



**OPINION No 05/2009**

**OF THE EUROPEAN AVIATION SAFETY AGENCY**

**of 15 December 2009**

**for a Commission Regulation amending Commission Regulation (EC) No 2042/2003  
on the continuing airworthiness of aircraft and aeronautical products, parts and  
appliances, and on the approval of organisations and personnel involved in these  
tasks**

*“Privileges of B1 and B2 aircraft maintenance licences  
AND  
Type and group ratings  
AND  
Type rating training”*

## I. General

1. The purpose of this opinion is to suggest the Commission to amend Commission Regulation (EC) No 2042/2003<sup>1</sup>. The reasons for this rulemaking activity are described below.
2. The Opinion has been adopted, following the procedure specified by the European Aviation Safety Agency's (the Agency) Management Board<sup>2</sup>, in accordance with the provisions of Article 19 of Regulation (EC) No 216/2008<sup>3</sup> (the Basic Regulation).

## II. Consultation

3. Although Regulation (EC) No 2042/2003 already establishes in its Annex III (Part-66) a licensing system for certifying staff, feedback received from stakeholders and national authorities indicated a need to review this regulation in relation to the following subjects:
  - Privileges of B1 and B2 aircraft maintenance licences.
  - Type and group ratings.
  - Type rating training.

The specific concerns for each one of the subjects are the following:

### Privileges of B1 and B2 aircraft maintenance licences:

4. Currently in Regulation (EC) No 2042/2003, Annex III (Part-66), the privileges associated to each aircraft maintenance licence category are described as follows:
  - A category A aircraft maintenance licence permits the holder to issue certificates of release to service following minor scheduled line maintenance and simple defect rectification within the limits of tasks specifically endorsed on the authorisation. The certification privileges shall be restricted to work that the licence holder has personally performed in a Part-145 organisation.
  - A category B1 aircraft maintenance licence shall permit the holder to issue certificates of release to service following maintenance, including aircraft structure, powerplant and mechanical and electrical systems. Replacement of avionic line replaceable units, requiring simple tests to prove their serviceability, shall also be included in the privileges. Category B1 shall automatically include the appropriate A subcategory.
  - A category B2 aircraft maintenance licence shall permit the holder to issue certificates of release to service following maintenance on avionic and electrical systems.

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<sup>1</sup> 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 1056/2008 of 27 October 2008 (OJ L 283, 28.10.2008).

<sup>2</sup> Decision of the Management Board concerning the procedure to be applied by the Agency for the issuing of Opinions, Certifications Specifications and Guidance Material. EASA MB 08-2007 of 11.06.2007 ("Rulemaking Procedure").

<sup>3</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).

- A category C aircraft maintenance licence shall permit the holder to issue certificates of release to service following base maintenance on aircraft. The privileges apply to the aircraft in its entirety in a Part-145 organisation.
5. Feedback received by the Agency from stakeholders and national authorities indicated that the current regulation does not clearly define what an electrical system is and what an avionic system is. Furthermore, the current AMCs and Guidance Material do not seem sufficient to clarify which avionic tasks can be performed by a B1 licence holder and what is a simple test.
  6. Additional feedback received by the Agency from stakeholders and national authorities suggested that the B2 licensed personnel privileges are too restricted. In addition, the duration of the basic training for category B2 (2400 hours) is the same as the one for category B1, while the content of Appendix I to Part-66 seems to indicate that the B2 training should be shorter than that for the B1.

Type and group ratings:

7. Currently in Regulation (EC) No 2042/2003, Annex III (Part-66), for the purpose of endorsing aircraft type ratings on the aircraft maintenance licences, aircraft are classified as:
  - Aircraft for which licence holders must have an individual aircraft type rating endorsed on the licence. This includes all large aircraft as defined in regulation (EC) No 2042/2003 (i.e. aeroplanes above 5700 Kg MTOM and multi-engine helicopters) and aircraft for which the Agency has determined that the complexity of the aircraft in question requires an aircraft type rating. For these aircraft, type training is required.
  - Aircraft for which licence holders have the possibility of either having an individual aircraft type rating endorsed on the licence, or having an appropriate group rating or manufacturer group rating. In this case type training is not required. However, it is necessary to complete type examination and practical experience (at least 50% of the tasks contained in Appendix II to AMC to Part-66<sup>4</sup>).
8. Feedback received by the Agency from stakeholders and national authorities indicated the following concerns:
  - It is not clear what an "aircraft type" is in terms of maintenance and, as a consequence, it is not clear when two different aircraft models/variants are similar enough to be considered as belonging to the same "type rating". This induced to inaccuracies in the list of Type ratings in Appendix I to AMC to Part-66.
  - There is currently no policy describing when an aircraft shall be considered as complex in terms of maintenance, which may be different from the definition of "complex motor powered aircraft" contained in the Basic Regulation.

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<sup>4</sup> Decision No 2003/19/RM of the Executive Director of the Agency of 28.11.2003 on acceptable means of compliance and guidance material to 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. Decision last amended by Decision 2009/016/R of 1 December 2009.

- The different current aircraft groups do not really reflect the complexity of aircraft. Some aircraft are “not simple” in terms of design and are only required to have a group rating, which is contrary to its definition.
- The privileges of B2 licence holders are too restrictive when considering manufacturer group ratings. It is reasonable to consider that the group ratings should be better adapted to the capacity of working of a B2 licence holder, where the technology is very similar from one manufacturer to another.
- Aircraft eligible for manufacturer group ratings and full group ratings currently require type examination for a representative number of aircraft. However, in many cases it is difficult to find a provider for those examinations (approved organisation or competent authority).

#### Type rating training:

9. Currently according to Regulation (EC) No 2042/2003, Annex III (Part-66), except as otherwise specified in point 66.A.45(g), the holder of a category B1, B2 or C aircraft maintenance licence shall only exercise certification privileges on a specific aircraft when the aircraft maintenance licence (AML) is endorsed with the appropriate aircraft type rating (TR).
10. Furthermore, except as otherwise specified in point 66.A.45(h), ratings shall be granted following satisfactory completion of the relevant category B1, B2 or C aircraft type rating training (TRT) approved by the competent authority or conducted by an appropriately approved Part-147 maintenance training organisation.
11. In addition, according to current regulation and AMCs, category B1 and B2 approved type training shall include theoretical and practical elements which must comply with Appendix III to Part-66. A programme of structured On the Job Training (OJT) may be prepared to satisfy the practical training requirement. The practical training must comprise a period of four months for applicants with no recent recorded previous practical experience of aircraft of comparable construction and systems, including the engines, but this can be reduced to a minimum of two weeks for applicant with such previous experience.
12. Feedback received by the Agency from stakeholders and national authorities indicated the following concerns:
  - The elements described in Appendix III of Part-66 (although quite extensive) do not seem to be detailed enough to address all the possibilities of aircraft type training, with too much room left for interpretation and cases of unequal treatment. Cases have been reported where the same training course varies in level, length and content regarding theoretical, practical training/OJT/practical experience, and where practical elements were limited to two week training, whatever the experience of the applicant was. Furthermore, difference training is not sufficiently addressed.
  - In addition, current AMC and GM material indicates that the competent authority has the final word about the adequacy of the length of the practical element for a particular individual before endorsing the rating (which may vary between 2 weeks and 4 months). This has created situations where having completed an approved type training course at a Part-147 organisation, including theoretical and practical training, was not considered enough by the competent authority in order to have the rating endorsed, and additional practical training was requested by the competent authority.

