



**European Aviation Safety Agency  
Rulemaking Directorate**

**EXPLANATORY NOTE**

**AMC & GM to Part-21**

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**1. GENERAL**

Executive Director Decision 2011/010/R amends Decision No 2003/01/RM of 17 October 2003 (AMC & GM to Part-21 Initial Issue) as last amended by Executive Director Decision 2011/006/R of 19 August 2011. It incorporates into AMC & GM to Part-21 the output from the following EASA rulemaking task:

<b>Rulemaking Task No.</b>	<b>TITLE</b>	<b>NPA No.</b>
<b>21.018</b>	<b>Improvement of GM to 21A.101</b>	<b>2010-02</b>

The Notice of Proposed Amendment (NPA) has been subject to consultation in accordance with Article 52 of the Basic Regulation<sup>1</sup> and Article 15 of the Rulemaking Procedure established by the Management Board<sup>2</sup>. For detailed information on the proposed changes and their justification, please consult the above NPA 2010-02 which is available on the Agency's website (Archives)<sup>3</sup>.

The Agency has addressed and responded to the comments received on the NPA. The responses are included in a comment-response document (CRD), which has been produced for the NPA (CRD 2010-02) and which is also available on the same page of the Agency's website (Archives).

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<sup>1</sup> 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). Regulation as last amended by Regulation 1108/2009 of the European Parliament and of the Council of 21 October 2009 (OJ L 309, 24.11.2009, p. 51).

<sup>2</sup> Management Board decision concerning the procedure to be applied by the Agency for the issuing of opinions, certification specifications and guidance material ('Rulemaking Procedure'), EASA MB 08-2007, 13.6.2007.

<sup>3</sup> See Rulemaking Archives page: <http://easa.europa.eu/rulemaking/r-archives.php>.

## 2. CRD REACTIONS

In response to CRD 2010-02, the Agency received the following substantive reactions, which are reproduced below together with the Agency's responses:

CRD Comment No.	Commenter	Comment	EASA Response
74	LHT DO	<p>The reduction of the number or type of emergency exits must be considered relative to the number of passengers. This was the consensus of the discussion between industry and authorities when this example was initially accepted to be used in the original table.</p> <p>An emergency exit type degradation (for example from type A to type I) or a reduction of the number of emergency exits cannot be considered as a change in the general configuration on a product level, neither have the assumptions used for certification been invalidated as long as the maximum number of passengers allowed has been reduced in a comparable order of magnitude.</p> <p>Especially for executive aircraft a drastic reduction of the number of passengers is usually involved with the implementation of interior that serves the needs of the operator. The existing regulations defines the minimum number and types of required emergency exits. These assumptions have been used for the original certification and are still valid.</p> <p>We recommend either to keep the former text or to delete the words "Change in type or number of emergency exits".</p>	<p>Not accepted.</p> <p>A need was identified to remove the existing inconsistency in the descriptions of this change in the CS-23 and CS-25 tables. Taking into account the experience gained from real CPR certification projects, the FAA, TCCA and the Agency concluded that the CS-23 description was more appropriate one. Both a de-rating of a door or increasing the door type capacity (e.g. <i>increasing from a Type 1 to a Type A</i>) with the same or even lower maximum number of passengers in a standard passenger cabin layout could result in a worse case configuration for evacuation. Any change in the number or any change of substance in the size of emergency exits invalidates the assumptions used for certification. Such assumptions relate to the emergency egress of the whole aeroplane, i.e. on product level, and thus the 'significant' change classification. However, the exception routs 'no material contribution to safety' or 'impractical' may still be applied, if substantiated. Specific cases of a change from standard layouts to specific executive layouts need to be evaluated on case by case basis, often using Special Conditions. which can also take into account the case of a substantial reduction of the maximum number of passengers.</p>

<p>AEA</p>	<p>Airlines and MROs have participated in the definition of the appropriate certification basis for a change to a product over a long period of time. Consensus was reached with the authorities after lengthy discussions in 2002 (NPA 31-32). The mutually agreed Guidance Material to 21.101 achieved a balance between the attempt to mandate the application of the "latest requirements" and the potential risk of hindering or even preventing innovations due to the economic effects involved. The proposed NPA 2010-02 appears to upset this equilibrium.</p> <p>The original examples for categorization of changes included into NPA Table 2 have been derived from real projects and were provided by the FAA. It seems that the NPA, as well as the related CRD, is now using artificially modified and restructured examples that do not always reflect real data. The intent of the rule as originally communicated by the authorities was to categorize changes in accordance with their repercussion on the product. This was originally called product level changes. The new defined examples do not reflect this intention in every case and the effect of the proposed changes, especially on the executive aircraft completion business, would be immense.</p> <p>Some of the airlines' comments to the NPA have been taken into account, but the CRD also introduces other major changes, which are summarized below:</p> <p>1. For narrow body aircraft with adjacent emergency exits such as the Boeing 737-800 and the A320, which are often selected by customers in the executive aircraft completion business, the reduction in the number of exits (achieved by blocking one of the two adjacent exits on each side of the aircraft) would now be categorized as a significant change, even though the maximum number of passengers was drastically reduced. This cannot be considered as a product level change as originally intended.</p>	<p>On your specific comments:</p> <p>1. Not accepted</p> <p>See the response to the reaction by LHT DO above.</p> <p>2. Not accepted</p> <p>Note, please, that the subject example only exists in the table of non-significant CS-25 examples. This is to assure applicants that if they use the existing floor mounting structure, they have guarantee through this GM that their change will be classified non-significant.</p> <p>The case of a new interior and/or a reconfiguration <u>changing the existing floor mounting structure</u> was deliberately not included in the table of significant examples and left open to be solved on case-by-case basis. See also the EASA response to the comment No. 102 in the CRD. This EASA response even suggests that the majority of these changes not changing the principles of attachment will not be classified significant. Therefore the concern expressed in this comment does not seem to be valid.</p> <p>On you general comment:</p> <p>Not accepted.</p> <p>When this rulemaking exercise was agreed by the FAA, TCCA, and the Agency, no need was perceived to change the equilibrium between the significant and not-significant classification of changes.</p> <p>The examples in the tables have been reviewed one by one, taking into account the real experience from recent</p>
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		<p>2. The re-arrangement of an interior (e.g. galleys, seats, lavatories or closets) is considered to be a significant change if the re-arrangement requires more than the use of the existing floor mounting structure.</p> <p>More specific comments to the CRD have been given by AEA members. However, the effect of this rulemaking with the current CRD solution is immense and would entail a significant economic impact. We therefore need another round to improve and harmonize the CRD proposal with industry.</p> <p>AEA is prepared to support with more details from STC-industry.</p>	<p>CPR certification projects.</p> <p>Now, at the end of the exercise, we still believe that the mentioned equilibrium has remained approximately the same.</p> <p>A substantial number of comments on the NPA 2010-02 were accepted by the Agency, which surely helped to improve the text. Except this AEA reaction, the other comments on the NPA/CRD do not indicate that the proposal as a whole is unacceptable, and needs to go substantially changed through another round of public consultation.</p>
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