



TERMS OF REFERENCE

Task Nr: RMT.0018 and RMT.0571 (21.026)

Issue: 1

Date: 6 November 2012

Regulatory reference: Regulation (EC) No 216/2008¹
Reg. 1702/2003 art. 4.1
21A.307 of Annex to Regulation (EC) No 1702/2003² (Part-21) and related AMC and GM³.
M.A.501 of Annex to Regulation (EC) No 2042/2003⁴ (Part-M) and related AMC and GM
145.A.42 of Annex to Regulation (EC) No 2042/2003 (Part-145) and related AMC and GM

Reference documents: EASA NPA 20-2005
EASA CRD 20-2005
EASA NPA 2008-07
EASA CRD 2008-07 Part I
FAA AC 21-45
DGAC paper: 'approval of parts and appliances' (27-04-2012)
CAA-UK Leaflet B-110

1. Subject: Installation of parts and appliances that are released without an EASA Form 1 or equivalent.

2. Problem / Statement of issue and justification; reason for regulatory evolution (regulatory tasks):

In accordance with Part-21 Subpart K: 21A.307; a part or appliance is only eligible for installation in type certificated products when released with an EASA Form 1 or if it is a

¹ 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).

² Commission Regulation (EC) No 1702/2003 of 24 September 2003 laying down implementing rules for the airworthiness and environmental certification of aircraft and related products, parts and appliances, as well as for the certification of design and production (OJ L 243, 27.9.2003, p. 6). Regulation as last amended by Commission Regulation (EC) 1194/2009 of 30 November 2009 (OJ L 321, 8.12.2009, p. 5).

³ Decision No 2003/1/RM of the Executive Director of the European Aviation Safety Agency of 17 October 2003 on acceptable means of compliance and guidance material for the airworthiness and environmental certification of aircraft and related products, parts and appliances, as well as for the certification of design and production organisation ('AMC and GM to Part-21'). Decision as last amended by Decision 2011/006/R of the Executive Director of the Agency of 26 August 2011..

⁴ 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 (EU) No 1149/2011 of 21 October 2011 (OJ L 298, 16.11.2011, p. 1)

standard part. Similarly in Part-M and Part-145 this is repeated with the addition that the part or appliance must be accompanied by an EASA Form 1 or equivalent. The term 'or equivalent' refers to authorised release forms issued in the EU before the Agency existed or release forms accepted through bilateral agreements.

These requirements in practice create some problems and uncertainties.

First of all the definition of Parts and Appliances in the Basic Regulation states:

'parts and appliances' shall mean any instrument, equipment, mechanism, part, apparatus, appurtenance, software or accessory, including communications equipment, that is used or intended to be used in operating or controlling an aircraft in flight; it shall include parts of an airframe, engine or propeller, or equipment used to manoeuvre the aircraft from the ground;'

Together with article 5 of the Basic Regulation, this definition establishes the applicability of the design and production rules. In this context article 5(2) is relevant:

'Compliance of aircraft referred to in Article 4(1)(b), and of products, parts and appliances mounted thereon shall be established in accordance with the following: ...'

This can be understood as meaning that anything in an aircraft that does not comply with the definition of 'parts and appliances' or is not mounted on a product, does not need a design and/or production approval.

These provisions raise several interpretation issues:

- What is meant with 'used or intended to be used in operating or controlling an aircraft in flight';
- What is meant with 'mounted'.

Secondly, today only standard parts can be installed without a Form 1 (or equivalent). In this context a part is considered a 'standard part' where it is designated as such by the design approval holder responsible for the product, part or appliance, in which the part is intended to be used. In order to be considered a 'standard part', all design, manufacturing, inspection data and marking requirements necessary to demonstrate conformity of that part should be in the public domain and published or established as part of officially recognised standards.