13. In order to address these issues, the Agency created three Rulemaking tasks:
- 66.006: Privileges of B1 and B2 aircraft maintenance licences.
  - 66.009: Type and group ratings.
  - 66.011: Type rating training.
- For each one of the tasks, the Agency created the corresponding drafting group, composed of representatives of national authorities and industry. The aim was to evaluate the situation, submit a proposal and develop guidelines for issuing an opinion to modify Part-66 and/or a decision to modify the AMC and GM to this Part in relation with the corresponding ToR (Terms of Reference). In the particular case of task 66.011, the scope of work was limited to those aircraft requiring type rating training.
14. Based on the input of the drafting groups, the Agency issued the NPA2007-07 on 28 June 2007 on its web site at: ([http://www.easa.europa.eu/ws\\_prod/r/r\\_archives.php](http://www.easa.europa.eu/ws_prod/r/r_archives.php)).
15. By the closing date of 28 October 2007 (which included a one month extension to the initial 3 month consultation), the Agency had received 409 comments from National Aviation Authorities, professional organisations and private organisations/persons.
16. In order to review these comments, the Agency created a review group for each one of the three tasks, each one composed of the members of the corresponding working group plus a person from Standardisation & Approvals (Agency) and a person from industry who had expressed a dissenting opinion to the NPA2007-07. As a result of this review, the Agency published on 06 October 2009 the CRD2007-07, which contained the responses to each comment and the proposed text for the rule and for the AMC/GM.
17. It is important to note at this point that the review groups also took into account the comments received during the consultation of NPA2008-03.
18. After the CRD2007-07 was published, the Agency organised on 29 October 2009 a workshop in Cologne in order to explain its content and to help stakeholders understanding the proposal before reactions were submitted.
19. As a result of the external consultation of the CRD2007-07, which finished on 05 December 2009, the Agency received reactions from:
- 4 competent authorities: CAA-Netherlands, CAA-Sweden, CAA-United Kingdom and DGAC-France.
  - 12 organisations and associations: Airbus SAS, British Airways Engineering, Flight Safety International, Helicopters Italia, KLM Engineering & Maintenance, Monarch, Thomas Cook Aircraft Engineering, Air France, Association of Dutch Aviation Technicians (NVLT), Tyrolean Airways, European Aircraft Maintenance Training Committee (EAMTC) and EAT-DHL Technical Training Department.
  - 4 individual persons.

These reactions are analysed in detail in the Attachment.

### III. Content of the Opinion of the Agency

20. The present opinion takes into account as much as possible the suggestions made by the many stakeholders and national authorities who participated in the consultation and reacted to the CRD.
21. Taking into account the hierarchy of EASA rules, the present opinion only addresses the changes that the Agency suggests to Regulation (EC) No 2042/2003; the related means of compliance (AMC) and guidance material (GM), which were detailed in the CRD, can and will only be issued by the Agency when the above mentioned regulations have been adopted by the Commission. It must however be clear that the measures presented in this opinion have to be read in conjunction with the said AMC and GM as part of an agreed package.

#### **a) Changes related to task 66.006: Privileges of B1 and B2 aircraft maintenance licences**

22. Regarding the privileges of the category B1 certifying staff the Agency proposes to allow the release of "work on avionic systems" (instead of the current "replacement of avionic line replaceable units") as long as the test involved is simple and there is no need for troubleshooting.

This change will be further supported by AMC and GM in order to clarify:

- what is an "electrical system" and what is an "avionic system";
- what is a "simple test";
- what is "troubleshooting";
- that the typical areas covered by Module 7.7 are considered "electrical tasks", which means they can be released by both B1 and B2 certifying staff.

23. Regarding category B2 certifying staff the Agency proposes to include in their privileges the release of electrical and avionics tasks performed within powerplant and mechanical systems (point 66.A.20(a)3(i) to Part-66). As a consequence, Appendixes I, II and III have been revised for the applicable systems in order to increase the knowledge/training level for category B2 to match that of category B1 and to add new questions to the respective examinations.
24. In order not to oblige all existing B2 licence holders to be re-trained/re-examined, the Agency proposes in Article 7.9(a) of Regulation (EC) No 2042/2003 that they obtain this privilege automatically. Although this is partially justified by the fact that the approved maintenance organisation is always required to assess the competence of certifying staff before issuing the appropriate authorisation, the Agency has introduced an additional compensating measure in point 66.A.20(b)3 to Part-66, which states that certifying staff cannot exercise privileges unless they are competent on the corresponding aircraft.

This will be supplemented by an AMC 66.A.20(b)3 clarifying that the licence holder should ensure that he/she has acquired the appropriate knowledge and experience to release the specific aircraft. This is essential because some systems and technology present in the particular aircraft may not have been covered by the 66.A.25 basic knowledge requirements or by the 66.A.45 type rating requirements.

This is typically the case of:

- Type ratings endorsed on a licence using the designations defined in Appendix I to AMC "List of Type Ratings" after following type training/examination which did not cover all the variants within that rating designation.
- Work performed on a model that has evolved technologically from the original model used for the type training/examination.
- Evolution of the basic knowledge requirements not requiring re-examination of existing licence holders.
- Specific technology and options selected by each customer, which may not have been covered by the type training/examination.
- The endorsement of group/sub-group ratings based on experience on a representative number of tasks or based on type training/examination on a representative number of aircraft.

25. In addition, for B2 certifying staff, the Agency proposes to include the possibility for the Part-145 organisation to authorise a B2 licence holder to certify category A tasks (point 66.A.20(a)3(ii) to Part-66). Although the basic knowledge of the category B2 licence does not fully cover the basic knowledge required for the category A licence, and certainly the Agency has made clear that the category B2 licence does not automatically include any sub-category A, the Agency has found reasonable this increase of privileges subject to the following compensating measures:

- The category A privilege covers only the aircraft types already endorsed on the B2 licence;
- Appropriate task training must be performed, for each aircraft type, at the Part-145 organisation that issues the authorisation;
- 6 months of documented practical experience is required at the Part-145 organisation that issues the authorisation. This experience must cover the scope of the authorisation that will be issued;
- Both task training and practical experience shall be followed by the appropriate examination/assessment.

26. Appendix I to Part-66 has been amended in order to:

- Include new technology such as "Integrated Modular Avionics (ATA42)", "Cabin Systems (ATA44)" and "Information Systems (ATA46)";
- Expand Modules 13 and 14 to cover the extension of privileges for the B2 licence contained in point 66.A.20(a)3(i) to Part-66.

This expansion of the content of Appendix I has not implied a change of the training hours required for Part-147 basic courses for the following reasons:

- The change introduced in the B1 syllabus (new technology) is insignificant in relation to the full course duration.
- The change introduced to cover the increase of B2 privileges, although much more significant, is compensated by the reduction of hours that the Agency was planning to introduce once it had confirmed that the current B2 training should be shorter than that for the B1. This reduction was the consequence of a detailed analysis of the syllabus content (modules, sub-modules and items) and the level of training for each particular item. As a consequence, the final duration of the B2 basic course remains at 2400 hours.

27. Appendix II to Part-66 has been amended in order to:

- Adapt the number of questions to the changes introduced in Appendix I.
  - Make sure that the number of questions for each Module is divisible by 4, so a 75% score can be obtained. This solves the current problem where in some cases it is necessary to obtain more than 75% score in order to pass.
28. Appendix III to Part-66 has been amended in order to adapt it to the changes introduced in Appendix I.
29. Point 145.A.30(g) to Part-145 has been amended by adding the words “as appropriate” in order to allow the competent authority to approve an organisation with only B1 or only B2 certifying staff if the scope of work clearly justifies it.

An AMC 145.A.30(g) will be added to clarify that this is only possible if the scope of work, as defined in the Maintenance Organisation Exposition, shows that there is no need of both B1 and B2 certifying staff. Special attention should be taken to clearly limit the scope of scheduled and non-scheduled line maintenance (defect rectification) to only those tasks that can be certified by the available certifying staff category.

30. Finally, the Agency has introduced appropriate provisions in Article 7.9(b) and (c) of Regulation (EC) No 2042/2003 in order to ensure that Part-147 organisations providing basic training courses and examinations and competent authorities providing basic examinations have an adequate transition phase.

