;
- RAG/TAGs and SSCC consultations (written or meetings).

4. Profile and contribution of the rulemaking group

The rulemaking group is intended to continue the process that was started by the ARC group. The key elements of this initiative are:

- global introduction of the concept even when regulatory systems are different;
- maintain the ARC momentum;
- expand European industry engagement and participation.

Profile of potential rulemaking group and its members:

- The rulemaking group should have:
 - ARC representation;
 - FAA and other non-European authorities' representation;
 - EASA GA PCM representation;

- European GA industry representation;
 - linking pin with ASTM F44.
- The role, responsibilities, and duties of the rulemaking group members specific to this task will be established in the rulemaking group.

5. Annex I: Reference documents

5.1. Affected regulations

n/a

5.2. Affected decisions

- Decision 2003/14/RM¹ of the Executive Director of the Agency of 14 November 2003 on certification specifications, including airworthiness codes and acceptable means of compliance for normal, utility, aerobatic and commuter category aeroplanes (CS-23)
- Decision 2003/11/RM of the Executive Director of the Agency of 5 November 2003 containing definitions and abbreviations used in certification specifications for products, parts and appliances (CS-Definitions) as last amended by Decision 2010/014/R of 16 December 2010
- Decision 2011/005/R of the Executive Director of the Agency of 27 June 2011 on Certification Specifications and Acceptable Means of Compliance for Light Sport Aeroplanes (CS-LSA)
- Decision 2003/18/RM of the Executive Director of the Agency of 14 November 2003 on certification specifications, including airworthiness codes and acceptable means of compliance for very light aeroplanes (CS-VLA) as last amended by Decision 2009/003/R of 26 February 2009

5.3. Reference documents

- Part 23 Small Airplane Certification Process Study (July 2009)
- [Part 23 Reorganisation Aviation Rulemaking Committee \(ARC\) final report](#)

¹ Decision as last amended by Decision 2010/008/R of the Executive Director of the Agency of 28 September 2010.