



OPINION No 04/2008

OF THE EUROPEAN AVIATION SAFETY AGENCY

of 5 September 2008

for a Commission Regulation amending 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

“New training requirements for maintenance personnel related to electrical wiring interconnection systems”

I. General

1. The purpose of this opinion is to suggest the Commission to amend Commission Regulation (EC) No 2042/2003¹. The scope of this rulemaking activity is outlined in Terms of Reference (ToR) MDM.002 and is described in more detail below.
2. The opinion has been adopted, following the procedure specified by the European Aviation Safety Agency's (the Agency) Management Board², in accordance with the provisions of Article 19 of Regulation (EC) No 216/2008³ (hereinafter referred to as the Basic Regulation).

II. Consultation

3. Notice of Proposed Amendment (NPA) 2007-01⁴ that contained the draft opinion for a Commission Regulation amending Commission Regulation (EC) 2042/2003 was published on the Agency website on 10 March 2007.
4. By the closing date of 13 June 2007, the Agency had received 116 comments from national authorities, professional organisations and private companies.
5. All comments received have been acknowledged and incorporated into a Comment Response Document (CRD) 2007-01, which was published on the Agency's web site on 6 March 2008⁵. This CRD contains a list of all persons and/or organisations that have provided comments and the answers of the Agency.

III. Content of the Opinion of the Agency

6. The changes to Regulation (EC) No 2042/2003 are part of a more comprehensive package of measures initiated by the Agency to address the identified safety risks related to electrical wiring interconnection systems (EWIS) in large aeroplanes. The certification specifications for large aeroplanes (CS-25) are improved and extended to enhance the safety of the design and to improve the continued airworthiness of these systems.
7. The changes to Part-M and Part-66 that are proposed in the present opinion intend to improve awareness of the specific safety risks of EWIS in maintenance activities by all personnel involved in continuing airworthiness and are detailed below.
8. The change to Part-M will ensure that the competence of personnel of a continuing airworthiness maintenance organisation is adequately controlled. For that reason, M.A.706 has been amended in order to ensure that the competence of the personnel involved in the management of the continuing airworthiness, airworthiness reviews and quality audits are assessed according to a procedure. The measure will also restore consistency with the relevant personnel requirements for Part-145 maintenance organisations. It means that the competency check should include the assessment of the personnel dealing with the EWIS elements.

¹ 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 (OJ L 315, 28.11.2003, p. 1). Regulation as last amended by Commission Regulation (EC) No 376/2007 (OJ L 94, 4.4.2007, p. 18).

² Decision of the Management Board 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, 13.06.2007.

³ 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)

⁴ See Rulemaking Archives at http://www.easa.europa.eu/ws_prod/r/r_archives.php.

⁵ See Rulemaking Archives at http://www.easa.europa.eu/ws_prod/r/r_archives.php.

9. The change to Part-66 will extend the basic knowledge requirements of maintenance certifying staff to two specific items related to EWIS. In addition, the required basic knowledge levels of the EWIS module for B1 and B2 certifying staff, who have specific privileges related to maintenance of electrical systems, are increased from level 2 to level 3. Therefore an amendment to Part-66 Appendix I (Basic Knowledge Requirements) is proposed but it was not necessary to amend Part-66 Appendix II (Basic Examination Standard)
10. Personnel who already have aircraft maintenance licence with the type training endorsed and/or who are already qualified as Part-145 certifying staff (or support staff) will have to be adequately trained to the EWIS elements through the continuation training (145.A35). It means that provisions in the regulation already exist and for that reason no further change to Part-145 is required. No timeframe for a specific training about EWIS was proposed because the staff shall receive the recurrent training in each two year period in accordance with 145.A.35(d): this time limit is considered to be reasonable and should constitute the ultimate safety net as the certifying staff are the ones performing the EWIS inspections or carrying out maintenance that may cause wire degradation.
11. Comprehensive acceptable means of compliance for EWIS training of technical staff is provided by the Agency. AMC 20-21, AMC 20-22 and AMC 20-23⁶ constitute technical guidance material in order to set up training syllabus and in order to raise the awareness of personnel involved in the management of the continuing airworthiness and the maintenance carried out.

IV. Regulatory Impact Assessment

12. As indicated in paragraph 6 above, the amendments to Regulation (EC) No 2042/2003 are part of a more comprehensive package of measures initiated by the Agency to address the identified safety risks related to electrical wiring interconnection systems (EWIS) in large aeroplanes. The Regulatory Impact Assessment for this complete package in NPA 2007-01 resulted in the conclusion by the Agency that the envisaged changes to rules and standards were justified, when assessing the various impacts of these changes.
13. Because the different changes as indicated above are all interlinked it is difficult to separate out the specific safety impact that can be attributed to the individual components of the rulemaking package. For the whole package it has been demonstrated that implementation of the new rules will prevent 32.8 incidents or accidents, including 1.2 fatal accidents, in the next 25 years for the USA fleet of transport category aeroplanes. Extrapolated to the European fleet size this accounts for the prevention of 22.4 incidents or accidents with large aeroplanes, including 0.8 fatal accidents.
14. Other benefits are the cost savings by prevention of wiring failures causing flight delays. Again extrapolated to the European fleet from the data that is available for the USA the savings would add up to EUR 61 million over a 25-year period.
15. The costs for the affected stakeholders can be broken down as follows.
 - Costs for Part-147 approved training organisations that will have to update their training programmes and examinations for Part-66 training to include the new provisions of Part-66.
A considerable amendment of Appendix I to Part-66 is already envisaged by NPA 2007-07. This will lead to an opinion to change Regulation (EC) No 2042/2003 by end of this year. The minor adaptation of training programmes that is needed for

⁶ Decision No. 2003/12/RM of the Executive Director of the Agency of 5 November 2003 on general acceptable means of compliance for airworthiness of products, parts and appliances (« AMC-20 »). Decision as last amended by Decision No 2008/004/R of the Executive Director of the European Aviation Safety Agency of 25 April 2008.

incorporation of the EWIS elements can thus be combined with the major adaptation resulting from the referred NPA. The impact is therefore negligible.

- Costs for Part-145 organisations that will have to update their continuation training for maintenance personnel.

Those organisations are required to update their continuation training every 24 months to incorporate technological developments. Adding the EWIS elements in the regular update of training will not lead to a major impact

- Costs for continuing airworthiness management organisations that will have to establish a procedure and standard for establishing and controlling the competence of personnel.

These costs are not negligible but they are not recurrent. In addition, because of the implementation period of 18 months the affected organisations will be able to include the effort to draft a specific procedure and to establish standards into the regular update of procedures and standards as required through the quality management system approach. Therefore the overall impact is not considered significant.

16. The Agency concludes that the proposed measures will have a positive effect on safety and a minor negative economic impact on the affected organisations. Based on the above observations the Agency considers the proposed measures to be justified.

Cologne, 5 September 2008

P. GOUDOU
Executive Director