**b) Changes related to task 66.009: Type and group ratings**

31. Regarding the policy for determining when an aircraft model/variant requires a separate “type rating” or can be introduced within an existing “type rating”, this is currently under review as part of the task 21.039 related to “Operational Suitability Data”. This task envisages, among other changes, the obligation for the TC and STC holders to define the minimum syllabus for type rating training of maintenance certifying staff.
32. Regarding the criteria for establishing when an aircraft is considered “complex” in relation to maintenance and as a consequence requires an individual type rating based on individual type training, the Agency has grouped them in Group 1, which according to the new point 66.A.42 is defined as:

*Group 1: “All complex motor-powered aircraft and those non complex motor-powered aircraft requiring and individual type rating. A non complex motor-powered aircraft requires an aircraft type rating when defined by the Agency”.*

In this definition, the term “complex motor-powered aircraft” is the one defined in the Basic Regulation.

The policy that will be followed by the Agency to classify a non complex motor-powered aircraft in Group 1 will be the following:

- when the maintenance procedures require specialised training (meaning when one of its features is not adequately covered by the Basic syllabus of Appendix I of Part-66), or
- the maximum certified operating altitude exceeds FL 290, or
- it is a multiple engine helicopter, or



- it is equipped with fly by wire systems.

These criteria are simple and aircraft will be easily identified whether they belong to group 1 or not.

33. Regarding the grouping of aircraft, the 13 groups of maintenance type ratings currently listed in Appendix I to AMC to Part-66, referred here as "List of type ratings", are replaced by 3 groups (new point 66.A.42 to Part-66):
- Group 1: all complex motor-powered aircraft and those non complex motor-powered aircraft requiring an aircraft type rating, as defined by the Agency.
  - Group 2: aircraft other than those in Group 1, which belong to the following subgroups:
    - sub-group 2a: single turbo-propeller engine aeroplanes
    - sub-group 2b: single turbine engine helicopters
    - sub-group 2c: single piston engine helicopters
  - Group 3: piston engine aeroplanes other than those in Group 1.
34. Based on the groups and sub-groups defined in point 66.A.42 to Part-66, the Agency has introduced in point 66.A.45 to Part-66 different possibilities for licence endorsement together with the corresponding training/examination/experience requirements. A table similar to the one below will be introduced in the Guidance Material (GM 66.A.45) in order to summarise all the options and requirements:

<b>Aircraft rating requirements</b>			
	<b>B1 licence</b>	<b>B2 licence</b>	<b>C licence</b>
<b>Group 1</b> Complex motor-powered aircraft + other aircraft defined by the Agency	<b>Individual TYPE RATING</b> <i>Type training:</i> - Theory + examination - Practical + assessment  <i>OJT (for first aircraft in licence subcategory)</i>	<b>Individual TYPE RATING</b> <i>Type training:</i> - Theory + examination - Practical + assessment  <i>OJT (for first aircraft in licence subcategory)</i>	<b>Individual TYPE RATING</b> <i>Type training:</i> - Theory + examination
<b>Group 2:</b> (except those in Group 1)  <b>Subgroups:</b>  <b>2a:</b> single turboprop aeroplanes  <b>2b:</b> single turbine	<b>(B1.1, B1.3, B1.4 licence holders)</b>  <b>Individual TYPE RATING</b> <i>(type training+OJT) or (type examination + practical experience)</i>  <b>or</b>  <b>Manufacturer SUB-GROUP RATING</b> <i>(type training+OJT) or (type examination + practical experience) on at least 2 representative aircraft of that</i>	<b>Individual TYPE RATING</b> <i>(type training+OJT) or (type examination + practical experience)</i>  <b>or</b>  <b>Manufacturer SUB-GROUP RATING</b> <i>(based on demonstration of appropriate</i>	<b>Individual TYPE RATING</b> <i>(type training) or (type examination)</i>  <b>or</b>  <b>Manufacturer SUB-GROUP RATING</b> <i>(type training or type examination) on at least 2 representative aircraft of that manufacturer sub-</i>

helicopters  <b>2c:</b> single piston helicopters	<i>manufacturer sub-group</i> <b>or</b> <b>Full SUB-GROUP RATING</b> <i>(type training+OJT) or (type examination + practical experience) on at least 3 representative aircraft of that sub-group from different manufacturers</i>	<i>experience)</i>  <b>or</b> <b>Full SUB-GROUP RATING</b> <i>(based on demonstration of appropriate experience)</i>	<i>group</i> <b>or</b> <b>Full SUB-GROUP RATING</b> <i>(type training or type examination) on at least 3 representative aircraft of that sub-group from different manufacturers</i>
<b>Group 3</b>  Piston engine aeroplanes (except those in Group 1)	<b>(B1.2 licence holders)</b> <b>Individual TYPE RATING</b> <i>(type training+OJT) or (type examination + practical experience)</i> <b>or</b> <b>Full GROUP 3 RATING</b> <i>(based on demonstration of appropriate experience)</i> <b>Limitations:</b> <ul style="list-style-type: none"> <li>▪ Pressurized aeroplanes</li> <li>▪ Structures (metal / composite / wood / metal tubing and fabric)</li> </ul> <i>(Limitations shall be removed based on appropriate experience)</i>	<b>Individual TYPE RATING</b> <i>(type training+OJT) or (type examination + practical experience)</i> <b>or</b> <b>Full GROUP 3 RATING</b> <i>(based on demonstration of appropriate experience)</i>	<b>Individual TYPE RATING</b> <i>(type training) or (type examination)</i>  <b>or</b> <b>Full GROUP 3 RATING</b> <i>(based on demonstration of appropriate experience)</i>

35. It is important to note that for some aircraft groups and licences it is possible to obtain group/sub-group ratings based on appropriate experience, without the need of type training or type examinations. This is true for the following:

- Group 3 aircraft for all licences (B1.2, B2 and C).
- Group 2 aircraft for the B2 licence.

The reason why the B2 licence has also the possibility to have subgroup ratings on Group 2 aircraft based on experience, without the need for type training/type examination on a number of representative aircraft, is that the avionic technology available in different aircraft types tends to be very similar.

For the B1 and C licences, the technology available for structures and mechanical systems is much more varied. As a consequence, subgroup ratings on Group 2 aircraft based on experience are not possible for the B1 and C licences. Furthermore, even when it is possible to have full Group 3 rating on a B1.2 licence based on experience, this rating will be subject to the following limitations if the person cannot demonstrate appropriate experience:

- Pressurized aircraft.
- Wooden structure aircraft.
- Aircraft with metal tubing structure covered with fabric.
- Metal structure aircraft.

- Composite structure aircraft.

It is important to note here that in the NPA2007-07 the number of limitations was larger, including also the following limitations:

For B1.2 and C licence:

- Retractable landing gear.
- Variable pitch propeller.
- Turbo-charged engine.
- FADEC.

For B2 licence:

- helicopter autopilots
- aeroplane autopilots
- EFIS
- FADEC

However, these additional limitations were removed from the final proposal in coordination with the review group corresponding to the NPA2008-03 where similar limitations had been introduced for the B3 and L licences.

The reasons for removing the limitations related to these systems are the following:

- It could be argued why these systems had been selected and not others.
- The system for endorsing and removing limitations may create a significant burden for competent authorities and licence holders.
- Nevertheless, the licence holder still has to cover all the basic knowledge and experience requirements.

In addition, as a compensating measure, a provision has been introduced in point 66.A.20(b) to Part-66 in order to make very clear that the certifying staff cannot exercise privileges unless he/she is competent on the particular aircraft. This reinforces the current responsibility of the maintenance organisation or of the independent certifying staff to ensure this competence prior to releasing an aircraft.

36. The limitations endorsed on the licence:

- Mean "exclusions" from the certification privileges.
- Affect the whole aircraft. Nothing can be released on the aircraft except pilot-owner maintenance tasks.
- Can be removed by:
  1. Demonstration of appropriate experience (will be further explained in AMC), or
  2. Demonstration of appropriate experience or after a satisfactory practical assessment performed by the competent authority

37. Point 66.B.125 to Part-66 has been amended to provide instructions to the competent authorities on how the existing Part-66 licences will be converted into the new ratings described in point 66.A.45 to Part-66. Nevertheless, this conversion is not mandatory until the existing Part-66 licence expires or needs an amendment (see Article 7.9(h) of Regulation (EC) No 2042/2003). Furthermore, individual aircraft type ratings endorsed on a Part-66 licence will not be subject to conversion and shall remain on the licence.