For years however, industry has used the term 'commercial parts' in referring to parts that are not designed or manufactured specifically for aviation use such as light bulbs, fire axes, smoke detectors, and so on. Whereas a standard part specification is developed by a consensus standards organisation and is publicly available, the design of a commercial part is developed privately. Therefore, these parts cannot be considered standard parts and when installed as replacement part would need a Form 1.

The Agency recognizes that it is unrealistic to expect manufacturers making thousands of non-aviation parts per day and relatively few aviation parts to obtain a Production Organisation Approval (POA) allowing them to issue a Form 1.

To address this issue the FAA has recently amended its Part-21 and issued an Advisory Circular introducing the concept of 'commercial parts'.

The Agency has already taken several actions to address similar problems in particular domains of aviation. Decisions 2006/13/R and 2006/14/R have extended the definition of standard parts to allow the installation of certain non-required equipment in sailplanes and powered sailplanes without Form 1. Opinion 01/2011 of 21 March 2011 is proposing a category of parts that do not require a Form 1 when installed in European Light Aircraft.

There is a need to incorporate these 'stop-gap measures' in a comprehensive regulatory approach towards the production of all aviation parts.

Thirdly, a question could be raised as to the proportionality of production rules. However, for production there are only two possibilities: production under an approval for most parts or production without approval in case of standard parts. On the design side the certification of parts and appliances can be based on a wide range of requirements, depending on their potential impact on safety. The question is whether there should be a more differentiated approach towards production of parts and appliances, commensurate with the design certification of those parts. A consideration could be also whether a part is required for certification or not.

Finally, the question is whether the requirement of 21A.307 is properly placed in Part-21 and if it is maybe superfluous and could therefore be deleted. Part-21 deals with design and production and should not deal with installation of replacement parts in already certified aircraft. This is a matter for maintenance and only needs to be regulated under Regulation EC 2042/2003.

3. Objective:

The intent of this proposal is:

- to provide a consistent interpretation of the definition of parts & appliances and other terms used in the various rules;
- to develop criteria for the acceptance of parts and appliances with different production background for installation in certificated aircraft;
- to create a parts classification for commercial parts, allowing an installer to install commercial parts on a type- certificated product without having to obtain parts manufactured under a POA. This proposal will also allow manufactures to continue to use parts now categorised as commercial parts in their type designs. The added benefit of the proposal is to now have the manufacturers specifically identify for EASA approval the commercial parts they intend to use;
- to develop criteria for production and release of parts and appliances proportionate to the potential impact on safety as determined in the design certification process;
- to develop the draft amendments to Regulations EC 1702/2003 and EC 2042/2003 as necessary to incorporate the above concepts and integrate the existing alleviations for sailplanes and ELA;
- to develop the necessary AMC and GM to accompany the amendments to the regulations;
- to develop AMC and GM to support the interpretation of the above mentioned provisions in the Basic Regulation related to parts and appliances; and
- to elaborate the AMC and GM related to standard parts.

4. Specific tasks and interface issues (Deliverables):

To review FAA material related to production and release of parts and appliances.

To develop a Regulatory Impact Assessment containing options for production and release of parts and appliances.

To consider the deletion of Part 21A.307 which seems to be misplaced in the context of Part-21 and which duplicates rules in Regulation EC 2042/2003.

To develop an opinion and related Decisions for the amendment of implementing rules and AMC & GM.

As it is expected that performing the full task will take considerable time and effort, and while there is an urgent need to address the commercial parts issue, this task is split up in two phases:

Phase 1: To harmonise Part-21 with the FAR Part 21 regarding the concept of commercial parts.

Phase 2: to address all the other issues mentioned above.

5. Working Methods (in addition to the applicable Agency procedures):

Phase 1: Agency

Phase 2: Group

6. Time scale, milestones:

NPA:

Phase 1: 2013/Q4

Phase 2: 2014/Q4

CRD/Opinion:

Phase 1: 2014/Q3

Phase 2: 2015/Q3

Decision:

Phase 1: 2015/Q3

Phase 2: 2016/Q3