**c) *Changes related to task 66.011: Type training***

38. Type Rating Training (TRT) and On The Job Training (OJT)

The TRT is always composed of:

- Theoretical portion and examination;
- Practical portion and assessment.

The OJT is not considered to be part of the TRT. The OJT will be additional to the TRT and only mandatory in the case of obtaining the first type rating (TR) in an Aircraft Maintenance Licence (AML) category/subcategory, so that the mechanic can gain experience in addition to the practical portion of the TRT.

The OJT is a programme which shall be run within a real maintenance environment and under the oversight of a designated supervisor. In addition this OJT leads to an assessment. All these elements shall be acceptable to the Competent Authority responsible for the TR endorsement.

For all these reasons, the TRT is now described in point 66.A.45(k) to Part-66, separated from the OJT, which is described in point 66.A.45(l) to Part-66.

39. Aircraft type relevant for the On The Job Training (OJT)

The OJT can only be performed on the aircraft type that will be endorsed, and not on other aircraft within the same or within other subcategories. The reason is that this is the first aircraft type in the subcategory and the licence holder needs to have the experience on that aircraft in order to be able to certify.

40. Type rating training and certification privileges

The endorsement of a type rating on the AML is not sufficient for exercising certification privileges. There are other requirements, as described in point 66.A.20(b) to Part-66 and point 145.A.35 to Part-145. In order to make it more clear, a new point 66.A.20(b)3 to Part-66 has been created and further AMC will be issued for this purpose, for both 66.A.20(b)3 and 145.A.35(a).

41. Theoretical portion of the Type Rating Training (TRT): minimum duration

In order to avoid too short Type Rating Trainings (TRTs) as reported by the EASA Standardisation teams, the concept of the minimum duration for the theoretical portion of the TRT has been introduced as the best compromise. However it was not possible to propose durations that fully encompass the wide diversity in technology, complexity, weight. Therefore the changes had to be limited to generic and wide categories.

In addition to the one for the rotorcraft, three generic categories are proposed for aeroplanes, based on the MTOM:

- Below 5700 Kg
- Between 5700 Kg and 30000 Kg
- Above 30000 Kg

Moreover, special attention was given to the aircraft types that are below 2T (light aircraft): for the non –pressurised piston engine aeroplanes below 2000kg MTOM, the minimum duration can be reduced by 50%.

For helicopters pertaining to group 2, as now defined in 66.A.42, the minimum duration may be reduced by 30%.

All the minimum durations for the theoretical TRT are based on generic categories of aircraft and minimum standard equipment fit and have been established taking into account, among other things, the following:

- Duration of existing Part 147 TRT courses through Europe provided by the European Aircraft Maintenance Training Committee (EAMTC).
- Duration of Part 147 TRT courses provided by foreign organisations under the oversight of the Agency.

#### 42. Flexibility provisions for the minimum duration – justification of the TRT duration

The determination of the TRT content and duration will have to be based on a detailed training needs analysis (TNA).

A methodology to identify the Training Needs will be provided in the Guidance Material (GM) to Appendix III to Part-66.

Since it is impossible to cover all the diversity of aircraft, technology etc, and since Appendix III to Part 66, where such duration is proposed, is of mandatory compliance, any deviation would require the use of Article 14 of the Basic Regulation.

In order to avoid this deadlock, the Agency has proposed flexibility provisions, which shall be:

- Only permissible under exceptional circumstances;
- Justified, accepted and archived by the Competent Authority;
- Based on the Training Need Analysis.

Course lengths may be below the proposed minimum though based upon detailed justification, or longer than the proposed minimum where this is required to satisfy the required teaching points and cover all the training needs and the learning objectives.

A definition of tuition hour is also proposed in this document.

#### 43. Maximum number of training hours per day

For the sake of the “training” efficiency and for “human factor” issues, the number of tuition hours per day for the theoretical training shall not exceed 6 hours; in exceptional cases, deviation from this standard may be permitted by the competent authority when properly justified. This maximum number of hours is also applicable

- for the combination of theoretical and practical training, when they are performed at the same time;
- for the combination of training and normal day to day maintenance performance (such as maintenance tasks or OJT), when they are performed at the same time.

44. Attendance (absenteeism)

Minimum participation time is at least 90 percent of the tuition hours for the theoretical training course. If this criterion is not met, the certificate of recognition shall not be issued. Additional training may be given by the training organisation in order to meet the minimum participation time.

45. Improvement of the existing content and level of theoretical portion of the TRT

The existing table (type training standard/theoretical elements) in Part-66 Appendix III has been reviewed and updated to address new systems, new technology, etc, and has been aligned with ATA104 (Air Transport Association Specification 104) as far as practical. In addition, each number of the tables is considered to be a peculiar chapter, for the purpose of the examination.

Coordination was undertaken with rulemaking task 66.006 where the privileges of a B1 and B2 licence holders have been reviewed.

The engine ground running is not considered to be part of the TRT.

46. Practical portion of the TRT (content)

Practical training is now composed of a fixed content, based upon a specific list of practical tasks contained in Appendix III to Part-66.

The practical elements to be completed must be representative of the aircraft and systems both in complexity and in the technical input required. While relatively simple tasks may be included, other more complex maintenance tasks shall also be incorporated and undertaken.

The proposed table includes the following task categories:

- LOC: Location
- FOT: Functional/Operational Test
- SGH: Service and Ground Handling
- R/I: Removal/Installation
- MEL: Minimum Equipment List
- TS: Troubleshooting

AMC will address the following aspects:

- performance of an assessment and the role of the practical training assessor within the TR practical training and;
- compliance with the practical element requirement showing either a detailed syllabus, or practical worksheets/logbook (documentary evidence to be provided for type endorsement on the license);
- retention of documentary evidence of performance of practical training.

47. Practical portion of the TRT (duration)

Although the practical portion of the TRT is "content" orientated (table in Appendix III to Part-66) regardless of the time necessary to carry out these tasks, for aeroplanes above 30000 Kg (MTOM) the duration should be at least 2 weeks (10 working days) unless properly justified to the competent authority. This will be part of an AMC.

48. OJT

As previously explained, in the case of the first TR within a license (sub)category, the trainee will be required to perform OJT in a real maintenance environment. The OJT tasks to be completed must be representative of the aircraft and systems both in complexity and in the technical input required to complete that task.

Appropriate AMC will be issued by the Agency to clarify the meaning of the word of "representative". This will be done through the use of Appendix II to AMC to Part-66, which will be also applicable to aircraft requiring type rating training.

OJT will be recorded through worksheets/logbooks, which have to be produced by the trainees.

In addition, a compliance report by a designated assessor shall confirm that the OJT performance by the trainee met the requirements. The assessor will base his assessment on the records which have been countersigned on a day to day basis by themselves or by the designated supervisor(s) directly in charge of the oversight of every OJT task. The role and qualification of the designated assessor and supervisor(s) will be further described in an AMC.

49. Responsibilities of the NAA related to type endorsement

Point 66.B.115 to Part-66 has been amended in order to better define the responsibilities of the competent authority when endorsing type rating.

Among other aspects it has been made clear that, in the case of second or subsequent type rating endorsement within a licence category/subcategory, a Certificate of Recognition issued by a Part-147 organisation covering the full type rating training is enough for the type rating endorsement. This point has been included because of a lack of mutual recognition between Member States, where the automatic acceptance of the certificate was not observed.

When the type training is split and conducted in different organisations (PART 147 and/or approved maintenance organisations or direct course approval) the authority shall be satisfied that the interfaces are appropriately handled.

50. Examination - Additional small amendments to fit to the overall changes

Some improvements have been taken into consideration:

- The duration of type rating examination questions has been changed from a mixture of 75 and 120 seconds to 90 seconds for all levels in order to standardise the question generation.
- Changes to the number of questions per chapter
  - to simplify the system presently in place and;
  - to proportionate it to the time of training spent on the issue
- Examination question level must be in proportion to the level of training conducted.

Concerning the examination, there is no more minimum number of questions per chapter as previously proposed because some stakeholders commented there was no need for having systematically one question per chapter when the nature of the issue remains

simple: therefore the number of questions must be at least 1 question per hour of instruction and shall be consistent with:

- the effective training hours spent when teaching at that chapter and level;
- the learning objectives as given by the training need analysis.

In addition, the minimum examination pass mark is 75%. It means that, when the type training examination is split in several examinations, each examination must be passed with at least a 75% mark. In order to be possible to achieve exactly a 75% pass mark, the number of questions in the examination must be a multiple of 4.

The organisation running the course shall propose the distribution of questions and level according to the rule. The competent authority of the Member State will assess the number and the level of questions when approving the course, in particular when the duration of the instruction is less than one hour for a specific chapter.

51. Differences training

The differences training is now defined as the training required in order to cover the differences between two different aircraft type ratings of the same manufacturer determined by the Agency.

The differences training has to be defined on a case to case basis taking into account Appendix III in respect of both theoretical and practical elements of the type rating training.

A type rating shall only be endorsed on a license after differences training when the applicant also complies with one of the following conditions:

- having already endorsed on the licence the aircraft type rating from which the differences are being identified, or
- having completed the type training requirements for the aircraft from which the differences are being identified.

These provisions, which were lacking in the past, are now described in 66.A.45(k) as part of the TR requirements.

52. Procedure for the direct approval of the aircraft type training

Although Part-147 already contains requirements for Part-147 organisations in order to develop type training courses, this is not the case of the courses directly approved by the competent authority. Therefore a new point 66.B.130 to Part-66 has been created, requesting the competent authority to have procedures in place in order to ensure that directly approved aircraft type rating courses comply with Appendix III to Part-66.

Further AMC will be issued by the Agency.

53. Transition provisions

Based on the elements explained above, all existing TR courses (contents, examination and duration if applicable) will have to be reviewed in order to verify that they meet the new requirements. However, in order to ensure a smooth transition, the Agency proposes that this can be postponed for 15 months after the entry into force of this amending Regulation. After that date, these courses must fully comply with the requirements of this amending



Regulation, except that there is no need to produce a training needs analysis (TNA) for courses approved before this date if their duration is already above the minimum duration described in Appendix III to Part-66.

All new courses developed after the 15 months deadline will have to be supported by a TNA and the learning objectives

The Part-147 approved maintenance training organisations applying for approval of new TR courses may elect not to apply this amending Regulation until 15 months after the entry into force of this amending Regulation. Partial implementation of selective items of this amending Regulation is not allowed.

TR courses approved in accordance with the requirements applicable prior to the entry into force of this amending Regulation can only be imparted until 15 months after the entry into force of this amending Regulation. However, certificates for those type courses issued not later than 15 months after the entry into force of this amending Regulation shall be considered as issued in accordance with this amending Regulation, meaning that the course does not need to be repeated.

The applicants for an initial Part-147 maintenance training organisation approval that are already subject to the applicable investigation process on the date of entry into force of this amending Regulation, remain subject to the requirements applicable prior to the entry into force of this amending Regulation.

#### **IV. Regulatory Impact Assessment**

54. The full Regulatory Impact Assessment is contained in NPA 2007-07.

Cologne, 15 December 2009

P. GOUDOU  
Executive Director

**ATTACHMENT: Reactions to CRD 2007-07****Reactions related to task 66.006 "B1 and B2 Privileges":**

(1) "MONARCH" submitted the following comments:

- They request why the tables containing the training requirements in Part-66 do not follow the Air Transport Association Specification 104 (ATA104).

The Agency notes that for Type Training and On the Job Training (Appendix III to Part-66) ATA104 has been followed as much as practical. However, for Basic Knowledge (Appendix I to Part-66) this has not been done in order to keep the current structure of Appendix I.

- They comment that the Agency proposal allows the B2 licence to include the A licence, while the B2 syllabus does not fully cover the A syllabus.

The Agency notes here that the B2 licence does not include any A subcategory (see point 66.A.20(a)3). What has been included in point 66.A.20(a)3(ii) is a privilege within the B2 licence under certain compensating measures.

- They do not agree with the obligation to repeat the 6 month experience in order to maintain the privileges described in 66.A.20(a)3(ii) if the B2 licence holder changes employer. This comment has also been received from the "CAA-NETHERLANDS".

The position of the Agency is that this is absolutely necessary since this is one of the compensating measures for not having the full basic knowledge of the category A. The intention of the requirement is to make sure that the licence holder has 6 month experience on the particular tasks he is going to perform in the new employer, which may be different from the previous employer.

(2) One individual person submitted the following comments:

- Request that the privilege contained in point 66.A.20(a)3(ii) is extended to Subpart F maintenance organisations.

The position of the Agency is that this privilege is limited to Part-145 organisations, the same as the privilege for category A certifying staff contained in point 66.A.20(a)1. Subpart F maintenance organisations are not entitled to use category A certifying staff for the following reasons:

- There is no concept of Line or Base Maintenance within Part-M, Subpart F.
- There is no concept of Line Stations within Part-M, Subpart F.
- There is no requirement for a Quality System for Subpart F maintenance organisations to control such type of qualifications and authorisations.
- Suggestion to transfer from B1 to B2 the privilege contained in AMC 66.A.20(a), which allows the performance of pitot-static checks, due to the complex tests required when testing air data EFIS systems with interfaced transponder and autopilots.

The Agency agrees with the comment and AMC 66.A.20(a) will be amended to read:

*"Instruments are formally within the privileges of B2 licence holders. However, electro-mechanical and pitot-static components can also be released by a B1 licence holder".*

- Comment that the privileges of the B2 licence holder have been downgraded because of the introduction of the privileges contained in point 66.A.20(a)3(ii) to perform "minor scheduled line maintenance and simple defect rectification".

The Agency notes that the privileges have not been downgraded but upgraded. The licence holder retains all the B2 privileges he previously had and, in addition, for tasks that were not in his privileges he obtains "minor scheduled line maintenance and simple defect rectification".

- (3) "THOMAS COOK AIRCRAFT ENGINEERING" commented that the new privilege included in 66.A.20(a)3(i) for B2 licence holders, which allows them to release electrical and avionics tasks within powerplant and mechanical systems, is limited to tasks requiring simple tests to prove their serviceability. This organisation also states that this means that if the test required is not simple, then the task cannot be released by either a B2 licence holder or a B1 licence holder because the B1 licence holder can only release avionic tasks if the test is simple.

The Agency clarifies here that the B1 licence holder can release these tasks. Please note that we are talking of "electrical and avionic tasks within powerplant and mechanical systems". The privileges of a B1 licence holder include the release of work performed on powerplant and mechanical systems, independently of the specific nature of the task. The limitation imposed to B1 licence holders affects the release of avionic systems when the task is not simple, but again, we are not talking about avionic systems, but powerplant and mechanical systems.

- (4) One individual person requested that in Module 13 of Appendix I to Part-66, the level of training for the B2 licence holder for "flight controls" would be changed from level 1 to level 2 in order to be in line with the level required for the theoretical element of the type training.

The Agency has agreed with the comment and has changed this subject to level 2.

- (5) One individual person proposed to include in Module 11.11 "Hydraulic Power" a subject called "Filters" and in Module 11.13 "Landing Gear" a subject called "Air-ground sensing".

The Agency has agreed with the comment and has amended in Appendix I to Part-66 the Module 11A (sub-modules 11.11 and 11.13), Module 11B (sub-modules 11.11 and 11.13), Module 12 (sub-modules 12.12 and 12.14) and Module 13 (sub-module 13.14 and 13.16).

- (6) "TYROLEAN AIRWAYS" requested to replace in point 66.A.20(a)3(i) the word ... avionic "parts"... by ... avionic "appliances". The "CAA-NETHERLANDS" proposed the word "tasks".

In order to make clear that the additional privilege is linked to the nature of the tasks, the Agency has preferred to reword the paragraph to read:

*"electrical and avionics tasks within powerplant and mechanical systems, requiring simple tests to prove their serviceability"*

- (7) One individual person requested to remove the limitation on the number of steps contained in the definition of "simple test" within AMC 66.A.20(a). This person also requested clarification on whether a test for which the outcome includes reading that a value is within a given tolerance would be considered as not simple.

The position of the Agency is that the length of a test is linked in most of the cases to its complexity. For those particular cases where a longer test is clearly simple, this can be agreed with the competent authority since this is an AMC, and other AMCs can be proposed either by the competent authority or by the organisation.

Regarding the second question, the fact that the test includes reading a value within a given tolerance does not disqualify it as simple, as long as this tolerance has been established by the maintenance data and not by the licence holder. This will be further clarified in AMC 66.A.20(a).

- (8) "CAA-SWEDEN" opposes to the privilege proposed by the Agency in point 66.A.20(a)3(ii), which allows category B2 licence holders to have the privilege to perform "minor scheduled line maintenance and simple defect rectification". They argue that the category B2 licence does not have subcategories, contrary to what happens with the category A licence. Furthermore, they believe that this could be the same as eliminating the category A licence and granting its privileges to just anybody with a Part-66 licence solely at the judgement of the maintenance organisation issuing the authorisation.

The Agency notes that the new privileges granted to the B2 licence holders are more restricted and are given under more strict requirements than those for the category A licence. As a consequence, it is not the intention to eliminate the category A licence.

In addition, the Agency is aware that the B2 licence does not have subcategories. That is one of the reasons for limiting the privileges to the aircraft types already endorsed on the B2 licence. This is supplemented by additional compensating measures in order to ensure that the B2 licence holder has the knowledge and experience necessary to compensate for the initial shortcomings of the basic knowledge.

Furthermore, the basic knowledge contained in Module 13 of Appendix I to Part-66 has been amended to cover mechanical systems.

- (9) "CAA-SWEDEN" requested clarification on what the 6 month experience required in 66.A.45(b) is meant to comprise (full employment or just occasional occupation on the specific tasks during the required timeframe).

The Agency will further explain this subject in AMC 66.A.45(b).

- (10) "CAA-NETHERLANDS" believes that the licensing systems resulting from CRD 2008-03 and CRD 2007-07 is very complex and they propose to start a task to restructure and simplify the whole licensing system.

The Agency notes the comment.

- (11) "CAA-NETHERLANDS" commented that the new privilege granted to B2 licence holders to release avionic and electrical tasks within powerplant and mechanical systems, should be applicable only to those systems covered by level 3 type training, although they also

commented that the fact that the privileges are limited to tasks requiring simple tests, may justify to have lower training level.

The Agency notes that both, Appendix I and Appendix III to Part-66, have been amended to cover the increase of privileges. Level 3 has been required for all the subjects where the B2 licence holder is typically involved, such as "Indications and Warning", "Control", etc. Other subjects linked more to the structure and the physical configuration of these systems have been kept at level 1 or 2. In addition, as "CAA-NETHERLANDS" pointed out, there is a limitation on the privileges to tasks requiring only simple tests.

- (12) "CAA-NETHERLANDS" proposed to rewrite paragraphs 66.A.45(a) and (b) so they look more alike.

The Agency notes that it is not possible to make both paragraphs more similar to each other due to the compensating measures introduced in 66.A.45(b) in order to grant to the B2 licence holder the privilege to release "minor schedule line maintenance and simple defect rectification".

- (13) "CAA-NETHERLANDS" requested further clarification on whether re-examination is needed for the new privileges. In particular, for example, when a B1.1 licence holder requests an extension to B1.2.

The Agency has further amended Article 7.9(a) to read the following:

*"Persons holding a valid Part-66 licence in a given category/sub-category before **(15 months after the date of entry into force)** shall automatically obtain the privileges described in the amended point 66.A.20(a) corresponding to such category/sub-category. The basic knowledge requirements corresponding to these new privileges shall be considered met for the purpose of extending such licence to a new category/sub-category".*

As a consequence, if a person already has a B1.1 licence prior to the deadline established above, this person would maintain the privileges of the B1.1 licence without having to perform examination on the differences introduced in Appendix I to Part-66. Furthermore, these differences would be credited for the purpose of extending the B1.1 licence to other categories/sub-categories, even if the extension is performed after the deadline established above.

- (14) "CAA-NETHERLANDS" commented that the B2 licence holder should obtain full category A privileges instead of being limited to those type ratings already endorsed on the licence. They justify this by the fact that the shortcoming of the B2 licence holders is on the basic knowledge, which is not related to the aircraft type.

The Agency does not agree with the proposal because this limitation has been introducing as one of the compensating measures. The Agency considers that it is more likely that the B2 licence holder has a better understanding of mechanical tasks for those aircraft types already endorsed on the licence, where he has received type training and where he is typically involved in maintenance.

- (15) "CAA-NETHERLANDS" requested that the privileges of category A certifying staff should include troubleshooting as long as it is within their privileges of simple tasks. They justify

this by the fact that all defects need a degree of troubleshooting before the rectification can take place.

The Agency does not agree that all defects need troubleshooting. For example:

- Replacement of wheels (if tyres are worn).
- Replacement of wheel brake units (if brakes are worn).
- Replacement of windscreen wiper blades (if they do not clean properly).
- Replacement of static wicks (if they are broken or missing).

(16) The "ASSOCIATION OF DUTCH AVIATION TECHNICIANS (NVLT)" submitted the following comments and questions:

- NVLT commented that the Frequent Asked Questions (FAQ) shown on the EASA website indicate that "category A certifying staff is allowed to perform any troubleshooting or to defer a defect in the scope of the certifying staff authorisation", while the proposed text of the CRD2007-07 shows that troubleshooting should not be allowed.

The Agency notes that the Frequent Asked Question (FAQ) No 34 on the EASA website only talks about "deferment" and not about "troubleshooting".

- NVLT disagreed with the response provided in CRD2007-07 to their comment #311. They ask why the Agency responded to the comment as "NOTED" and request that the Agency responds to all the questions made in the comment.

The Agency responded to the comment as "NOTED" because the comment did not contain any request for a change in the rule or in the AMC/GM material.

Furthermore, there was only one question made in the comment, to which the Agency replied. The rest of the comment was a copy and paste of questions and answers obtained from the EASA website.

- NVLT commented that if the new proposal does not allow troubleshooting, how can category A certifying staff identify the source of a failure when deferring an item described in the MEL.

The position of the Agency is that category A certifying staff should not defer defects which require identifying the source of the failure. This person should only defer MEL items which can be deferred without performing any troubleshooting, for example:

- Deferment of the replacement of a static wick (if they are broken or missing)
- Deferment of the replacement of damaged emergency equipment (when permitted by MEL)

Nevertheless, the statement that "troubleshooting should not be allowed" is contained in AMC 145.A.30(g), which means that other AMCs can be proposed by the competent authority or by the organisations as long as the particular task is clearly within the competence of the category A certifying staff.

- NVLT requested clarification for category A certifying staff in relation to the difference between deferring a task and rectifying such task.

The position of the Agency is clear in AMC 145.A.30(g):

- Deferment of defects is allowed per item (q) in paragraph 2, which means when there is no need for troubleshooting, the task is in the MEL and the maintenance action required by the MEL is agreed by the competent authority to be simple.
- Rectification of such deferred defect can be released as long as the task is contained in the list included in paragraph 2, which includes the item (q). This item allows the release of any other task agreed by the competent authority as a simple task.

This means that even if the competent authority agrees that the maintenance action required to defer a defect is simple, the competent authority may or may not agree that the maintenance action to rectify such defect is simple.

- NVLT asked whether B1 certifying staff can defer defects on avionic systems / components and whether B2 certifying staff can defer defects on mechanical systems/components.

The position of the Agency is that this is not possible.

- NVLT requested clarification on whether the pilot can defer MEL items which require a maintenance action and whether "troubleshooting" is considered "maintenance". NVLT also requested clarification on whether a "simple test" is considered part of "troubleshooting".

The position of the Agency is that when the MEL requires to perform an action classified as "maintenance" per the MEL, then there is a need of a release by appropriate certifying staff. The Agency notes here that AMC 145.A.30(j)(4) allows the commander to be issued a limited certifying staff authorisation.

In addition, "troubleshooting" is considered "maintenance" and as such requires a release to service. However, this is not applicable if such action is part of the MEL and the action has not been identified in the MEL as "maintenance". The commander can defer any item permitted by the MEL as long as it does not include any action classified by the MEL as "maintenance".

In relation to the "simple test", the position of the Agency is that there are cases where it is not considered as part of the "troubleshooting", for example, when the simple test is performed after the replacement of a Line Replaceable Unit (LRU) in order to determine its serviceability.

- NVLT commented that the definition of "Line Maintenance" contained in AMC 66.A.20(a) contains the sentence "any maintenance that is carried out before flight to ensure that the aircraft is fit for the intended flight". In their opinion this is an inconsistency because the definition of "Pre-flight Inspection" provided in EC2042/2003, Article 2(j), includes also the sentence "the inspection carried out before flight to ensure that the aircraft is fit for the intended flight". Furthermore, the "Pre-flight Inspection" is not considered maintenance.

The position of the Agency is that there is no inconsistency or contradiction. In order to ensure that "an aircraft is fit for the intended flight" there are other things to be performed before the "Pre-flight Inspection". It is necessary to comply with the requirements of M.A.201(a) and M.A.708(b), which include, among other things, the performance of all the maintenance required by the maintenance programme and the rectification of defects.

The "Pre-flight Inspection" is the last step in order to ensure that the "aircraft is fit for the intended flight" and includes also the verification of the Technical Log and compliance with the operator's procedures in order to ensure that all the previous steps have been completed (including maintenance).

According to EU-OPS 1.290, the commander is the ultimate responsible for the aircraft acceptance before flight. That is the reason for the box included in the Technical Log where the commander records that the "aircraft is fit for the intended flight".

### **Reactions related to task 66.009 "Type and Group Ratings":**

- (17) "HELICOPTERS ITALIA" commented that, according to the proposal from the Agency, a B2 licence for Group 2 aircraft can only be endorsed with "individual type ratings" and "full sub-group ratings". They propose the possibility to endorse "manufacturer sub-group ratings" because some B2 licence holders may be only working on aircraft of a specific manufacturer and it would be difficult for them to show an experience representative of the full sub-group.

The Agency has agreed on the proposal and has modified paragraph 66.A.45(d). This has made the previous paragraph 66.A.45(e) unnecessary. A full renumbering of the different paragraphs in point 66.A.45 has been performed. The table contained in GM66.A.45 will be modified accordingly to match the table shown in this explanatory note.

- (18) The "CAA-UNITED KINGDOM" commented that in the response to comment #331 of CRD2007-07 the Agency responded that training on specific avionic equipment was the responsibility of the maintenance organisation, which in their view contradicts AMC 147.A.300, which allows type training to be sub-divided to provide "avionic systems".

The Agency notes that the proposal made by the "CAA-UNITED KINGDOM" in comment #331 included the creation of B2 type ratings based on equipment installations for aircraft in the smaller spectrum. For example Primus 1000 integrated avionic system.

The position of the Agency is maintained. It is not necessary to create different ratings based on equipment installation for Group 2 and Group 3 since in most of the cases the equipment is similar for the different manufacturers and it is considered enough to show an experience representative of the requested group/sub-group. It is then the responsibility of the maintenance organisation employing that person to assess his competence and provide any additional training found necessary. This training can be performed in a Part-147 organisation but, instead of being part of the licensing requirements, it is part of the requirements for issuing the certifying staff authorisation.

- (19) "BRITISH AIRWAYS ENGINEERING" proposed that public transport aircraft are considered a separate group from freighter transport aircraft for the purpose of defining the ratings contained in the "List of Type Ratings" of Appendix I to AMC to Part-66. They believe that having freighter variants and public transport variants included in the same rating, as it currently happens, makes difficult if not impossible for airlines to have the training for the variant they do not operate.



The position of the Agency is that it is not necessary to perform the type training for all the variants contained in a specific type rating in order to have the full rating endorsed. As a matter of fact, when the Agency decides that two variants can be included in the same type rating in Appendix I to AMC to Part-66, it is because the Agency believes that both variants are close enough from a maintenance point of view, and there is no need for difference training for licensing purposes. As soon as one variant is included in the licence, the other variant can be automatically endorsed.

Nevertheless, this does not mean that the person can obtain a certifying staff authorisation on the variant where he has not been trained. This is the responsibility of the maintenance organisation employing that person or of the licence holder himself if he acts as independent certifying staff. This has been clarified in the new paragraph 66.A.20(b)3 and associated AMC 66.A.20(b)3.

As a consequence, the Agency is of the opinion that it is not necessary to separate the variants as proposed by "BRITISH AIRWAYS ENGINEERING".

- (20) "DGAC-FRANCE" proposed to delete the reference shown in item 15 of Appendix V to Part-66 where it says that limitations endorsed on the licence are exclusions from the certification privileges. They propose to replace it by AMC material explaining that the limitations should be written so that it is clear whether they are certification privileges or exclusions from the certification privileges. The reason is that in some cases the competent authority may have already issued licences where the limitations coming from the conversion of national qualifications mean certification privileges.

Nevertheless, "DGAC-FRANCE" supports the idea that limitations endorsed in application of paragraph 66.A.45 are considered as tasks which are excluded from the certification privileges.

A similar comment has been received from "CAA-NETHERLANDS".

The Agency agrees that there are some inconsistencies in the regulation. For example:

- 66.B.305 refers to *"examinations needed to ensure conversion without limitations"*, which means that the limitation refers to tasks that cannot be certified.
- Item 15 in the Part-66 licence (Appendix V to Part-66) states that *"if there are no limitations applicable, the LIMITATIONS page will be issued stating "No limitations"."* This means again that the limitation refers to tasks that cannot be certified.
- Part-145 uses limitations to restrict the scope of activities, which means that the limitation refers to tasks that can be certified.

Although the Agency has decided to state that the limitations endorsed on a B3 licence are tasks that cannot be certified, we agree that in some cases it may be more practical to refer to tasks that can be certified, for example when the privileges are very small compared with the tasks that are not authorised. In those cases, it is not practical to list all the tasks that cannot be certified.

Further rulemaking may be necessary in the future in order to address all these inconsistencies.

- (21) "CAA-NETHERLANDS" requested the Agency to ensure adequate standardisation across the EU by defining in the "List of Type Ratings" all the ratings and group ratings to be endorsed on the Part-66 licences.

The Agency will consider this proposal for the next annual revision of the "List of Type Ratings" (Appendix I to AMC to Part-66).

- (22) "CAA-NETHERLANDS" proposed to eliminate the option to have "Individual Type Ratings" for Group 3 aircraft. They assumed that these "Individual Type Ratings" will be subject to the same limitations as the Group 3.

The Agency notes that the limitations are only applicable to the B1.2 licence for Group 3 aircraft, but not in the case of "Individual Type Ratings". The reason is that in order to get an "Individual Type Rating" it is necessary to complete either the practical element of the type training or, if type training is not performed, the practical experience required after the type examination.

In addition, the Agency notes that the option to have "Individual Type Ratings" is retained in order to provide flexibility to those licence holders who only work on a particular aircraft type which is not representative of the full Group 3.

- (23) "CAA-NETHERLANDS" requested that experience in Group 1 and 2 aircraft can contribute to the experience required in order to get a Group 3 rating.

The Agency agrees with the proposal and will modify AMC66.A.45(g)(3) & (h) accordingly.

#### **Reactions related to task 66.011 "Type Training":**

- (24) "AIRBUS SAS", "AIR FRANCE", "DGAC-FRANCE", "BRITISH AIRWAYS ENGINEERING", "FLIGHT SAFETY INTERNATIONAL" and "KLM ENGINEERING AND MAINTENANCE" submitted several comments relative to the content of the theoretical and practical elements of the Type Rating Training (TRT) as described in paragraphs 2.1(e) and 2.2(b) of Appendix III to Part66.

Concerning the level of training or the nature of the tasks, the Agency agreed for most of the suggestions and corrected the tasks accordingly.

Regarding the content of the practical element table, three organisations mentioned that the volume of tasks was too generous and therefore unrealistic, in particular for the removal and installation tasks, which are time consuming. The Agency agreed on the comment and alleviated the content by introducing some flexibility: instead of all the crossed items, it is now requested that at least 50% shall be completed as part of the practical training.

It has been also added that only the items which are relevant to the particular aircraft type shall be completed.

- (25) The "EUROPEAN AIRCRAFT MAINTENANCE TRAINING COMMITTEE (EAMTC)", "FLIGHT SAFETY INTERNATIONAL" and one individual person requested clarifications and expressed some concerns related to the duration of the theoretical elements of the TRT, in particular for the maximum number of tuition hours per day. Having considered the justification of the comments, the Agency decided
- to limit the number of tuition hours to 6 per day. Here, "per day" should be understood as "per 24 hours";

- to confirm that tuition hours shall exclude any break, preparation work, examination, etc;
- to remove the limitation to “regular office hours” as it may be possible, under certain circumstances, that the training may be given during the night or during the weekend.

This is as well in line with current AMC 147.A.200.

- (26) The “ASSOCIATION OF DUTCH AVIATION TECHNICIANS (NVL)” requested to confirm that in the course of the training performance, when practical tasks are considered real maintenance tasks such as opening and closing from panels, removal / installation of components etc, such tasks shall lead to the issuance of the Certificate of Release to Service (CRS) by certifying staff, even when they are performed under the oversight of the trainers or supervisors.

The position of the Agency on this issue is that it is clear that the trainees do not have the certifying staff privileges and therefore only the certifying staff from the maintenance organisation can issue the CRS. This position becomes more obvious for OJT tasks as they are always performed in a real maintenance environment and under the oversight of the supervisor.

On the other hand, EAMTC requested that the practical training elements imparted by Part 147 organisations shall never result in actual maintenance activities. The Agency rejected the comment because there are cases where such practical training results in maintenance activities, for example, when the Part 147 organisation subcontracts the activity to a Part-145 organisation. A certificate of release to service has to be issued because the continuing airworthiness of the aircraft has to be restored each time a component has been, for instance, de-installed and re-installed.

- (27) The “ASSOCIATION OF DUTCH AVIATION TECHNICIANS (NVL)” and one independent person made comments about the definition, role and qualification of designated assessors.

The Agency has reviewed the issue and improved the text. In addition, the Agency will develop AMC material in order to provide better explanations regarding the role and qualification of assessors and supervisors. This will be provided for the practical portion of TRT and for OJT.

- (28) “KLM ENGINEERING AND MAINTENANCE” expressed that with the current proposal, those Part-145 organisations employing personnel with licences issued by different competent authorities would need to have the OJT programme approved by each one of those authorities for the first type endorsement of a specific type. They proposed a new option for the OJT as they would like the OJT programme to be approved by the competent authority in charge of the oversight of the maintenance organisation and that this OJT programme would be recognized by all Member States.

First the Agency would like to note that the OJT is only required for the endorsement of the first type rating for a given category/subcategory, and not for the endorsement of the first type rating for a specific type as mentioned by KLM. As a consequence, the problem would be applicable only for organisations contracting personnel from different Member States, who hold only basic licences (no ratings endorsed). It is questionable that this is a normal practice.

In addition, the proposal made by KLM is contrary to the requirements of Article 6 to Regulation (EC) No 2042/2003, which does not give privileges to a maintenance organisation to be approved for training purposes. Only Part 147 organisations may have such a privilege.

Although it is true that courses can be directly approved by the competent authority itself when they are not performed by a Part-147 organisation, this is supposed to be done on a case by case basis and they are not subject to mutual recognition between EU Member States. A course directly approved by the competent authority is only valid for licensing purposes for such authority.

(29) "FLIGHT SAFETY INTERNATIONAL" and one individual person made two recommendations about the type training examination:

- The first comment, made by "FLIGHT SAFETY INTERNATIONAL", questions the need for the number of questions to be a multiple of 4 and suggest to replace this requirement by the introduction of a prohibition to round up marks.

The Agency notes that this proposal would not solve the current problem. If the number of questions is not a multiple of 4 then it is necessary to obtain more than 75% score in order to pass, which contradicts the rule. There have been already Court cases on this subject.

As a consequence, the Agency maintains the requirements that the number of questions is multiple of 4, not only in Appendix III to Part-66 for the type training standard but also in Appendix II of Part-66 for the basic examination standard.

- The second comment, made by an individual person, suggests introducing in Appendix III to Part-66 the number of questions required for each chapter.

This proposal has been rejected by the Agency because the number of questions depends on the training hours spent on each chapter, which result from the corresponding learning objectives and Training Needs Analysis, and are specific to each aircraft type.

(30) "AIRBUS SAS", "FLIGHT SAFETY INTERNATIONAL" and EAMTC commented that it was unclear in which cases the Training Needs Analysis is mandatory and in which cases it is not.

The Agency has made clear in paragraph 2.1(d) of Appendix III to Part-66 that a Training Needs Analysis is always required. The only exceptions are described in Article 7.9(f). As a consequence, there is no need to produce a Training Needs Analysis (TNA) for courses approved before 15 months after the entry into force of this amending Regulation if their duration is already above the minimum duration described in Appendix III to Part-66.

(31) "AIRBUS SAS" made a comment related to AMC 66.A.45(k) and AMC 66.B.115, where the Agency states that the interface between the engine/airframe systems must be addressed by either airframe or powerplant type training. The opinion of Airbus SAS is that the interface should be addressed by the powerplant type training.

The position of the Agency is that this depends on the type/category of aircraft. In some cases, for example in General Aviation, it may be more reasonable to cover the interface

during the airframe course due to the large variety of aircraft that can have the same engine type installed.

- (32) "AIR FRANCE" made a comment related to Paragraph 3(j) in Appendix III to Part-66. To their opinion, there should be an AMC establishing for a level 3 examination the percentage of questions that should be at level 1, level 2 and level 3.

The Agency does not consider that it should be so prescriptive. Nevertheless, paragraph 3(j) in Appendix III has been eliminated and paragraphs 3(d) and 3(f) have been modified in order to make clear that:

- The use of a limited number of questions at a lower level is acceptable.
- The competent authority will assess the number and the level of the questions when approving the course.

- (33) The EAMTC commented that the MPD, SRM, RVSM and other items should not be part of AMC 66.A.45(k)(1) and (k)(2) and should not be taken into account when developing the theoretical content of a type training course. They justify it stating that these items are not specific to an aircraft type.

The Agency does not agree with the proposal because a particular aircraft type may have very specific repairs contained in the SRM (including maintenance actions coming from RVSM requirements) that may need to be taken into account when developing the content of the course.

- (34) "EAT-DHL TECHNICAL TRAINING DEPARTMENT" advised to modify paragraph 147.A.100(f) in order to reduce from 15 to 7 the maximum number of students per supervisor undergoing practical training during any training course.

The Agency cannot take on board this proposal because this paragraph was not part of the discussions of the working group and has not been part of any of the external consultations performed. As a consequence, it can only be addressed through future rulemaking action.